CWPPRA

PPL 34 Regional Planning Team (RPT) Meetings

Final Package Region 4

21 February 2024

Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA)
Priority Project List 34
Regional Planning Team Meetings

Region 4 – Lake Charles – January 30, 2024, 9:30 am
Region 3 – Morgan City – January 31, 2024, 9:30 am
Region 1 & 2 – Lacombe – February 1, 2024, 9:00 am

AGENDA

Meeting Purpose: The Regional Planning Teams (RPTs) will accept project and demonstration project nominations for developing the 34th Priority Project List (PPL34). Public comments are welcomed. RPTs will select PPL 34 nominees via electronic voting on February 23, 2024.

1. **Welcome and Introductions**
   RPT Team Leader, Louisiana Coastal Protection and Restoration Authority (CPRA), U.S. Army Corps of Engineers (USACE), CWPPRA Representatives, Parish Representatives, State Representatives, RPT members

2. **Review of CWPPRA Strategy and Criteria for Project Selection (Kaitlyn Richard, USACE)**
   Overview of selection criteria and other considerations utilized to determine most impactful projects.

3. **PPL 34 Selection Process Brief Overview and Ground Rules for Today's PPL 34 Nomination Meeting (RPT Leader)**

4. **Explanation of Coastwide Voting Process (RPT Leader)***

5. **PPL 34 Project Nominations (Entire RPT)**
   Nominees must be consistent with and support the state's 2017 and/or draft 2023 Coastal Master Plan.

6. **Announcements of upcoming PPL 34, Task Force, Technical Committee and Other Program Meetings**

7. **Adjourn**

**Parishes within each basin will be asked to identify who will vote during the coastwide electronic vote by January 29th.*

No additional projects will be nominated after the RPT meetings, nor will any significant changes to projects proposed at these meetings be allowed. Public comments will be heard during the meeting and additional written comments may be forwarded to CWPPRA Project Manager, Terri Von Hoven, by February 16, 2024 for dissemination to the CWPPRA agencies.

Coastal Wetlands Planning Protection & Restoration Act

34th Priority Project List

Region 4

Regional Planning Team Meeting

Lead:
Patrick Williams, NMFS

January 30, 2024

Kaitlyn Richard, USACE

Strategy and Criteria for Project Selection

Scan Barcode to Access Strategy and Criteria for Project Selection

https://www.mvn.usace.army.mil/Missions/Environmental/CWPPRA

Selection Criteria

- Cost Effectiveness
- Synergy
- Critical Area of Need
- Critical Landscape Feature
- Critical Infrastructure Protection
- Other Considerations

Other Considerations

- Sustainable Borrow Source
- Sustainability of Specific Project Site
- Water Quality
- Excessive Maintenance
- Liability
- Ease of Construction
- Geography - Basin, Political Boundary, Distribution
- Willing Landowners and Stakeholder Support
- Partnerships
- Oysters
- Pipelines/Utilities
- Operations and Maintenance
- Number of Previous Phase 2 (Construction and Operations, Maintenance, and Monitoring) Requests

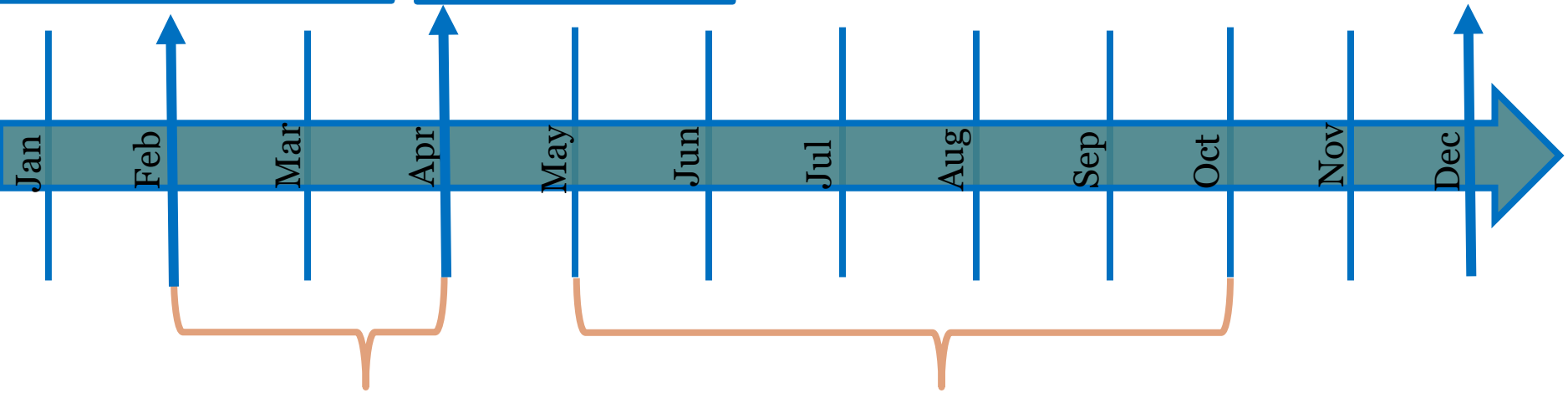
Not all inclusive

PPL Timeline

Coastwide Vote (Feb)
- 21 basin nominees, 1 coastwide, up to 6 demos

TC Mtg (Apr)
- Up to 10 candidates
- up to 3 demos

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



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

May - Oct
- Site visits
- Workgroup evaluations

REGION 4

Patrick Williams, NMFS

- PPL 34 RPT meetings to accept project nominees:
  - Region IV - Jan. 30, 2024, 9:30 am
  - Region III – Jan. 31, 2024, 9:30 am
  - Regions II and I - Feb. 1, 2024, 9:00 am

Region 4 Parishes

- Eligible parishes for basins in Region 4 include:

- Calcasieu-Sabine Basin
  - **Cameron Parish**
  - **Calcasieu Parish**

- Mermentau Basin
  - **Cameron Parish**
  - **Vermilion Parish**

RPT Meetings

- Project proposals should be consistent with the state's **2023 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, 2024**.
- Limit comments and questions today to PPL 34 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 34.

Coastwide Vote

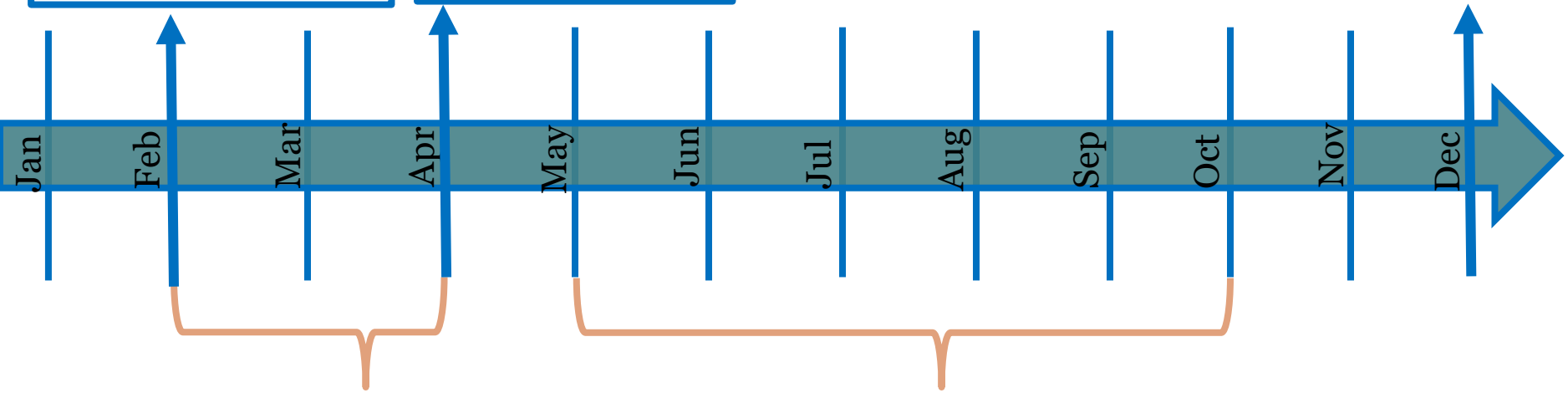
- An electronic vote will be held **23 February** to select projects, with the number of projects per basin determined by loss rate (i.e., basins with the highest loss have the most projects):
  - Barataria: 4
  - Terrebonne: 4
  - Breton Sound: 3
  - Pontchartrain: 3
  - Mermentau: 2
  - Calcasieu/Sabine: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

PPL Timeline

Coastwide Vote (Feb)
- 21 nominees, 1 coastwide, up to 6 demos

TC Mtg (April)
- Up to 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 USACE by **16 February 2024**

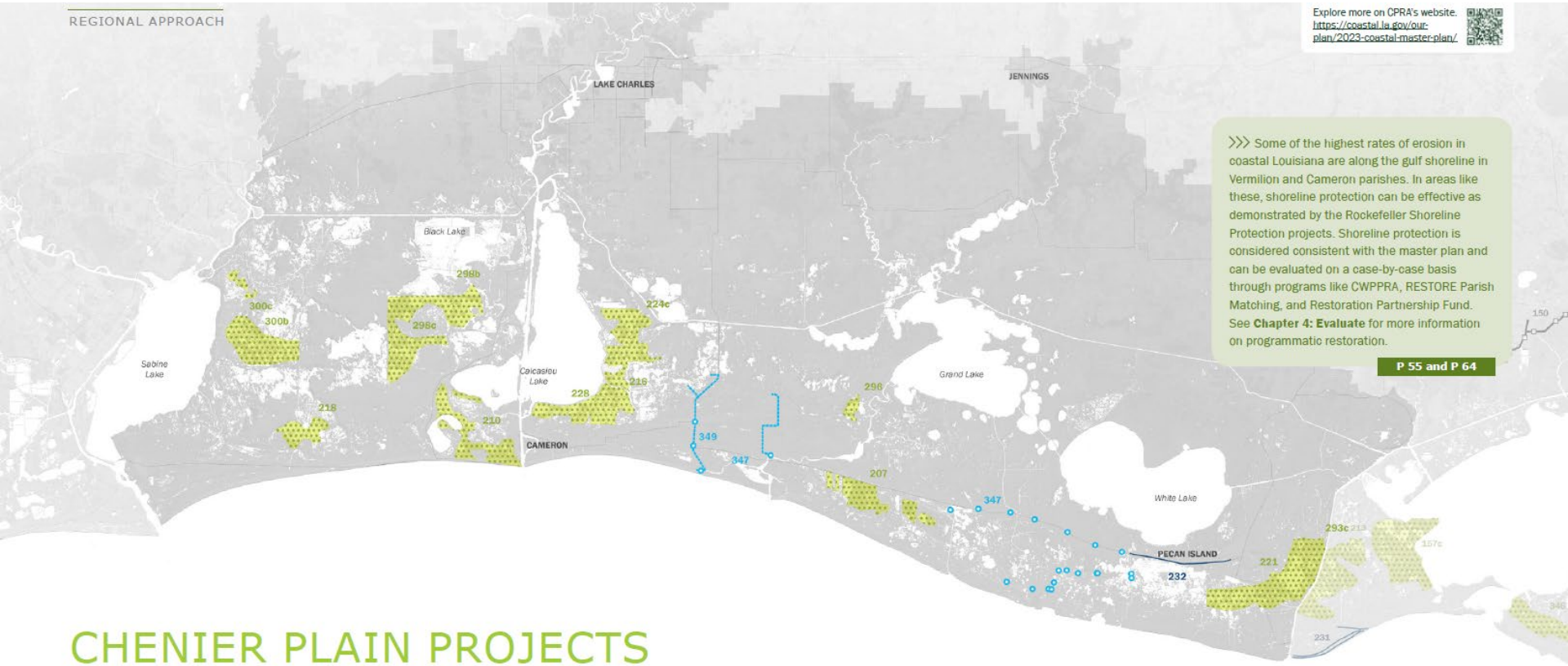
Terri Von Hoven
U.S. Army Corps of Engineers
CEMVN-PMR, RM 331
7400 Leake Avenue
New Orleans, LA 70118

Email: terri.m.vonhoven@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 Terri Von Hoven at Terri.m.vonhoven@usace.army.mil

Explore more on CPRA's website.
https://coastal.la.gov/our-plan/2023-coastal-master-plan/



>>> Some of the highest rates of erosion in coastal Louisiana are along the gulf shoreline in Vermilion and Cameron parishes. In areas like these, shoreline protection can be effective as demonstrated by the Rockefeller Shoreline Protection projects. Shoreline protection is considered consistent with the master plan and can be evaluated on a case-by-case basis through programs like CWPPRA, RESTORE Parish Matching, and Restoration Partnership Fund. See **Chapter 4: Evaluate** for more information on programmatic restoration.

P 55 and P 64

CHENIER PLAIN PROJECTS

REGIONAL 2023 PROJECTS MAP

For the 2023 Coastal Master Plan, 16 projects were selected in the Chenier Plain region, including several marsh creation projects spread across the region. Through the help of the Chenier Plain Regional Workgroup, the locations of these marsh creation projects were chosen to address current and future land loss concerns, such as strengthening the shoreline of Calcasieu Lake and other important regional water bodies. Large-scale hydrologic restoration projects were also selected for the region. These projects were designed, with input from our advisory groups, to provide improved drainage in both the upper Mermentau Basin and the Cameron-Creole Watershed.

>>> Opportunities for structural risk reduction measures vary across the coast, yet all regions face storm surge-based flood risk. For the 2023 Coastal Master Plan, $11B has been allocated to nonstructural risk reduction strategies, including in the Chenier Plain region. For more information on nonstructural risk reduction projects, see **Chapter 5: Take Action**.

P 90

Ridge Restoration
Marsh Creation
Hydrologic Restoration

Map 6.3: Chenier Plain 2023 Coastal Master Plan Projects.

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Region 4

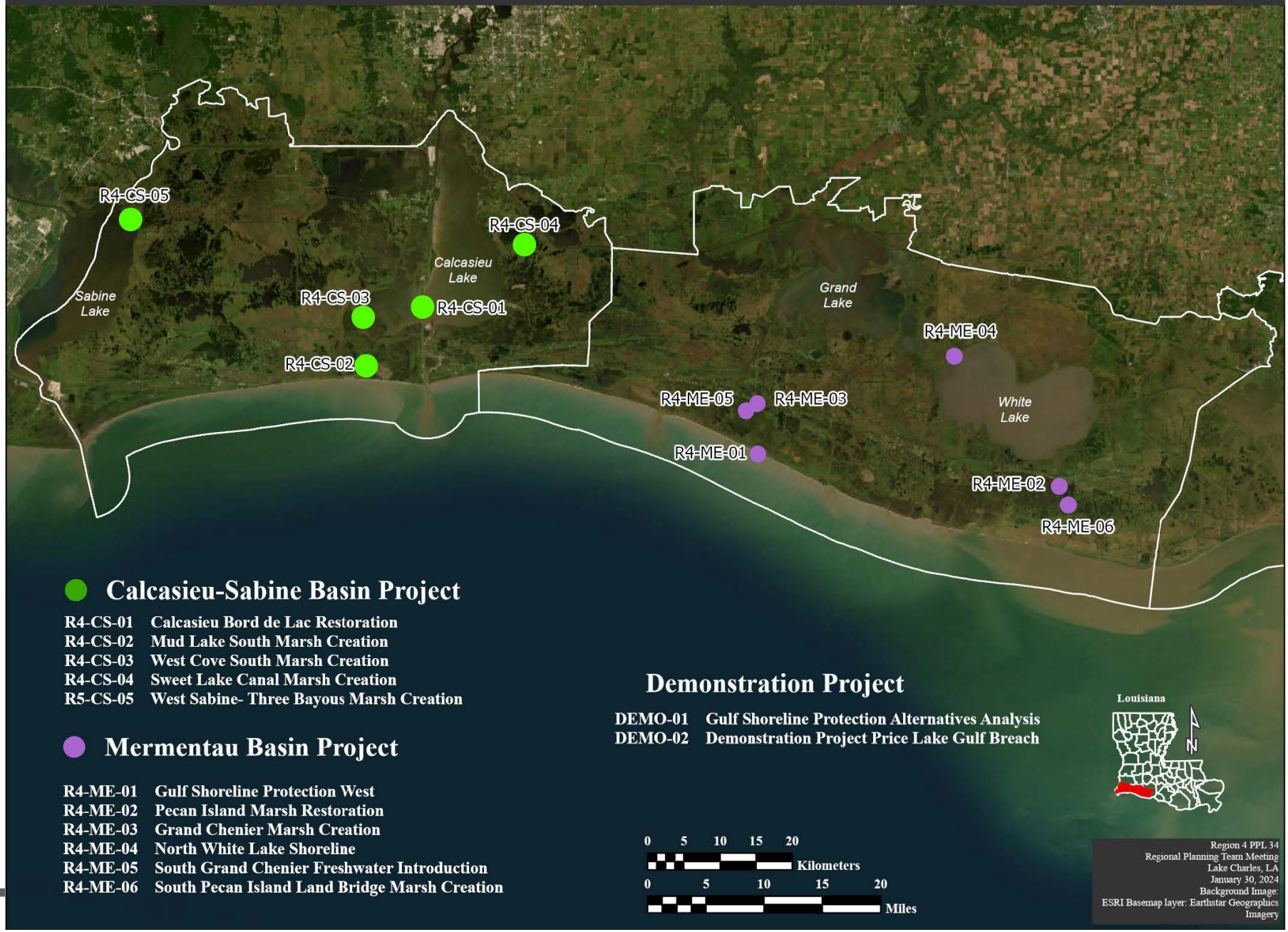
Calcasieu-Sabine Basin

Project ID	Agency	Project Name
R4, CS-01	EPA	Calcasieu Bord de Lac Restoration
R4, CS-02	EPA	Mud Lake South Marsh Creation
R4, CS-03	EPA	West Cove South Marsh Creation
R4, CS-04	NOAA	Sweet Lake Canal Marsh Creation
R4, CS-05	NRCS	West Sabine – Three Bayou Marsh Creation

Mermentau Basin

Project ID	Agency	Project Name
R4, ME-01	FWS	Gulf Shoreline Protection West
R4, ME-02	NOAA	Pecan Island Marsh Restoration
R4, ME-03	NRCS	Grand Chenier Marsh Creation
R4, ME-04	LAWLF	North White Lake Shoreline
R4, ME-05	*LAWLF*	*Old Mermentau River Marsh Creation NOT CONSISTENT*
R4, ME-06	LAWLF	Rockefeller Shoreline Protection Project WITHDRAWN
R4, ME-07	LAWLF	South Grand Chenier Freshwater Introduction
R4, ME-08	LAWLF	Pecan Island Land Bridge Marsh Creation
R4, ME-09	*LAWLF*	*White Lake WCA GIWW Shoreline Project NOT CONSISTENT*

PPL34 Region 4 Nominated Projects



Calcasieu-Sabine Basin Project

R4-CS-01 Calcasieu Bord de Lac Restoration
R4-CS-02 Mud Lake South Marsh Creation
R4-CS-03 West Cove South Marsh Creation
R4-CS-04 Sweet Lake Canal Marsh Creation
R5-CS-05 West Sabine- Three Bayous Marsh Creation

Mermentau Basin Project

R4-ME-01 Gulf Shoreline Protection West
R4-ME-02 Pecan Island Marsh Restoration
R4-ME-03 Grand Chenier Marsh Creation
R4-ME-04 North White Lake Shoreline
R4-ME-05 South Grand Chenier Freshwater Introduction
R4-ME-06 South Pecan Island Land Bridge Marsh Creation

Demonstration Project

DEMO-01 Gulf Shoreline Protection Alternatives Analysis
DEMO-02 Demonstration Project Price Lake Gulf Breach

Region 4 PPL 34
Regional Planning Team Meeting
Lake Charles, LA
January 30, 2024
Background Image:
ESRI Basemap layer: Earthstar Geographics Imagery

CWPPRA RPT Region 4

Calcasieu-Sabine Basin

PPL34 PROJECT FACT SHEET
January 30, 2024 – edited February 5, 2024

Project Name
Calcasieu Bord de Lac Restoration

Project Location
Region 4, Calcasieu/Sabine Basin, Cameron Parish
Calcasieu Lake is a brackish lake located in southwest Louisiana, United States, located mostly within Cameron Parish. The Lake is paralleled on its west shore by Louisiana Highway 27, and is located about 17 miles south of Lake Charles, Louisiana.

Master Plan Strategy
CPRA has reviewed this concept and deemed it consistent only if it uses BUDMAT as its sediment source.

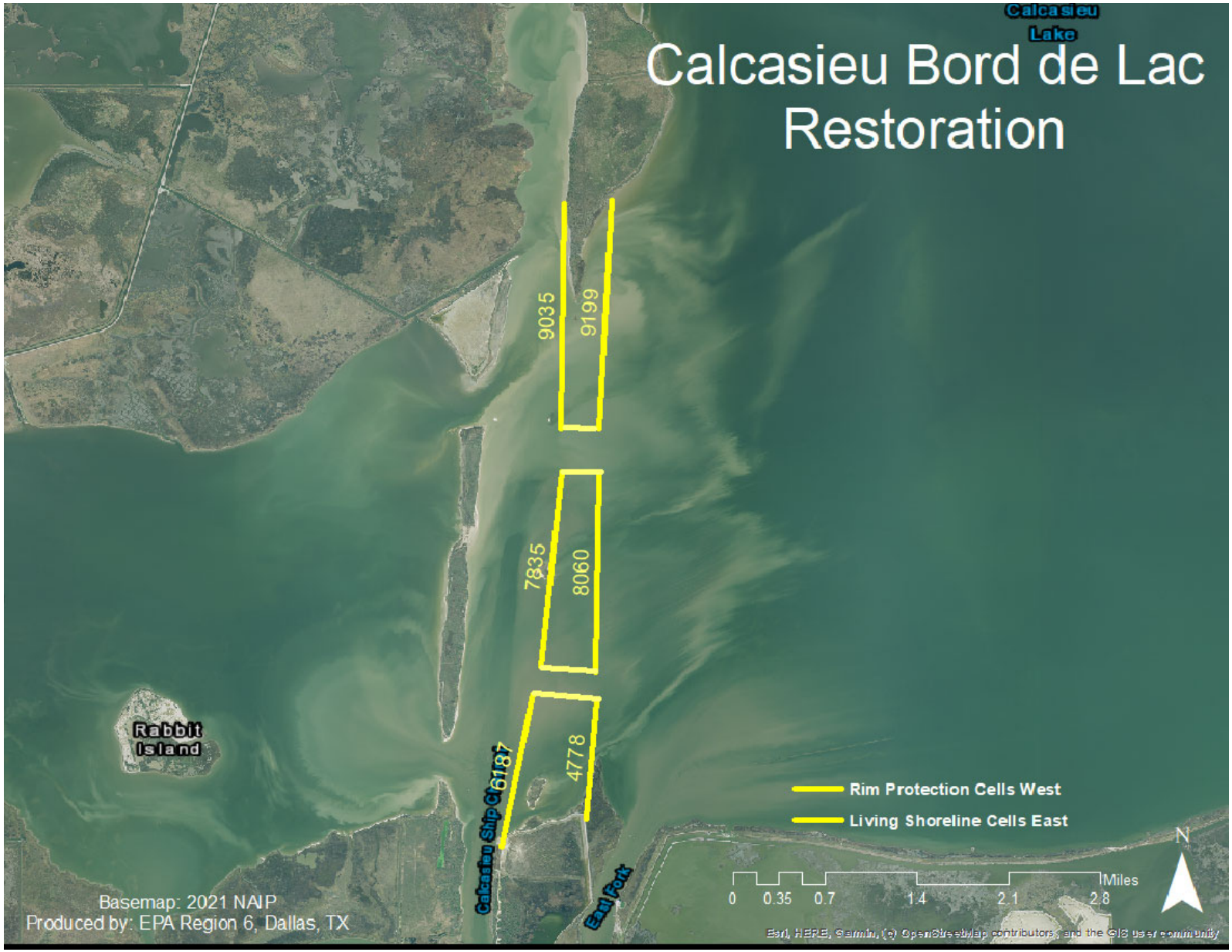
Problem
This area has experienced impacts from storm surge and hurricanes, subsidence, and wave erosion. There is no separation between the navigation channel and the lake. Lack of separation allows erosive waves and turbid waters to flow into the lake impacting water quality. Ship waves and storm surges erode the lake rim marshes.

