

PPL 17

Regional Planning Team Meetings

Region 4 – January 9, 2007
Region 3 – January 10, 2007
Region 2 – January 11, 2007
Region 1 – January 11, 2007

Initial Fact Sheets and Maps

Region 4
Rockefeller Wildlife Refuge
January 9, 2007



ATTENDANCE RECORD



DATE(S) January 9, 2007 10:00 A.M.	SPONSORING ORGANIZATION COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	LOCATION Rockefeller Wildlife Refuge Rockefeller Refuge Grand Cheniere, Louisiana
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PURPOSE

MEETING OF THE REGIONAL PLANNING TEAM REGION IV

PARTICIPANT REGISTER*

NAME	JOB TITLE AND ORGANIZATION	TELEPHONE NUMBER
Darryl Mark	Senior Fish & Wildlife Biol. / USFWS	337-291-3111
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Billy Eakin	LDEQ	337-491-2667
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**Region 4
Regional Planning Team Meeting
9 Jan 07
Rockefeller Refuge, LA**



**1. Welcome
and Introductions**



RPT Region 4
Leader:
Darryl Clark - FWS

Announcements

- First round of RPT meetings (Jan. 9 - 11, 2007) will be held to accept project and demo nominations. **NO VOTING** will take place at these meetings.
- Voting to select project nominees for all basins will occur at the Coast-wide Voting Meeting, on Feb. 7, 2007, in Baton Rouge at the LDWF Building (2000 Quail Dr.).
- Parish representatives are asked to identify themselves and announce who will cast votes at the coast-wide voting meeting.
- Agencies will be assigned responsibilities for preparing nominee fact sheets after the coast-wide voting meeting.

Announcements

Eligible parishes for basins in Region 4 include:

Calcasieu-Sabine Basin

Cameron Parish
Calcasieu Parish

Mermentau Basin

Cameron Parish
Vermilion Parish

2. PPL17 Selection Process and Ground Rules



CWPPRA PPL 17 Process Summary

- RPT meetings Jan. 9-11, 2007 to accept ideas for projects and demos (no limit on number of projects).
- Projects must support a Coast 2050 Regional or Coastwide Strategy.
- At the coast-wide voting meeting on Feb. 7, 2007. RPTs will select 2 nominees per basin (3 each in Barataria and Terrebonne).
- RPTs will select 6 demo projects coast-wide.
- Selection is by consensus, if possible; if not by agency/ parish ranked vote.

CWPPRA PPL 17 Process Summary

- Following the coast-wide voting meeting, an agency will be assigned to each project.
- The agency will prepare a fact sheet (1 page + map) so nominees can be evaluated for costs/ benefits.
- Engineering Work Group will estimate preliminary fully funded cost.
- Engineering and Environmental Work Groups will review draft features and benefits for each nominee.
- Work groups will also review demo projects and verify that they meet demo criteria.

CWPPRA PPL 17 Process Summary

- Matrix of costs/benefits transmitted to Tech. Comm. & Coastal Protection and Restoration Authority (CPRA).
- Tech. Comm. meets Mar. 14, 2007 at 9:30 am at the Corps in New Orleans to select up to 10 PPL 17 candidate projects and up to 3 demos.
- Tech. Comm. assigns agencies to candidate projects to develop costs/benefits for Phase 0.
- Workgroups conduct field trips to evaluate benefits and calculate fully funded costs for candidates.

CWPPRA PPL 17 Process Summary

- Public meetings will be Aug. 29, 2007 in Abbeville and Aug. 30, 2007 in New Orleans to present results of Phase 0 analysis
- On Sept. 12, 2007, the Tech. Comm. will select up to 4 candidate projects (and possibly demos) to present to the Task Force for Phase 1 funding.
- On Oct. 17, 2007, the Task Force will meet to select up to 4 projects for Phase 1 funding.

3. Region 4 Coast 2050 Regional Strategies



Projects nominated should be:

- consistent with the Coast 2050 Regional Ecosystem or Coastwide Strategies
- consider CWPPRA's prioritization criteria

Restore and Sustain Wetlands

- Operate locks in Mermentau basin to evacuate excess water
- Operate Calcasieu Lock to evacuate water after building new lock on a parallel channel for navigation.
- Manage Mermentau watershed to reduce rapid inflow to Lakes Subbasin
- Move water N to S across Hwy 82 in Mermentau Basin

Restore and Sustain Wetlands

- Restore connection of original Mermentau River to Gulf and constrict Ship Channel to authorized dimensions
- Dedicated dredging of sediment for wetland creation in Region 4
- Maintain Atchafalaya River water and sediment inflow thru the GIWW into the Mermentau Basin

Salinity Control in Calcasieu/Sabine Basin

- Control Calcasieu Ship Channel between Gulf and Calcasieu Lake
- Maintain Sabine River inflow
- Salinity control at Sabine Pass
- Salinity reduction in Sabine Lake at the Causeway
- Salinity control on east shoreline of Sabine Lake
- Salinity control of GIWW east of Sabine River

Restore, Protect and Maintain All Shorelines in Calcasieu/Sabine Basin

- Stabilize Grand/White Lake shorelines
- Stabilize Gulf shoreline in vicinity of Rockefeller Refuge
- Stabilize Gulf shoreline from Calcasieu Pass to Johnson's Bayou
- Maintain Atchafalaya mudstream in Gulf
- Restore longshore sediment flow across mouth of Calcasieu Pass
- Restore longshore sediment flow across mouth of Mermentau River Ship Channel

Maintain critical landforms

- Prevent coalescence of Grand and White Lakes
- Prevent coalescence of Grand Lake and GIWW

Coast 2050 Coastwide Strategies



- Beneficial Use of Dredged Material
- Dedicated Dredging for Wetland Creation
- Herbivory Control
- Stabilization of Major Navigation Channels
- Management of Bay/Lake Shoreline Integrity
- Management of Pump Outfall
- Vegetative Planting
- Maintain or Restore Ridge Function
- Terracing

4. PPL17 Project Nominations



Demonstration Projects

- Demonstrates a new technology
- Demonstrates a technology which can be transferred to other areas in coastal Louisiana
 - Are unique and not duplicative in nature
 - Engineering/Environmental Workgroups will select sites for proposed demonstration projects
 - The RPTs will select 6 demos at the Feb. 7th coast-wide voting meeting. The Tech. Comm. will select up to 3 demos in March 07
 - PPL16 demos must be *re-nominated* for PPL17

5. Announcement of Coast-wide Voting Meeting



Coast-wide Voting Meeting

- **Feb. 7, 2007** in Baton Rouge to choose 2 nominees per basin (3 in Barataria and Terrebonne), and 6 demos.
- Parishes within each basin are asked today to identify who will vote at the coast-wide meeting.
- No additional projects can be nominated at the coast-wide meeting.
- No significant changes to projects proposed at the first round of RPT meetings will be allowed (this includes combining projects).
- No public comments accepted at the coast-wide meeting (public comments will be heard today).

Coast-wide Voting Meeting

- Each officially designated parish representative, each Federal agency, & DNR will have one vote.
- Voting will be by ranked vote.
- Each voting entity will be provided a ballot.
- Each voting entity will provide a ranked score for all projects – the highest ranking project will receive the highest vote and the lowest will receive a vote of “1”.
- Points will be totaled for all projects within each basin.

Coast-wide Voting Meeting

- The two nominees per basin (three in Barataria and Terrebonne) receiving the highest vote will be included in the list of 20 nominee projects.
- All demo projects will be voted upon in same manner with one coast-wide ballot.
- 15 minutes will be allowed for voting in each basin and for demos.

6. Announcements of Upcoming Meetings



PPL 17 Upcoming Meetings

Coast-wide Voting Mtg, 7 Feb 07, Baton Rouge
20 nominees and 6 demos selected

Technical Committee Mtg, 14 Mar 07, New Orleans
Selection of 10 candidates and up to 3 demos

Public Meetings

29 Aug 07, Abbeville
30 Aug 07, New Orleans

Technical Committee Mtg, 12 Sep 07, New Orleans
Recommend up to 4 projects for Phase I funding

Task Force Mtg, 17 Oct 07, New Orleans
Final selection of projects for Phase I funding

7. Adjourn



Region 4 – Mermentau Basin

Proposed Projects

R4- ME 1 900 Acre Terracing Project

PPL17 PROJECT NOMINEE FACT SHEET
January 9, 2007

Region 4 – RPT Meeting at Rockefeller Wildlife Refuge

Project Name
900 Acre Terracing

Coast 2050 Strategies

- Coastwide Common Strategies
 - Terracing
- Region 4 mapping unit strategies
 - Terracing and plantings along northern boundary of unit

Project Location

Region 4, Mermentau Basin. Vermilion Parish. This project is bordered to the north by Hwy. 82 at Pecan Island and extends south for 1.5 miles. The project area is 755 acres in size and is located just west of the existing Pecan Island Terracing (ME-14) project.

Problem

In the mid-150s continuous dikes were constructed and water pumped off the marsh, transforming the area into dry pasturelands. As a result of oxidation, the soil elevation has subsided 1 to 2 feet. Deterioration and loss of the perimeter levees in recent years has converted much of the area to open water. Between 1998 and 2005, approximately ±320 acres of California bulrush (*Scirpus californicus*) and other emergent vegetation have been lost due to wind drive erosion and the high salinity conditions created by Hurricane Rita. It is anticipated that the entire project area will be converted to open water in the near future which will result in the net loss of emergent wetlands and aquatic fisheries habitat.

Proposed Project Features

The proposed project features consist of constructing 70,000 linear feet of terraces in 500 ft sections with a 50 ft break between each terrace.

Goals

The goals of the project are:

- 1) Increase land to water ratios by constructing approximately 100 acres of earthen terraces.
- 2) Increase land to water ratios by creating over 100 acres of land over 20 years after construction.
- 3) Increase percent cover of SAV in remaining open water areas to 50%.
- 4) Establish emergent vegetated marsh on planted terraces.

Preliminary Project Benefits

- 1) What is the total acreage benefited both directly and indirectly?
 - 900 acres
- 2) How many acres of wetlands will be protected/created over the project life?
 - There would be 160 net acres in the future with the project at target year 20.
- 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%)?
 - <25%
- 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?
 - This project should provide some protection to Hwy. 82 from storm surge.
- 6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?
 - This type project has (Pecan Island Terracing [ME-14]) has already been constructed just to the east.
 - The Freshwater Introduction South of Hwy. 82 (ME-16) will flow in and through the project area.
 - Should the South Pecan Island Freshwater Introduction (ME-23) be constructed, freshwater from White Lake could be diverted directly into the project area for the control of salinities and for nutrient input into the area.

Identification of Potential Issues

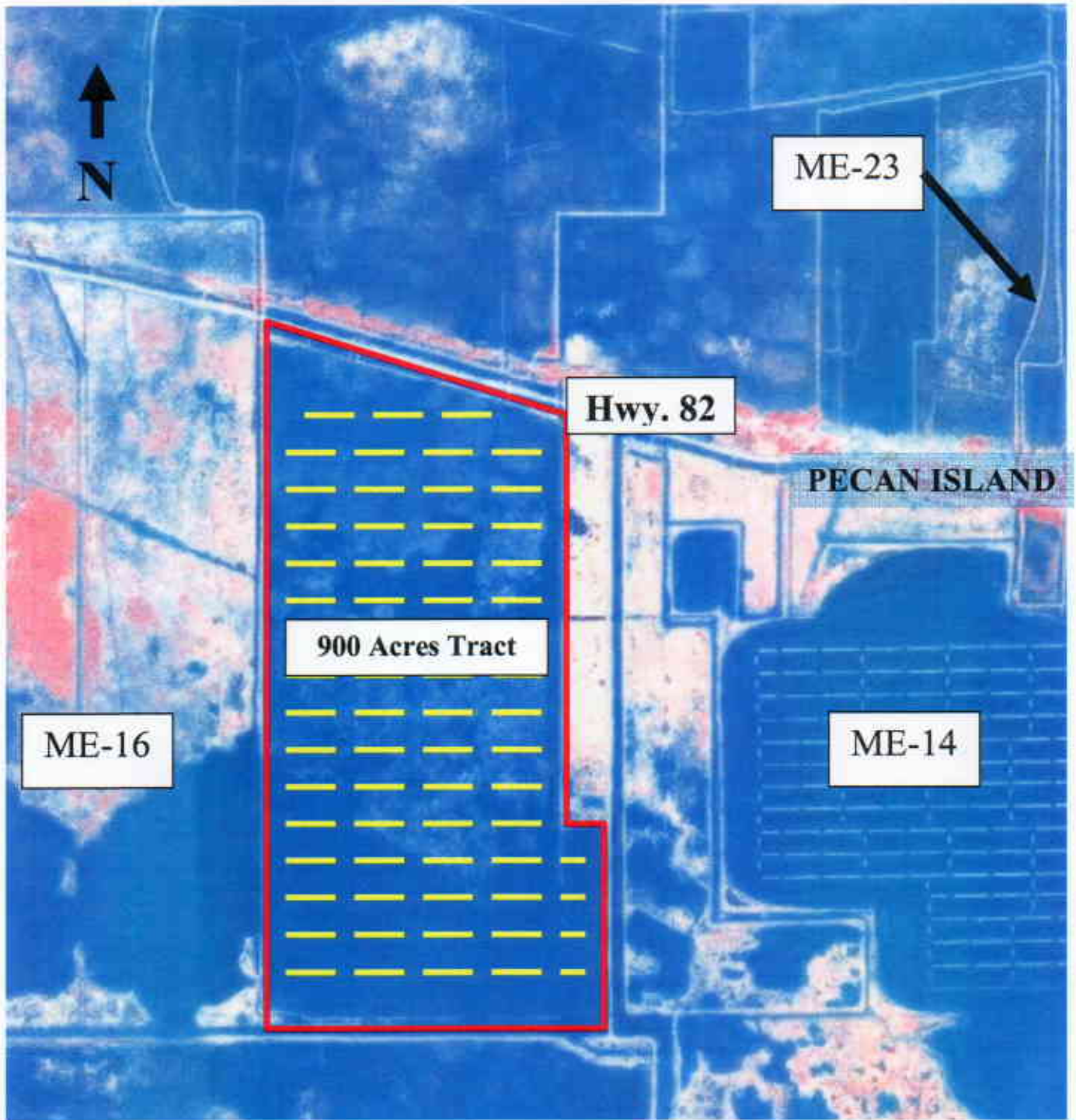
There are no potential issues identified at this time.

