

# **REGION II**

# **Coastal Wetlands Planning, Protection and Restoration Act**

## **20<sup>th</sup> Priority Project List**



# **Region 2 Regional Planning Team Meeting**



**January 28, 2010  
New Orleans, LA**

# 1. Welcome and Introductions



RPT Region 2  
Leader:  
Melanie Goodman -  
USACE

## Announcements

- PPL 20 Selection Process Packages
- PPL 20 RPT meetings to accept project nominees:
  - Region IV, Rockefeller Refuge, Jan. 26, 2010, 1:00 pm
  - Region III, Houma Municipal Auditorium, Jan. 27, 2010, 9:00 am
  - Region II, New Orleans Corps of Engineers, Jan 28, 9:00 am
  - Region I, New Orleans Corps of Engineers, Jan 28, 1:00 pm
- Coast-wide Voting meeting to select project nominees for all basins:  
February 24, 2010, 9:30 am  
LA Department of Wildlife and Fisheries, 2000 Quail Dr. Baton Rouge
- Parish representatives must identify themselves during the RPT meetings and fill out a voting registration form, including contact information for the primary and secondary voting representatives that will cast votes at the coast-wide voting meeting.
- CWPPRA agencies will be assigned responsibilities for preparing nominee fact sheets after the coast-wide voting meeting.

## Region 2 Parishes

Eligible parishes for basins in Region 2 include:

### Barataria Basin

Plaquemines Parish

Jefferson Parish

Orleans Parish

Ascension Parish

Assumption Parish

St. James Parish

St. Charles Parish

Lafourche Parish

St. John the Baptist Parish

### Breton Sound Basin

Plaquemines Parish

St. Bernard Parish

### Mississippi River Basin

Plaquemines Parish

## 2. PPL 20 Process and Ground Rules



## RPT Meetings

- Jan. 26-28, 2010 to accept project and demo proposals in 4 coastal regions broken into 9 basins (no limit on number of projects that can be proposed).
- Project proposals should support a Coast 2050 Regional or Coast-wide Strategy.
- A project can only be nominated in one basin.
- Proposals that cross multiple basins or coast wide projects shall be nominated in one basin only based on majority area of project influence.
- Project presenters can split multi-basin or coast-wide projects into multiple individual projects. This must occur during the RPT meeting the project is first presented in. If a presenter does not choose what basin to propose a project in, the RPT leaders will decide collectively after the RPT meetings but before the Coast-wide Voting Meeting.
- Public comments on project proposals will be accepted orally during the RPT meetings and in writing by February 12, 2010.

## Coast-wide Voting Meeting

- Feb. 24, 2010, Coast Wide Voting Meeting.
- RPTs, consisting of CWPPRA Agencies and Coastal Parishes, will select 2 nominees per basin, except 3 each in Barataria, Terrebonne, and Pontchartrain and one in the Atchafalaya Basin. Six demonstration projects will also be selected.
- Selection will be by consensus if possible. If not CWPPRA agencies and parishes will submit ranked votes by basin.
- Parishes vote in basins they occupy and on all demonstration projects.
- No public comments taken during CWV meeting (Public comments will be heard today and written comments should be submitted by 2/12/2010 to the CWPPRA Program Manager)

## Nominee Project Evaluations

- Following the coast-wide voting meeting, an agency will be assigned to each project to prepare a Nominee Project fact sheet (1 page + map).
- CWPPRA Engineering & Environmental Workgroups develop features and preliminary cost and benefit ranges
- Work groups will also review demo projects and verify that they meet demo criteria.
- CWPPRA Planning and Evaluation Subcommittee prepares cost/benefit summary matrix for Technical Committee.

## PPL 20 Candidate Project Selection

- CWPPRA Technical Committee meeting, April 20, 2010 at 9:30 am, New Orleans Corps of Engineers
- Technical Committee ranks nominees and votes to select 10 candidate projects and up to 3 demos.
- Written public comments should be submitted to Corps of Engineers prior to TC meeting by April 3, 2010
- Public comments also accepted orally during meeting.
- Technical Committee will assign CWPPRA agencies to develop Phase 0 candidate projects.