Proposed Solution
This concept will create approximately 900 acres of marsh using BUDMAT materials from the adjacent Calcasieu River Navigation channel. The proposed project consists of three marsh creation segments, in series, separating the west side of Calcasieu Lake from the navigation channel. The segments are gapped to provide some exchange between the lake and the channel. The enhanced containment feature with possible armoring is proposed for the navigation channel side with a living shoreline feature for containment on the lake side. Design alternatives will be explored, and options presented at the 30% design level.

Project Benefits
The project will create approximately 900 acres of marsh and provide separation between Calcasieu Lake and the Calcasieu Navigation Channel. Establishing the confined marsh creation cells to separate Calcasieu Lake from the Calcasieu River Channel will protect lake rim marshes, improve water quality, and benefit oysters. The marsh creation cells will moderate storm surge and reduce wave energies to the lake shoreline and lake rim marshes protecting and maintaining resources vital to nearby communities and the lake ecosystem. An added water quality benefit is reducing sediment transport into Calcasieu Lake and reducing turbidity impacts to oysters. This proposed project works synergistically with the numerous existing and planned restoration and mitigation concepts in the Calcasieu Lake area.

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

Preparer(s) of Fact Sheet:
Patricia A Taylor, Ph.D., P.E.; EPA; (214) 665-6403; taylor.patricia-a@epa.gov
Sharon L. Osowski, Ph.D.; EPA; (214) 665-7506; osowski.sharon@epa.gov
Doug Jacobson, EPA; (214) 665-6692; jacobson.doug@epa.gov


Calcasieu Lake
Calcasieu Bord de Lac Restoration
9035
9199
7835
8060
6187
4778
Rabbit Island
Calcasieu Ship Ch
East Fork
Rim Protection Cells West
Living Shoreline Cells East
N
0 0.35 0.7 1.4 2.1 2.8 Miles
Basemap: 2021 NAIP
Produced by: EPA Region 6, Dallas, TX
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

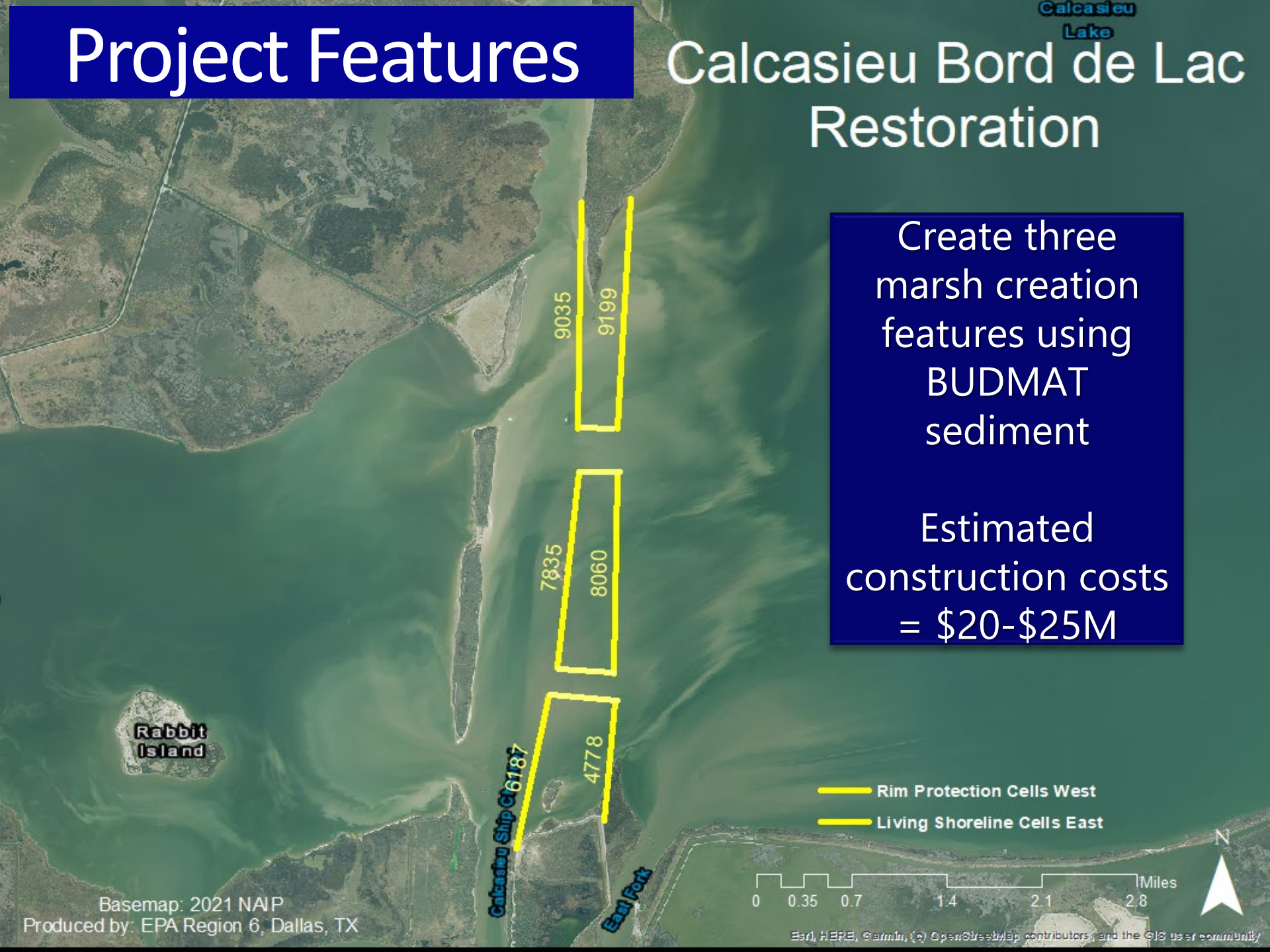
Calcasieu Bord de Lac Restoration

Coastal Wetlands Planning, Protection and Restoration Act

Master Plan Solution

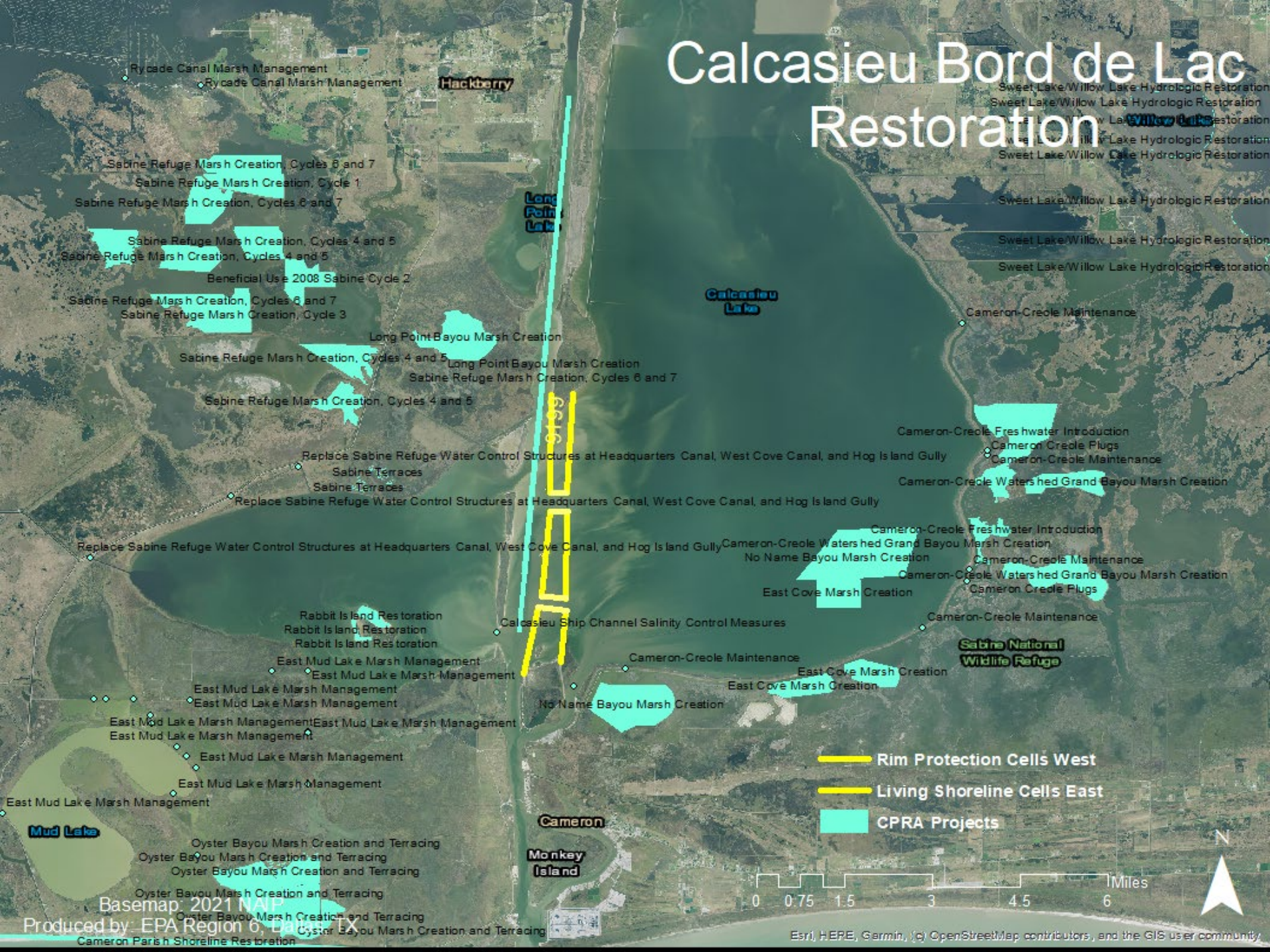
CPRA has reviewed this concept and deemed this project consistent only if it uses BUDMAT as its sediment source.

Project Features



Create three marsh creation features using BUDMAT sediment

Estimated construction costs = $20-$25M


Calcasieu Bord de Lac Restoration
Rycade Canal Marsh Management
Rycade Canal Marsh Management
Hackberry
Sweet Lake/Willow Lake Hydrologic Restoration
Sweet Lake/Willow Lake Hydrologic Restoration
Willow Lake
Sweet Lake/Willow Lake Hydrologic Restoration
Sweet Lake/Willow Lake Hydrologic Restoration
Sabine Refuge Marsh Creation, Cycles 6 and 7
Sabine Refuge Marsh Creation, Cycle 1
Sabine Refuge Marsh Creation, Cycles 6 and 7
Long Point Lake
Sweet Lake/Willow Lake Hydrologic Restoration
Sabine Refuge Marsh Creation, Cycles 4 and 5
Sabine Refuge Marsh Creation, Cycles 4 and 5
Sweet Lake/Willow Lake Hydrologic Restoration
Beneficial Use 2008 Sabine Cycle 2
Sweet Lake/Willow Lake Hydrologic Restoration
Calcasieu Lake
Sabine Refuge Marsh Creation, Cycles 6 and 7
Sabine Refuge Marsh Creation, Cycle 3
Cameron-Creole Maintenance
Long Point Bayou Marsh Creation
Sabine Refuge Marsh Creation, Cycles 4 and 5
Long Point Bayou Marsh Creation
Sabine Refuge Marsh Creation, Cycles 6 and 7
Sabine Refuge Marsh Creation, Cycles 4 and 5
Cameron-Creole Freshwater Introduction
Cameron Creole Plugs
Cameron-Creole Maintenance
Replace Sabine Refuge Water Control Structures at Headquarters Canal, West Cove Canal, and Hog Island Gully
Sabine Terraces
Sabine Terraces
Cameron-Creole Watershed Grand Bayou Marsh Creation
Replace Sabine Refuge Water Control Structures at Headquarters Canal, West Cove Canal, and Hog Island Gully
Cameron-Creole Freshwater Introduction
Replace Sabine Refuge Water Control Structures at Headquarters Canal, West Cove Canal, and Hog Island Gully
Cameron-Creole Watershed Grand Bayou Marsh Creation
No Name Bayou Marsh Creation
Cameron-Creole Maintenance
Cameron-Creole Watershed Grand Bayou Marsh Creation
East Cove Marsh Creation
Cameron Creole Plugs
Rabbit Island Restoration
Rabbit Island Restoration
Rabbit Island Restoration
Calcasieu Ship Channel Salinity Control Measures
Cameron-Creole Maintenance
Sabine National Wildlife Refuge
East Mud Lake Marsh Management
East Mud Lake Marsh Management
Cameron-Creole Maintenance
East Cove Marsh Creation
East Cove Marsh Creation
East Mud Lake Marsh Management
East Mud Lake Marsh Management
No Name Bayou Marsh Creation
East Mud Lake Marsh Management
East Mud Lake Marsh Management
East Mud Lake Marsh Management
East Mud Lake Marsh Management
East Mud Lake Marsh Management
East Mud Lake Marsh Management
East Mud Lake Marsh Management
Mud Lake
Cameron
Monkey Island
Oyster Bayou Marsh Creation and Terracing
Oyster Bayou Marsh Creation and Terracing
Oyster Bayou Marsh Creation and Terracing
Oyster Bayou Marsh Creation and Terracing
Oyster Bayou Marsh Creation and Terracing
Oyster Bayou Marsh Creation and Terracing
Cameron Parish Shoreline Restoration
Rim Protection Cells West
Living Shoreline Cells East
CPRA Projects
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Miles
Basemap: 2021 NAIP
Produced by: EPA Region 6, Dallas, TX
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

PPL34 PROJECT FACT SHEET
January 30, 2024

Project Name
Mud Lake South Marsh Creation

Master Plan Strategy
Mud Lake Marsh Creation (2023 Master Plan Project ID 210, Implementation Period 1):
Creation of marsh within a footprint of approximately 8,100 acres at Mud Lake south of West Cove Calcasieu Lake to create new wetland habitat, restore degraded marsh, and reduce wave erosion.

Project Location
Region 4, Calcasieu/Sabine Basin, Cameron Parish

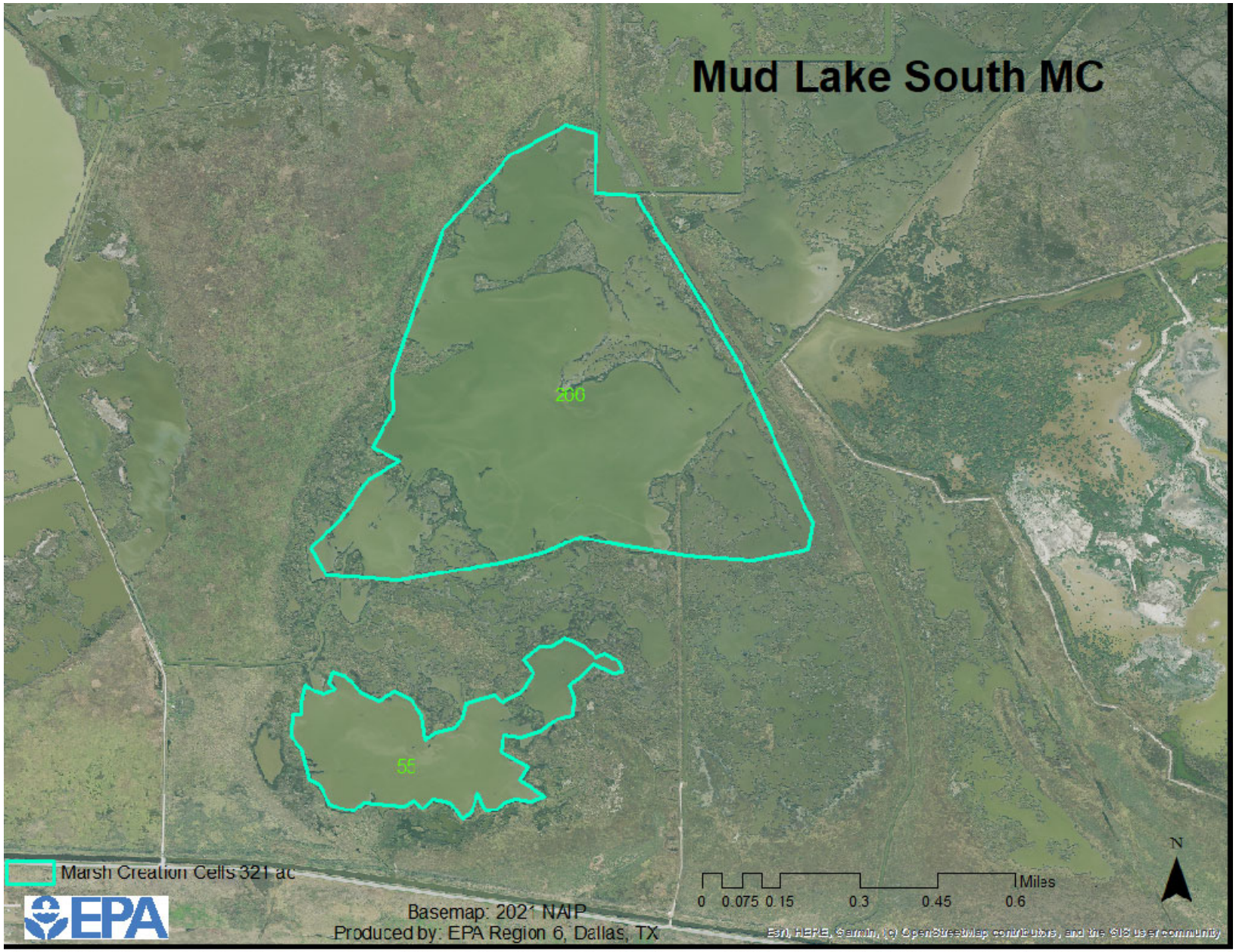
Problem
The project proposed is a fragmented wetland area water located immediately west of Mud Lake, just north of LA Hwy 27. The project area has experienced substantial wetland loss due to subsidence, oil and gas activity, saltwater intrusion, construction of the Calcasieu Ship Channel, LA Highway 27 and storm damage. In August of 2020, Hurricane Laura made landfall in Cameron Parish as a Category 4 hurricane and decimated the town of Holly Beach, LA. Cameron Parish faces wetland loss over the next 50 years and with no further action, the parish faces severely increased future exposure to storm surge-based flooding (2023 State Master Plan). The land loss rate for the area as determined for the PPL31 WVA is -1.05%/yr.

Proposed Solution
The proposed project would create/nourish approximately 321 acres of marsh using sediment dredged from the Gulf of Mexico. The dredged material may be fully contained or partially contained depending upon the borrow sediment characteristics and site conditions and containment dikes would be degraded as necessary to reestablish hydrologic connectivity with adjacent wetlands. The proposed project would be synergistic with Oyster Bayou Marsh Creation and Terracing (CS-59), Oyster Lake Marsh Creation and Nourishment (CS-79), East Mud Lake Marsh Management (CS-20) to the northwest, and Holly Beach Sand Management (CS-31).

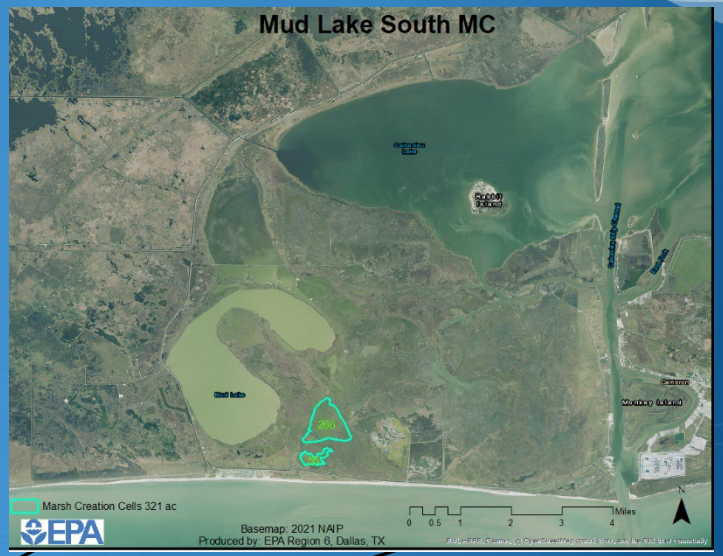
Project Benefits
This project would create 267 acres of marsh and nourish at least 54 acres of existing fragmented emergent marsh near Mud Lake in areas that were historically marshland but are now largely open water. The proposed project features will help maintain the marshes adjacent to and separating Mud Lake and Mud Pass and will provide support as a barrier marsh to the Gulf of Mexico shoreline. Nearby infrastructure would benefit from this project.

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

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


Mud Lake South MC
266
55
Marsh Creation Cells 321 ac
EPA
Basemap: 2021 NAIP
Produced by: EPA Region 6, Dallas, TX
0 0.075 0.15 0.3 0.45 0.6
Miles
N
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

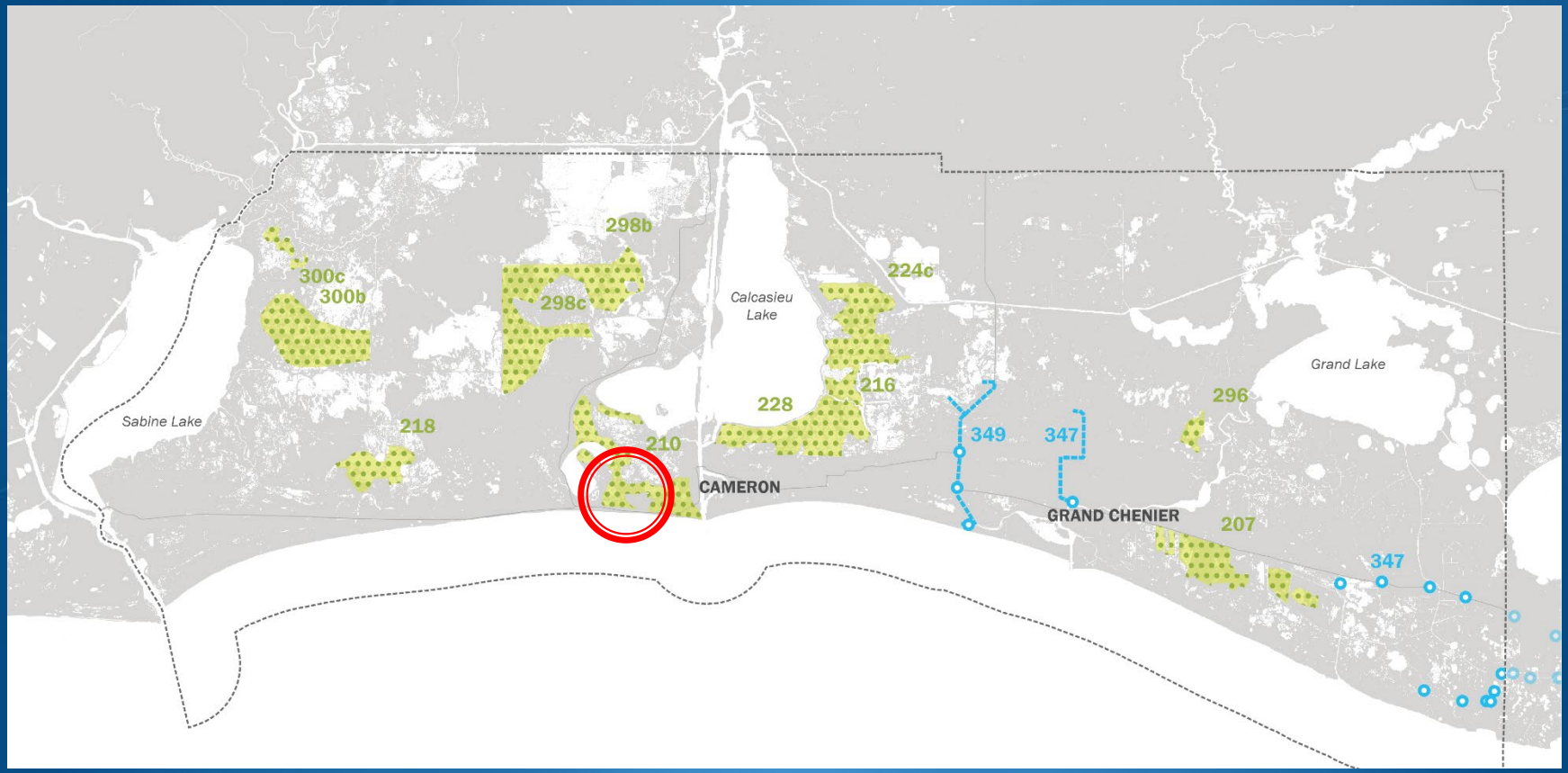
Mud Lake South Marsh Creation



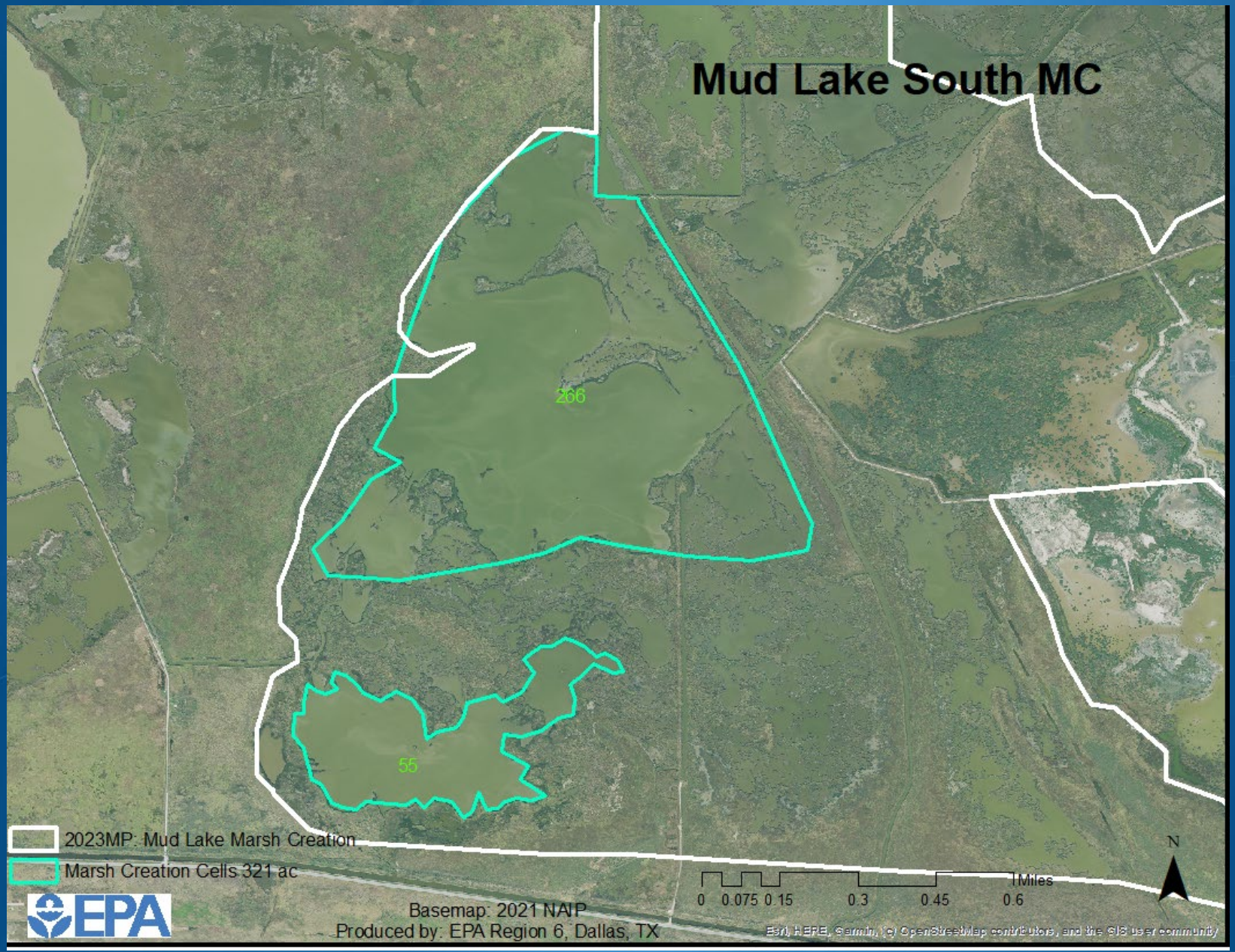
Coastal Wetlands Planning, Protection and Restoration Act