Preliminary Construction Costs

The construction cost plus 25% contingency is estimated to be approximately \$1,500,000.

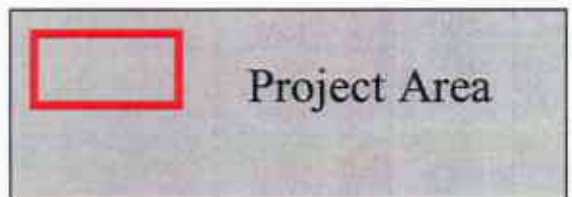
Preparer of Fact Sheet

Randy Moertle, M.O. Miller Estates; (985) 532-6388; rmoertle@bellsouth.net



Project Name: 900 Acres Terracing

Data Source:
Louisiana Department of Natural Resources
Coastal Restoration Division
From 2005 Cir DOQQ imagery
Map produced January 8, 2007



R4- ME 2 Mermentau Spillway Project

PPL17 PROJECT NOMINEE FACT SHEET

January 9, 2007

Mermentau Spillway

Coast 2050 Strategy

Ecosystem Management: Goal 1: Assure vertical accumulation to achieve sustainability.

Failure to achieve self-maintenance in the system means either the system cannot be sustained, or the system must be maintained artificially with large ongoing investments of labor, energy, and materials.

Regional: 1. Eliminate adverse hydrologic conditions, including elevated water levels and extreme salinity spikes.

Revised Regional Ecosystem Strategies: 8. Restore historic hydrologic and salinity conditions throughout Region 4 to protect wetlands from hydrologic modification.

Project Location

Region 4, Mermentau Basin, Cameron Parish, Big Burn Mapping Unit, on the west bank of the Mermentau River.

Problem

The project will reduce prolong periods of inundation by relieving flooding stress in the Big Burns sub basin of the Mermentau watershed particularly during, and after, high rainfall events. Currently, elevated water levels in Big Burns must sheet flow across Little Chenier Road south into an even smaller watershed. This results in prolong high water levels and stress to vegetation in the Big Burns sub basin. In this region, there is no significant source of sediments. Therefore, vertical accumulation and marsh sustainability must be achieved predominately by organic production.

Proposed Project Features

The project proposes to construct a spillway structure with stop log bays in the bank of the Mermentau River north of Little Chenier. That structure would allow excess water to flow into the river and reduce the amount of time vegetation is inundated in the Big Burns sub basin.

Goals

- 1.) Reduce the amount of time that vegetation is inundated after high rainfall and/or surge events.
- 2.) Reduce high salinity impacts to fresh and intermediate marshes by promoting rapid drainage into the Mermentau River.

Preliminary Project Benefits

The project is designed to decrease marsh loss and allow the evacuation of excess water. The total area benefited is 65,000 acres. This project maintains the marshes in the Big Burns sub basin and has a positive net impact on critical infrastructure (highways, oil and gas).

Preliminary Construction Costs:

Preliminary cost estimates are approximately \$ 2 Million.

Preparers of Fact Sheet

Troy Mallach, NRCS troy.mallach@la.usda.gov and Ted Joanen, Miami Corporation

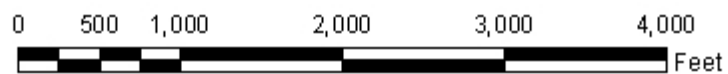


Legend

- Spillway_Structure
- Dredge_Channel



Mermentau Spillway
PPL17
Cameron Parish, Louisiana



M-4 Humble Canal Spillway at the Mermentau River PPL 16 Nominee



Grand Lake

Humble Canal

Mermentau River

Grand Canals

Gulf of Mexico

**R4- ME 3 West Club Hydrologic Restoration
Project**

R4- PPL17-MER#3

PPL17 PROJECT NOMINEE FACT SHEET
January 9, 2007

Region 4 – RPT Meeting at Rockefeller Wildlife Refuge

Project Name

West Club Hydrologic Restoration

Coast 2050 Strategies

- Region 4 mapping unit strategies
 - Improve Hydrology

Project Location

Region 4, Mermentau Basin. Cameron Parish. This project is bordered to the north by Hwy. 82 at Grand Chenier and extends south for 2.5 miles. The project area is 1,100 acres in size and is located just west of the existing South Grand Chenier Hydrologic Restoration (ME-20) project.

Problem

In the mid-1950s continuous dikes were constructed and water pumped off the marsh, transforming the area into dry pasturelands. The soil oxidized which lowered elevations of the land. Since the 1970s the area has been managed through levees and water control structures for waterfowl and estuarine fisheries organisms. As a direct result of Hurricane Rita (September 24, 2005), the levees were overtopped and breached with high salinity sea water. Between 1998 and 2005, it is estimated that ± 550 acres of emergent vegetation has been loss due to the high salinities and uncontrolled water exchange. This computes to a loss of ± 78 acres/year. It is anticipated that the remaining 550 acres will be converted to open water in the near future if the present conditions persist. The result will be a net loss emergent wetlands and aquatic fisheries habitat.

Proposed Project Features

The proposed project features consist of reconstructing approximately 4,500 linear feet of levee along the northwest corner and refurbishment of approximately 2,500 linear feet of existing levee. In addition, a 48" stop-log, flap-gate water control structure would need be put in the northwest corner of the project area to replace an existing structure and a new structure would be placed on the eastern boundary of the project area to facilitate drainage and prevent further saltwater intrusion.

Goals

The goals of the project are:

- 1) To develop hydrologic restoration of the area.
- 2) To maintain existing emergent vegetation.
- 3) To enhance and encourage the growth of emergent vegetation in open water areas created by Hurricane Rita and from extreme salinity events.

Preliminary Project Benefits

- 1) What is the total acreage benefited both directly and indirectly?
 - 1,100 acres
- 2) How many acres of wetlands will be protected/created over the project life?
 - There would be 500 net acres in the future with the project at target year 20.

- 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%)?
 - <25%
- 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?
 - This project should provide some protection to Hwy. 82 from storm surge.
- 6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?
 - This type project is directly south of the South Grand Chenier Hydrologic Restoration (ME-20) and could receive benefits from the freshwater introduction component of the project.

Identification of Potential Issues

The only potential issues identified at this time would be pipeline and oil and gas servitudes.

Preliminary Construction Costs

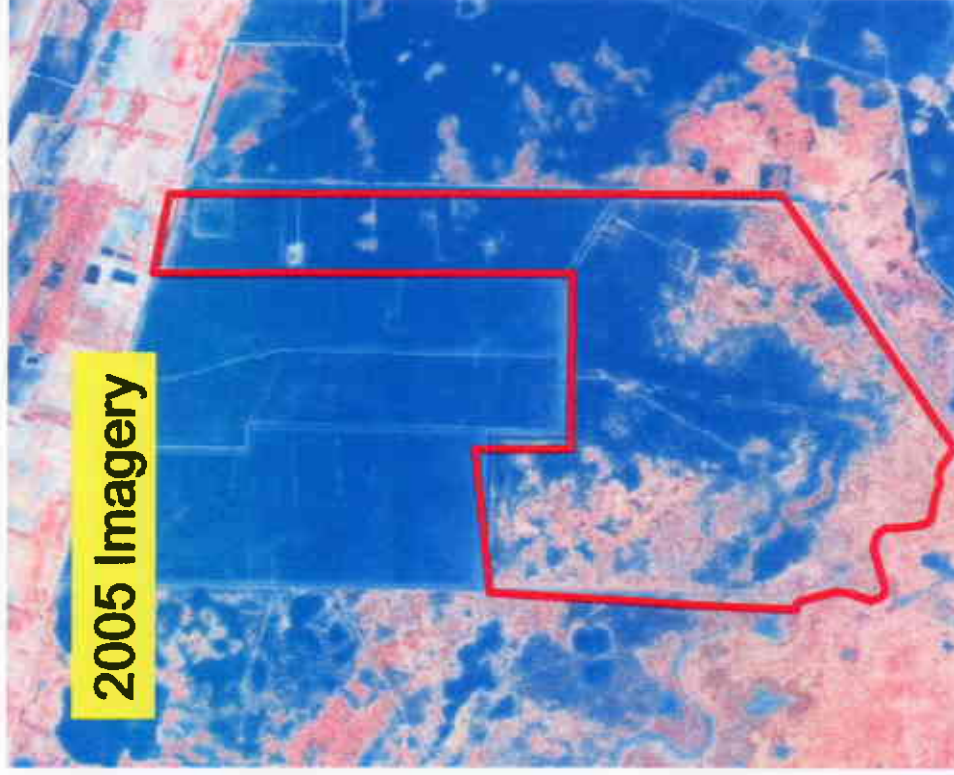
The construction cost plus 25% contingency is estimated to be approximately \$500,000.

Preparer of Fact Sheet

Randy Moertle, M.O. Miller Estates; (985) 532-6388; rmoertle@bellsouth.net



1998 Imagery

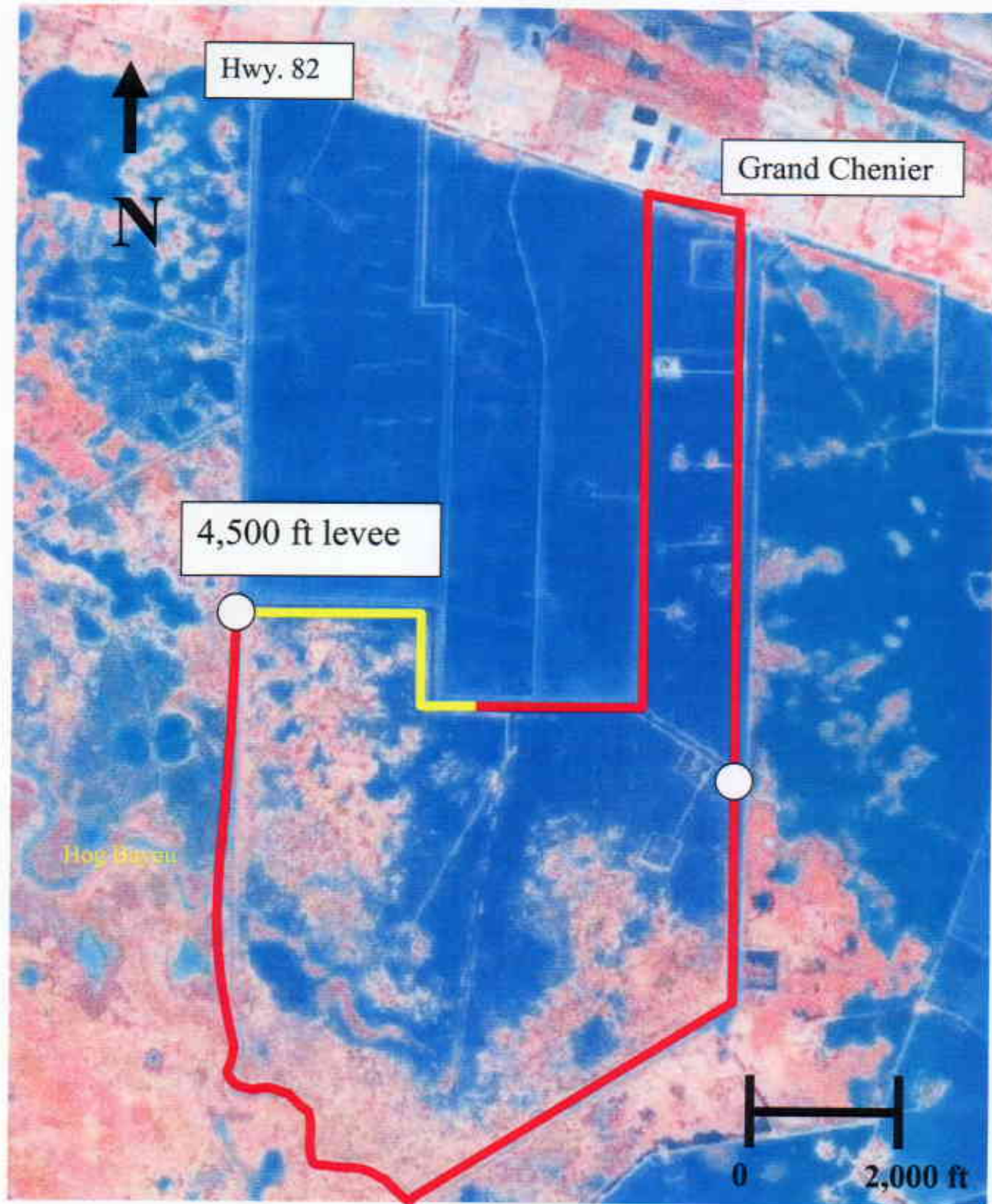


2005 Imagery

West Club – Land loss between 1998-2005 approximately 550 acres.



Project Area



Project Name: West Club Hydrologic Restoration

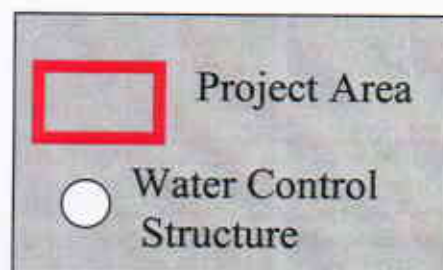
Data Source:

Louisiana Department of Natural Resources

Coastal Restoration Division

From 2005 Cir DOQQ imagery

Map produced January 8, 2007



**R4- ME 4 Lacassine Pool South Levee Protection
Project**

PPL17 PROJECT NOMINEE FACT SHEET
January 9, 2007 (Revised January 25, 2007)

Project Name:

Lacassine Pool South Levee Protection Project

Coast 2050 Strategy:

Coastwide Common Strategy of:

Stabilization of the width and depth of major navigation channels and other water bodies at their point of intersection.