## PPL 20 Candidate Project Evaluation

- Candidates evaluated between May and October
- CWPPRA Workgroups
  - Workgroups conduct site visits to establish baseline and identify needs
  - Mapping workgroup meetings to establish project boundaries
  - Environmental Workgroup WVA meetings to calculate benefits
  - Engineering Workgroup meetings to refine features and project costs
  - Engineering Workgroup meetings to develop demonstration project scope and costs.
  - Economics Workgroup conducts economic analyses to develop fully funded cost estimates for 20 year project

## CWPPRA PPL 20 Selection

- 2 Public meetings to present Phase 0 Evaluation results:
  - Abbeville, Courthouse, Nov. 16, 2010, 7:00 pm
  - New Orleans, Corps of Engs, Nov. 17, 2010, 7:00 pm
- Technical Committee votes to select up to 4 candidate projects and up to 1 demo to recommend for Phase 1.
  - Dec. 1, 2010, Baton Rouge, 9:30 am
- Task Force final decision end of January 2011.

## 3. Region 2 Coast 2050 Regional Strategies



Projects nominated should be:

- consistent with the Coast 2050  
Regional Ecosystem or  
Coastwide Strategies



## Restore Swamps

- Construct small sediment-rich diversions with outfall management
- Restore natural drainage patterns
- Prevent diversion-related flooding by building local levees at the wetland/upland interface and local pumping; remove diverted waters from upper basin by raising Highway 90 and installing flap-gated culverts or other appropriate measures

## Restore and Sustain Marshes

- Use existing or future locks (Harvey, Algiers or Empire) to divert as much water as possible.
- Manage outfall of existing diversions
- Enrich existing diversions with sediment
- Continue building and maintaining delta splays
- Construct most effective small diversions (Upper Oak, Amoretta, East and West of Empire)
- Construct sediment trap in Miss. River south of Venice and pump out to build marsh
- Construct delta-building diversion in the Myrtle Grove/Naomi area (15,000 cfs)
- Construct delta-building diversion in Bastion Bay (about 15,000 cfs)

## Restore and Sustain Marshes

- Construct delta-building diversion into Benny's Bay (50,000 cfs)
- Construct delta-building diversion into American Bay (20,000-100,000 cfs)
- Construct controlled crevasses to allow diversion into Quarentine Bay and control sediment with low levees (about 50,000 cfs)
- Prevent loss of bedload into deep Gulf waters by relocating the navigation channel, not thru Bastion Bay, to reallocate water and sediment for land-building near shore

## Restore and Sustain Marshes

- Dedicated dredging to create marsh near La. Highway 1
- Dedicated dredging of sediment for marsh building in Caminada Bay
- Construct large conveyance channel parallel to B. Lafourche too divert 100,000 cfs to create a delta lobe in Caminada Bay
- Gap spoil banks and plug canals in lower bay marshes

## Restore, Protect and Maintain Bay, Lake and Gulf Shorelines and Barrier Islands

- Construct wave absorbers or low breakwaters at the head of bays
- Construct reef zones across bays
- Restore/maintain barrier headlands, islands and shorelines
- Extend and maintain barrier islands/shoreline from Sandy Point to Southwest Pass

## Maintain Critical Landforms

- Build entire CWPPRA land bridge shore protection project
- Preserve bay/lake shoreline integrity on the land bridge
- Dedicated dredging to create marsh on the land bridge
- Build Bayou Lafourche siphon and pump project, if cost effective

## 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. PPL 20 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. 24<sup>th</sup> coast-wide voting meeting. The Tech. Comm. will select up to 3 demos in April 10
- Previous demo candidates must be *re-nominated* for PPL 20

## 5. Announcement of Coast-wide Voting Meeting



### Coast-wide Voting Meeting

- Feb. 24, 2010 in Baton Rouge to choose 2 nominees per basin (3 in Barataria, Terrebonne, and Pontchartrain), (1 in Atchafalaya), and 6 demos. If only 1 project is nominated for the Mississippi River Basin, 3 nominees will be assigned to Breton Sound.
- Parishes within each basin are asked today to identify who will vote at the coast-wide meeting.
- No additional projects can be nominated after the RPTs
- No significant changes to projects proposed at the first round of RPT meetings will be allowed (this includes combining projects).
- No public comments accepted at the coast-wide meeting (public comments will be heard today and written comments can be submitted by 2/12/2010).