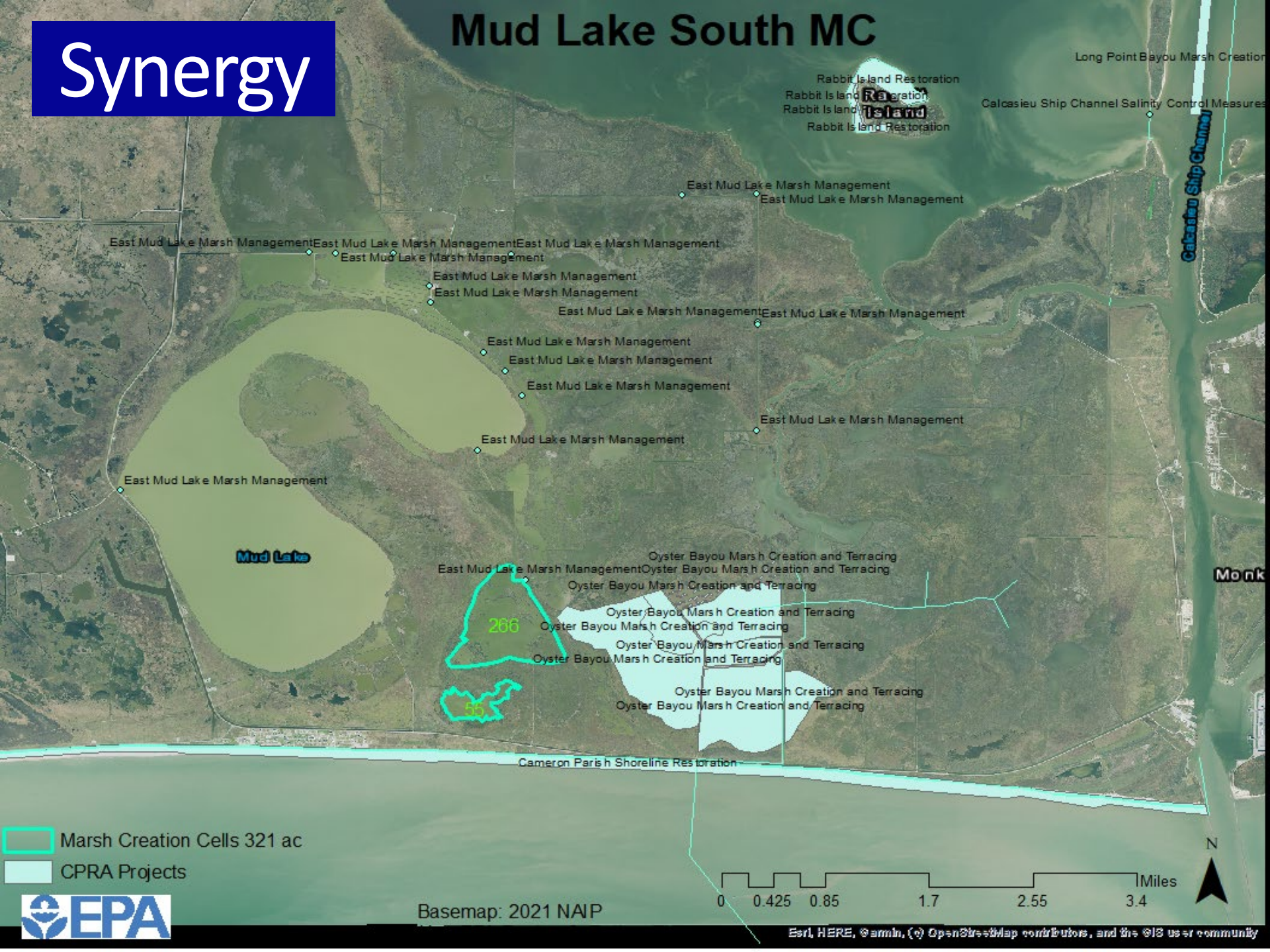
2023 Master Plan Solution

Mud Lake Marsh Creation (2023 Master Plan Project ID 210, Implementation Period 1): Creation of marsh within a footprint of approximately 8,100 acres at Mud Lake south of West Cove Calcasieu Lake to create new wetland habitat, restore degraded marsh, and reduce wave erosion.



2023 Master Plan Solution




Synergy
Mud Lake South MC
Long Point Bayou Marsh Creation
Rabbit Island Restoration
Rabbit Island Restoration
Rabbit Island Restoration
Rabbit Island Restoration
Calcasieu Ship Channel Salinity Control Measures
Calcasieu Ship Channel
East Mud Lake Marsh Management
East Mud Lake Marsh Management
East Mud Lake Marsh Management
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Oyster Bayou Marsh Creation and Terracing
Oyster Bayou Marsh Creation and Terracing
Oyster Bayou Marsh Creation and Terracing
Oyster Bayou Marsh Creation and Terracing
55
Cameron Parish Shoreline Restoration
Marsh Creation Cells 321 ac
CPRA Projects
Basemap: 2021 NAIP
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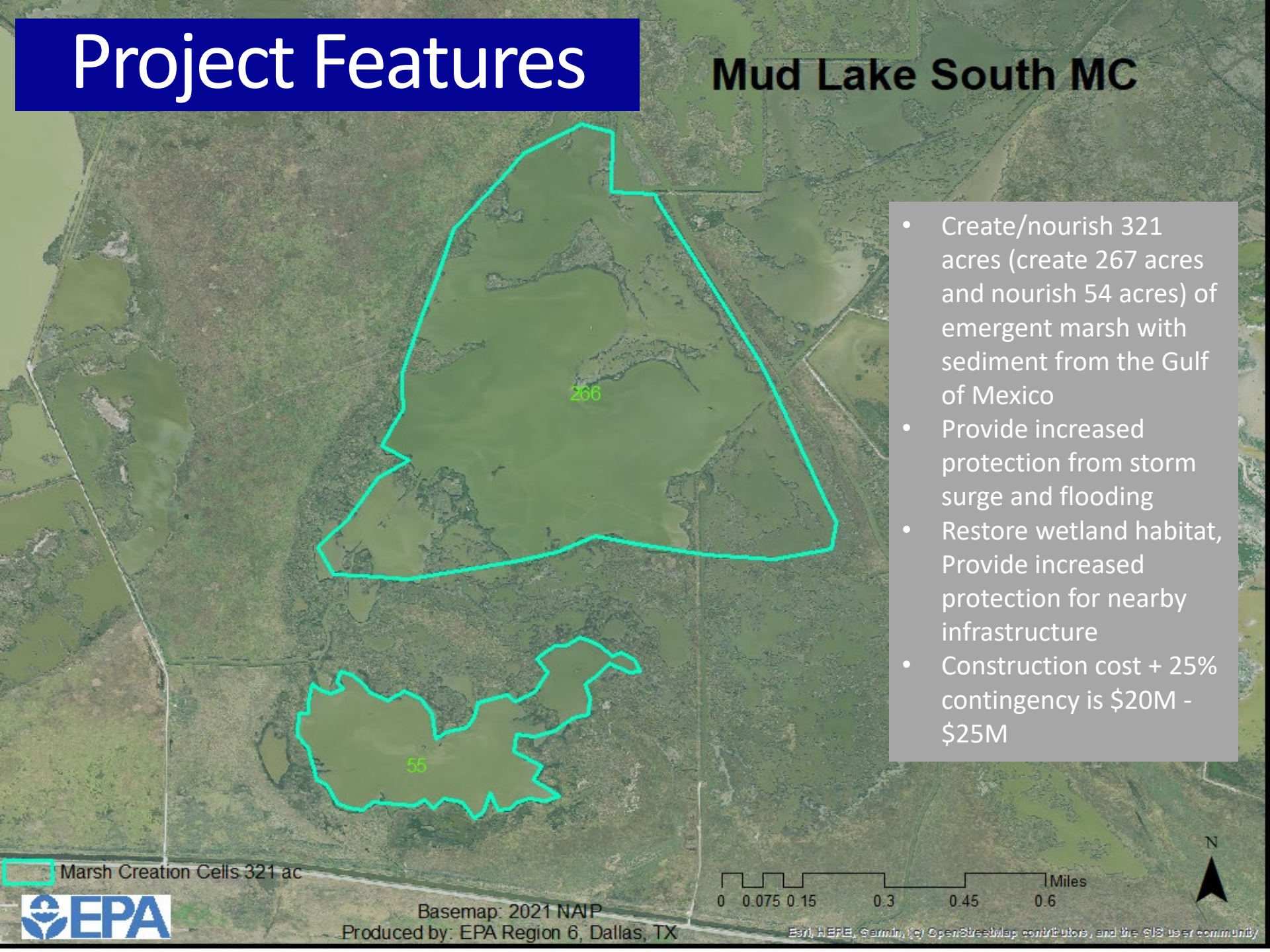
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Project Features



- Create/nourish 321 acres (create 267 acres and nourish 54 acres) of emergent marsh with sediment from the Gulf of Mexico
- Provide increased protection from storm surge and flooding
- Restore wetland habitat, Provide increased protection for nearby infrastructure
- Construction cost + 25% contingency is $20M - $25M

PPL34 PROJECT FACT SHEET
January 30, 2024

Project Name
West Cove South Marsh Creation

Master Plan Strategy
Mud Lake Marsh Creation (2023 Master Plan Project ID 210, Implementation Period 1):
Creation of marsh within a footprint of approximately 8,100 acres at Mud Lake south of West Cove Calcasieu Lake to create new wetland habitat, restore degraded marsh, and reduce wave erosion.

Project Location
Region 4, Calcasieu/Sabine Basin, Cameron Parish

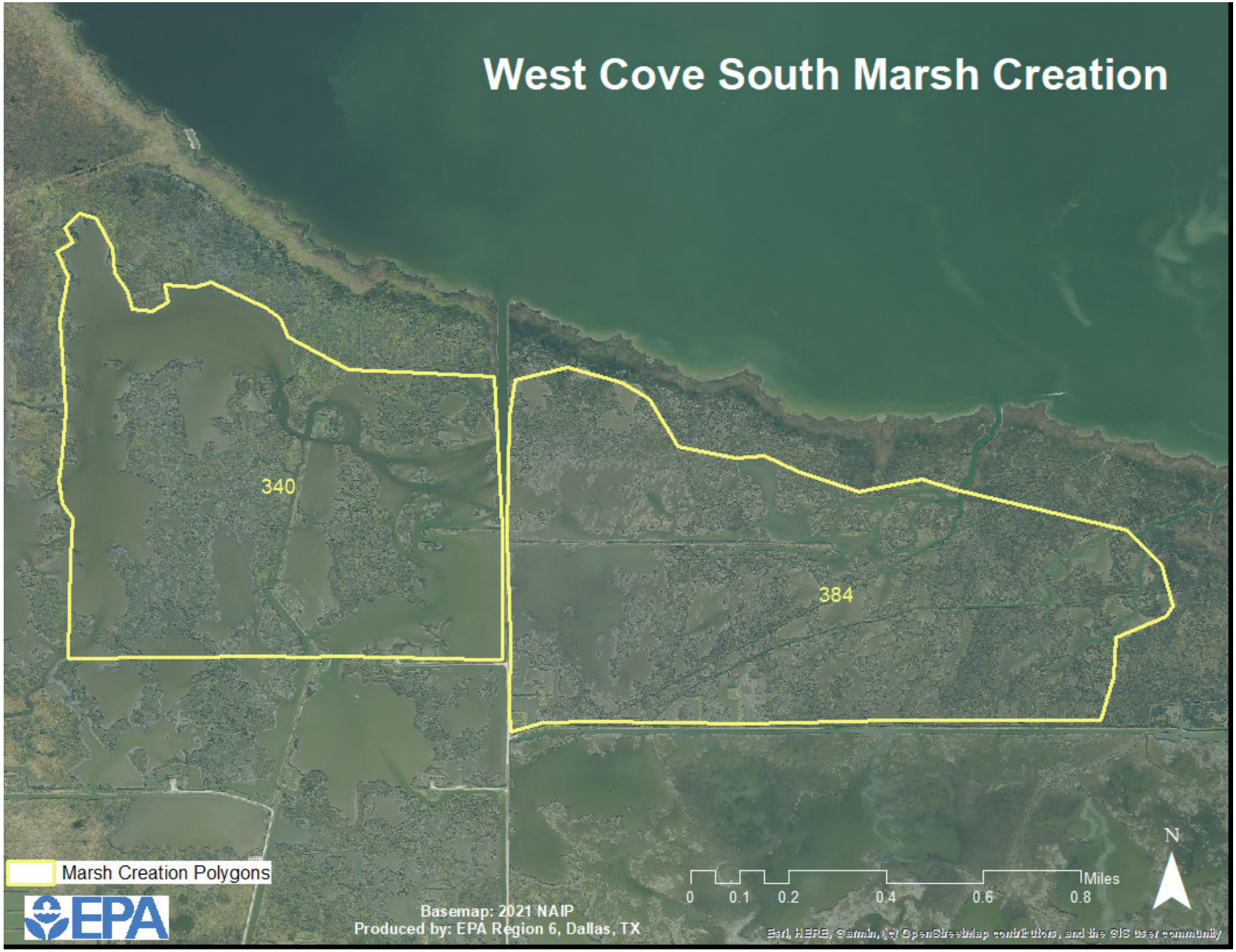
Problem
The project proposed is a fragmented wetland area water located immediately southeast of West Cove, approximately 1 mile north of Mud Lake. Cameron Parish faces wetland loss over the next 50 years and with no further action, the parish faces severely increased future exposure to storm surge-based flooding (2023 State Master Plan). The project area is located near the PPL29/PPL31 Candidate Mud Lake South Marsh Creation project (WVA) which shows a land loss rate of -1.05%/yr.

Proposed Solution
The proposed project would create/nourish approximately 724 acres of marsh using sediment dredged from the Calcasieu Ship Channel. The dredged material may be fully contained or partially contained depending upon the borrow sediment characteristics and site conditions. Containment dikes would be degraded as necessary to reestablish hydrologic connectivity with adjacent wetlands.

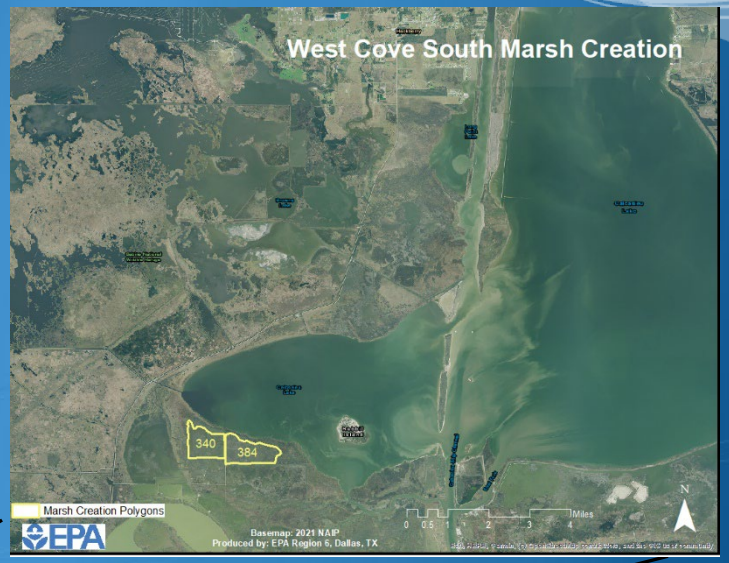
Project Benefits
Create/nourish approximately 724 acres (create 434 acres and nourish 290 acres) of marsh using sediment dredged from the Calcasieu Ship Channel.

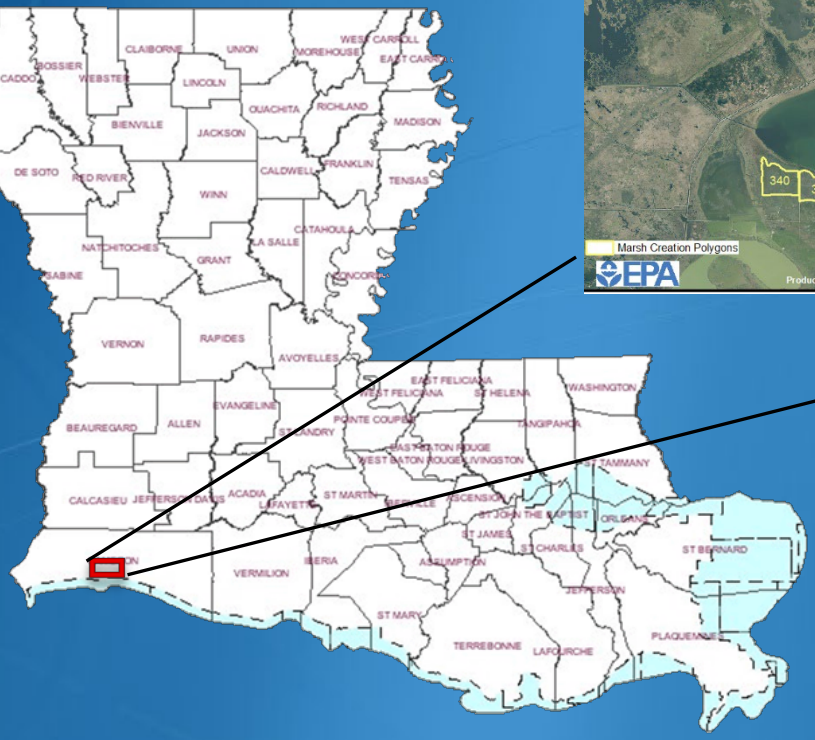
Project Costs
The estimated construction cost plus 25% contingency is $20M-25M with USACE credit.
The estimated construction cost plus 25% contingency is $35M-40M w/o USACE credit.

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


West Cove South Marsh Creation
340
384
Marsh Creation Polygons
EPA
Basemap: 2021 NAIP
Produced by: EPA Region 6, Dallas, TX
0 0.1 0.2 0.4 0.6 0.8
Miles
N
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

West Cove South Marsh Creation

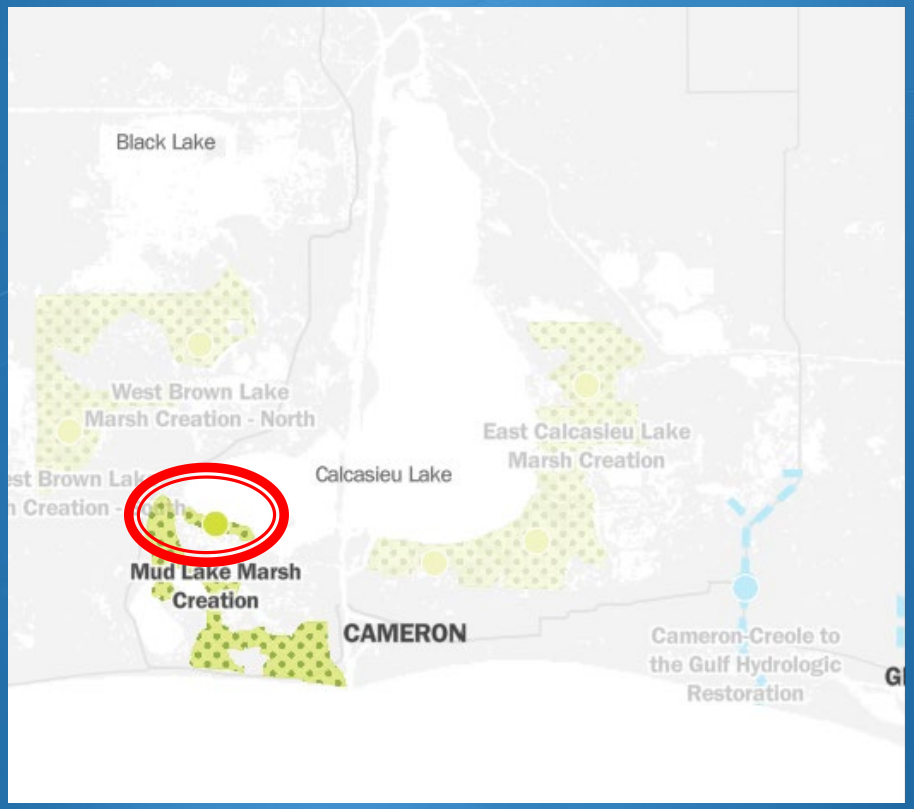




Coastal Wetlands Planning, Protection and Restoration Act

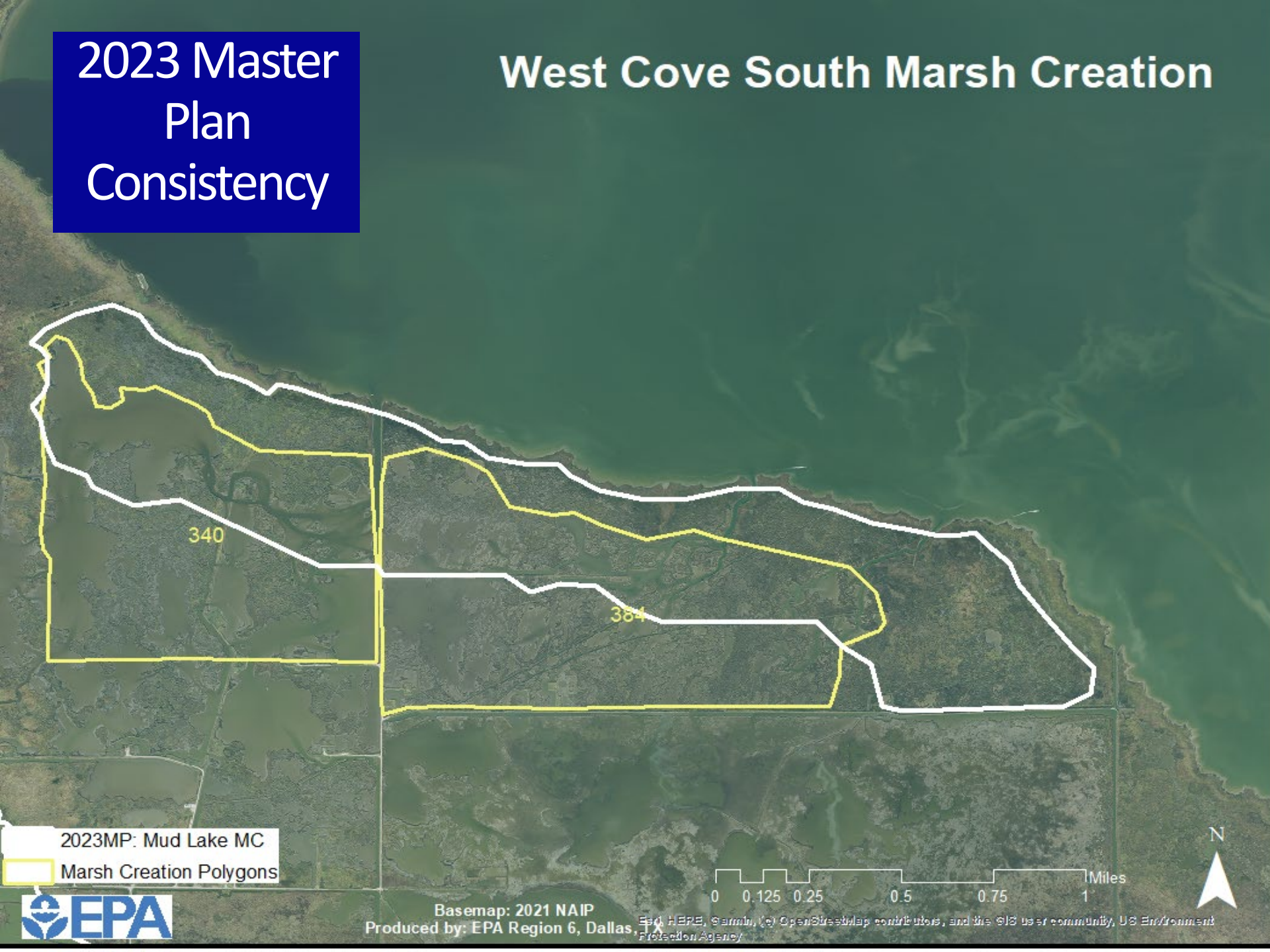
2023 Master Plan Solution

Mud Lake Marsh Creation (ID: #210): Creation of marsh within a footprint of approximately 8,100 acres at Mud Lake south of West Cove Calcasieu Lake to create new wetland habitat, restore degraded marsh, and reduce wave erosion.