Project Location:

Region 4, Mermentau and Calcasieu/Sabine Basins, Cameron Parish, Gulf Intracoastal Waterway (GIWW) between east pool levee and the Bell City Ditch.

Problem:

The north bank of the GIWW is eroding at a rate of 2 to 3 feet per year (range from 1 to 6 feet/yr). Lacassine Pool south levee could be breached in 30 - 40 years.

Goals :

1. Maintain integrity of Lacassine Pool south levee.
2. Maintain GIWW channel.

Proposed Solutions:

- 1) Acreage affected would be Lacassine Pool (16,000 acres), GIWW, and Lake Misere
- 2) 16,000 + acres would be protected.
- 3) It is anticipated that this project would decrease the loss rate by more than 75%.
- 4) This project would protect the GIWW and south pool levee.
- 5) Existing Lacassine Pool infrastructure would be protected.
- 6) This project would directly enhance the planned pool restoration projects.

Preliminary Project Benefits:

Lacassine Pool would be maintained as a prime waterfowl wintering habitat, and the GIWW channel would be stabilized.

Identification of Potential Issues:

The proposed project has the following potential issues: breach of Lacassine Pool levee and siltation of GIWW channel.

Preliminary Construction Costs:

Riprap material and installation (33,100 feet)	\$5,020,167
Mobilization	\$50,000
Demobilization	\$50,000
Total	\$5,120,167

Preparer of Fact Sheet:

Wayne Syron
U. S. Fish and Wildlife Service
Lacassine National Wildlife Refuge

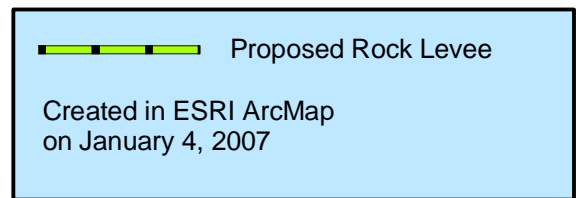
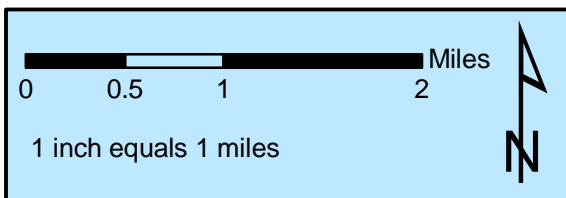
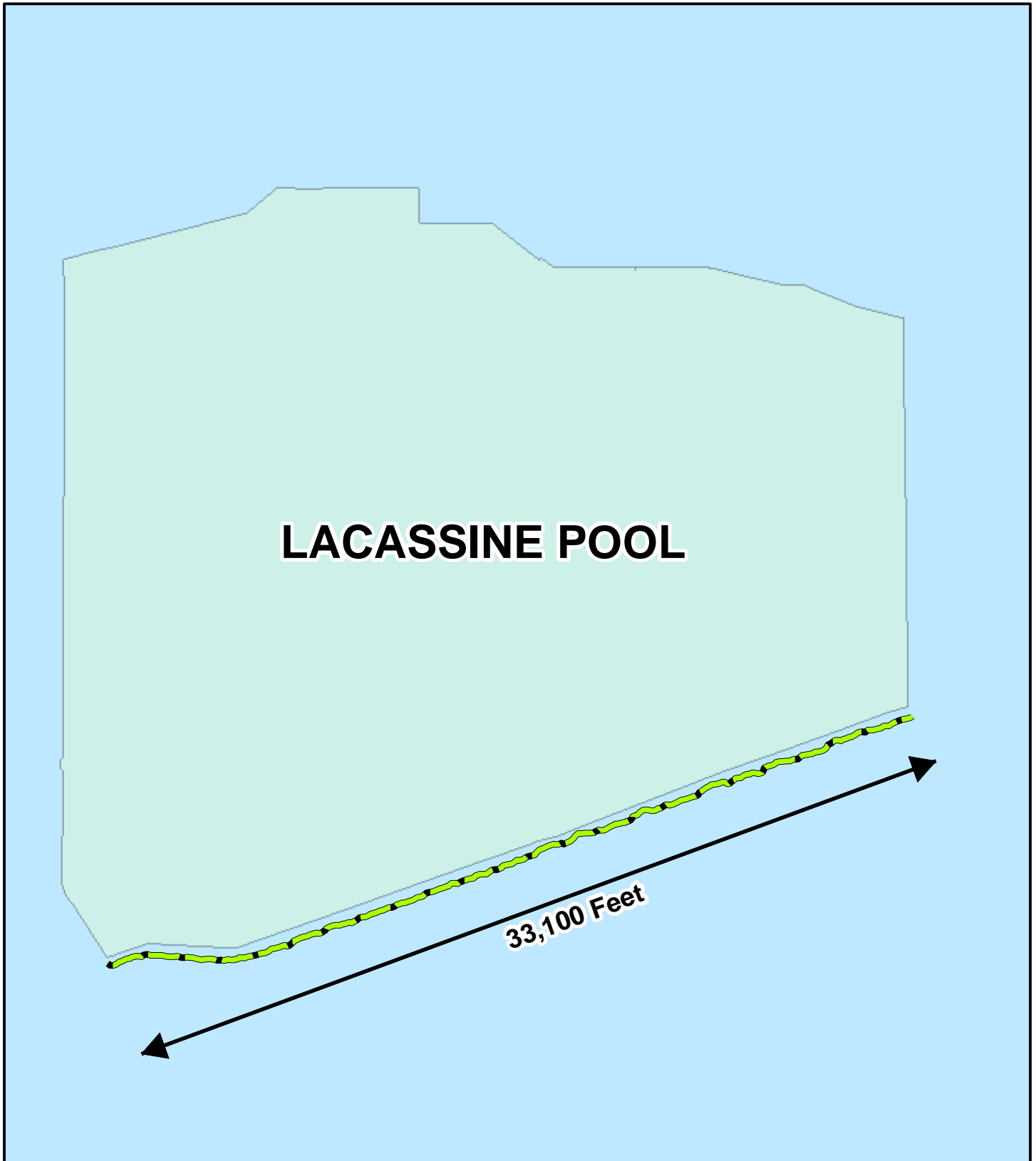
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email: wayne_syron@fws.gov

Project Map:

See attached.

LACASSINE POOL SOUTH LEVEE PROTECTION PROJECT





Erosion Rates Per Year



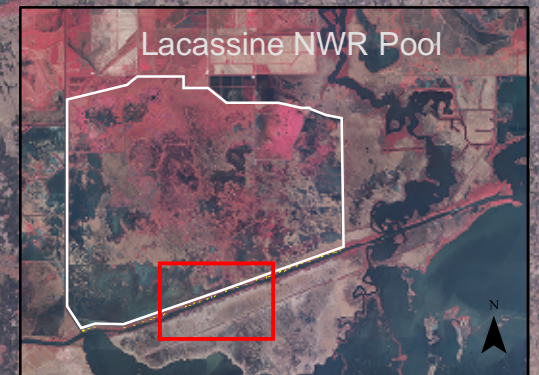


Erosion Rates Per Year



2005 Photography

- 1978 Shoreline
 - 2005 Shoreline
 - Erosion Cross-sections
- 0 1000 Feet





Erosion Rates Per Year



**R4- ME 5 Grand Lake Shore Protection at
Lacassine Point Project**

R4-PPL17-MER #5

Project Fact Sheet

Grand Lake Shore Protection at Lacassine Point - (Segmented Breakwaters with-w/o Planting and with-w/o Dedicated Dredging)

Project Name:

Grand Lake Shore Protection at Lacassine Point -
(Segmented Rock/A-Jacks-Like Breakwaters with-without Planting and with-without
Dedicated Dredging)

Regional Strategy:

Strategy #14: Stabilize Grand Lake and White Lake Shorelines

Location:

Region 4, Mermentau Basin/Lakes Sub-basin, Cameron Parish. The project is located on the
NW shore of Grand Lake from Lacassine Pt. to the GIWW.

Problem

1. What problem will the project address?

Erosion of the NW shoreline of Grand Lake has exposed the interior organic soils to high energy wave-action. In most places, the historic lake rim is completely gone. With a portion of this shoreline approaching the GIWW, erosion prevention is needed soon because NW Grand Lake will completely erode into the GIWW.

2. What evidence is there for the nature and scope of this problem in the project area?

National Wetlands Inventory data indicates a shoreline erosion rate of 1 m/yr from 1956 to 1978 while the 1978 to 1988 rate nearly tripled to - 3 m/yr (9 ft /yr). This project would protect approximately 69 acres of wetland habitat during the project life and reestablish 6.9 additional acres with bullwhip plantings or 86 acres of wetlands through dedicated dredging for a total of 155 acres created and protected if the dedicated dredging increment is implemented.

Goals

1) Protect fish and wildlife habitat by stopping the erosion of the NW shoreline of Grand Lake from Lacassine Point to the GIWW. 2) Allow for the migration and emigration of organisms between the nursery grounds and the open waters of Grand Lake. 3) Allow for water exchange between these protected wetlands and the open waters of Grand Lake. 4) Vertical accretion of sediment and organic substrate along historical shoreline.

Objectives

Stop shoreline erosion by constructing a rock/"A-Jacks-like" breakwater along the NW shoreline of Grand Lake from Lacassine Point to the GIWW, while allowing the migration and

emigration of organisms and exchange of water between the nursery habitat being protected and the open waters of Grand Lake by the placement of gaps within the rock/A-Jacks breakwater. To accelerate the vertical accretion of sediment, wetland plants (bullwhip) would be planted between the rock/A-Jacks breakwaters and the shoreline. The creation of fresh marsh by dedicated dredging.

Proposed Solution

Rock Breakwater:

The construction will include a rock breakwater 15,000 ft. in length, located 100 ft. from the shoreline in approximately 1.5 ft. of water. The breakwater will be 11,250 ft long and will include 50 ft. gaps every 200 ft. to allow for the circulation of water and fisheries access. The top of the breakwater will be 5 ft. in width with 1 ft. of freeboard above the water.

A-Jacks:

The construction will include an "A-Jacks-like" breakwater 15,000 ft. in length, located 100 ft. from the shoreline in approximately 1.5 ft. of water. The breakwater will consist of two rows of 2 ft wide A-Jacks 11,250 ft long stacked on top of each other. They will include 50 ft. gaps every 200 ft. to allow for the circulation of water and fisheries access. The top of the A-Jacks breakwater will have 1 ft. of freeboard above the water.

Planting:

Two rows of wetland plants (bullwhip) with 5 ft. centers will be planted on the marsh side of the rock/A-Jacks breakwater (no deeper than 1.5 ft) creating 6.9 acres of wetland habitat (20 ft. x 15,000 ft.).

Dedicated Dredging:

The project will include an earthen dike 15,000 ft. in length, located 250 ft. from the shoreline in approximately 3 ft. of water. The top of the earthen dike will be 5 ft. in width with 3 ft. of freeboard above the water. Spoil will be dredged from within Grand Lake and deposited behind the dike to a height of 2 ft. above mean water level. After the newly created marsh has de-watered and subsided to the desired level, trenasses will be cut within the marsh, if necessary, and gaps will be cut in the dikes to allow for water exchange.

Project Benefits

Stabilization of the NW Grand Lake shoreline with breakwaters would at a minimum protect 69 acres of primary nursery habitat (fresh marsh and swamp) and at a maximum create 86 acres of fresh marsh through dedicated dredging for a total of 155 acres protected and restored. This will help fulfill Coast 2050 Region 4 Strategy # 14 (namely to stabilize Grand Lake shoreline). This project would also prevent high wave energy from reaching the southern portion of the bank and marsh system that protects the GIWW. Stopping the coalescence of the GIWW and Grand Lake would maintain the water circulation patterns that exist within the Grand Lake

ecosystem.

Project Costs

Rock breakwater:

The total length of the rock breakwater would be 15,000 ft with 50 ft. gaps every 200 ft. The actual length of rock would be 11,250 ft. The breakwater would be constructed in approximately 1.5 ft. of water with 1 ft. of freeboard and allowing 2 ft. subsidence. The cost of the rock is approximately \$30.00 per yd³, or \$210.22 per ft. This would give a **first construction cost of \$2.45 Mill.** for the rock breakwaters based on the 1999 cost estimates for the Grand-White Lake Land Bridge Protection Project.

A-Jacks:

The total length of the A-Jacks breakwater would be 15,000 ft with 50 ft. gaps every 200 ft. The actual length of the A-Jacks breakwater would be 11,250 ft. with two 2 ft-wide (1.5 ft high) rows stacked one on top of each other. The breakwater would be constructed in 1.5 ft. of water with 1 ft. of freeboard allowing for 6 inches of settlement. The cost of the A-Jacks is approximately \$45.00 per ft. which would give a **first construction cost of \$1.0 Mill.**

Planting:

The cost of planting two rows of bullwhip with 5 ft. centers (6,000 per row) @ \$7.00 per plant would total \$84,000.