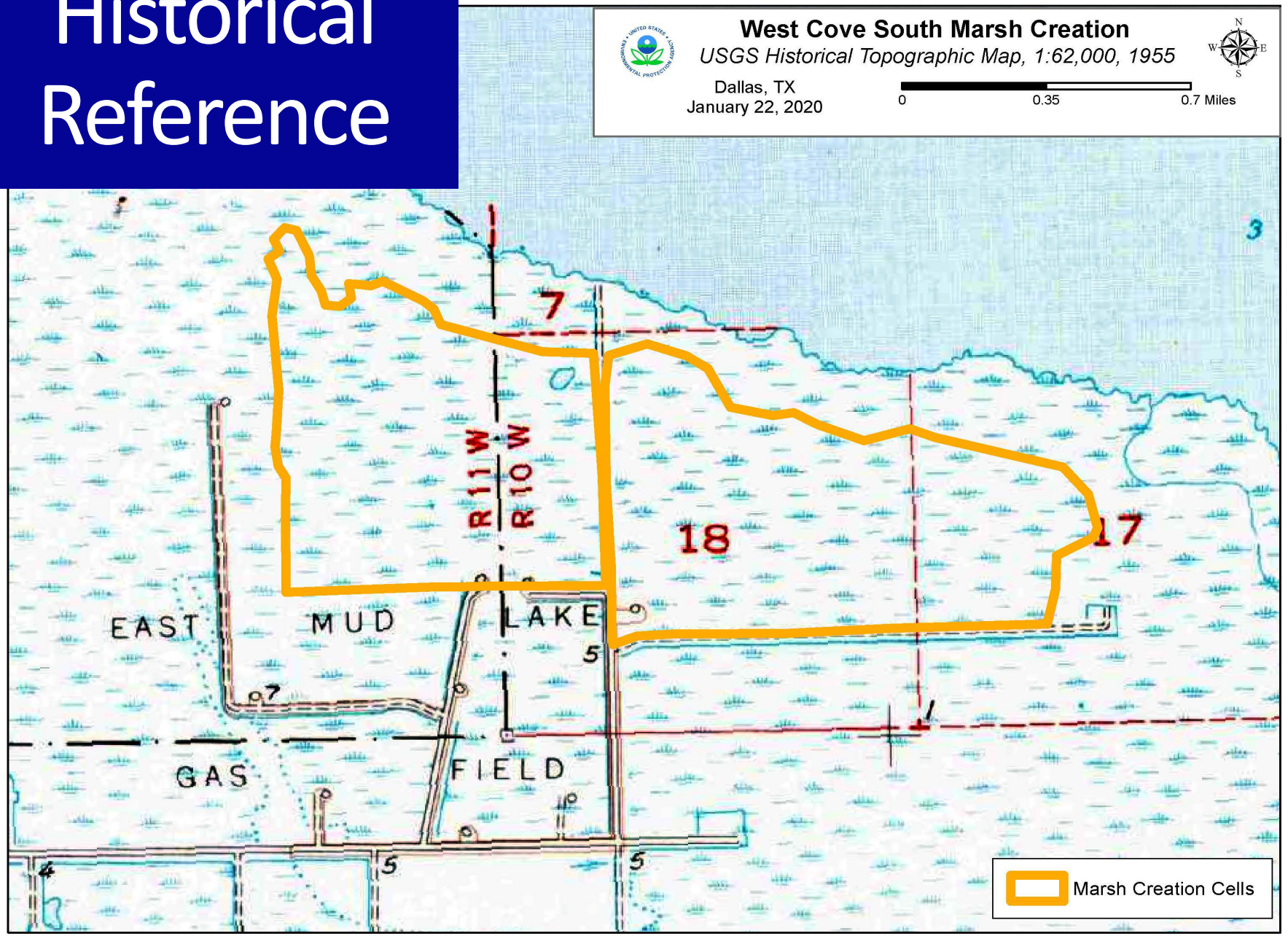


2023 Master Plan Consistency

West Cove South Marsh Creation



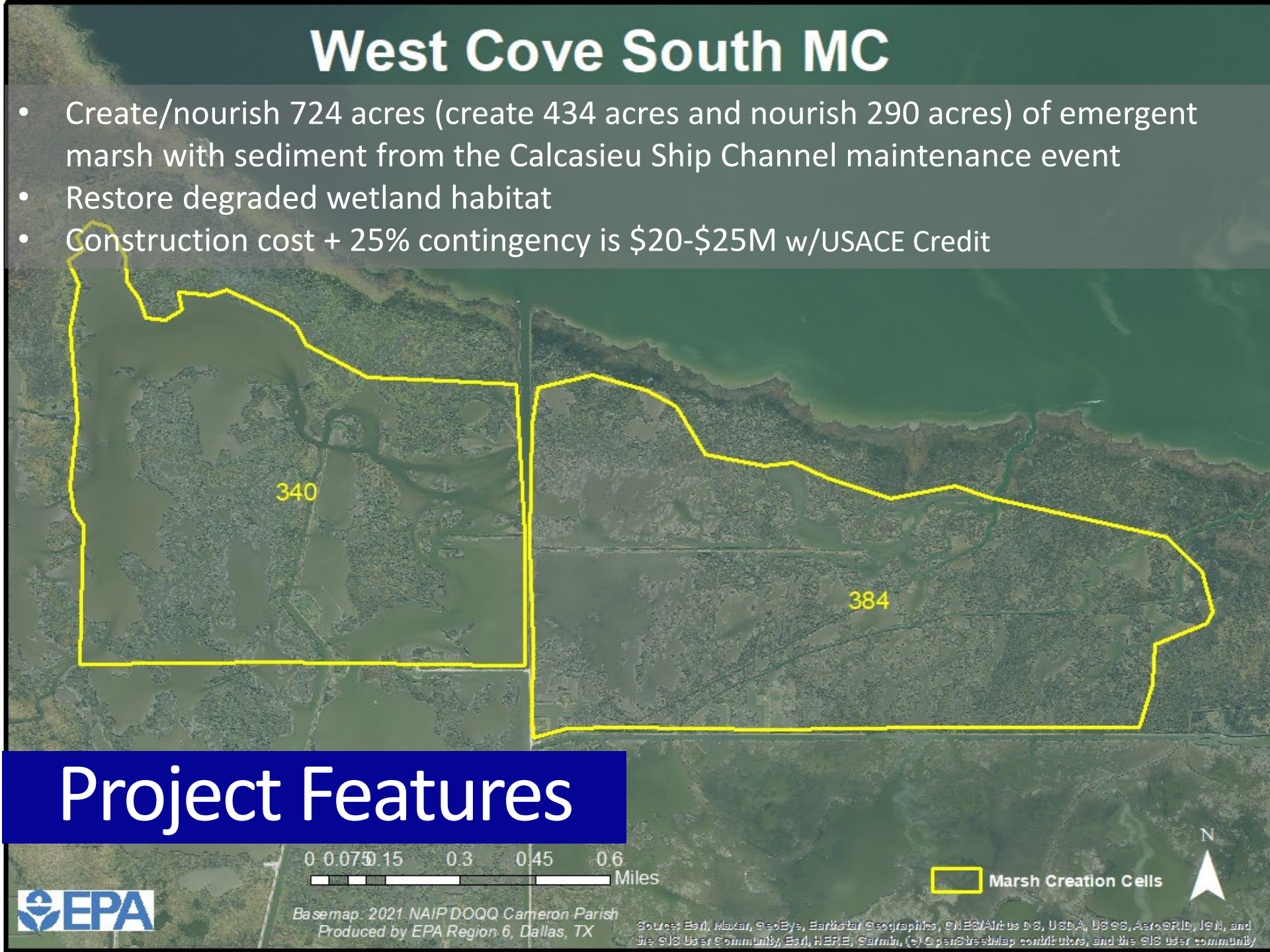
Historical Reference



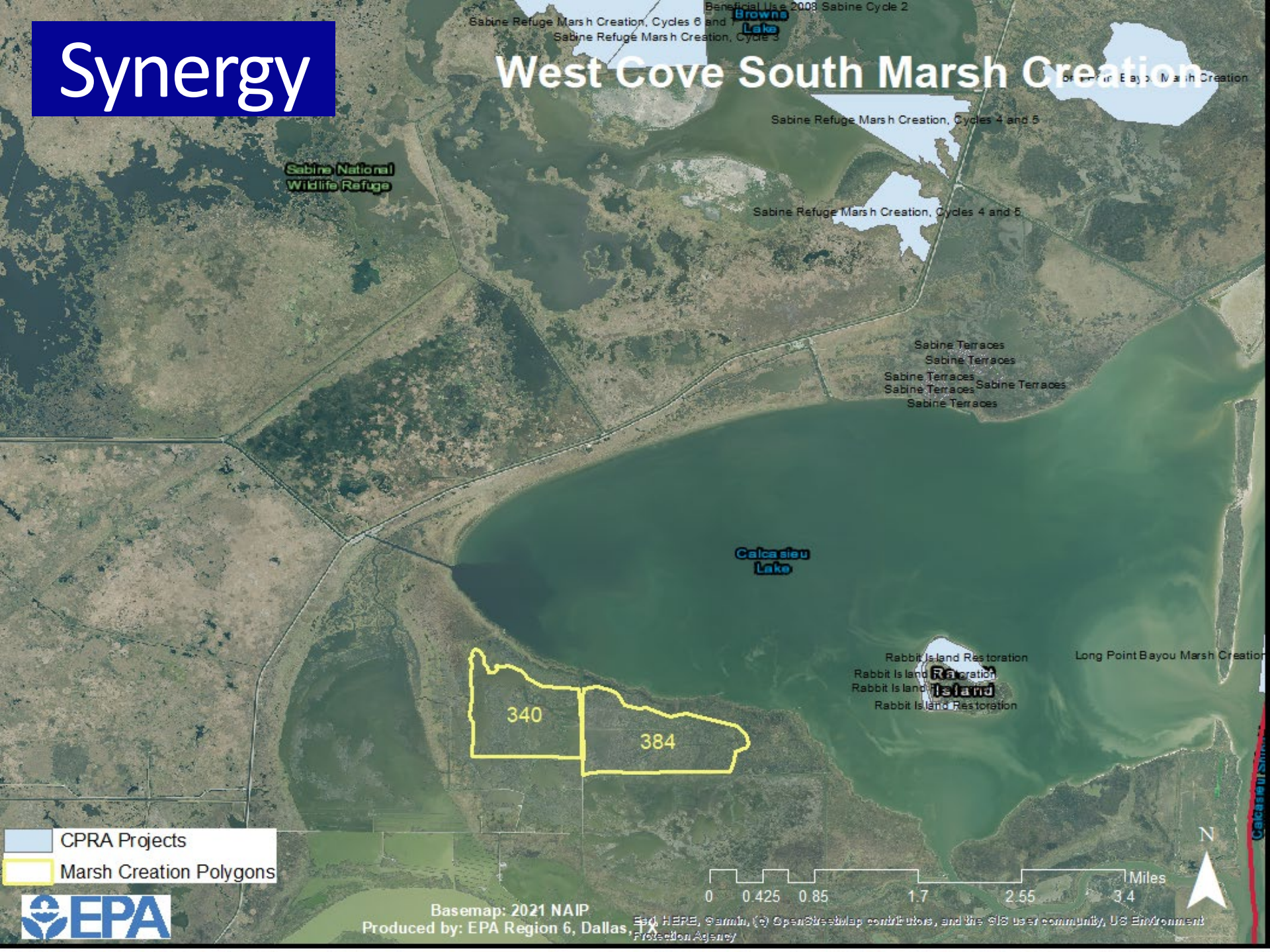
- 1955

West Cove South MC

- Create/nourish 724 acres (create 434 acres and nourish 290 acres) of emergent marsh with sediment from the Calcasieu Ship Channel maintenance event
- Restore degraded wetland habitat
- Construction cost + 25% contingency is $20-$25M w/USACE Credit



Synergy


West Cove South Marsh Creation
Beneficial Use 2008 Sabine Cycle 2
Sabine Refuge Marsh Creation, Cycles 6 and 7
Sabine Refuge Marsh Creation, Cycle 3
Browns Lake
Sabine Refuge Marsh Creation, Cycles 4 and 5
Sabine National Wildlife Refuge
Sabine Refuge Marsh Creation, Cycles 4 and 5
Sabine Terraces
Sabine Terraces
Sabine Terraces
Sabine Terraces
Sabine Terraces
Sabine Terraces
Calcasieu Lake
Rabbit Island Restoration
Rabbit Island Restoration
Rabbit Island Restoration
Rabbit Island Restoration
Long Point Bayou Marsh Creation
340
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CPRA Projects
Marsh Creation Polygons
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0 0.425 0.85 1.7 2.55 3.4
Miles
Basemap: 2021 NAIP
Produced by: EPA Region 6, Dallas, TX
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, US Environment Protection Agency

PPL34 PROJECT RPT NOMINEE FACT SHEET
January 30, 2024

Project Name
Sweet Lake Canal Marsh Creation

Project Location
Region 4, Calcasieu-Sabine Basin, Cameron Parish

Problem
Wetland loss in the Calcasieu-Sabine Basin is due to altered hydrology, drought and inundation stress, subsidence, and hurricane-induced damage. The USGS land change trend from 1985 to 2020 for the Sweet Lake Canal subunit (046) is 0.14% gain per year; however, the current condition of the project area is predominately open water. The majority of the project footprint overlaps with a marsh terrace restoration project that was constructed circa 2003, but has since eroded and subsided back to open water.

Proposed Solution
The proposed solution would be to create approximately 407 acres of tidal marsh, maintain hydrologic patterns and historic flow paths, along a salinity gradient to restore a northern portion of the Cameron Creole Watershed. Sediment will be hydraulically pumped from Calcasieu Lake into a fully contained marsh creation cell. Temporary earthen containment dikes will be constructed using internal borrow, and will be gapped within three years of construction to allow greater tidal exchange and access for estuarine organisms.

Goals
The project goal is to restore approximately 407 acres of tidal marsh in the northern portion of the Cameron Creole Watershed to the east of Calcasieu Lake.

Project Features:
Marsh Creation – 407 acres

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   The total project area is approximately 407 acres.

2) *How many acres of wetlands will be protected/created over the project life?*
   The net acre benefit range is 400-450 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 cells.

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

5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project may have minor 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) CS-04a Cameron-Creole Maintenance, 2) CS-49 Cameron-Creole Freshwater Introduction, 3) CS-54 Cameron-Creole Watershed Grand Bayou Marsh Creation, 4) Ducks Unlimited terraces, and 5) CS-87 Calcasieu-Sabine Large Scale Marsh and Hydrologic Restoration.

Considerations
Calcasieu Lake public oyster seed grounds and pipelines.

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

Preparer(s) of Fact Sheet:
Craig Gothreaux, NOAA Fisheries, 337-280-0544, craig.gothreaux@noaa.gov
Patrick Williams, NOAA Fisheries, 225-329-9268, patrick.williams@noaa.gov

PPL34 Sweet Lake Canal Marsh Creation

405 Total Project Acres

405 Acres Marsh Creation

MCA 1 – 280 acres

MCA 2 – 125 acres

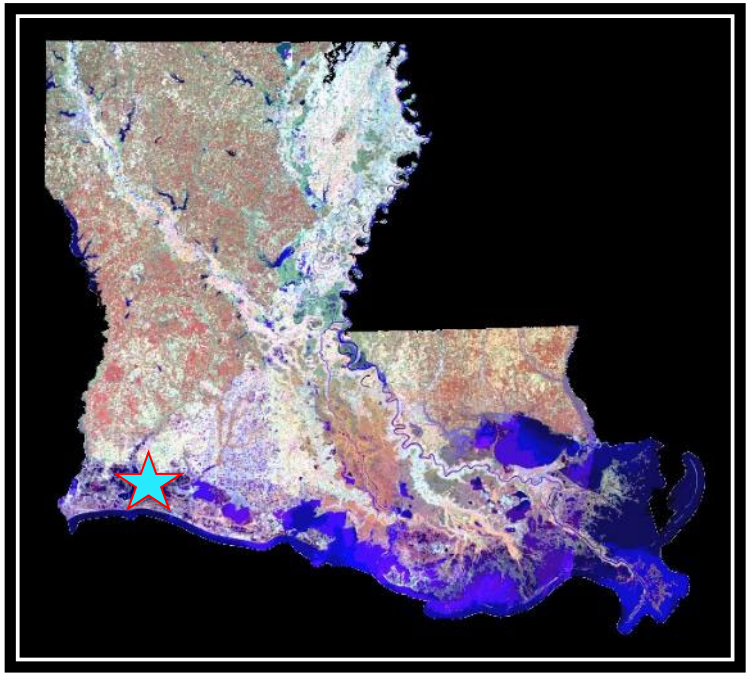
Federal Sponsor: NOAA Fisheries
2022 Google Earth Aerial Imagery
Map Date 01-24-2024

Legend

- Marsh Creation Areas
- Existing Drainage Structures
- Planned Drainage Structures

Sweet Lake Canal
Marsh Creation Project

NOAA FISHERIES



REGION 4: Calcasieu-Sabine Basin

Presenter: Craig Gothreaux, Fish Biologist, NOAA

Special Thanks

Sweet Lake Land

Miami Corporation

PPL 34 CWPPRA Regional Planning Team Meeting

January 30, 2024

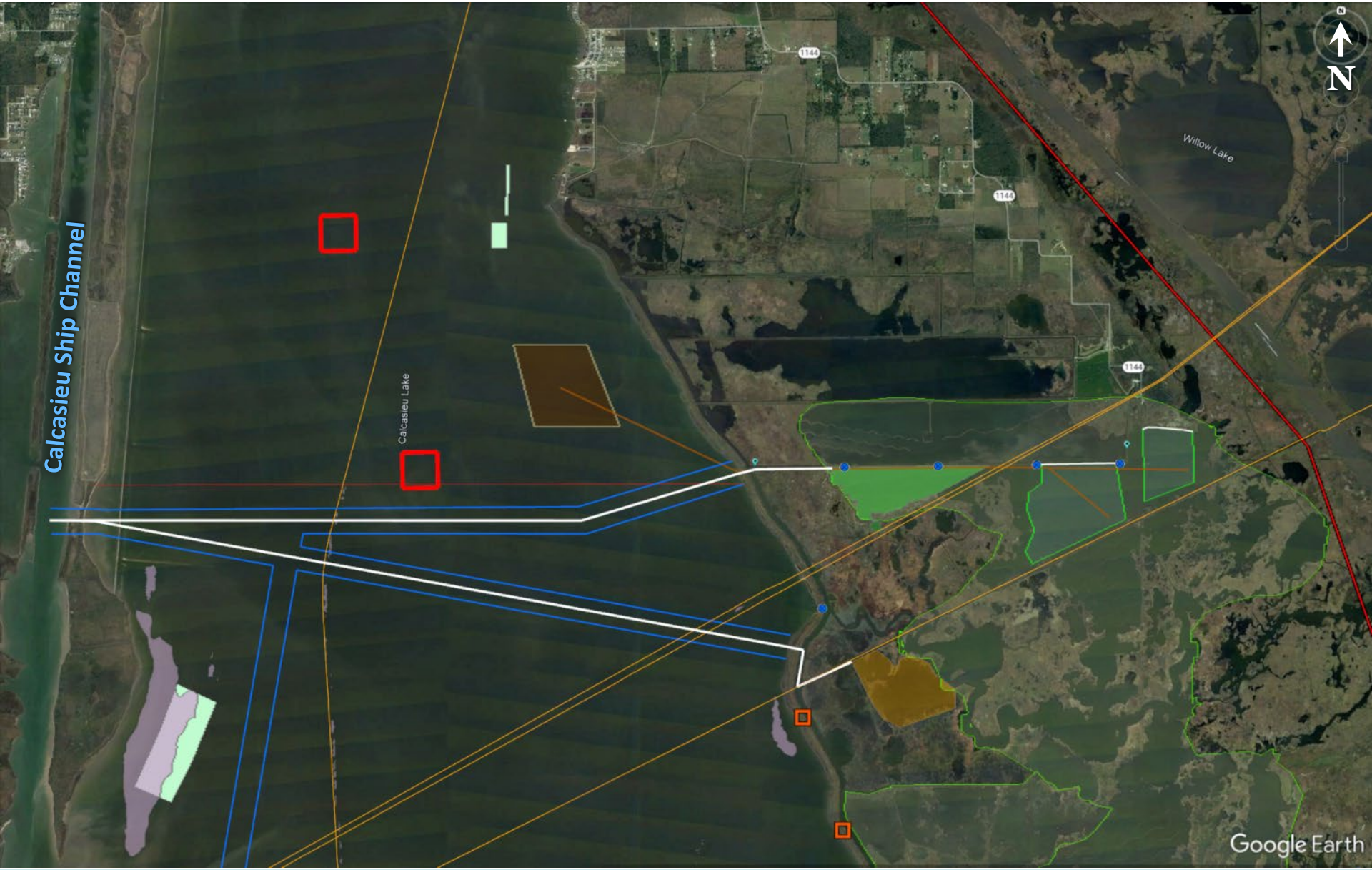
Project Vicinity

Sweet Lake Canal MC

2023 Coastal Master Plan - East Calcasieu Lake Marsh Creation Polygon

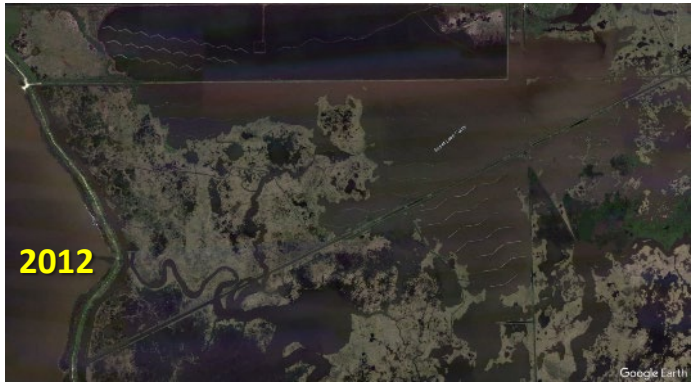
Considerations

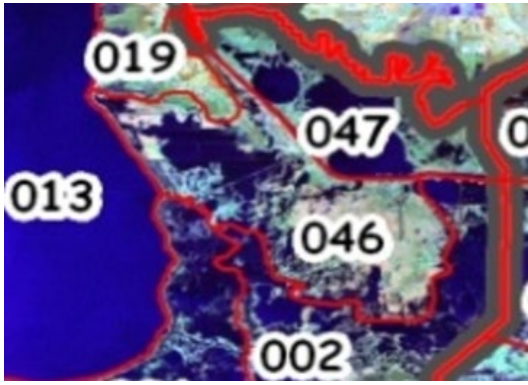
Sweet Lake Canal MC

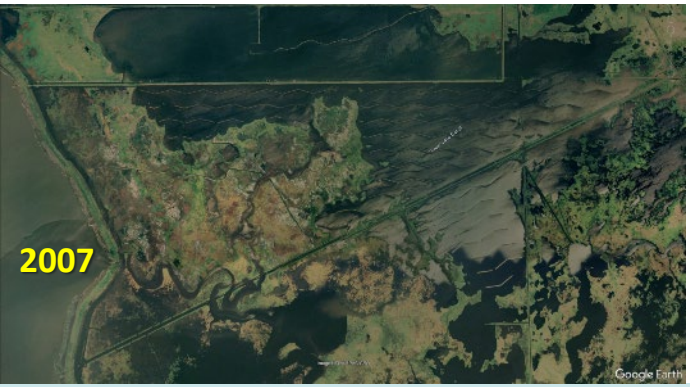


Project Area Problems

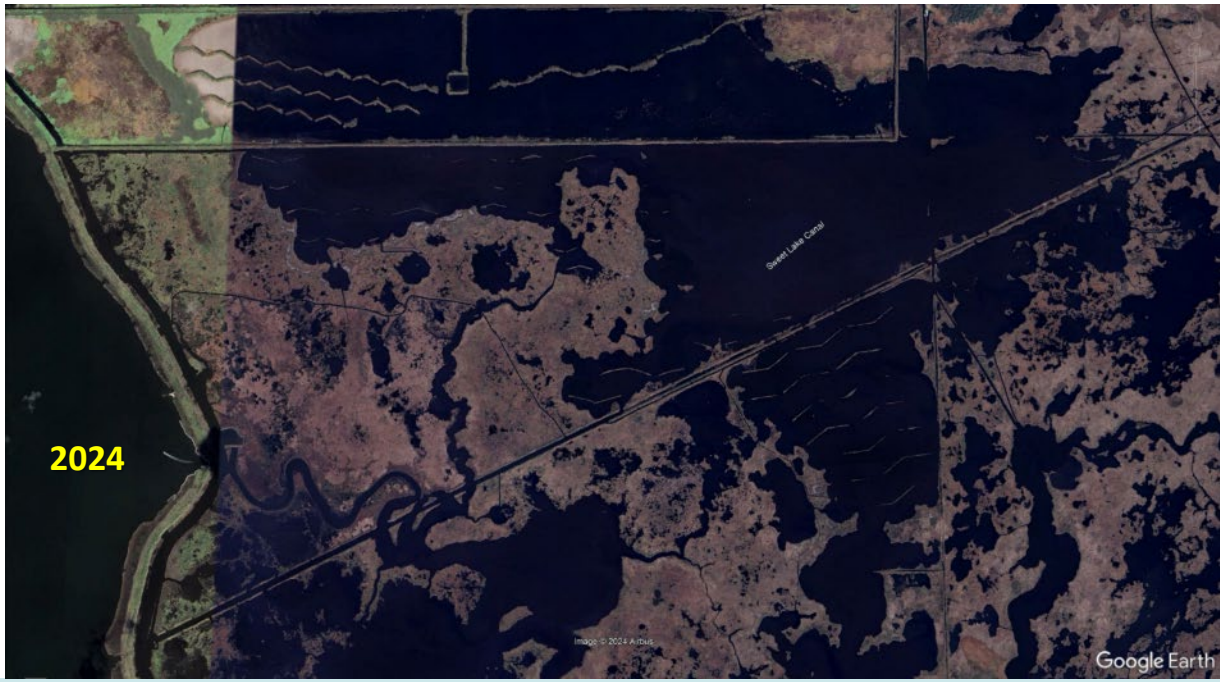
Sweet Lake Canal MC





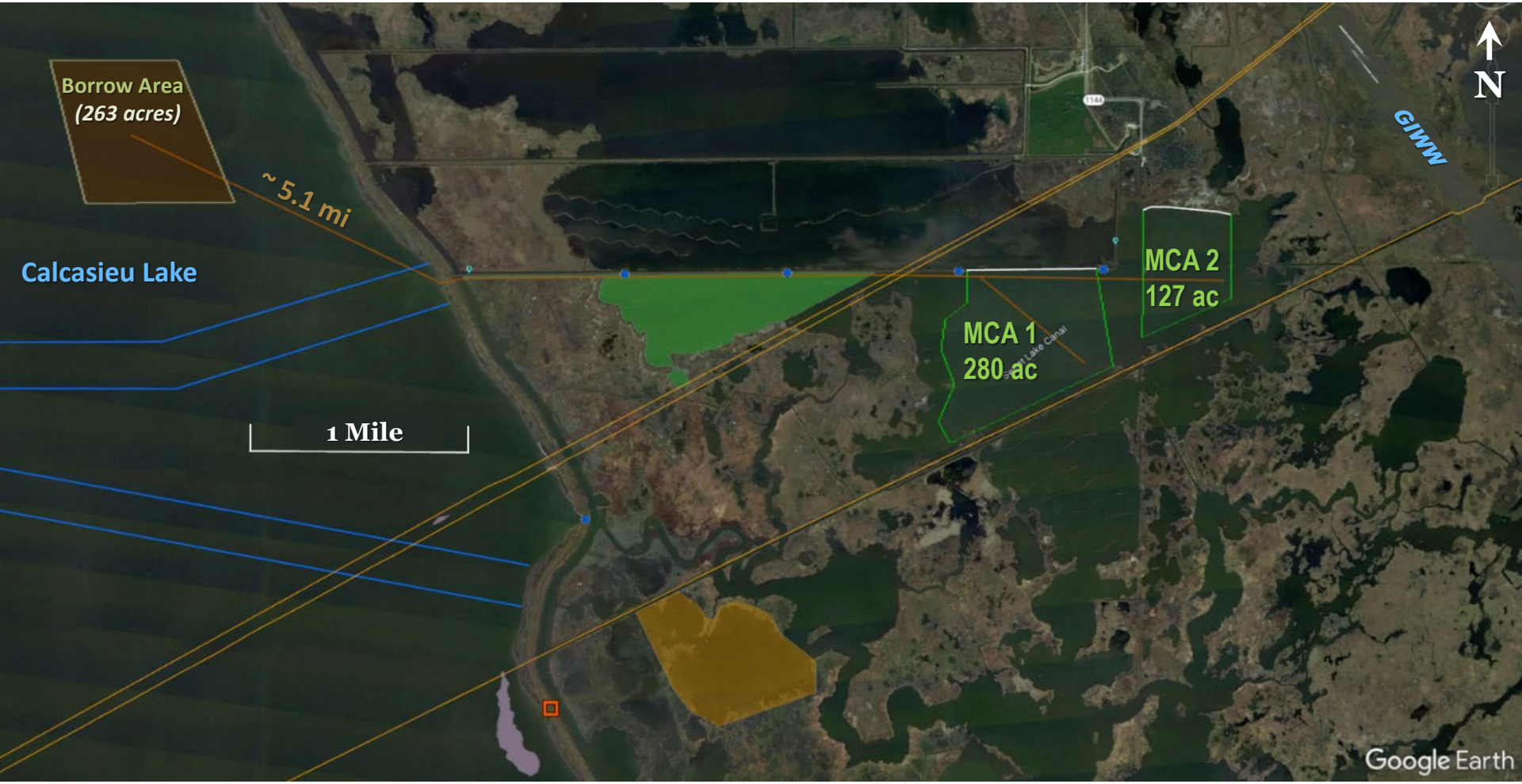


Land change rate (1985-2020 USGS data) for the Sweet Lake Canals subunit (046) is +0.14%/yr



Project Elements

Sweet Lake Canal MC



- 263 Acres Calcasieu Lake Dredge Borrow Area
  - North of DHH Harvest Line
  - 5.13 mile dredge pipeline
- 407 Total Project Acres
  - 407 acres marsh creation
  - Drainage considerations

Summary

Sweet Lake Canal Marsh Creation Project

- **407 Total Project Acres**
  - 407 Acres Marsh Creation (MCA 1 = 280 ac, MCA 2 = 127 ac)
- **Construction Cost + 25% Contingency: $20M – $25M**
- **Net Benefits: 400 – 450 Acres**

Contact information:
Patrick Williams, 225-329-9268
patrick.williams@noaa.gov

Craig Gothreaux, 337-280-0544
craig.gothreaux@noaa.gov

PPL 34 RPT Project Fact Sheet
January 30, 2024

Project Name
West Sabine Refuge – Three Bayou Marsh Creation

Project Location
Region 4, Calcasieu-Sabine (CS) Basin, western Cameron Parish, near central Sabine Lake Rim

Master Plan Consistency
Master Plan 2023, West Sabine Refuge Marsh Creation – Central, Project ID 300C/Implementation Period 1

Problem
Since initial large-scale losses caused by Hurricanes Rita (2005) and Ike (2008), this area has further deteriorated from chronic inundation (McGinnis 2019). This inundation, caused by the loss of elevation from the storm surge scour, a lack of sediment input, and rising water levels, is causing further marsh deterioration as vegetation is detaching from its substrate. From 1985 to 2020, this area (Willow Canal/Green's Bayou) experienced a land change rate of -0.07%/yr based on a USGS hyper-temporal analysis; since Hurricane Rita in 2005, land change has been -0.53%/yr based on a linear regression of the data set from 2004 to 2020.

Goals
This project would create and nourish ~500 acres of emergent marsh while relieving inundation stress by increasing marsh elevation within the marsh creation areas and by increasing drainage potential and tidal connectivity in the surrounding marsh by clearing debris from Three Bayou.

Proposed Solution
Following Three Bayou channels and higher shorelines along long-lived ponds, this project would create (375 acres) and nourish (125 acres) approximately 500 acres of marsh recently impacted by storm-surge scour and inundation. Clearing Three Bayou for the dredge pipe corridor from Sabine Lake would increase drainage potential and tidal connectivity for the surrounding marsh. Sabine Lake is currently considered as the dredge borrow source; however, an opportunity of beneficial use of dredge material for Sabine River channel maintenance will be investigated for a more sustainable and lower cost alternative.

Prelimary Project Benefits
This project would reinforce the Sabine Lake Rim/Ridge and work synergistically with CS-32 to stabilize west Sabine areas degraded by hurricanes and chronic inundation.

Considerations
All of Sabine Lake is considered oyster seed ground; borrow area would need to be coordinated with LDWF.

Project Costs

The estimated construction cost plus 25% contingency is $25-35 M. Opportunities for cost savings by using outside confinement along ponds and Three Bayou and semi-confinement along higher marsh will be investigated during PPL34 candidacy if selected as a nominee.

Preparers of Fact Sheet

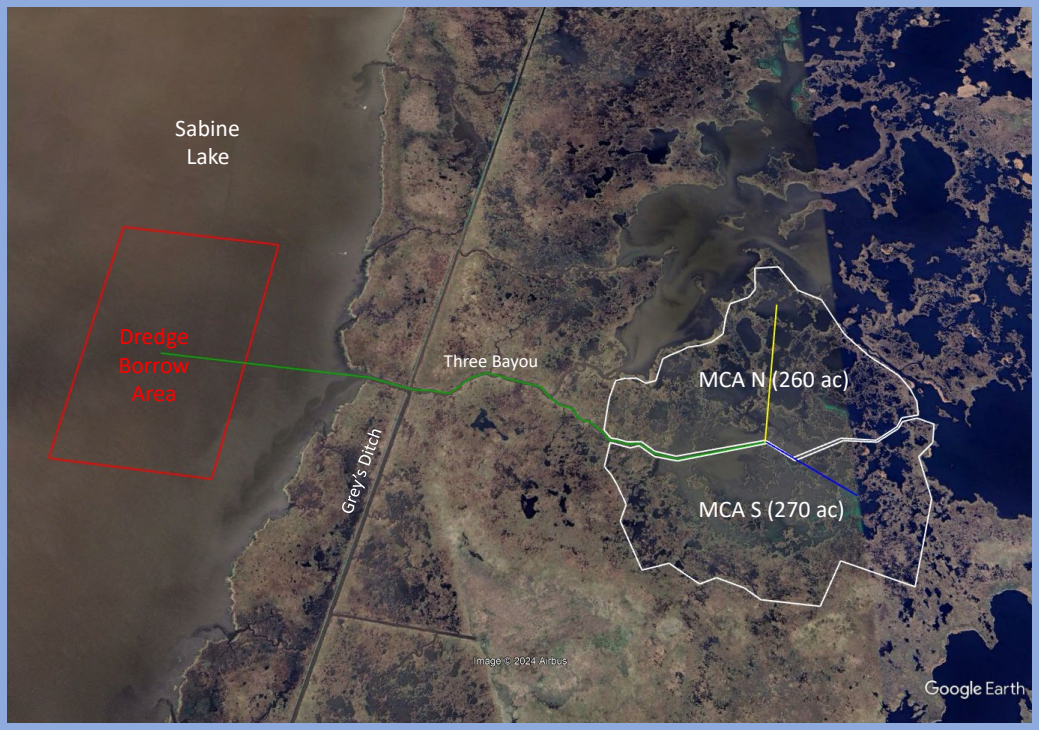
Project Map. West Sabine Marsh Creation – Three Bayou.

West Sabine – Three Bayou Marsh Creation

USDA-NRCS

Thomas McGinnis

CWPPRA PPL34 RPT Meeting – Region 4



Problem Statement

- The CS Basin Synthesis Report (2019) of CRMS data found that much of basin is **chronically inundated which leads to marsh deterioration**.

- **Sabine flood water detention**.

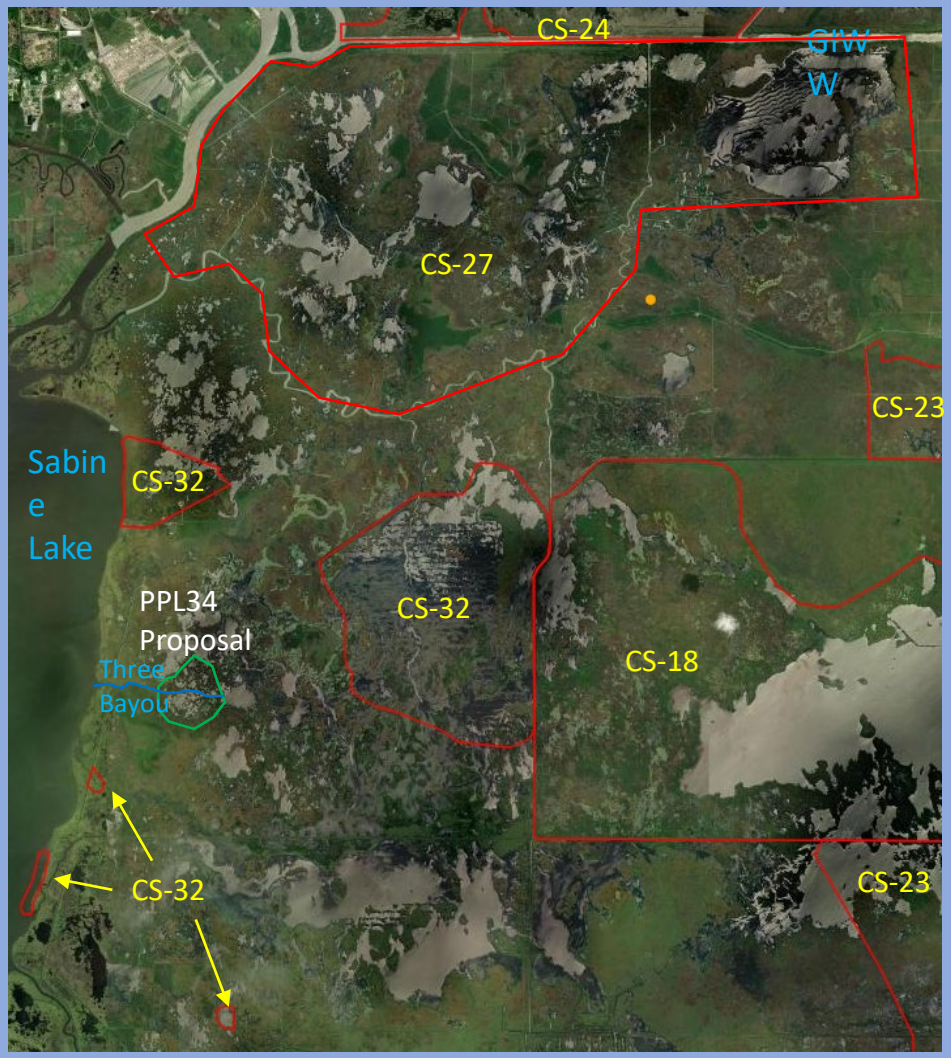
- **Three Bayou** is clogged and diffuse from **storm debris and deteriorating marsh.**

- **Land Change** since Hurricane Rita in 2005 change has been **-0.53% per year**.

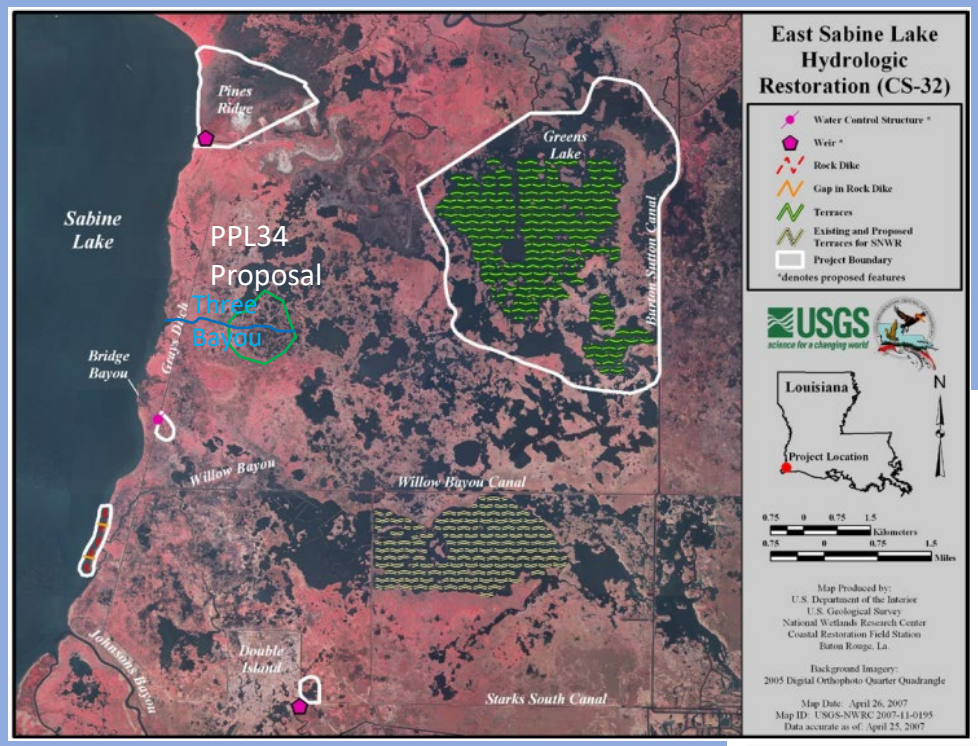
Proposed Solution

- **Create** (397 ac)/ **Nourish** (130 acres) 530 acres of **marsh**.

- **Clear and open Three Bayou** to enable improved **drainage of surrounding marsh into Sabine Lake**.

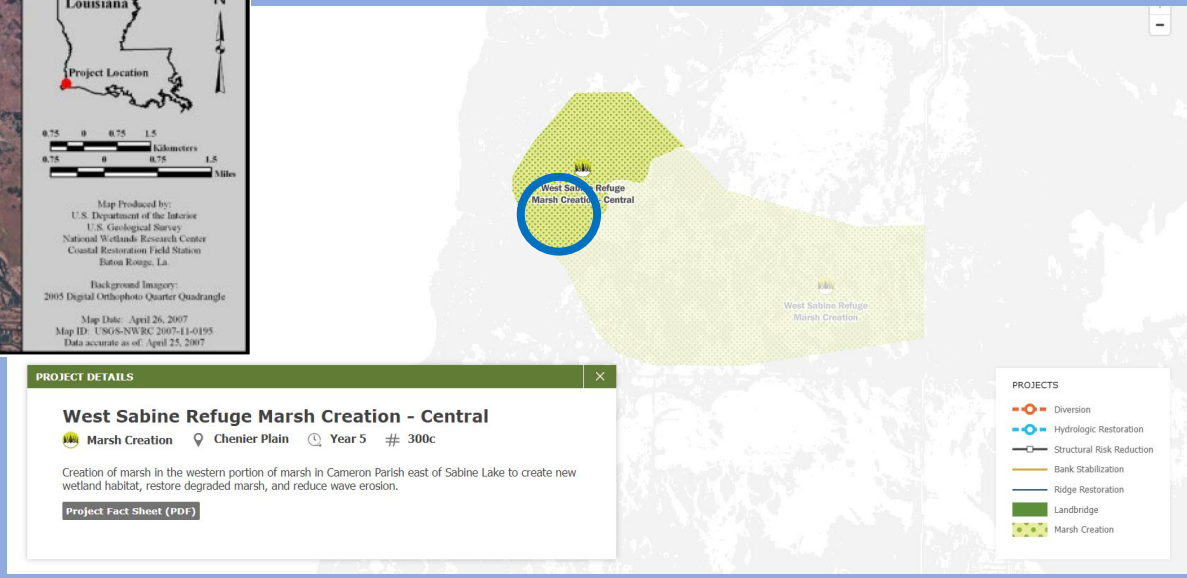


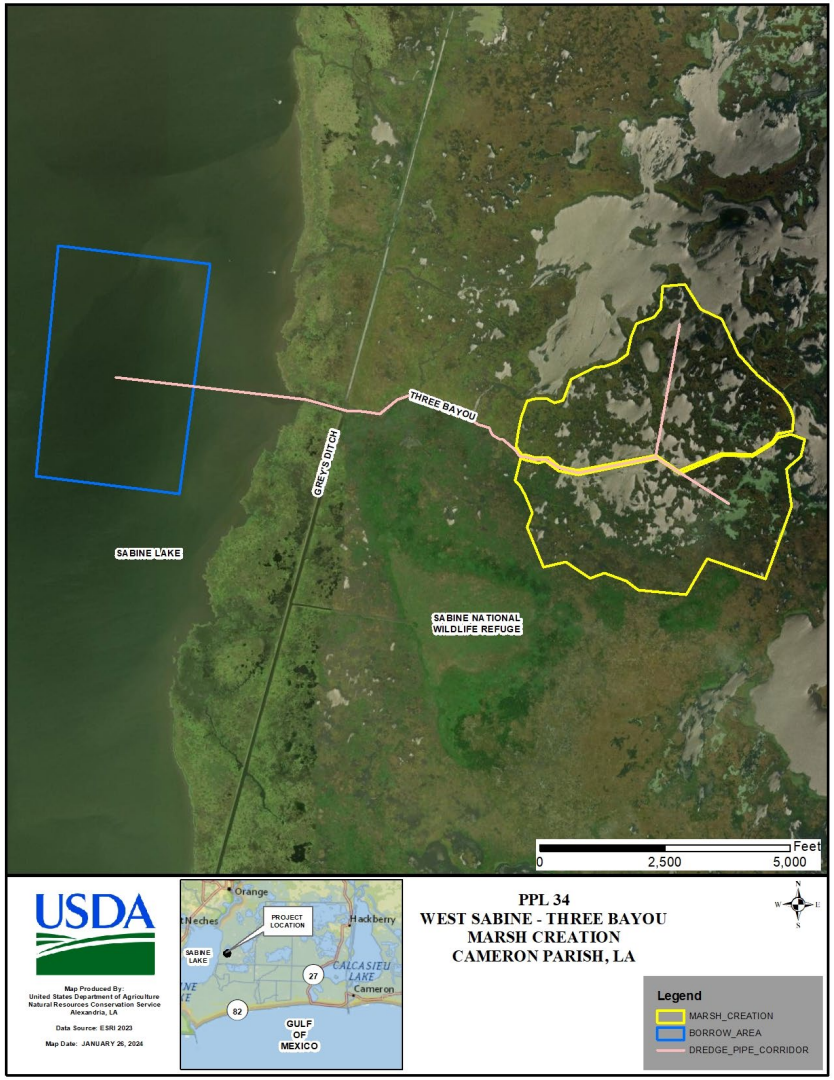
Synergy



CPRA Master Plan 2023 Consistency

West Sabine Refuge Marsh Creation – Central Implementation Period 1





West Sabine – Three Bayou Marsh Creation

- High Land Loss Rate of 0.53%/year since Hurricane Rita
- Synergistic with Existing Projects
- 530 Total Acres of Creation (397 ac)/Nourishment (130 ac)
- Construction Cost + 25% Contingency = $20-25 Million
- Supports Critical Landscape Feature along Sabine Lake Rim
- Supports Ecological Function for Louisiana and Texas

CWPPRA RPT Region 4

Mermentau Basin

PPL34 PROJECT NOMINEE FACT SHEET
January 30, 2024

Project Name
Gulf Shoreline Protection West

Project Location
Region 4, Mermentau Basin, Cameron Parish, south of Rockefeller State Wildlife Refuge

Problem
The Gulf shoreline in the vicinity of Rockefeller Refuge has some of the highest shoreline erosion rates found anywhere in Louisiana. Gulf shoreline erosion rates between Josephs Harbor and Price Lake Road, have been estimated to be 49 feet per year (1998 to 2021). After recent hurricanes, erosion rates west of Price Lake Road, were estimated to be 53 feet per year (1998 to 2019). This is equivalent to nearly 13 acres of marsh/shoreline lost per year in the project area. Without protection, the Rockefeller Refuge shoreline will continue to retreat landward, which could have substantial impacts on the refuge (including resident endangered species) as well as the surrounding area. Without stabilizing the Gulf shoreline at Rockefeller Refuge, the shoreline may retreat nearly 1,000 ft within a 20-year timespan.