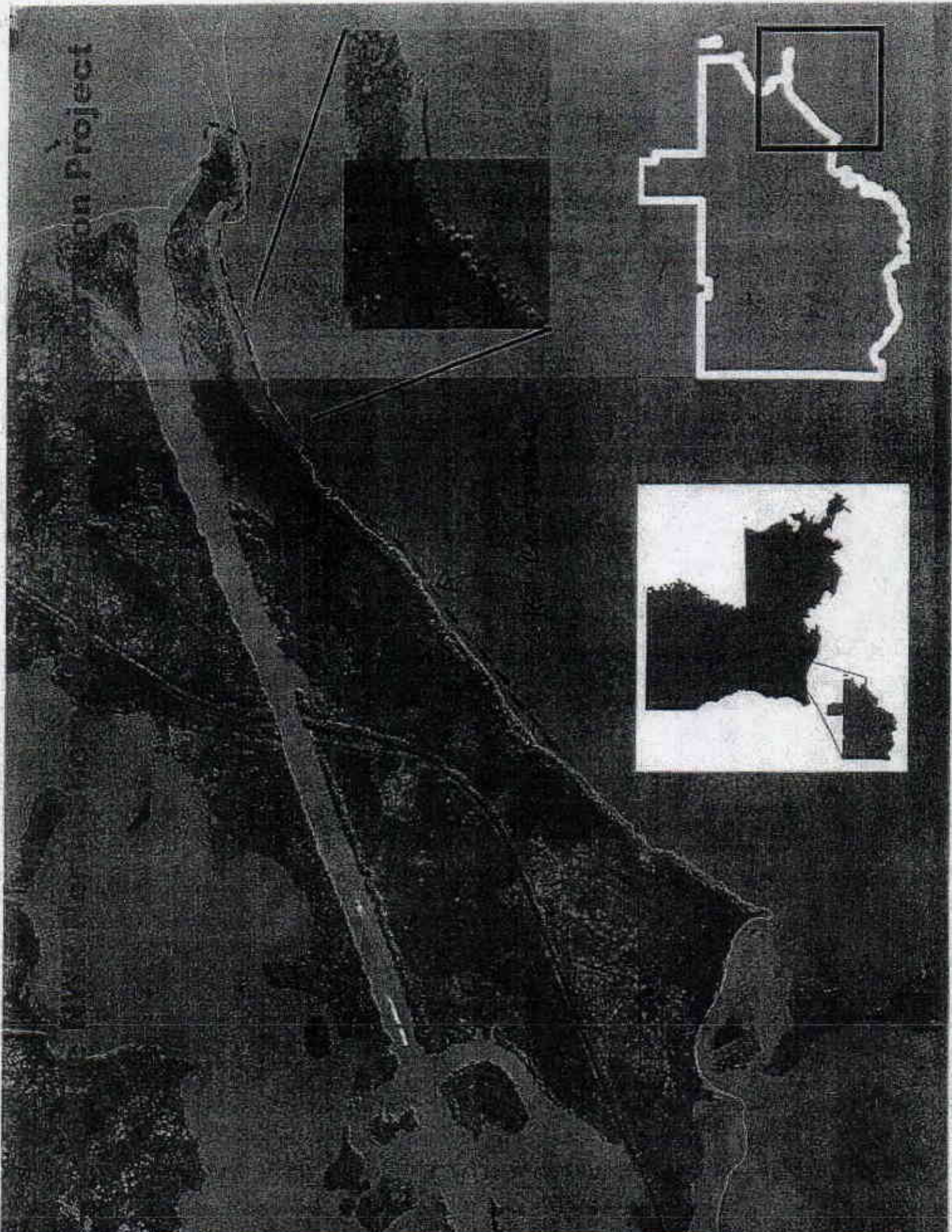
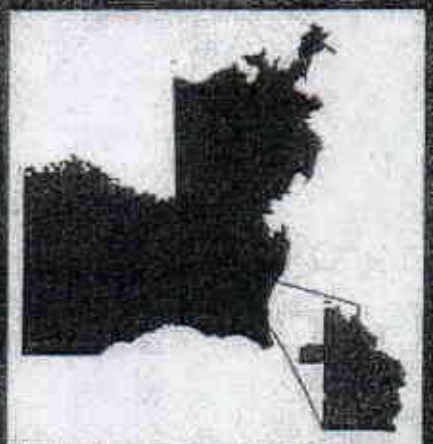
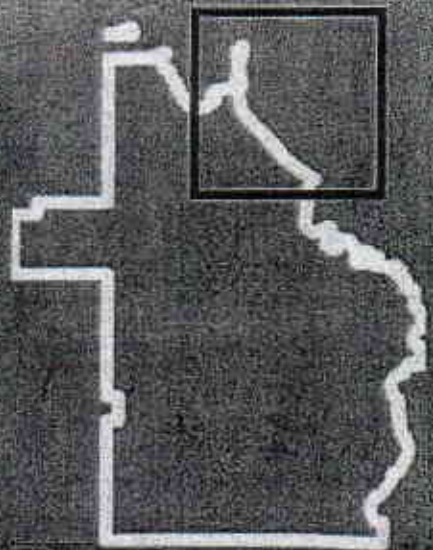
Dedicated Dredging:

The total length of the earthen dike would be 15,000 ft. The cost of the dike would be approximately \$84,000 at \$2.00 per yd³. The spoil deposited behind the dike would be dredged from Grand Lake at a fully funded cost of \$2.00 yd³, which would give a cost of \$750,000. Trenasses would be cut in the newly created marsh at an estimated cost of \$50,000. The **first construction cost would be estimated at \$950,000** for the creation of 86 acres of fresh marsh.

Summary of Cost:

	Rocks	A-Jacks	Planting Only	Spoil/Dike
Construction	\$2,449,500	\$1,012,500	\$ 84,000	\$ 950,000
Contingency	\$ 612,000	\$ 253,000	\$ 21,000	\$ 237,500
Total Construction	\$3,062,000	\$1,266,000	\$105,000	\$1,187,500
E&D	\$ 306,000	\$ 127,000	\$ 10,500	\$ 119,000
S&A, S&I	\$ 245,000	\$ 101,000	\$ 8,400	\$ 95,000
Real Estate, NEPA	<u>\$ 30,000</u>	<u>\$ 30,000</u>	<u>30,000</u>
Total Project Cost	\$3,640,000	\$1,524,000	\$123,900	\$1,431,500

on Project



**R4- ME 6 Rockefeller Gulf of Mexico Shoreline
Stabilization Project, Joseph's Harbor East**

PPL17 PROJECT NOMINEE FACT SHEET

January 24, 2007

Project Name and Number

Rockefeller Gulf of Mexico Shoreline Stabilization, Joseph's Harbor East, ME-25.

Coast 2050 Strategy

Regional: Dedicated dredging or beneficial use of sediment for wetland creation or protection (6) and Stabilize Gulf of Mexico Shoreline from Old Mermentau River to Dewitt Canal (16). Coast-wide
Common: Maintenance of Gulf, Bay and Lake shoreline Integrity, and Maintain, Protect or Restore Ridge Functions.

Project Location

Region 4, Mermentau Basin, Cameron/Vermilion Parish, LA. Along the Gulf shoreline from eastern bank of Joseph's Harbor (Rockefeller Refuge) eastward 10,000 feet.

Problem

The project will be designed to address Gulf shoreline retreat averaging 35' per year (Byrnes, McBride et al., 1995) with subsequent direct loss of saline emergent marsh.

Proposed Project Features

The project would entail construction of a near-shore break-waters along the Gulf of Mexico shoreline. The break-water would extend from the eastern bank of Joseph's Harbor canal eastward for 10,000 feet. The proposed structure would be tied into the present shoreline at the point of beginning and ending. It would be designed to attenuate shoreline retreat along this stretch of Gulf shoreline, as well as promote shallowing, settling out, and natural vegetative colonization of over-wash material landward of the proposed structure. The resultant design would be placed offshore along the -5' contour. The crest height of the proposed structure would be 8.5 feet above the Gulf floor (i.e., +3.5 ft above average water level), with an 18 foot crown and 1:2 slope on both sides. The proposed structure would consist of neutral buoyancy material encapsulated by 2,200 lb. class stone. The proposed design would include openings every 1000' to facilitate material and organism linkages. Excavation material for construction access would be placed on the landward side of the structures.

Goals

1) Reduce Gulf shoreline retreat and direct marsh loss at areas of need identified from Rockefeller Refuge east to Region 4 boundary, 2) protect saline marsh habitat, 3) Enhance fish and wildlife habitat.


Preliminary Project Benefits


The project is expected to influence approximately 125 acres directly (120 protected, 5 created), and a portion of 4,900 acres indirectly (Rockefeller Refuge Unit 5). This project is anticipated to benefit 125 acres (10K ln ft X 35 ft/yr X 20 yrs) X 0.75. The reduction efficiency was estimated by using 90% of the average wave transmission rates listed in the Rockefeller Refuge gulf Shoreline Stabilization Feasibility Study produced by Shiner Mosely and Associates (Table 6, page 4-19, methodology of Seabrook and Hall, 1998). Estimates for excavation are as follows; at the -5' contour, an additional 4' of material will be moved at a width of 80', for the 10,000 linear feet of the project or 3,200,000 cubic yards will be placed behind the rock structure.

The project would protect and maintain chenier and beach function.



**Gulf of Mexico Shoreline Stabilization -
Joseph Harbor East**

 **Shoreline Protection ***

 **Project Boundary**

* denotes proposed features

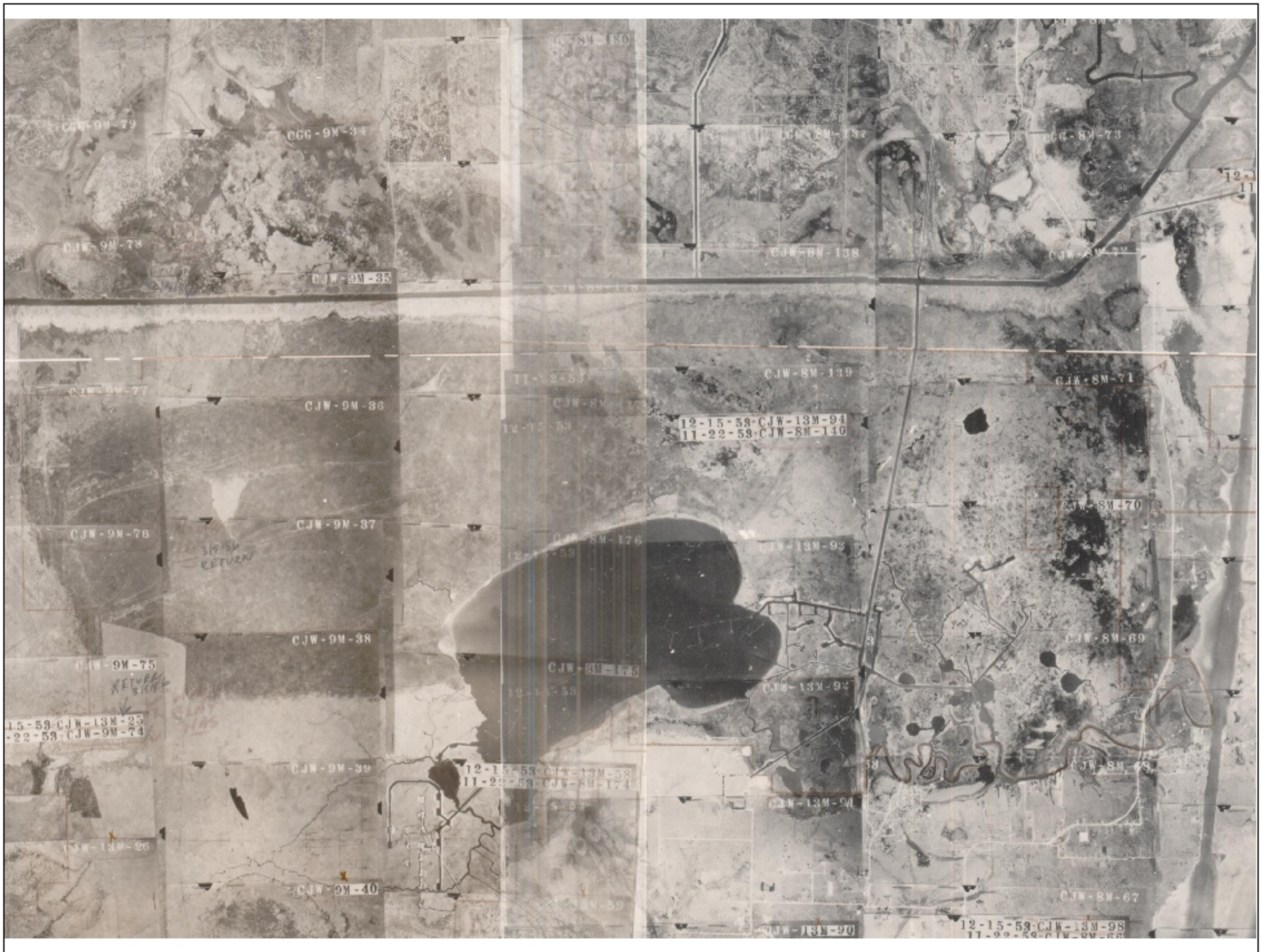


Map Produced by:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Background Imagery:
Thematic Mapper Satellite Imagery 2000
Map Date: March 2, 2003
Map ID: 1000-JWRC-2003-13-102
Data accurate as of March 2, 2003



CAMERON

N





CALCASIEU

CAMERON



**R4- ME 7 ~~Hog Bayou Marsh Creation Project~~
Withdrawn by EPA**

DRAFT PPL17 PROJECT NOMINEE FACT SHEET

December 14, 2006

Project Name

Hog Bayou Marsh Creation

Coast 2050 Strategy

Coastwide Strategy: Restore/sustain marshes

Region 4 Regional Ecosystem Strategy #6: Dedicated dredging of sediment for wetland creation.

Project Location:

Region 4, Mermentau Basin, Cameron Parish, Hog Bayou Mapping Unit.

Problem

These marshes have experienced high loss rates in the past due to drainage for pasture use, and subsequent oxidation of the organic soils. More recently, it has been hypothesized that Highway 82 is impeding input of freshwater from the north, resulting in shifts in vegetation type, and continued land loss. There is an existing CWPPRA project to address this (ME-20), as well as to create 400 ac of emergent marsh.

Proposed Project Features

- Marsh creation (300 ac) using offshore Gulf of Mexico sediment (dedicated dredging, external source).

Goals

- Create 300 ac of marsh in the area benefited by restoring freshwater discharge from north of Highway 82.