Goals
The project goal is to halt Gulf shoreline erosion along a critical 2-mile-long reach where continued erosion will threaten the integrity of Price Lake Road and the watershed within Rockefeller Refuge as well as the recently constructed CWPPRA project ME-20. A total of 237 acres would be protected by the project.

Service goals include the protection of shoreline beaches designated as critical habitat for the threatened piping plover and beaches used by the threatened red knot. The project would also prevent the loss of back beach marshes which is highly likely to be occupied habitat for the recently listed black rail.

Proposed Solution
The proposed project is similar to the Rockefeller Refuge Gulf Shoreline Stabilization Project (ME-18). The project would construct 10,560 LF of foreshore breakwater with a light-weight aggregate core along the -3.5-ft (NAVD88) contour (approximately 150-ft offshore). It would extend west from the Rockefeller Shoreline Protection Project ME-37 project and parallel the shoreline with gaps every 1,500- ft. The project feature may trap sediments from the Gulf, which could result in accretion behind the breakwater as has occurred at ME-18. All Geotech an Lanrights have been obtained as well as most of the E&D.

Preliminary Project Benefits
1) *What is the total acreage benefited both directly and indirectly?*
   The total project area is approximately 293 acres (237 acres of marsh protected and 36 acres that includes the rock dike and the area between the rock dike and the shoreline) would be directly benefited.

2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 213 net acres would be protected over the 20-yr project life, which would put it in the 200-250 acres benefit range.

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)? >75%*
A 93% loss rate reduction is assumed for the Target Years 1-10 and 75% for Target Years 11-20. (Workgroup assumptions for PPL 30 Flat Lake Gulf Shoreline Protection)

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?* Yes. The project would protect marsh and beach along the Gulf of Mexico and Rockefeller Refuge.

5) *What is the net impact of the project on critical and non-critical infrastructure?*
This project would protect a large portion of Price Lake Road.

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 ME-18, ME-35, ME-37, and the ME-20 projects.

Considerations
None

Preliminary Costs
The estimated construction cost plus contingency is $30.4 million. There would be no maintenance cost associated with this project.

Preparer(s) of Fact Sheet:
Robert Dubois, FWS, 337-291-3127, robert_dubois@fws.gov

Gulf Shoreline Protection West (PPL33 Candidate)

N

Shoreline Protection

Project Boundary

Note: All features are proposed.

0.3 0 0.3 0.6 Kilometers

0.3 0 0.3 0.6 Miles

Scale: 1:25,000

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: 2023-11-0024
Map Date: July 11, 2023

PPL34

Gulf Shoreline Protection - West

Region 4, Mermentau Basin

Contact:
Robert Dubois
Fish and Wildlife Biologist
robert_dubois@fws.gov
(337) 291-3127

2023 State Master Plan – Gulf Shoreline Protection - West

PROGRAMMATIC RESTORATION PROJECTS

CPRA implements several types of projects that are not individually identified in the master plan. With the exception of barrier island maintenance, these projects are often smaller scale, designed to address site-specific issues, and typically provide highly localized benefits. While these types of projects are not explicitly listed in the plan, they are consistent with the master plan. More information on programmatic restoration projects can be found on p. 64.


Barrier Island Maintenance


Oyster Reef Restoration


Shoreline Protection


Bank Stabilization

Programmatic Restoration

U.S. Fish & Wildlife Service

Louisiana Ecological Services

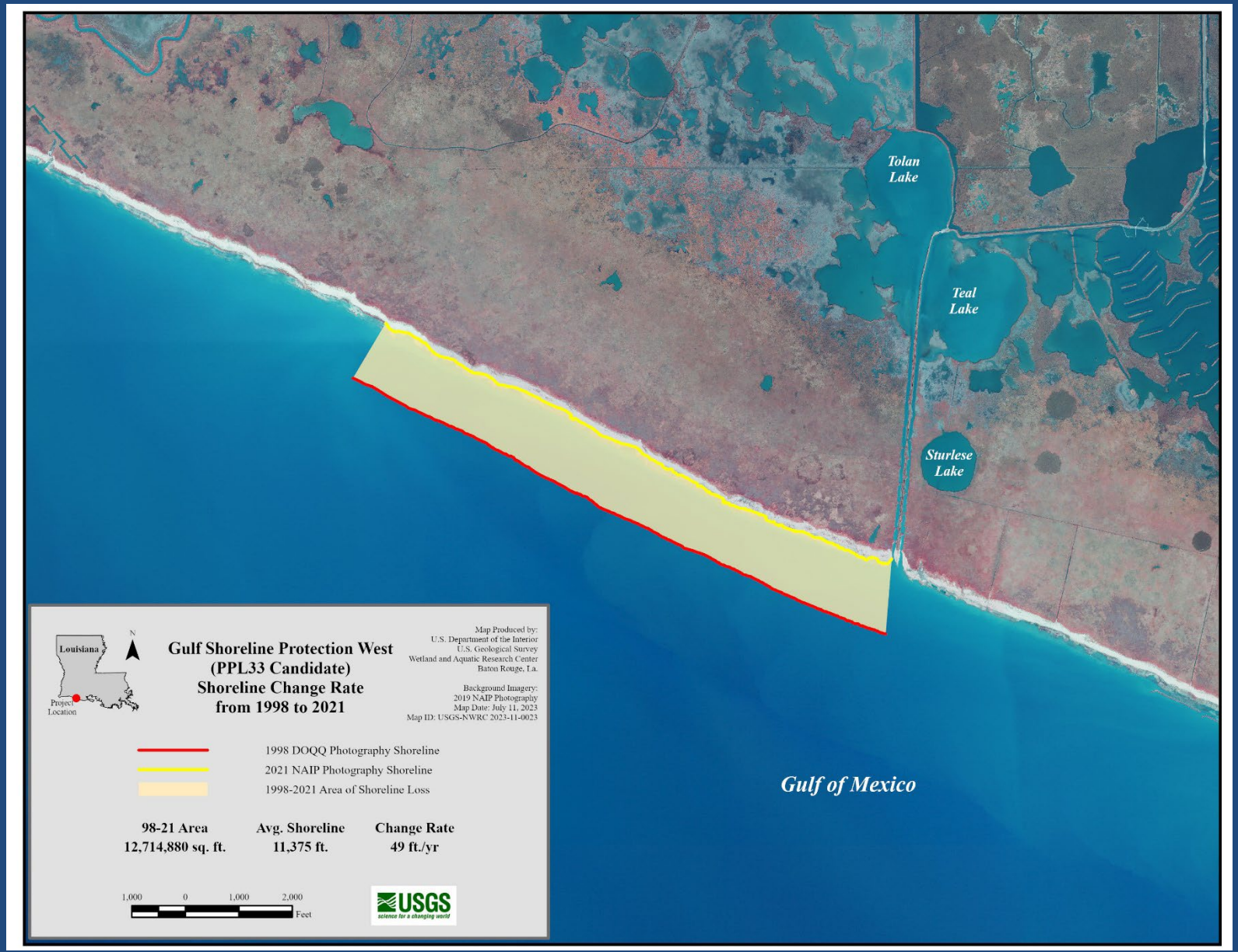
Rockefeller Refuge

Shoreline Protection

ME-18, ME-37, ME-35

PPL34
Gulf Shoreline Protection West
Cameron Parish, Louisiana

Gulf Shoreline Loss Rate




RIGID

Accretion behind ME-18

Gulf Shoreline Protection - West

- 223 acres of marsh protected
- 10,560 ft (2 miles) of Gulf shoreline protected
- Net acres = 213
  200 - 250
- Construction plus contingency
  $30 M - $35 M
- Synergistic with ME-20, ME-18, ME-37, ME-35
- Protects Rockefeller Refuge (State Refuge)
- Critical Habitat for threatened– Piping Plover, Red Knot

GULF SHORELINE PROTECTION

WEST

PPL34 PROJECT NOMINEE FACT SHEET
January 30, 2024

Project Name
Pecan Island Marsh Restoration

Project Location
Region 4, Mermentau Basin, southeastern Vermilion Parish, near Pecan Island, Louisiana

Problem
The project is located within the Chenier Sub-basin. Storms, saltwater intrusion, elevated water levels/prolonged flooding, oil and gas exploration, and land use practices have contributed to wetland loss in the project area. Synoptic spikes in wetland loss have occurred with storms along with historic persistent loss. Most of the wetland loss south of Pecan Island occurred in the latter half of the 20th century resulting in expansive open water areas creating risk for and reducing resiliency of habitat and nearby infrastructure. The USGS 1985 to 2020 loss rate is -0.21%/yr for the Rockefeller/Pecan Island mapping unit.

Goals
The project goal is to create approximately 300 acres of marsh and nourish 15 acres of marsh to remain within the MLW to MHW the maximum duration over 20 years. Additional project goals include creating edge habitat and reducing wave fetch by constructing approximately 14,000 linear feet of terraces.

Proposed Solution
The proposed solution is to restore wetland habitat by creating and nourishing marsh and constructing terraces in a manner nearby and parallel to Highway 82. Sediment would be mined from White Lake, delivered by a conveyance pipe down Pecan Island Canal (aka Mill Canal), across Highway 82, and placed in a confined area to create and nourish 315 acres of marsh south of Pecan Island. Crossing Louisiana Highway 82 would either occur through the ME-01a culverts or near the southern terminal end of Pecan Island Canal. Approximately one mile of pumping distance would be saved if a road crossing near the southern end of Pecan Island is possible. Additionally, 14,000 linear feet of earthen terraces would be constructed and planted. The marsh creation area and terrace field is located nearby and parallel to Highway 82 along the north side of an expansive open water area south of Pecan Island to break up wave fetch. Containment dikes would be gapped to the constructed marsh fill elevation at the end of construction for dewatering and gapped or degraded no later than year three after construction to establish tidal exchange.

Preliminary Project Benefits
1) *What is the total acreage benefited both directly and indirectly*? The total acres benefited is 527 acres (300 acres marsh creation, 15 acres marsh nourishment, and 212 acres terrace field).

2) *How many acres of wetlands will be protected/created over the project life*? The total net acres of marsh protected/created over the project life is approximately 300 - 350 acres (294 net

from marsh creation and 8 acres net from terracing). Additional benefit from promoting colonization of submerged aquatic vegetation is expected.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%).* The anticipated loss rate reduction throughout the area of direct benefits (marsh creation and terraces combined) over the project life is 25 – 49%.

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.* Although the project does not directly restore a ridge or chenier, it provides a buffer for Pecan Island.

5) *What is the net impact of the project on critical and non-critical infrastructure*? The project would have a net positive impact on critical infrastructure consisting of Louisiana Highway 82 and residences as well as positive impact and non-critical infrastructure consisting of flowlines.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects*? The project would work synergistically with ME-01a (Pecan Island Freshwater Introduction) and ME-14 (Pecan Island Terracing).

Considerations

Considerations for this project include pipelines/utilities and Eastern Black Rail.

Preliminary Cost

The estimated constructed cost + 25% contingency range is $30M - $35M.

Preparer of Fact Sheet

Patrick Williams, NOAA, (225) 400-5943, patrick.williams@noaa.gov
John Foret, Rainey Conservation Alliance, (337) 322-1701, jdforet@fenstermaker.com

0 1 2 Miles

N
W E
S

Legend

- Borrow Area
- Terrace Field
- Marsh Creation

PECAN ISLAND MARSH RESTORATION

VERMILLION PARISH, LOUISIANA

REVISED BY: ETB
DATE: 1/31/2023
PROJ. MGR: JDF

Path: R:\Proposals__Proposals - OneCompany\Rainey Conservation Alliance\Avery Island Marsh Creation\Avery Island Marsh Creation_Elliot_2_0.aprx

C.H. Fenstermaker & Associates, L.L.C. 135 Regency Sq. Lafayette, LA 70508, Ph. 337-237-2200 Fax. 337-232-3299 www.fenstermaker.com

Pecan Island Marsh Restoration Project

CWPPRA Project Priority List 34, Region 4 Nomination

January 31, 2024

Pecan Island Marsh Restoration

Consistent with Louisiana's 2023 Coastal Mater Plan

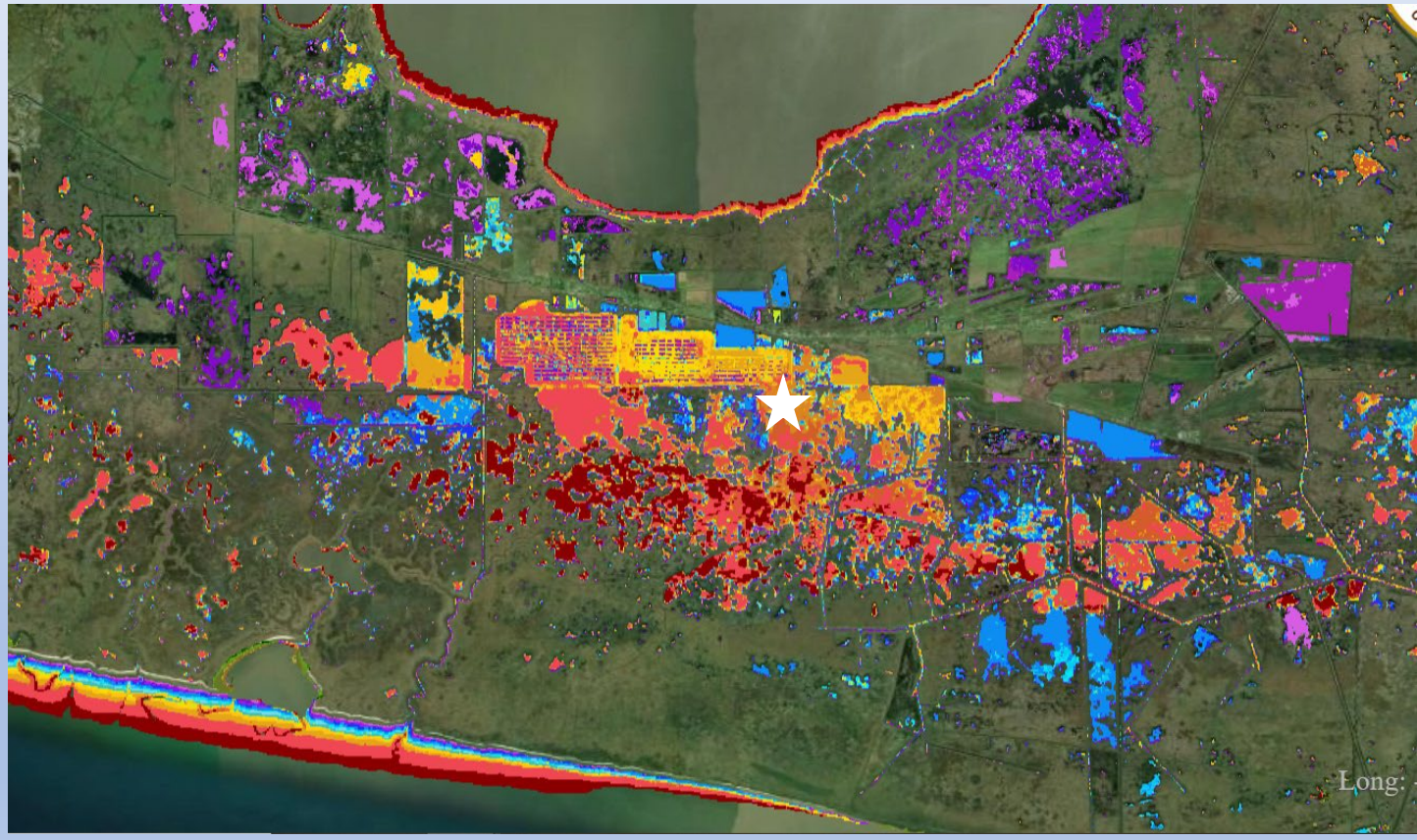
Project Location:
Region 4, Mermentau Basin, located nearby and parallel to Pecan Island

Pecan Island Marsh Restoration

Problem:

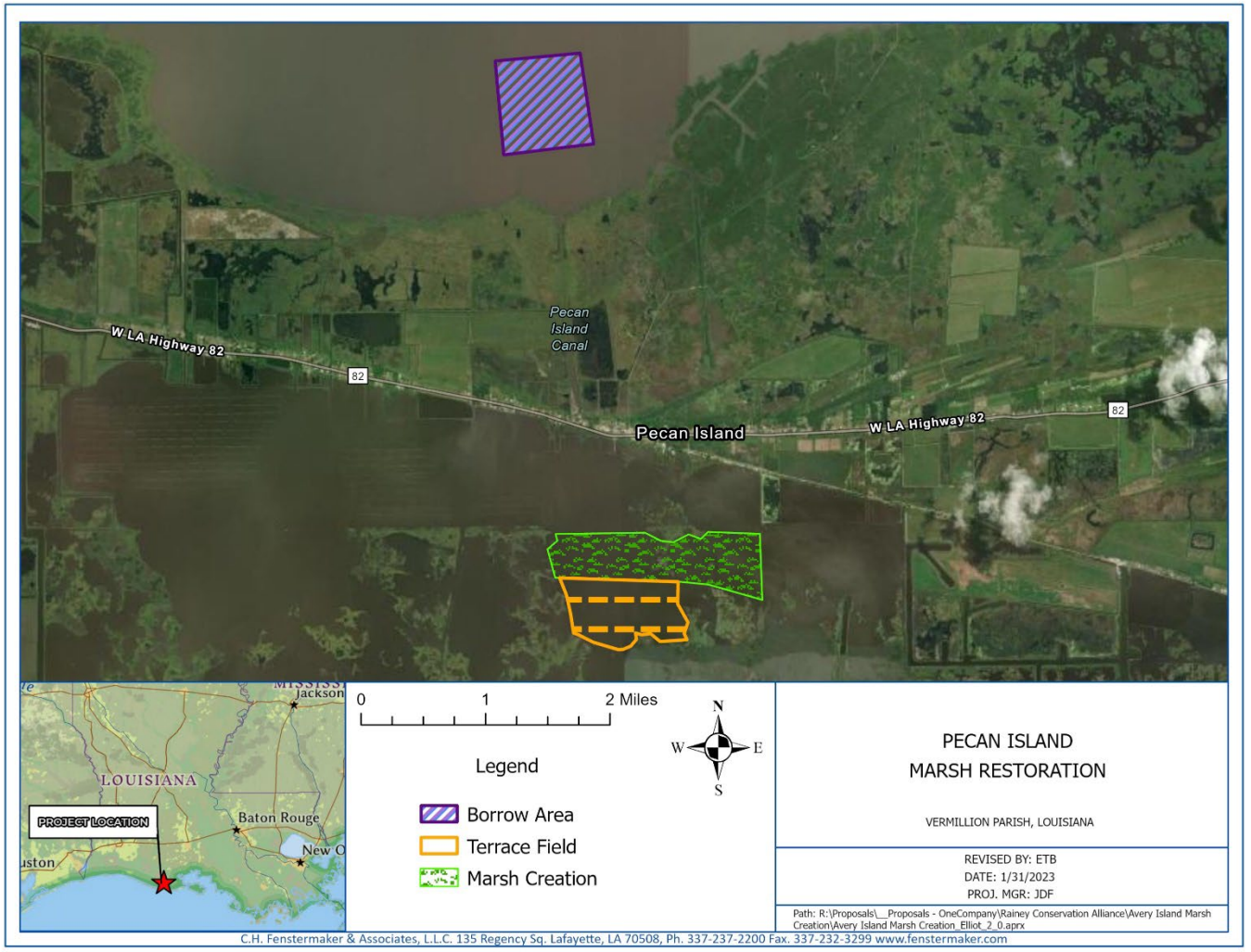
Marsh losses in the Chenier Sub-basin have occurred from storms, saltwater intrusion, flooding, oil and gas exploration, and land use practices. USGS estimates that the area has a loss rate of about -0.21 %/yr from 1985 to 2020. However, much of loss in the area predates this time period.

-0.21%/yr 1985 to 2020



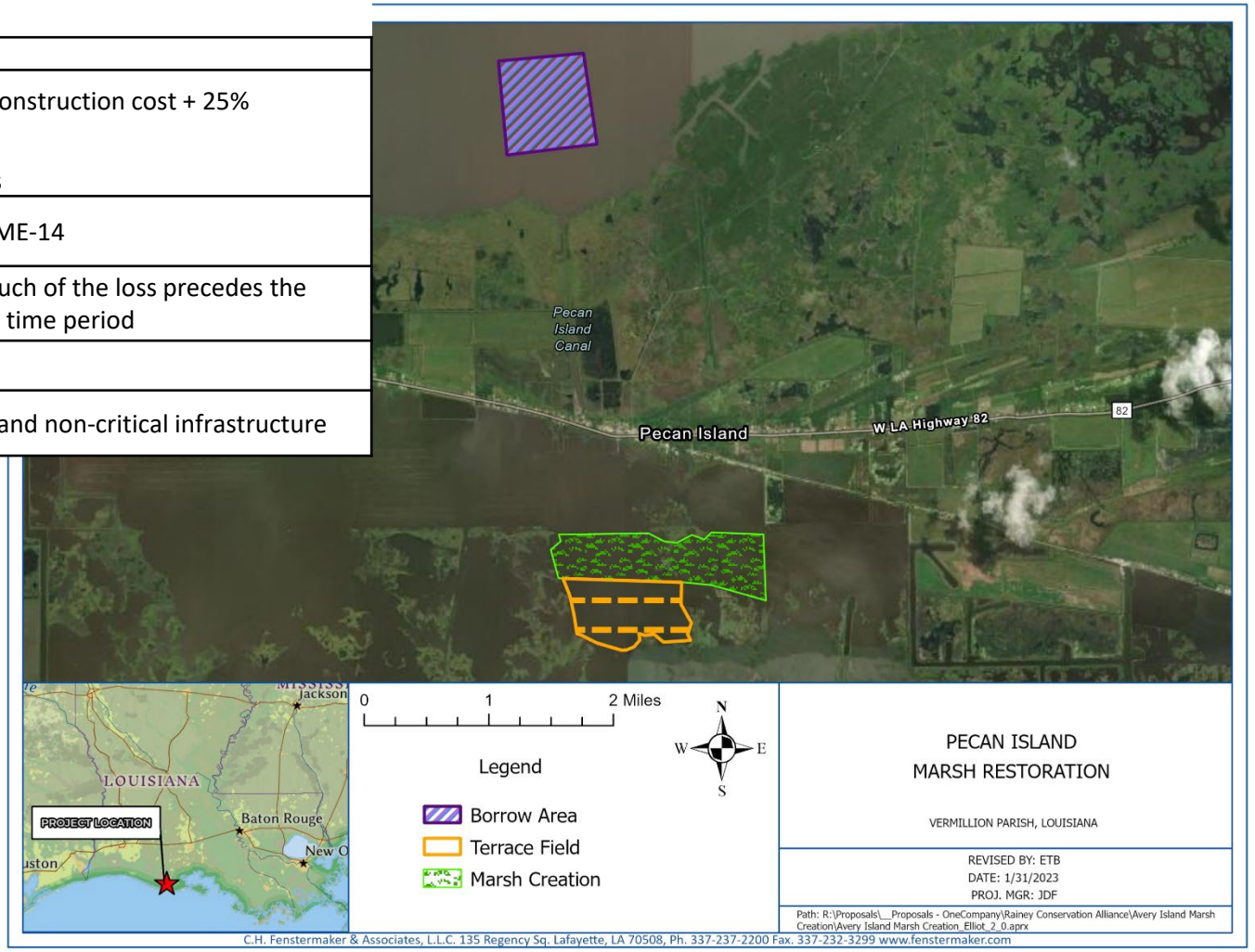
Goals: As increment one of an overall approach nearby and parallel to Pecan Island, create/nourish approximately 315 acres of marsh habitat nearby and parallel with Pecan Island in a manner for the restored marsh to remain in the MLW to MWH for the maximum duration over 20 yrs. Create edge habitat, reduce wave fetch, and promote SAV colonization by constructing terraces.