Preliminary Project Benefits:

- 250 net acres of emergent marsh over 20 years

Identification of Potential Issues

- potential land rights issues

Preliminary Construction Costs

- \$15 million

Preparer of Fact Sheet





Kenneth Teague, EPA, (214) 665-6687; Teague.Kenneth@epa.gov



Louisiana Department of Natural Resources

0 2.9mi

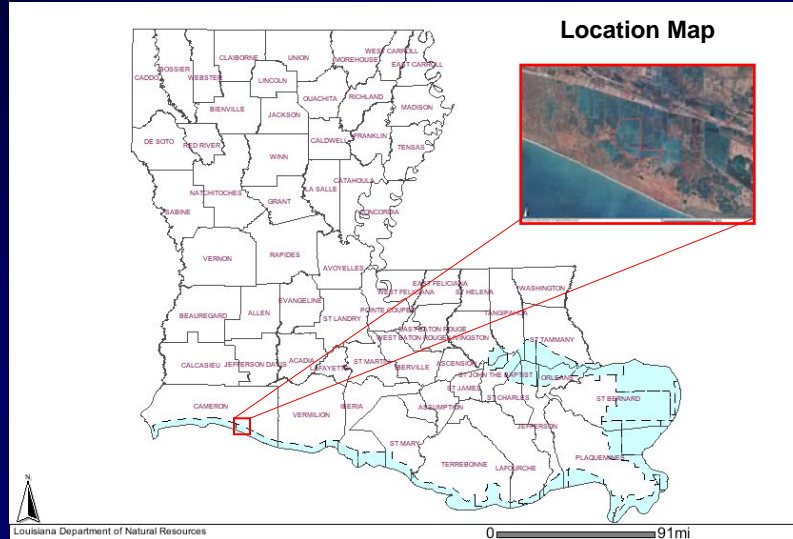


-  Borrow Area
-  Project Influence Area
-  Created Marsh (≤300 acres)
-  Existing Hydrologic Feature (ME-08-01)

Data Source:
 LA Department of Natural Resources
 Map Date: November 30, 2006
 Image Data: 2005 Coastal
 Photographs

**PPL 17 Proposed
 Region 4
 Hog Bayou Marsh Creation**

Hog Bayou Marsh Creation



Hog Bayou Marsh Creation



Hog Bayou Marsh Creation

Goal:

- Create 300 ac of marsh in the benefit area
- Restore marsh in concert with freshwater introduction component of ME-20 CWPPRA project

Project Features:

- Marsh creation using offshore Gulf of Mexico sediment

Cost/Benefits:

- ~250 net acres of emergent marsh over 20 years
- Est. Construction Cost: ~ \$15 million

Hog Bayou Marsh Creation

Questions?

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**R4- ME 8 Southeast White Lake Shoreline and
Marsh Creation Project**

PPL17 PROJECT NOMINEE FACT SHEET
January 9, 2007

Project Name:

Southeast White Lake Shoreline Protection and Marsh Creation Project

Coast 2050 Strategies:

Basin Strategies: 5) Stabilize White Lake Shoreline

Project Location:

The project is located in Region IV, in the Mermentau Basin, South White Lake Mapping Unit, on the southeast side of White Lake, between Wills Point and Schooner Bayou in Vermilion Parish, Louisiana.

Problem:

The shoreline erosion rate between Wills Point and Schooner Bayou is roughly estimated to be an average 10 feet per year. The slightly elevated scrub/shrub and woody vegetated shoreline rim in the project area is eroding and exposing more fragile interior herbaceous marshes to the high energy wave climate and elevated water depths in White Lake. Also, the shoreline and interior marshes along the proposed project reach were severely impacted by Hurricane Rita.

Proposed Project Features:

1. Install approximately 26,000 lf of rock shoreline protection with fish gaps.
2. Create approximately 75 acres of marsh with floatation channel dredge material behind the shoreline protection.

Goals:

1. Stop shoreline erosion.
2. Create and nourish marsh.

Preliminary Project Benefits:

The following questions should be addressed:

1) What is the total acreage benefited both directly and indirectly? *Directly benefited:*

Protect approximately 120 acres and create 75 acres of marsh and lake rim habitat.

2) How many acres of wetlands will be protected/created over the project life? *At the end of 20 years, approximately 195 acres should remain. The shoreline protection should stop erosion of at least 20 feet per year over 26,000 feet (120 acres) and dredge material would create 75 acres behind the shoreline protection, which would remain after 20 years.*

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

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

5) What is the net impact of the project on critical and non-critical infrastructure? *The project would prevent further erosion into pipeline canals and protect marsh that separates White Lake from LA 82.*

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? *This project would add to the overall shoreline protection of south White Lake provided by the constructed South White Lake Shoreline Protection Project (ME-22). It would be somewhat synergistic with the Pecan Island Terracing Project (ME-4), the South Pecan Island Freshwater Introduction project (ME-23), and the Southwest LA Gulf Shoreline protection and nourishment Project (ME 24).*

Identification of Potential Issues:

Rock shoreline protection projects historically require O&M.

Preliminary Construction Costs:

The construction cost including 25% contingency is approximately \$9,400,000. The estimated fully funded cost range is \$20 - \$25 million.

Preparers of Fact Sheet:

Melanie Goodman, USACE, 504-862-1940, Melanie.L.Goodman@mvn02.usace.army.mil






White
Lake



Map Produced by:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Baton Rouge, La.
Background Imagery:
2005 Digital Orthophoto Quarter Quadrangle
Map Date: January 08, 2007
Map ID: USGS-NWRC: 2007-11-0147

Southeast White Lake East Shoreline Loss Rate from 1990 to 2005

-  1990 Aerial Photography Shoreline
-  2005 DOQQ Shoreline
-  1990-2005 Area of Shoreline Loss

90-05 Loss	Approx. Shoreline	Loss Rate
3,413,287 sq. ft.	44,592 ft.	5 ft. per yr.



Region 4 – Calcasieu/Sabine Basin

Proposed Projects

**R4- CS 1 Calcasieu and Mermentau Ship
Channels Sediment By-Pass Project**

PPL17 PROJECT NOMINEE FACT SHEET
January 9, 2007

Calcasieu and Mermentau Ship Channels Sediment By-Pass Project

Coast 2050 Strategy - CS 18 - Restore Long-shore Sediment Flow Across the Mouth of Calcasieu Pass; and M 19 Across the Mouth of the Mermentau Ship Channel.

Project Location

Region 4, Calcasieu-Sabine Basin, located at Calcasieu Pass and the Gulf of Mexico, south of Cameron; Mermentau Basin at the Mermentau Ship Channel south of Grand Chenier.

Problem

The Calcasieu and Mermentau Ship Channel jetties have interrupted the natural westward flow of near shore Gulf long-shore currents and sediment deposition. Sand to silty-clay sediments are being trapped by the jetties along the Gulf shore on the east side of these channels, while severe erosion continues to the west of both channels. The dunes west of the Calcasieu Ship Channel were intact 10 yrs ago. The erosion rates are 15 ft/yr west of the Calcasieu and 50 ft/yr west of the Mermentau Ship Channel (highest Cameron Parish shoreline erosion rates).

Proposed Project Features

The project proposes to transport about 2 to 4 Million cubic yards of subtidal sediment from the east side of Calcasieu Pass and the Mermentau Ship Channel (1 to 2 M cy each; 8,000 ft X 1,000 lf = 183 ac each) to the west via a hydraulic dredge placed east of each jetty. The recently deposited sediment will be dredged from subtidal areas in > 2 feet water depths to a dredged depth of no more than 10 feet.

Goals

The goal is to reduce Gulf shoreline erosion and restore shoreline west of the Calcasieu Pass and Mermentau Ship Channel jetties by transportation of sediment from the east jetty areas.

Preliminary Project Benefits

The transported sediment is expected to rebuild at least 100 to 200 acres of Gulf shoreline west of each channel totaling 200 to 400 acres restored and 25 to 50 acres protected over 20 yrs.

Identification of Potential Issues

Possible landrights issues caused by dredging recently deposited sediment east of the jetties may not be an issue because the likely landowner is the State of Louisiana. The material dredged would be submerged (subtidal) sediment not subaerial land that has created new marsh.

Preliminary Construction Costs

\$4 to \$6 M based on the cost to dredge 2 to 4 M cubic yards of material and transport it 1 to 2 miles to restore 200 to 400 acres of marsh and Gulf shoreline.

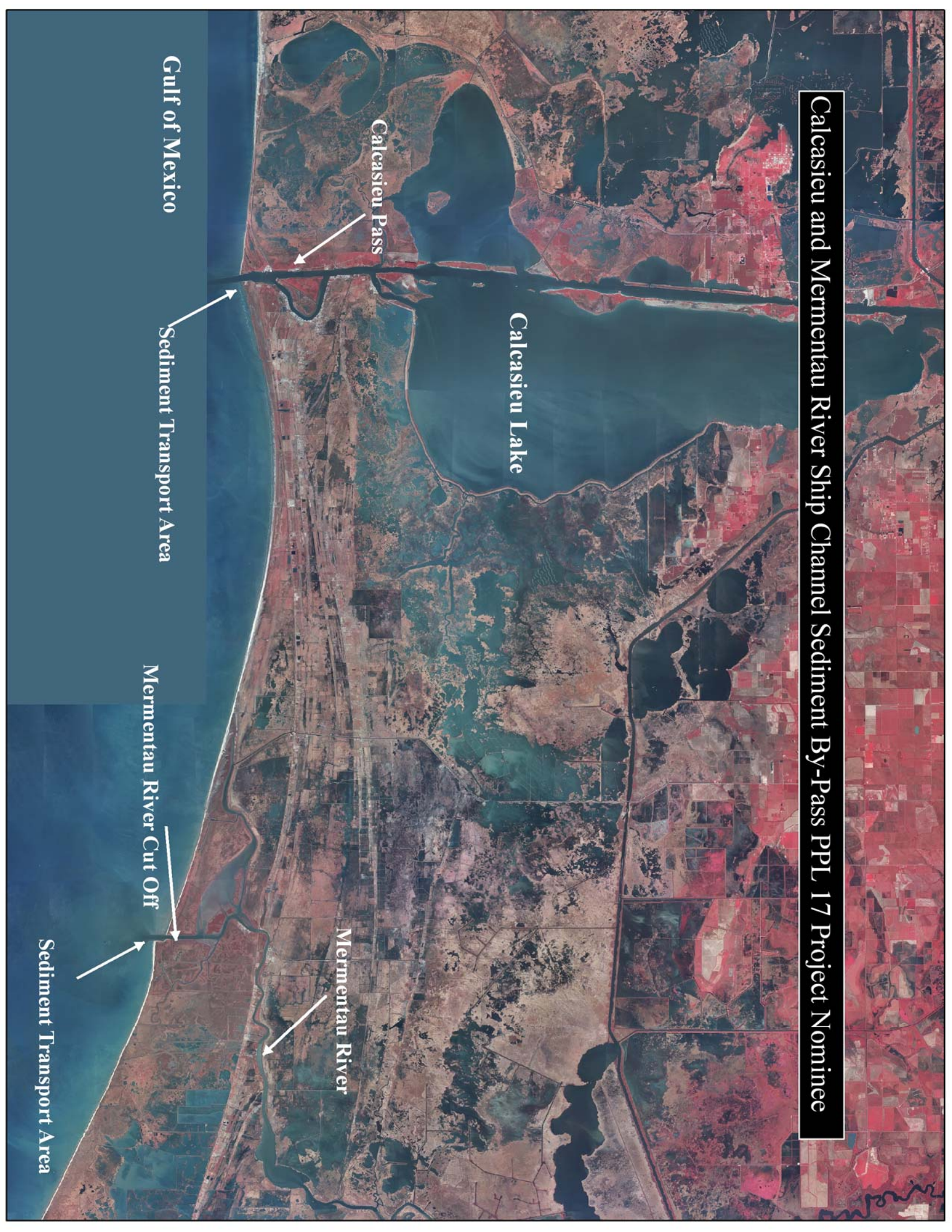
Project Nominator

David Richard, Stream Property Management Co., 337-433-1057 (ext 19), drichard@streamcompany.com; Darryl Clark, USFWS.

Preparer of Fact Sheet

Darryl Clark, USFWS, 337-291-3111, Darryl_Clark@fws.gov

Calcasieu and Mermentau River Ship Channel Sediment By-Pass PPL 17 Project Nominee



Calcasieu Lake

Calcasieu Pass

Gulf of Mexico

Sediment Transport Area

Mermentau River Cut Off

Mermentau River

Sediment Transport Area

R4- CS 2 Black Bayou Terraces Project

PPL17 PROJECT NOMINEE FACT SHEET
January 24, 2007

Black Bayou Terraces (CS-33)

Coast 2050 Strategy:

Restore and Sustain Wetlands (*Regional Ecosystem Strategy*)

Terracing (*Coastwide Common Strategy*)

Vegetative Plantings (*Coastwide Common Strategy*)

Project Location:

Region 4, Calcasieu/Sabine Basin, Calcasieu and Cameron Parish, South side of the GIWW, West of Gum Cove Ridge

Problem:

Saltwater intrusion into the surrounding marsh and canals from the GIWW coupled with erosion caused by wave action from nearby boats, wind, and tides has caused the historical land loss within this area. Aerial photography since the late 1930's documents the conversion of approximately 2,700 acres of emergent marsh to open water within the proposed project area, or approximately 75% of the emergent marsh has converted to open water over the last 70 years within this proposed project area. The CWPPRA sponsored Black Bayou Hydrologic Restoration Project (CS-27) features addressed the saltwater intrusion problem, however the expansive open water area identified by this project continues to experience shoreline erosion and coalescence of smaller water bodies into one 2,700 acre pond. This expansion is threatening the integrity of the western levee boundary at this time. The CWPPRA sponsored Plowed Terrace Demonstration Project (CS-25), coupled with mitigation terraces within this area has shown the usefulness of terracing to reduce wave fetch, however more terraces are needed.

Goals:

- (1) Restore coastal marsh habitat, and
- (2) Reverse the conversion of wetlands to shallow open water in the project area.

Proposed Solutions:

Construct up to 261,000 linear feet of earthen terraces, oriented in such a way as to reduce wind generated wave fetch. In addition, the terraces would be planted with appropriate species of wetland vegetation to reestablish the plant productivity needed to rebuild the organic peat for marsh vertical accretion and expansion.