Proposed Solution: Sediments will be hydraulically dredged and pumped down Pecan Island Canal via pipeline from a borrow site located in the White Lake to create/nourish approximately 315 acres of marsh. Construct approximately 14,000 linear feet of terraces.



Key Points:

Criteria	
Cost Effectiveness	$30 - $35M construction cost + 25% contingency 302 net acres
Synergy	ME-01a and ME-14
Critical Area of Need	-0.21%/yr; much of the loss precedes the 1985 to 2020 time period
Critical Landscape Feature	Pecan Island
Critical Infrastructure Protection	Pecan Island and non-critical infrastructure



Preparers of the Fact Sheet:
John D. Foret, Ph.D., Rainey Conservation Alliance, (337) 322.1701; jdforet@fenstermaker.com

Patrick Williams, NOAA, (225) 400-5943; patrick.williams@noaa.gov

PPL34 PROJECT NOMINEE FACT SHEET
January 30, 2024

Project Name
Grand Chenier Marsh Creation

Project Location
Region 4, Mermentau Basin, Cameron Parish, South of LA Highway 82 just south of Grand Chenier.

Problem
The marshes within the Hog Bayou watershed have severely deteriorated to mostly open water due to limited freshwater input, saltwater intrusion, subsidence and storm damage. There is little marsh left over a broad area that stretches from the Gulf of Mexio up to LA Highway 82 which makes the community of Grand Chenier extremely vulnerable to elevated tidal events even during normal highs but particularly to the effects of tropical storms. As a result, the effects have been catastrophic to the cheniers as evidenced by the recent occurrence of live oak "ghost forests" that line the highway. The regional loss rate is -0.27% per year but the most recent project in the area (ME-32) loss was determined by USGS to be -1.04% per year. The regional subsidence rate is 3.8 mm/y. The project is consistent with the 2023 State Master Plan objective #207-South Grand Chenier Marsh Creation.

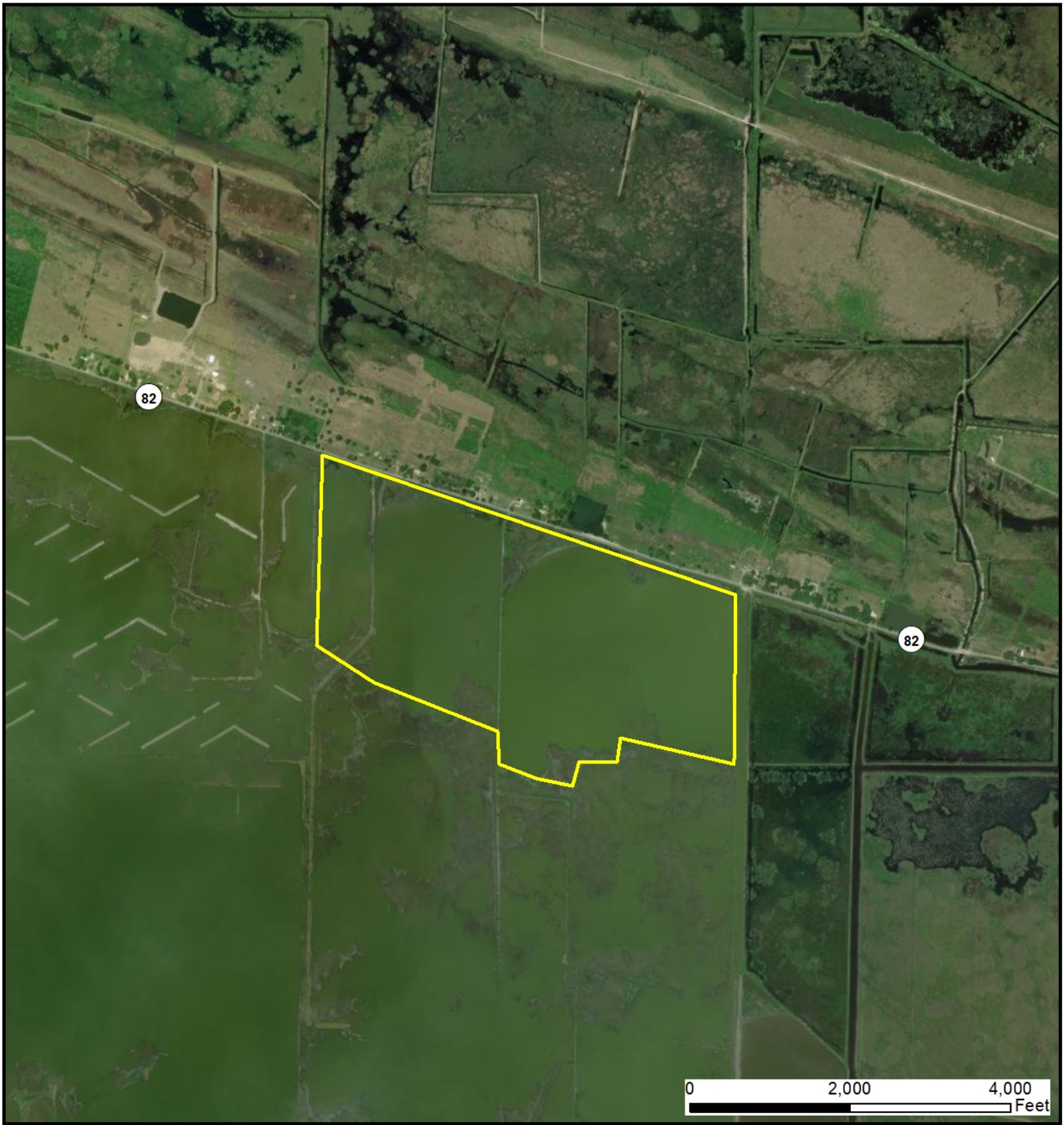
Goals
The primary goals of this project are to create/nourish marsh habitat in an area located in the northern portion of the watershed that abuts LA HWY 82. The project will be designed to be synergistic with the ME-20 South Grand Chenier and ME-32 South Grand Chenier (Baker Tract) projects providing additional protection to the community of Grand Chenier. Material will be borrowed from Upper Mud Lake, which the Mermentau River flows through, and has become heavily silted from river deposits. Dredging this location will provide mutual benefits of restoring depth to the interior lakes while beneficially using the material to create much needed coastal marsh.

Proposed Solution
Sediments will be hydraulically dredged and pumped via pipeline from a borrow site located in Upper Mud Lake to create/nourish approximately 309 acres of marsh.

Project Benefits
The project is expected to initially create/nourish approximately 309 acres of marsh.

Preliminary Cost
The estimated construction cost plus 25% contingency is $25M - $30M.

Preparer of Fact Sheet
Ron Boustany, NRCS, (337) 291-3067, ron.boustany@.usda.gov



USDA

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

Data Source: ESRI 2023

Map Date: JANUARY 24, 2024

PPL34
GRAND CHENIER
MARSH CREATION
CAMRON PARISH, LA

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S

Legend

MARSH_CREATION

PPL34

Grand Chenier Marsh Creation

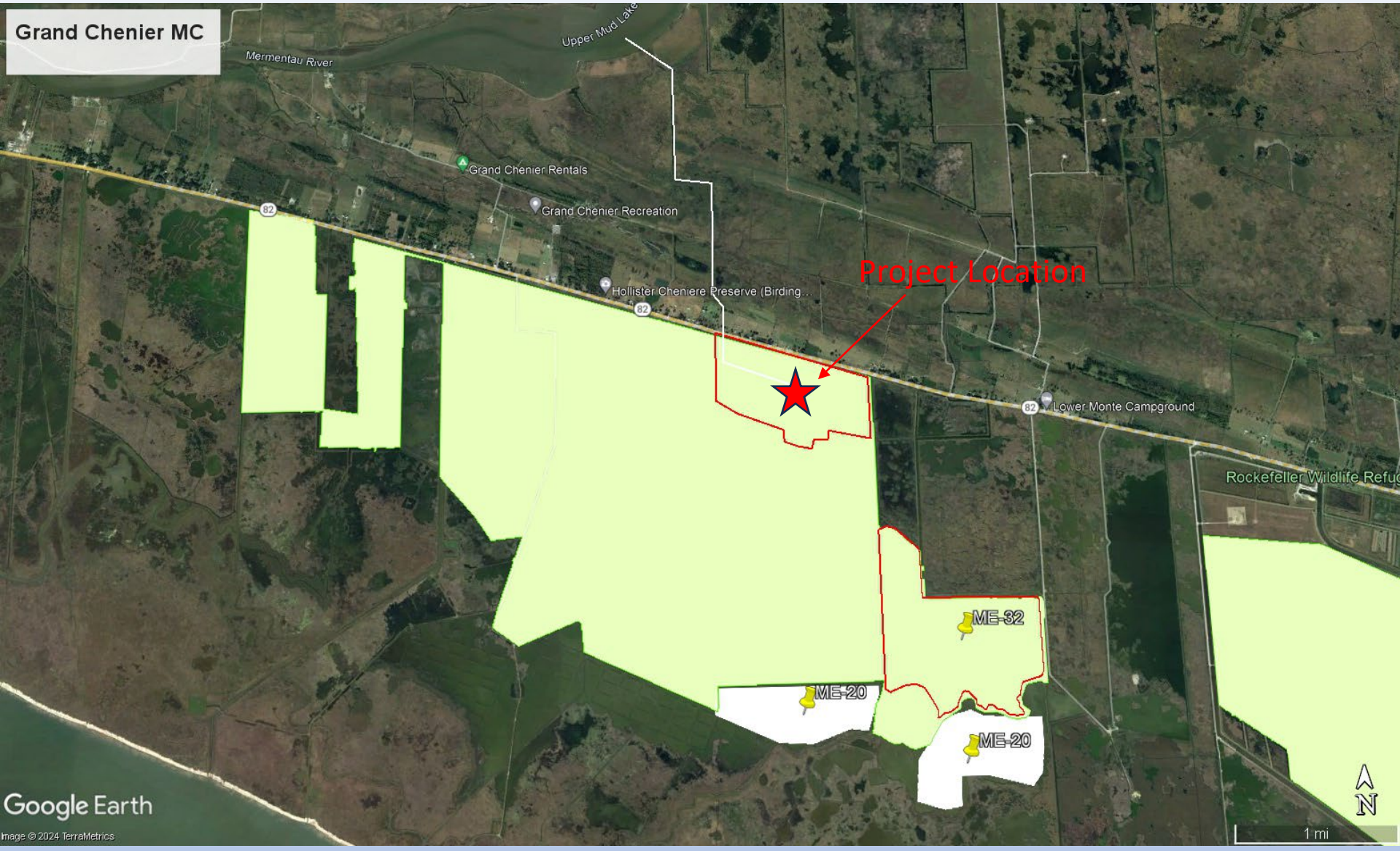
Ron Boustany, Biologist, NRCS
(In partnership with Pat Williams-NOAA)

USDA/Natural Resources Conservation Service

Regional Planning Team Meeting
Region 4

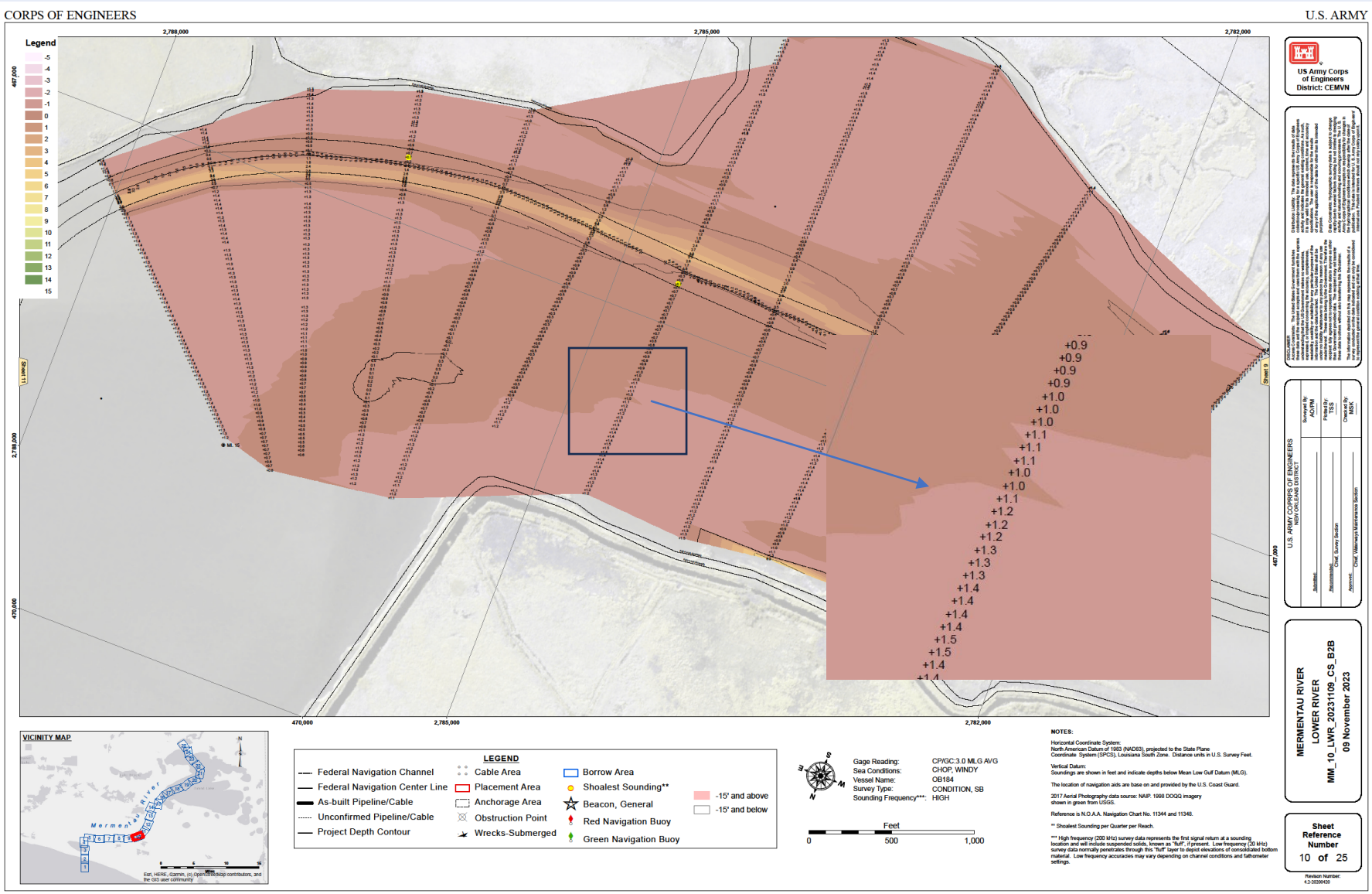
January 30, 2024

State Master Plan Area Map in Relation to Project Location

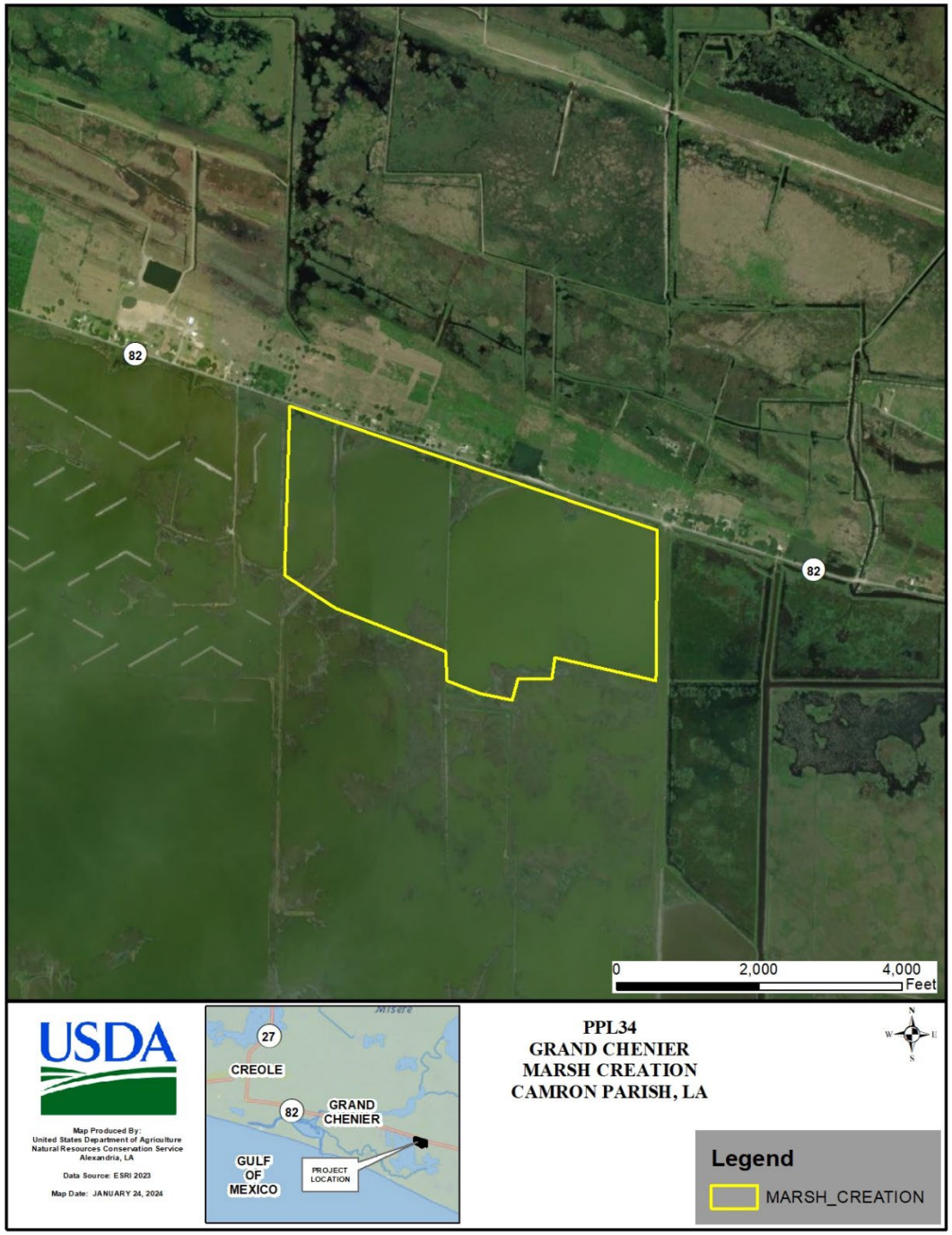


Upper Mud Lake Survey Data (November 2023)

Mean Low Gulf (MLG)



PPL34
Grand Chenier Marsh Creation



Problem: The Hog Bayou Watershed has suffered much loss due to subsidence, erosion, salinity intrusion and sea level rise. The area is now mostly open water up to LA HWY 82.

Project Goals: To create marsh to build resilience around the community of Grand Chenier and build synergy with ME-20 and ME-32 CWPPRA projects.

Project Benefits: The project will create/nourish 309 acres of marsh.

Preliminary Construction Cost: $25-30M (const+25%)

Selection Criteria Considerations

Cost Effectiveness: 80K-97K per acre (construction +25%)

Synergy: ME-20 and ME-32; terraces

Critical Area of Need: High loss rate (1.04%/y)

Critical Landscape Feature: Provides protection to Chenier ridges along HWY 82.

Critical Infrastructure Protection: Provides protection to the community of Grand Chenier and LA HWY 82.

PPL34 PROJECT NOMINEE FACT SHEET
February 2024

Project Name
North White Lake Shoreline Protection

Project Location
Region 4, Mermentau Basin, Vermilion Parish, along the northwestern shoreline of White Lake on the southwestern boundary of White Lake Wetlands Conservation Area (WLWCA).

Problem
Erosion along the northwestern shoreline of White Lake that is being driven by dominant southeasterly winds. These conditions have decayed the lake rim and continue to endanger WLWCA and surrounding privately owned lands of being converted to open water through inundation from White Lake.

Approximately 3 miles of the shoreline on the southwestern boundary of WLWCA has eroded to the point of breaching the Florence Canal protection levee system and inundating 51,000 acres of critical marsh habitat within WLWCA. The southern shoreline of WLWCA is unprotected from wave action, vessel wake, and high water events. Without protection, the Wetland Conservation Area's southern shoreline will continue to retreat landward until White Lake breaches the Florence Canal. Once the Florence Canal is exposed to White Lake, it will cause a direct connection between the Gulf Intracoastal Waterway and White Lake. This would directly impact the complex and fragile marsh system within WLWCA by increasing water flow and water levels across the Wetland Conservation Area's watershed. This increased water flow would induce erosion, cause levee breaches, and overtop the vulnerable infrastructure along the Florence Canal and would be catastrophic to the sustainability of the crucial wetland habitats through prolonged inundation, and ultimately the degradation of the land.

The remaining 2.25 miles of shoreline on the western boundary of White Lake borders the Grand-White Lake Landbridge. Excessive wave action caused by dominant southeasterly winds puts this crucial section of land at risk of erosion. In due course, the size of White Lake could increase by over 1,200 acres and thus decrease the width of the land bridge by half a mile. This eventual conversion of marsh to open water not only risks the merging of both Grand and White lakes, but it threatens a loss of investment. The ME-19 Grand-White Lakes Landbridge Protection project was constructed in 2004 on the southeastern shoreline of Grand Lake and has a current cost estimate of $9.6 million, an encroachment from the eastern side of the landbridge (White Lake) would leave the approximate 2.3 miles of shoreline protection futile.

Goals
The project goal is to halt erosion of the northwestern White Lake Shoreline along a critical 5.25-mile-long reach where continued erosion will threaten the dilapidated Florence Canal protection levee system and the watershed within WLWCA, as well as aid in the protection of the Grand-White Lakes landbridge from the eastern front. Approximately 58,000 acres will be protected by this project, along with promoting the accretion of soil and restoration of marsh habitat between the breakwaters and existing shoreline.