Preliminary Project Benefits:

At 261,000 LF; 5 foot crown, 1:5 side slopes, 3' out of water; $261,000 \text{ LF} * 35' = 9,135,000$ square feet / $43,560 = 210$ acres initially constructed, and approximately 500 acres of emergent marsh surrounding the open water will be benefited indirectly. An average loss of 2,700 acres over 75 years is 36 acres per year. This project will stop the conversion of marsh to open water by providing the necessary protection to the remaining emergent marsh to wind induced waves. Thus, 720 additional acres of emergent marsh will be protected over the 20-year life of the project, or >75%. These terraces will maintain the western artificial levee boundary of this 3,200-acre area through the reduction of wave induced erosion. The Black Bayou Gas Field is immediately adjacent to the project area, and this project will re-establish and help stabilize the emergent marsh that adjoins this critical infrastructure. This project would compliment the

results of the Black Bayou Hydrologic Restoration (CS-27) and Plowed Terrace Demonstration (CS-25), as CS-27 reduced saltwater intrusion and CS-25 demonstrated the usefulness of terraces in this area.

Identification of Potential Issues:

No known issues at this time.

Preliminary Construction Costs:

Estimated construction costs plus 25% contingency = \$5,875,000.

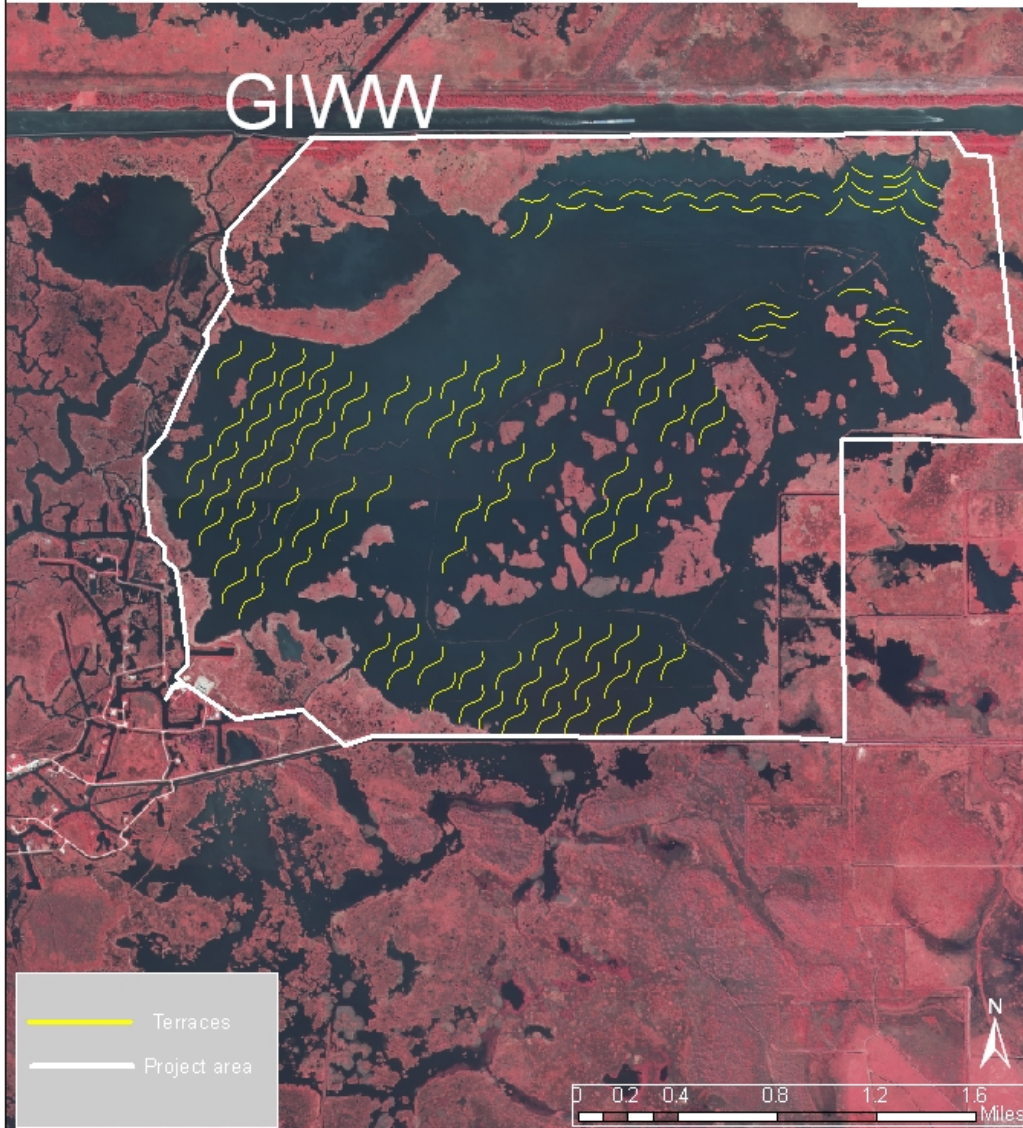
261,000 LF of terraces and 105,400 vegetative plugs.

Preparer of Fact Sheet:

John D. Foret, Ph.D., NOAA Fisheries Service, (337) 291-2107, john.foret@noaa.gov.

Black Bayou Terraces

Calcasieu and Cameron Parishes, LA
PPL 17 nominee



R4- CS 3

East Cove Marsh Creation Project

PPL17 PROJECT NOMINEE FINAL FACT SHEET

January 9, 2007

East Cove Marsh Creation Project

Coast 2050 Strategy

Regional Strategy 6: Use dedicated dredging or beneficial use of sediment for wetland creation or protection.

Project Location

Region 4, Calcasieu-Sabine Basin, 1.5 miles north of Cameron, Cameron Parish, in the southwestern portion of the Cameron-Creole Watershed on the Sabine National Wildlife Refuge.

Problem

Former brackish marshes in the SW portion of the Cameron Creole Watershed have converted to open water due to subsidence and past saltwater intrusion from the Calcasieu Ship Channel. The Cameron-Creole Watershed Hydrologic restoration project was implemented in 1989 to relieve the saltwater intrusion problem, has not succeed in revegetating the area. Hurricane Rita in 2005 cut four breaches in the Cameron-Creole Watershed levee allowing higher salinities from Calcasieu Lake to enter the watershed. Sediment from an outside source or water level draw-downs are needed to restore existing large open water areas to marsh.

Proposed Project Features

Place material beneficially from normal maintenance dredging of the Lower Calcasieu River from Mile Points 5 to 8 in two disposal areas totaling 300 acres in the SW portion of the Cameron-Creole Watershed. One area is 62 acres large with existing retention dikes, and the other area may have 12,000 ft of existing retention dikes. The marsh areas restored will have constructed bayous and openings to existing bayous for estuaries fisheries access to make them functional marshes. The Corps New Orleans District dredges about 1 million cubic yards of material every 2 years in the vicinity of MP 5 to 8 in the lower Calcasieu River. The project plan is to use beneficial use to transport at least 2 million cy of material to these areas to restore an estimated 262 to 300 acres of marsh (125 ac to 150 ac/1 million cy) in one or two cycles (8,067 cy/acre restored with initial slurry height of 5 ft). Material from slightly lower or higher reaches could be included so that one cycle would be all that would be necessary.

Goals

The goal is to restore approximately 300 acres of marsh via beneficial use of maintenance dredged material from the Calcasieu Ship Channel.

Preliminary Project Benefits

The project will restore approximately 300 acres of shallow open water to marsh and reduce shoreline erosion on adjacent marshes in the southwestern portion of the Cameron-Creole Watershed.

Identification of Potential Issues

There are no issues to our knowledge. The area is on a Federal refuge so landrights will not be an issue.

Proposed Solution

The primary components consist of the creation/restoration of 262 acres of marsh by beneficial use of maintenance dredged material from the Calcasieu Ship Channel.

Preliminary Construction Costs

The Sabine Refuge Marsh Creation Cycle 1 project cost about \$2.5/cy (1 M cy was transported about 8 miles to create 125 acres of marsh). Approximate construction costs would likely range from \$4 to \$5 M.

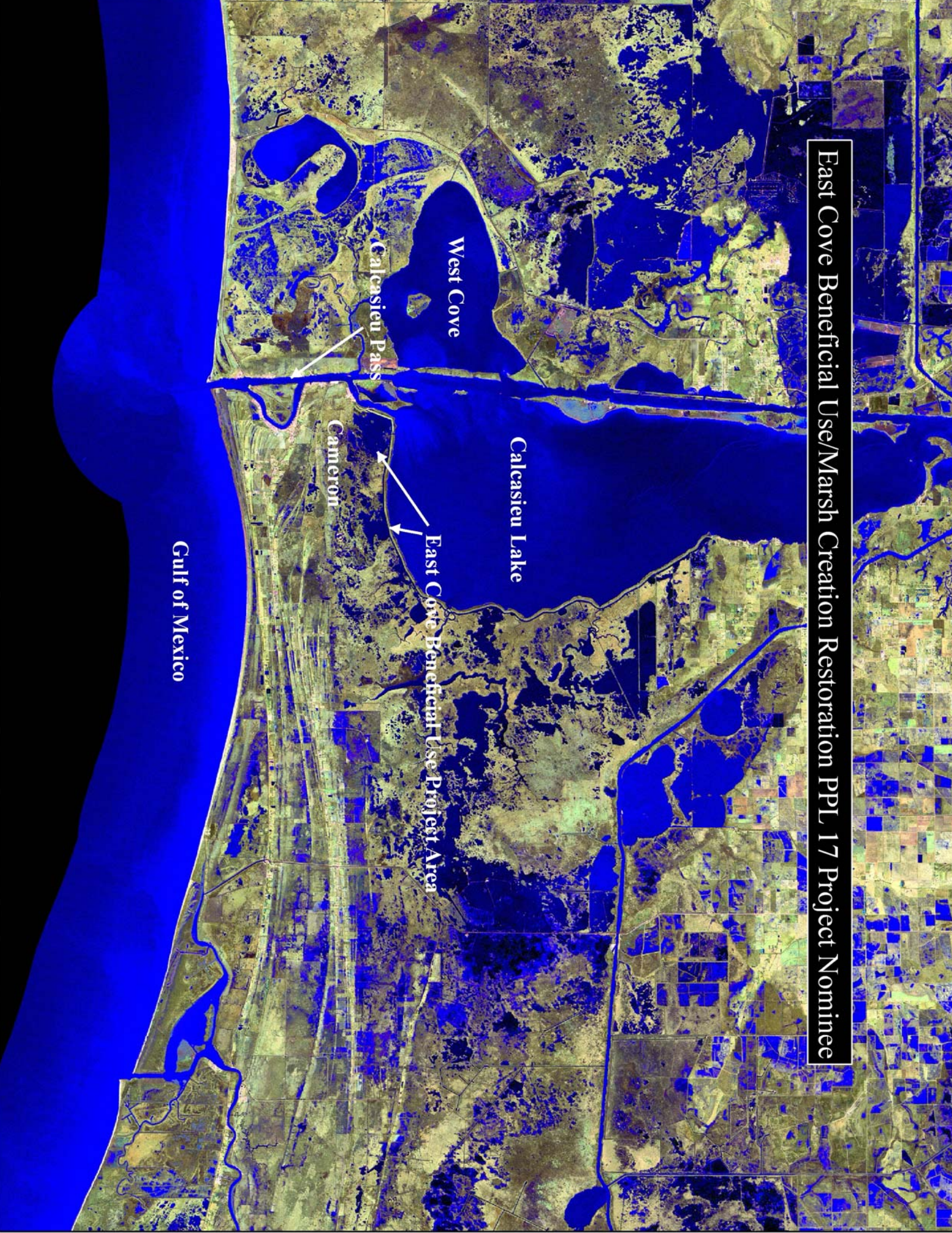
Nominator

Roy Walter, Sabine National Wildlife Refuge

Preparer of Fact Sheet

Darryl Clark, FWS, 337-291-3111, 291-3139 fax, Darryl_Clark@fws.gov
Robert Dubois, FWS, 337-291-3100

East Cove Beneficial Use/Marsh Creation Restoration PPL 17 Project Nominee



West Cove

Calcasieu Pass

Cameron

Calcasieu Lake

East Cove Beneficial Use Project Area

Gulf of Mexico

R4- CS 4 East Calcasieu Lake Marsh Creation Project

PPL17 PROJECT NOMINEE FACT SHEET

24 January 2007

Project Name: East Calcasieu Lake Marsh Creation Project

Coast 2050 Strategy: Regional Strategy #6 – Use dedicated dredging or beneficial use of sediment for wetland creation or protection.

Project Location: Region 4, Calcasieu/Sabine Basin, Cameron Parish, four sites on the east shoreline of Calcasieu Lake from near Highway 384 south to the Grand Bayou area.

Problem: Historically, there were approximately 50,000 acres of marsh on the eastern shore of Calcasieu Lake south of the GIWW and west of Highway 82. By the year 1990, 22,000 acres had been lost, most of it in the 1966-74 time period. More recently, the loss rate had appeared to slow significantly. However, Hurricane Rita impacted the area substantially in 2005 and most likely exacerbated the loss rate.

Goals: Create marsh in shallow open water areas on the east shore of Calcasieu Lake by beneficially using approximately 4.5 million cubic yards (MCY) of dredged material acquired from maintenance of the Calcasieu River Ship Channel, between channel miles 15 and 21.

Proposed Solutions: Dredged material from maintenance of the Calcasieu River Ship Channel will be pumped across Calcasieu Lake to create wetlands within the three (3) designated wetland creation areas along the east shore of Calcasieu Lake.

- (1) Wetland Creation Area 1: Approximately 2.6 MCY of material dredged from between ship channel miles 21.0 and 17.5 would be placed within the five (5) sites, designated as 1.A. through 1.E. Perimeter containment dikes would be constructed using in situ material. The ship channel dredged material would be placed at a maximum elevation of +4.5 feet Mean Low Gulf (mlg). Two (2) feet of freeboard would be maintained along the containment dikes at all times.
- (2) Wetland Creation Area 2: Approximately 1.4 CMY of material dredged from between ship channel miles 17.5 and 14.0 would be placed in wetland creation Area 2. Perimeter containment dikes and an internal low level earthen weir would be constructed using in situ material. The ship channel dredged material would be placed at a maximum of +4.5 feet MLG. Two (2) feet of freeboard would be maintained along the perimeter containment dikes at all times.
- (3) Wetland Creation Area 3: Approximately 475,000 cubic yards of material dredged from between ship channel miles 8.4 and 5.0 would be placed within three (3) wetland creation sites designated as 3.A. through 3.C. Due to the limits of available sediment from this reach of the ship channel, Area 3 would be restored in three dredging cycles, in the following sequence: 3.A, 3.B., 3.C. Containment dikes would be constructed using in situ material to prevent the dredged material from entering the area immediately north of and adjacent to the proposed marsh creation sites. The ship channel dredged material would be placed at a maximum of +4.5 feet MLG. Material would be deposited unconfined in order to nourish existing marsh within Area 3. Two feet of freeboard would be maintained along the closure dikes at all times.

Preliminary Project Benefits: The following acres of wetlands would be created for each of the following alternative wetland creation areas:

- (1) Sites 1.A. through 1.E. Approximately 280 acres would be created within these sites.
- (2) Site 2. Approximately 190 acres would be created in site.
- (3) Sites 3.A through 3.C. Approximately 116 acres would be created within these sites, and another 109 acres of existing wetlands would be nourished.

This project would create marsh to achieve an elevation that is conducive to sustaining wetland vegetation. At the end of 20 years, there would be between 250 and 500 net acres.

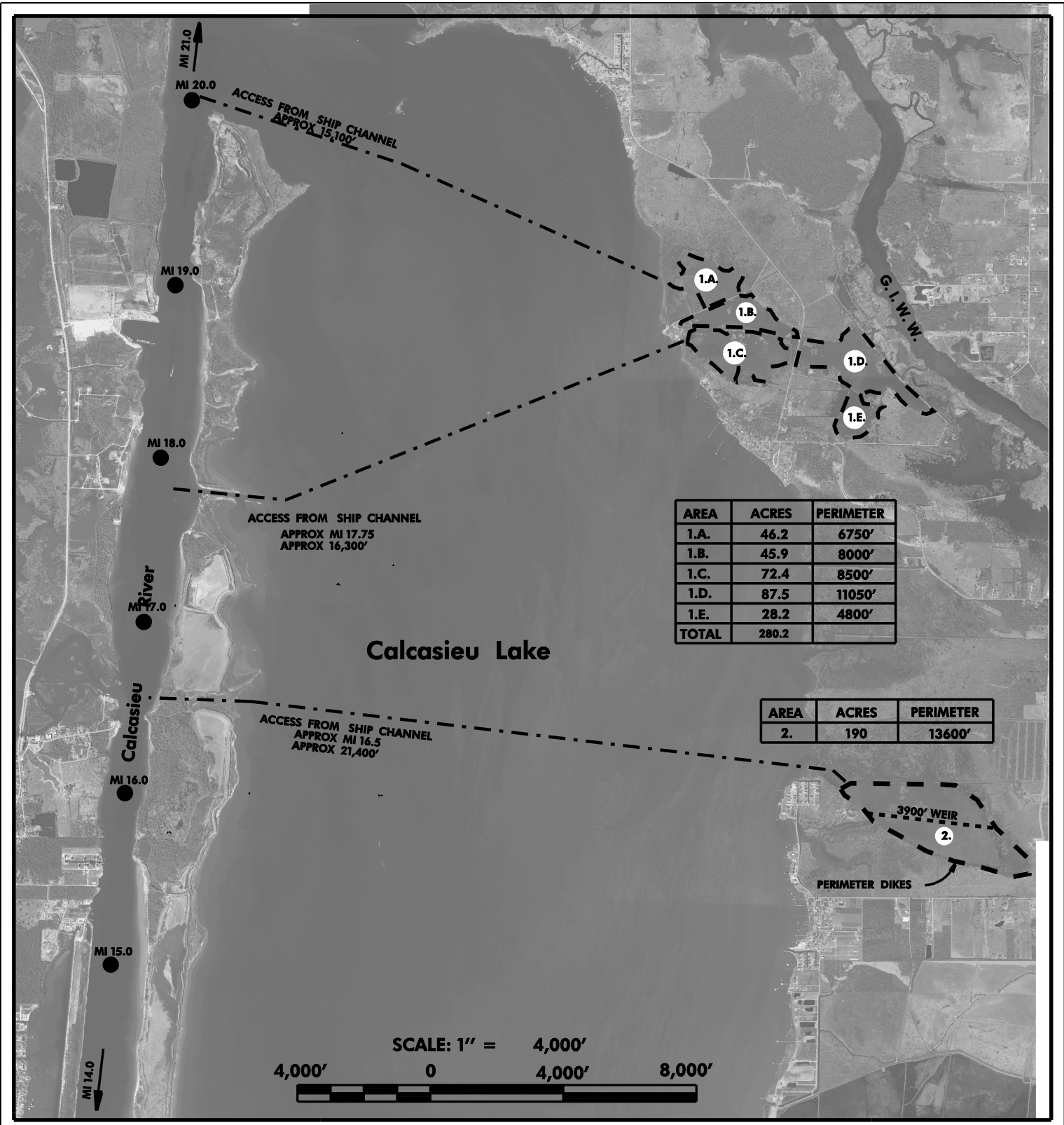
Identification of Potential Issues: Oysters and land rights

Preliminary Construction Costs: \$15 million

Preparer(s) of Fact Sheet:

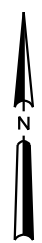
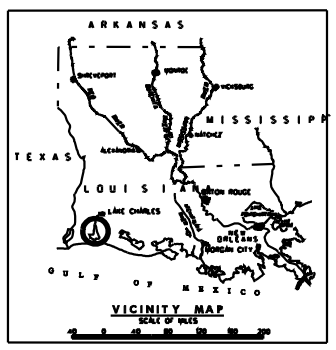
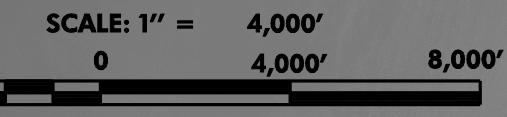
Melanie Goodman, US Army Corps of Engineers, 504-862-1940,
Melanie.L.Goodman@mvn02.usace.army.mil

Rick Broussard, US Army Corps of Engineers, 504-862-2402,
Richard.W.Broussard@mvn02.usace.army.mil



AREA	ACRES	PERIMETER
1.A.	46.2	6750'
1.B.	45.9	8000'
1.C.	72.4	8500'
1.D.	87.5	11050'
1.E.	28.2	4800'
TOTAL	280.2	

AREA	ACRES	PERIMETER
2.	190	13600'



DATA SOURCE:
1998 Photography (D00 Photos)

CWPPRA PPLII Nominee:
Region 4

Calcasieu Lake East Shore Marsh Creation Marsh Creation Sites 1 & 2

Calcasieu Lake

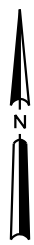
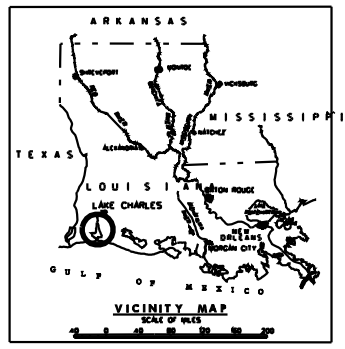
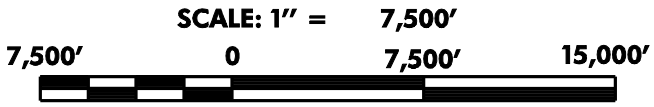
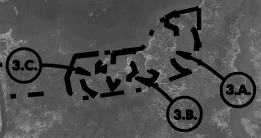
AREA	ACRES	CLOSURE DIKES
3.A.	40	2000'
3.B.	38	1500'
3.C.	38	1800'

Calcasieu River

- MI 11.0
- MI 10.0
- MI 9.0
- MI 8.4
- MI 8.0
- MI 7.0
- MI 6.0
- MI 5.0

ACCESS FROM SHIP CHANNEL
APPROX 35,000'

ACCESS FROM SHIP CHANNEL
APPROX 37,000'



DATA SOURCE:
1998 Photography (D00 Photos)

CWPPRA PPLII Nominee:
Region 4

Calcasieu Lake East Shore Marsh Creation Marsh Creation Site 3

R4- CS 5 East Gum Cove Marsh Terracing Project

PPL17 PROJECT NOMINEE FACT SHEET
January 9, 2007**East Gum Cove Terracing****Coast 2050 Strategy**

Ecosystem Management: Maintain estuarine gradient to achieve diversity. Restore freshwater input at the upper end of the estuary to flow seaward and grade into an increasingly saline flow. With a salinity gradient comes the gradation of fresh-intermediate-brackish-saline vegetation and associated variations in fish and wildlife habitat.

Regional: Dedicated dredging of sediment for wetland creation.

Project Location

Region 4, Calcasieu-Sabine Basin, Cameron Parish, West Black Lake Mapping Unit, area east of Gum Cove and south of GIWW.

Problem

The project will be designed to reduce salt water intrusion and marsh erosion by decreasing the amount of salt water entering the project area and disrupting the artificial circulation of that water. Additionally, the project proposes to create terraces and increase emergent marsh. Prior to Hurricane Rita this area was protected from salt water intrusion and artificial circulation. According to Coast 2050 loss rates (1978-1990) of approximately 1.5% per year were calculated by USGS in this area.

Proposed Project Features

The project proposes approximately 3 miles of shoreline protection along the GIWW, approximately 42,000 linear feet (8 miles) of terraces, replacing 9 deteriorated culverts with earthen plugs, and installing a structure and channel to allow water from the GIWW into the project area.

Goals

- 1.) Create marsh by beneficially using dredge material to build terraces
- 2.) Increase submerged aquatic vegetation in shallow open water areas
- 3.) Reduce salt water intrusion onto East Gum Cove Ridge

Preliminary Project Benefits

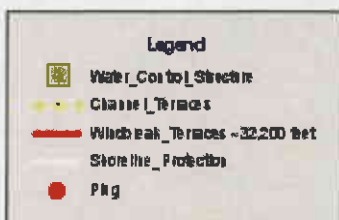
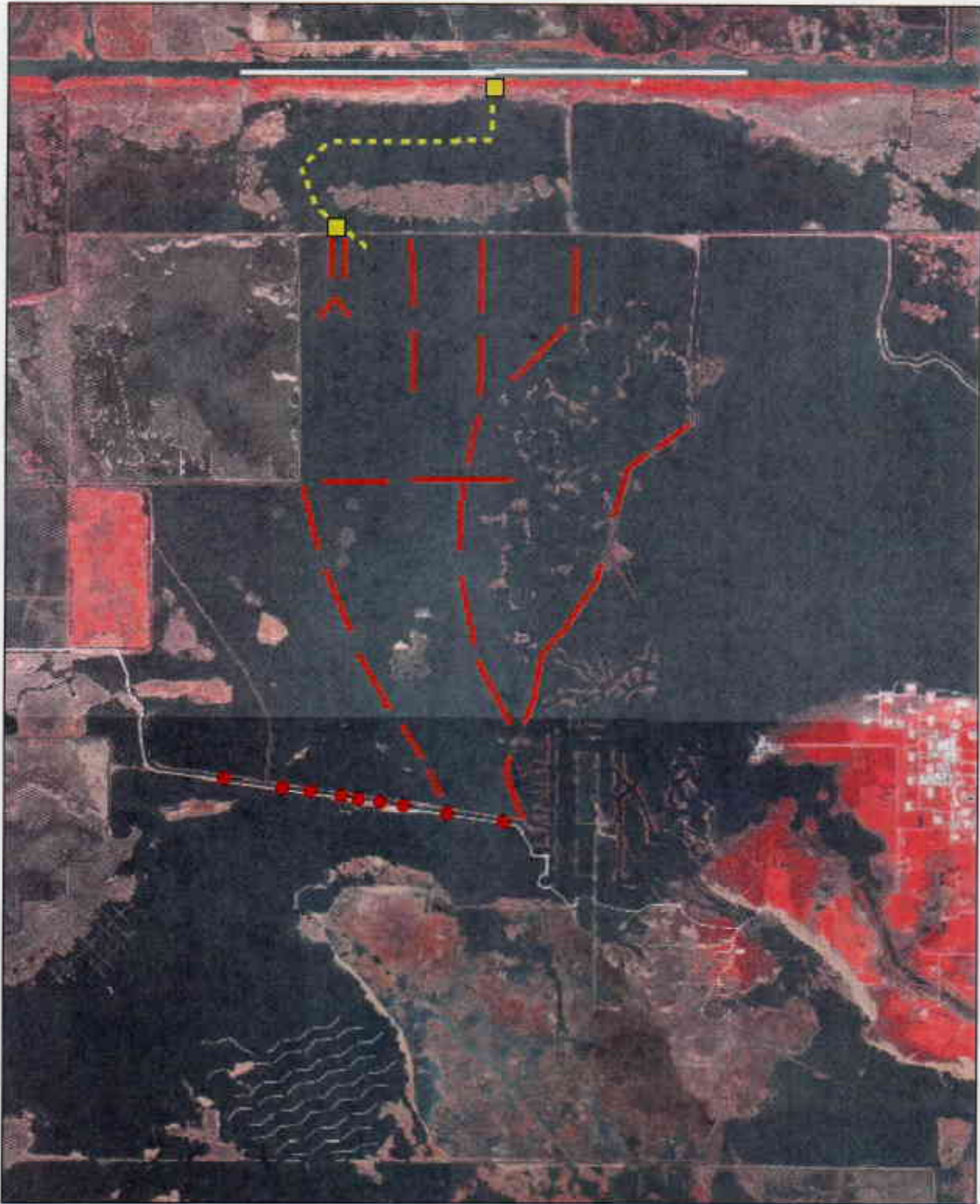
The project is designed to create emergent marsh and encourage SAV production. The total area benefited is 8,029 acres. This project maintains the Gum Cove Ridge and has a positive net impact on critical infrastructure (pipelines).