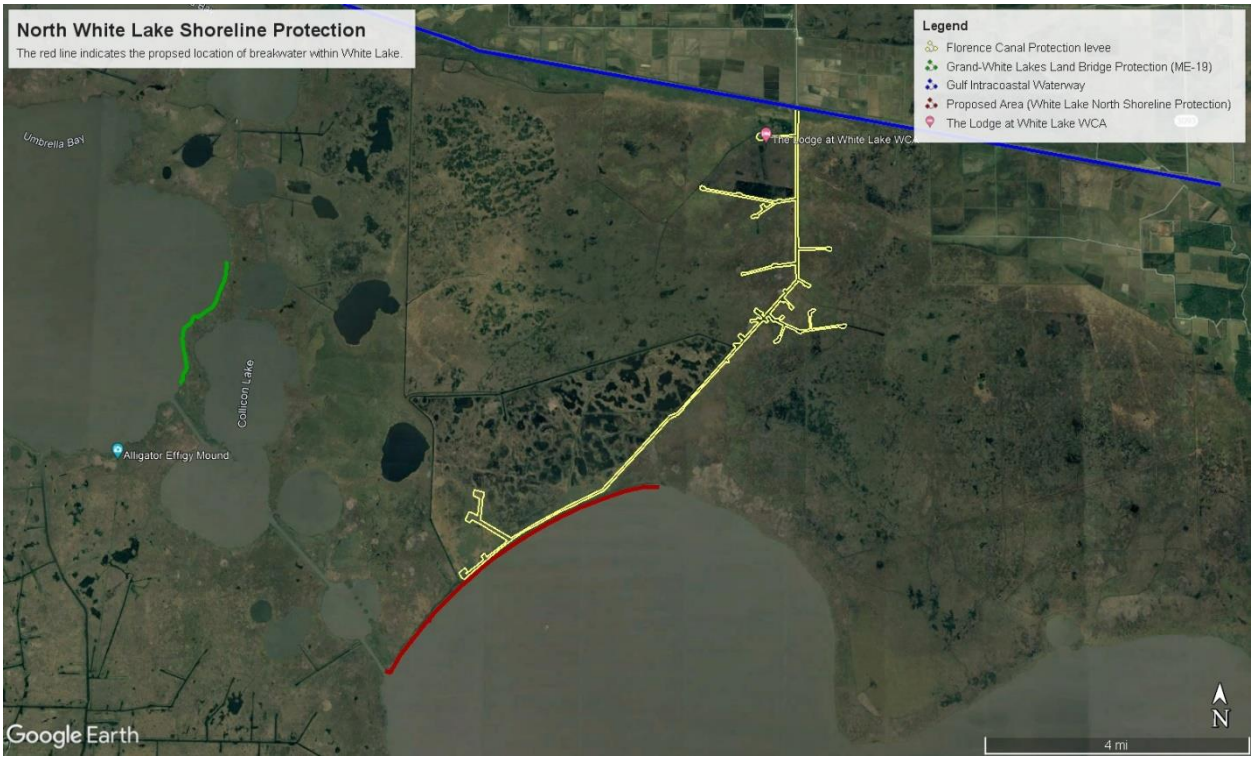
Proposed Solution
The proposed project would be similar to the South White Lake Shoreline Protection Project (ME-22) and Grand-White Lakes Landbridge Protection project (ME-19). This project would construct segmented breakwaters along a 5.25-mile stretch of the northwestern shoreline of White Lake that parallels the Florence Canal and then extends southward toward the Old Intracoastal Canal. The segmented breakwaters would be constructed in 200-foot sections with 50-foot gaps between each section. The gaps will allow the ingress and egress of aquatic species and water exchange. These 3 to 4 foot tall breakwaters would be placed in White Lake approximately 150 feet from the shore. In addition, dredge material would be deposited behind the breakwaters to aid in marsh accretion.

Project Benefits
The project would directly benefit an approximate 6,420 acres of freshwater marsh, additionally 58,000 acres will remain protected. Furthermore, 95 acres of marsh habitat could be created over the 20 year protected life.

Considerations
Considerations include Oil and Gas production facilities, pipelines, and their utilities as it associates to dredging and navigation for this project.

Preliminary Cost
The construction cost plus 25% contingency is estimated to be approximately $35M. There would be no maintenance cost associated with this project.

Preparer(s) of Fact Sheet:
Lance Ardoin, LDWF, 337-965-7765, lardoin@wlf.la.gov
Austin Hebert, LDWF, 337-281-8334, jhebert@wlf.la.gov


North White Lake Shoreline Protection
The red line indicates the propsed location of breakwater within White Lake.
Legend
Florence Canal Protection levee
Grand-White Lakes Land Bridge Protection (ME-19)
Gulf Intracoastal Waterway
Proposed Area (White Lake North Shoreline Protection)
The Lodge at White Lake WCA
Umbrella Bay
Collicon Lake
Alligator Effigy Mound
Google Earth
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4 mi

PPL34 PROJECT NOMINEE FACT SHEET
Jan. 30, 2024

Project Name
Old Mermentau River Marsh Creation

Project Location
Region 4, Mermentau Basin, Cameron Parish, south of Hwy. 82 located near Oak Grove, La..

Problem
Deterioration of marsh from inundation over time and four major hurricanes converted areas to open water that will one day impact Highway 82 and increase interior land loss due to wave action.

Goals
Restore marsh elevation to promote vegetation for protection Highway 82 and adjacent wetlands.

Proposed Solution
Dredge and pump sediments from the Old Mermentau River to create 420 acres of marsh.

Project Benefits
The project will create 420 acres of marsh that will benefit nearly 2,000 acres of brackish and intermediate coastal habitat, and protect the approximately 1.5 miles of Highway 82.

Considerations
Considerations for this project include Highway 82 and residences recovering from recent hurricanes.

Preliminary Cost
The construction cost plus 25% contingency is estimated to be approximately $15M.

Preparer(s) of Fact Sheet:
Scooter Trosclair, LDWF, 337-249-1555, ptrosclair@wlf.la.gov
Austin Hebert, LDWF, 337-281-8334, jhebert@wlf.la.gov


Creole
OAK GROVE
Mermentau River
Lower Mud Lake

PPL34 PROJECT NOMINEE FACT SHEET
Jan. 30, 2024

Project Name
Rockefeller Wildlife Refuge Gulf Shoreline Protection

Project Location
Region 4, Mermentau Basin, Cameron Parish, along the Rockefeller Wildlife Refuge (RWR) Gulf of Mexico Shoreline south of Tolan Lake.

Problem
Constant wave action, strong currents and high water events from the Gulf of Mexico has attributed to the high levels of erosion and depletion of Rockefeller Wildlife Refuge's shoreline. Within the last 6 year, RWR shoreline has on average retreated approximately 120 feet/year, resulting in a direct loss of emergent saline marsh. That is the equivalent of 6.88 acres per year within a 2,500 ft. stretch.

One section of RWR shoreline is in critical need of protection. The 2,500 stretch of beach located where Price Lake Road meets the Gulf of Mexico is substantially deteriorated to the point of breaching and inundating the Price Lake Unit within RWR and surrounding privately owned land. Hurricane Laura and Delta breached the natural beach's spoil bank at Price Lake levee location. Heavy water flow from the Gulf quickly eroded the segmented borrowed ponds bordering the east and west side of Price Lake road and created 2 direct channels going from the Gulf of Mexico into the Price Lake Unit and Tolan Lake. In January of 2022, CWPPRA was able to repair the breach through the ME-20 project. Since, the location has quickly deteriorated and is once again at serious risk of breaching. In a collaboration between CPRA and LDWF RWR Staff, 2 Aquadams where place to alleviate the rate of deterioration. Although the Auquadams have mitigated the problem, the location is still in serious need of additional protection. Additionally, storms and flood events could easily demolish the structural integrity of the Aquadams and the spoil bank around them. Both RWR and private land owner depend heavily on the beach's spoil banks along the Gulf of Mexico to successfully manage their properties. A breach at this location would allow the Gulf of Mexico to directly inundate an estimated 15,120 acres of fragile saline marsh, including directly impacting CWPPRA projects ME-20 and ME-32. High saline levels coupled with strong influx of tidal flow from the Gulf of Mexico would increase the rate of deterioration from within the already subsiding marsh. An expedited rate of subsidence and erosion of emergent marsh would be expected.

Goals
The project goal is to halt the continuous deterioration of RWR's shoreline along a critical 2,500 ft. stretch where continued erosion threatens the depleted beach's spoil bank at Price Lake Road while also endangering the watershed within RWR and the neighboring private properties. Approximately, 6,762 acres of RWR property and an estimated 8,358 acres of privately own land would be protected by this project. Within a 20 year life span, the project could create up to 138 acres of marsh habitat within the proposed 2,500 ft. stretch.

Proposed Solution
This project would be a continuation of the ME-35 project and the methods would be the same as that of ME-18, ME-37, and ME-35. A light weight aggregate core rock breakwater would be constructed due to soft soil found in the area. The breakwaters would be placed in two 1250 ft. sections, starting at ME-35 and extending west 2,500 ft just past the breach locations. The project is "Shovel Ready" with engineered drawing.

Project Benefits
The project would benefit about 15,120 acres of marsh. Approximately 2,500 ft. of linear shoreline would be protected. In addition, an estimated 138 acres of marsh habitat could be created over the 20 year protected life.

Considerations
Considerations for this project include Oil and Gas production facilities, pipelines, and Highway 82.

Preliminary Cost
The construction cost plus 25% contingency is estimated to be approximately $15M. Maintenance cost associated with this project is negotiable. Rockefeller Wildlife Refuge will take ownership after the 20 year life of the project.

Preparer(s) of Fact Sheet:
Phillip "Scooter" Trosclair, LDWF, 337-249-1555, ptrosclair@wlf.la.gov
Austin Hebert, LDWF, 337-281-8334, jhebert@wlf.la.gov


Rockefeller Wildlife Refuge Gulf Shoreline Protection
The red line indicates the 2,500 ft. of propoed breakwaters
Legend
ME-20
ME-32
Price Lake Road
RWR Gulf SHoreline Protection Breakwaters
Google Earth
Image © 2024 Maxar Technologies
Image © 2024 CNES / Airbus
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PPL34 PROJECT NOMINEE FACT SHEET
Jan. 30, 2024

Project Name
South Grand Chenier Freshwater Intro Project

Project Location
Region 4, Mermentau Basin, Cameron Parish, south of Hwy. 82 and south of the Mermentau River.

Problem
High salinities continue to impact coastal habitat south of Hwy 82.

Goals
To utilize fresher water sources to be introduce into Hog Bayou estuary for reducing and buffering salinities and as well as supply nutrients to promote a more plant diversity and recover SAVs.

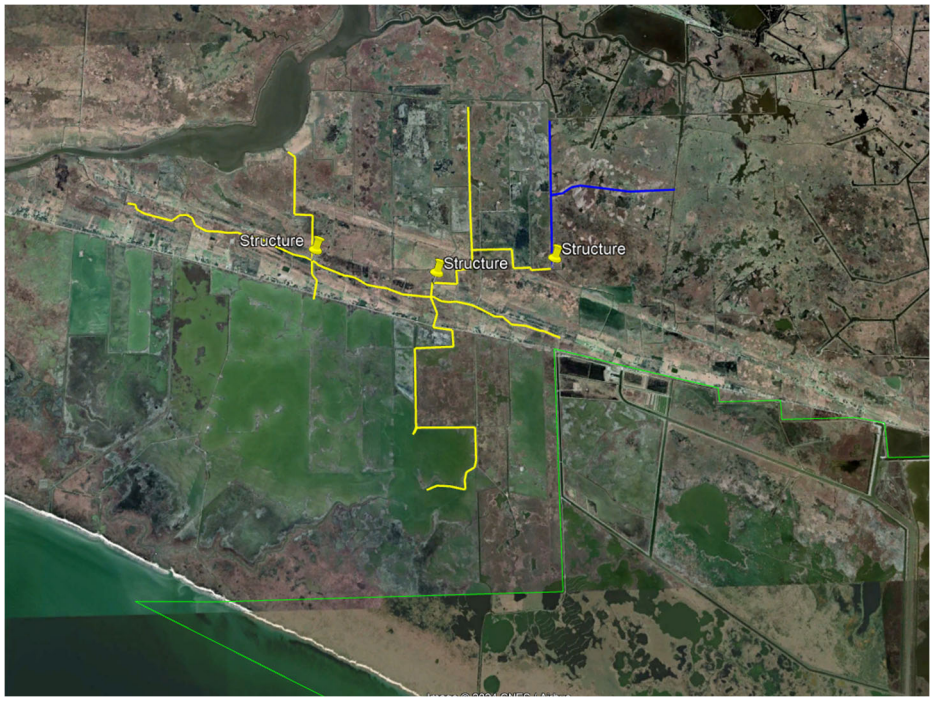
Proposed Solution
Engineer water control capabilities to flow freshwater from north of Highway 82 into coastal wetlands south of Hwy 82. Project would include possibly 3 water control structures and approx. 17 miles of ditch clean out.

Project Benefits
The project would benefit about 9,000 acres of deteriorating marsh. The project will also assist with reducing inundation periods during above normal rain events for approximately 3,100 acres.

Considerations
Considerations for this project include ME-20 and ME-32.

Preliminary Cost
The construction cost plus 25% contingency is estimated to be approximately $10M. The drainage board would consider accepting ownership after the 20 year life.

Preparer(s) of Fact Sheet:
Scooter Trosclair, LDWF, 337-249-1555, ptrosclair@wlf.la.gov
Austin Hebert, LDWF, 337-281-8334, jhebert@wlf.la.gov


Structure
Structure
Structure

PPL34 PROJECT NOMINEE FACT SHEET
Jan. 30, 2024

Project Name
Pecan Island Land Bridge Marsh Creation

Project Location
Region 4, Mermentau Basin, Vermilion Parish, south of Hwy. 82 and south of the Pecan Island.

Problem
High salinities and tides from Freshwater Bayou continue to impact coastal habitat south of Hwy 82.

Goals
The land bridge will create marsh protecting 10,000 plus acres from salinities and high tides inundating areas for long periods.

Proposed Solution
Dredge and pump sediments from White Lake to create 540 acres of marsh connecting land to protect deteriorating marsh south of Pecan Island.

Project Benefits
The project will directly create 540 acres of marsh that will benefit about over 10,000 acres of deteriorating marsh. The project will reduce inundation periods and lower salinities.

Considerations
Considerations for this project include ME-14 and residences that experience frequent flooding.

Preliminary Cost
The construction cost plus 25% contingency is estimated to be approximately $30M.

Preparer(s) of Fact Sheet:
Scooter Trosclair, LDWF, 337-249-1555, ptrosclair@wlf.la.gov
Austin Hebert, LDWF, 337-281-8334, jhebert@wlf.la.gov


Pecan Island
Image © 2024 Airbus
Image Landsat / Copernicus

PPL34 PROJECT NOMINEE FACT SHEET
February 2024

Project Name
White Lake WCA GIWW Shoreline Protection

Project Location
Region 4, Mermentau Basin, Vermilion Parish, the White Lake Wetlands Conservation Area (WLWCA) north shoreline along the Gulf Intracoastal Waterway (GIWW), starting at the Florence Canal and running east, ending at the Robins Canal.

Problem
Approximately 6.25 miles of the existing levee along the north side of the GIWW within WLWCA is suffering from a high rate of erosion induced by frequent vessel wake from the GIWW boat and barge traffic. Additionally, storms and flood events have aided in the advancement of an already deteriorating levee system, catalyzing the immediate threat of catastrophic failure. The complex network of levees and spoil banks within WLWCA are necessary for the hydrologic integrity of the region. Both WLWCA and private land owners depend heavily on this levee system to successfully manage and protect their properties. In the event of failure along the northern levee of the GIWW within WLWCA, significant portions of agricultural and marsh land will be inundated with approximately 2 feet of water. Without immediate action thousands of acres of critical wildlife habitat and ag land would be converted to open water, significantly reducing both the wildlife and economic value of the land within this region.

Goals
The project goal is to halt boat wake-induced erosion of the north GIWW protection levee along a critical 6.25-mile-long reach where continued land loss will threaten levee failure and ultimately the conversion of both agricultural and marsh land to open water within WLWCA and surrounding private properties. Approximately 8,700 acres of WLWCA property and thousands of acres of privately owned property would be protected by the project.

Proposed Solution
This project will be similar to the Cameron Prairie Refuge Protection Project (ME-09). Two continuous rock breakwaters would be constructed 50 feet from the northern bank of the GIWW. These 3 to 4 foot tall breakwaters would prevent vessel wakes from continuously deteriorating the levee system and allow elevations to remain, thus protecting the land to the north from inundation. Section 1 of the breakwaters would extend 31,110 feet from the Florence Canal to the west bank of the Warren Canal. Section 2 would extend 1,890 feet from the east bank of the Warren Canal to the west bank of the Robins Canal.

Project Benefits
The project would benefit approximately 8,700 acres of critical freshwater marsh habitat and agriculture land on WLWCA, as well as thousands of acres of private marsh and ag land. Approximately 6.25 miles of linear shoreline would be protected, additionally 38 acres of marsh habitat could be created over the 20 year protected life.

Considerations
Considerations for this project include Oil and Gas production facilities, pipelines and there utilities.

Preliminary Cost
The construction cost plus 25% contingency is estimated to be approximately $20 to $25M. There would be no maintenance cost associated with this project.

Preparer(s) of Fact Sheet:
Lance Ardoin, LDWF, 337-965-7765, lardoin@wlf.la.gov
Austin Hebert, LDWF, 337-281-8334, jhebert@wlf.la.gov


White Lake Wetland Conservation Area Shoreline Protection
The red and blue line indicate Sections 1 and 2 of the proposed breakwaters.
Legend
The Lodge at White Lake WCA
White Lake Conservation Area Headquarters
WLWCA Breakwaters Section 1
WLWCA Breakwaters Section 2
White Lake Conservation Area Headquarters
Well #2
91
3093
Google Earth
Image © 2024 CNES / Airbus
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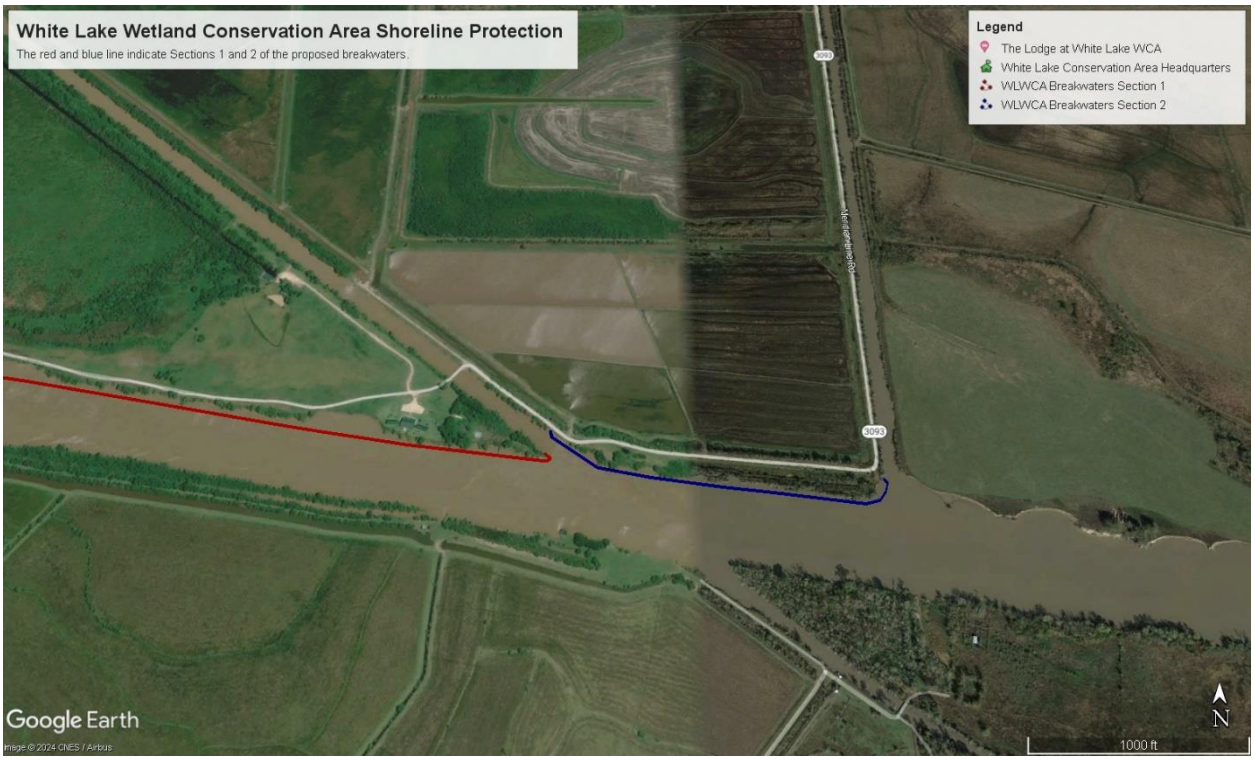
White Lake Wetland Conservation Area Shoreline Protection
The red and blue line indicate Sections 1 and 2 of the proposed breakwaters.
Legend
The Lodge at White Lake WCA
White Lake Conservation Area Headquarters
WLWCA Breakwaters Section 1
WLWCA Breakwaters Section 2
3092
3093
Google Earth
Image © 2024 CNES / Airbus
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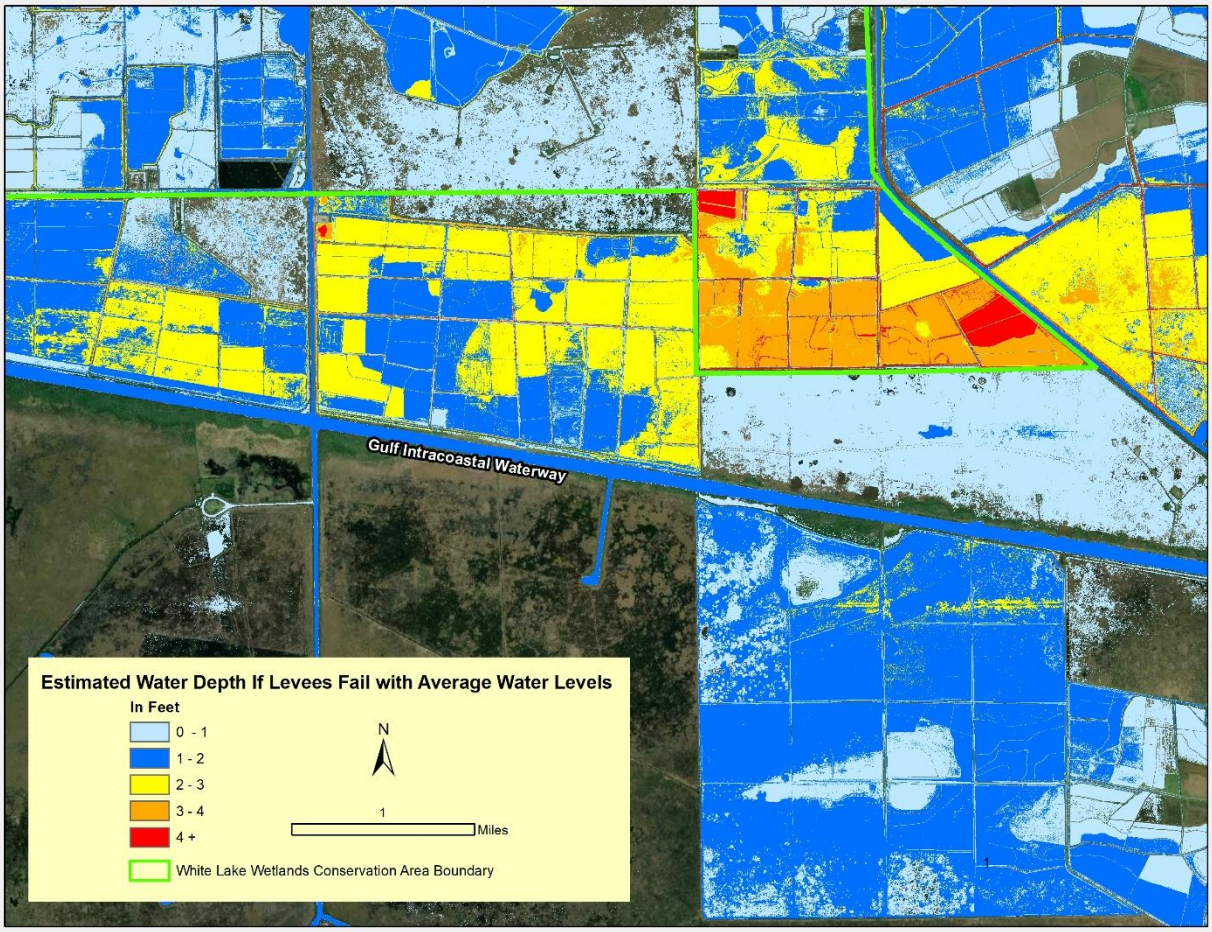
1000 ft


Gulf Intracoastal Waterway
Estimated Water Depth If Levees Fail with Average Water Levels
In Feet
0 - 1
1 - 2
2 - 3
3 - 4
4 +
N
1
Miles
White Lake Wetlands Conservation Area Boundary