Preliminary Construction Costs

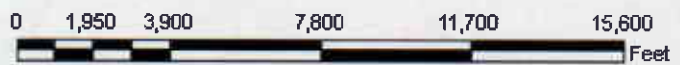
\$ 8 Million

Preparers of Fact Sheet

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East Gum Cove Terracing
 PPL 17
 Calcasieu and Cameron Parishes, Louisiana



R4- CS 6 Black Lake Restoration Project

PPL17 PROJECT NOMINEE FACT SHEET

January 9, 2007

Black Lake Restoration

Coast 2050 Strategy

Ecosystem Management: Maintain estuarine gradient to achieve diversity. Reduce saltwater intrusion to re-establish a salinity gradient. A salinity gradient will create a gradation of fresh-intermediate-brackish-saline vegetation and associated variations in fish and wildlife habitat.

Regional: Dedicated dredging of sediment for wetland creation.

Project Location

Region 4, Calcasieu-Sabine Basin, Cameron Parish, Black Lake Mapping Unit, north of the town of Hackberry, Louisiana.

Problem

The project will be designed to reduce salt water intrusion and marsh erosion by decreasing the amount of salt water entering the project area and disrupting the artificial circulation of that water. Additionally, the project proposes to recreate the north and west shoreline of Black Lake. According to Coast 2050 loss rates (1978-1990) of approximately 1.5% per year were calculated by USGS in this area.

Proposed Project Features

The project proposes approximately 3 miles of shoreline protection along the GIWW, approximately 39,000 linear feet (7.5 miles) of terraces, and water control structures in Black Lake Bayou and Alkali Ditch.

Goals

- 1.) Create marsh by beneficially using dredge material to build terraces
- 2.) Re-establish the north and west shoreline of Black Lake
- 3.) Reduce water exchange in Black Lake Bayou and Alkali Ditch

Preliminary Project Benefits

The project is designed to create emergent marsh and encourage SAV production. The proposed project restores the historic lakeshore and potentially provides containment for dredge material available through the BudMat program.

Preliminary Construction Costs:

\$ 7.6 Million

Preparers of Fact Sheet

Troy Mallach, NRCS

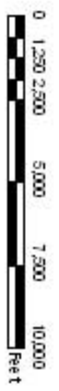
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Black Lake Restoration
Calcasieu and
Cameron Parishes, Louisiana



Legend

- Water_Control_Structure
- Shoreline_Protection
- Terraces



**R4- CS 7 Holly Beach Breakwaters East
Extension Project (BW and sand)**

PPL17 PROJECT NOMINEE FACT SHEET

January 9, 2007

Holly Beach Breakwaters East Extension (BW and sand)

Coast 2050 Strategy

Coastwide: Maintain, Protect, or Restore Ridge Functions; Maintenance of Gulf, Bay, and Lake Shoreline Integrity.

Regional: 18. Stabilize Gulf of Mexico shoreline from Calcasieu Pass to Johnson's Bayou.

Project Location

Region 4, Calcasieu-Sabine Basin, Cameron Parish, Martin Beach Ship Canal Shore Mapping Unit, Extension of Holly Beach Breakwater Project (CS-1) east toward the Calcasieu Ship Channel.

Problem

The project will be designed to reduce erosion of the Gulf Shoreline east of the Holly Beach Breakwater project, and incidentally protecting State Hwy 82 and the marsh system behind it. Recent loss rates (1998-2005) were calculated from aerial photography at approximately 22 ft/yr.

Proposed Project Features

The project proposes approximately 33,000 linear feet (6.25 miles) of breakwaters continuing from the Calcasieu Ship Channel west to the Holly Beach Breakwater Project (CS- 01). Breakwaters will be designed on the CS-01 template, using all the lessons learned from the Holly Beach Breakwater Enhancement and Sand Management Project (CS-31). An additional sand component will be added to create/nourish beach behind the breakwaters.

Goals

- 1.) Reduce Gulf shoreline retreat and restore chenier barrier shoreline and
- 2.) Protect Marsh and wooded chenier habitat threatened by encroaching gulf
- 3.) Protect/restore critical habitat for the piping plover, a threatened/endangered species

Preliminary Project Benefits

The project is designed to reduce wave energies on the gulf shoreline west of the Calcasieu Ship Channel and trap sediment between the breakwaters and shoreline and additional beach creation would protect approximately 300 acres. This project maintains a beach rim component of the coastal ecosystem and has a positive net impact on critical infrastructure (pipelines and houses) and has a synergistic effect of the Holly Beach project to which it is tied. The Audubon Society supports this project as further protection to valuable chenier habitat. This project would also protect/restore critical habitat for the piping plover, a threatened/endangered species.

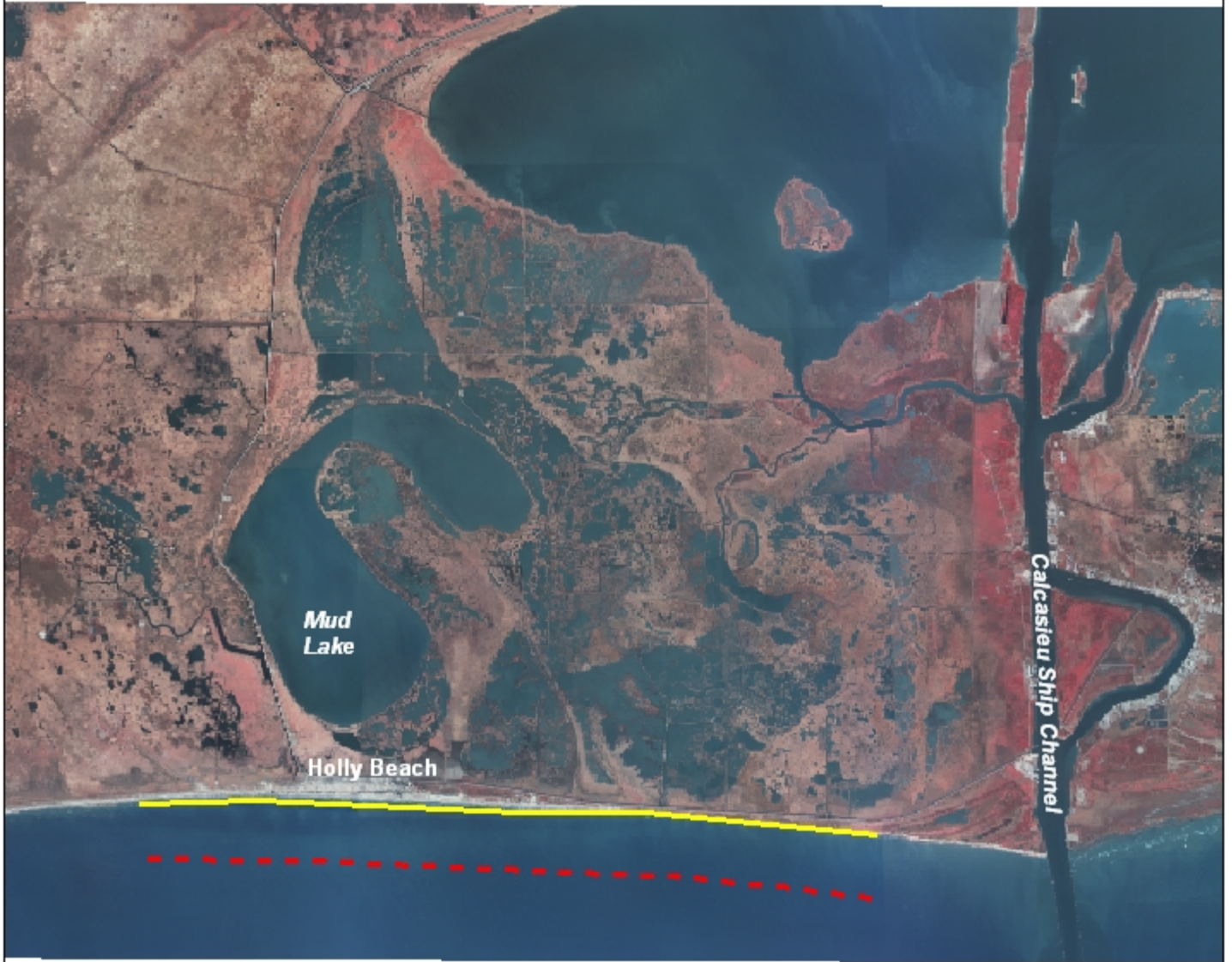
Preliminary Construction Costs

\$30.0 million

Preparers of Fact Sheet

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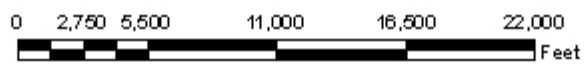


Legend

- Beach_Nourishment
- Rock_Breakwaters



Holly Beach East
Breakwaters and Beach Nourishment
PPL17
Cameron Parish, Louisiana



R4- CS 8 Rabbit Island Restoration Project

Rabbit Island Restoration Project

Coast 2050 Strategies:

- Dedicated dredging of sediment for wetland creation.

Project Location:

Region 4, Calcasieu/Sabine Basin; located approximately 4 miles northwest of Cameron, Louisiana, in Cameron Parish. The project encompasses approximately 220 acres of brackish-to-saline marsh and open water, and is border by the southwest portion of Calcasieu Lake known as West Cove.

Problem:

Rabbit Island is eroding due to subsidence and wave action from the Calcasieu Ship Channel. The island is owned by the Louisiana State Lands office and currently supports nesting for the endangered brown pelican (*Pelecanus occidentalis*) and various species of wading birds (i.e., herons, egrets, ibis, and roseate spoonbills). Continued subsidence and erosion will result in increased marsh loss and reduce the island's effectiveness in providing habitat for nesting brown pelicans and wading birds.

Goals:

The project goal is to restore Rabbit Island by beneficially using dredged material from the Calcasieu Ship Channel.

Proposed Solution:

Marsh nourishment and creation would provide additional stabilization to this area and would be accomplished by hydraulically dredging material to an elevation that would settle at marsh height for the majority of Rabbit Island, and one foot above marsh height on areas to be used as nesting habitat.

Project Benefits:

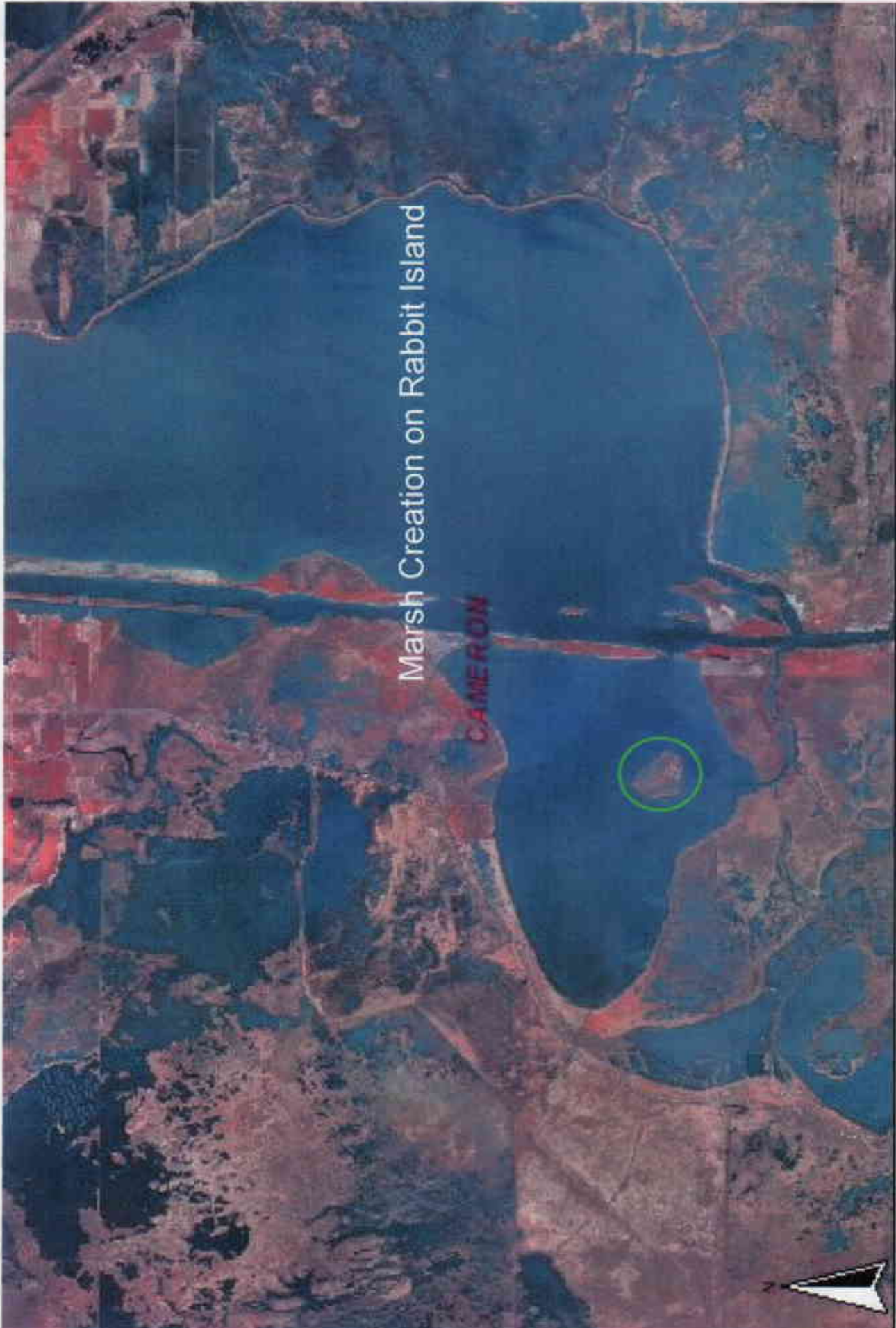
The project would benefit about 220 acres of brackish-to-saline marsh and open water. .

Preliminary Construction Costs:

\$3 Million

Preparers of Fact Sheet:

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Marsh Creation on Rabbit Island

CAMERON



Louisiana Department of Natural Resources

0 4.1 mi