## Coast-wide Voting Meeting

- Each officially designated parish representative, each Federal agency, & the State (OCPR) 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, Terrebonne and Pontchartrain, & Breton sound if only 1 in MR) 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 20 Upcoming Meetings**

Coast-wide Voting Mtg, Feb 24, 2010, Baton Rouge  
20 nominees and 6 demos selected

Technical Committee Mtg, 20 Apr 10, New Orleans  
Selection of 10 candidates and up to 3 demos

#### Public Meetings

16 Nov 10, Abbeville

17 Nov 10, New Orleans

Technical Committee Mtg, 1 Dec 10, New Orleans  
Recommend up to 4 projects for Phase I funding

Task Force Mtg, 19 Jan 11, New Orleans  
Final selection of projects for Phase I funding



## Written Comments on Projects Proposed Today Should be Sent to the CWPPRA Program Manager (Deadline: February 12, 2010)

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

Fax to 504-862-1892  
Attn: Melanie Goodman

Email: [Melanie.L.Goodman@usace.army.mil](mailto:Melanie.L.Goodman@usace.army.mil)

## 7. Adjourn





### ATTENDANCE RECORD



DATE(S)  January 28, 2010 9:00 A.M.	SPONSORING ORGANIZATION  COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	LOCATION  U.S. Army Corps of Engineers -New Orleans District District Assembly Room 7400 Leake Ave. New Orleans, LA
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**PURPOSE**

**MEETING OF THE REGIONAL PLANNING TEAM REGION II**

**PARTICIPANT REGISTER\***

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER/EMAIL
Randy Moertle	Little Lake Land Co. - Manager	(985) 856-3630 <small>moertle@bellsouth.net</small>
Phil Pechel	ConocoPhillips Company - Manager	985-853-3010 <small>ph.l.v.pechel@conocoPhillips.com</small>
Ordis Smith	ConocoPhillips Supervisor	985-853-3018 <small>ordis.j.smith@conocoPhillips.com</small>
JACQUES ZAGUR	Gulf Engineers	225 612 4161
Brad Crawford	EPA	214 665 7255
PAUL KASPAR	EPA	214 665 7459
Jeff DeBlieux	ConocoPhillips	985-853-3009
Angela Trahan	USFWS	angela-trahan@fws.gov
Ken Teague	EPA	214-665-6187
Christie Welton	EPA	214-665-7239
Steven O'Connor	NOLA Glass	504-914-0739
RALPH JUNIUS JR	LINFIELD HUNTON & JUNIUS	504-833-5300 <small>jravan@bivengineering.com</small>
Jane O. Rowan	The Bioengineering Group	6105921674 <small>abross@bioengineering.com</small>
Agaha Brass	The Bioengineering Group	225-768-1505
Greg Miller	Corps of Engineers	504-862-2310
Jen Pelto	NRC5	jen.pelto@la.usda.gov
PAT AMEDEE	Lafourche Parish School Bd.	pamedee@amedee.la.gov
William McCartney	St. Bernard Parish Gov't	wmccartney@sbgg.net
Cherie Price	USACE	cherie.price@us.army.mil
Beth McCasland	USACE	504-862-2021
Susan Colley Shandor	ABST J	504 841-2226x227
Robert Bourgeois	LDWF	225-765-0765

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

DATE(S)  January 28, 2010 9:00 A.M.	SPONSORING ORGANIZATION  COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	LOCATION  U.S. Army Corps of Engineers -New Orleans District District Assembly Room 7400 Leake Ave. New Orleans, LA
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PURPOSE

MEETING OF THE REGIONAL PLANNING TEAM REGION II

PARTICIPANT REGISTER\*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER/EMAIL
Christy McDonough	LDWF	985-765-2380
Patrick Williams	NOAA / NMFS	225-389-0508
Kim Clements	NOAA / NMFS	225 389 0508
Chris Allen	OCPH	225-342-4736
Kelley Temple	"	225-342-1592
Anthony Goodwin	Linfield Hunter & Junius, Inc	504-833-5300
Jennelce Visser	ULL	JUISS@Louisiana.edu
Ron Bourgeois	NRCS	337 291-3067
Vicki D'Amico	SHAW/JP	504-347-3600
Robert Dubois	USFWS	337-291-3127
Sue Hames	USACE	5044603032
Nancy Woodcock	Jeff. Parish Environmental	504-731-4662
Jason Smith	Jeff. Parish Environmental	504-731-4662
Yves Ed. Perrin		
Charles Sesser	LSU	225-578-6375
Davis Murt	NPS - JELVA	504-589-372412
John Boatman	NRCS	985-447-3871
Marnie Winter	Jeff. Parish	504-736-6443
Abigail M. Kymbk	Asst. Coastal Manager Plaquemine Parish	504-912-5913
Nic Mathere	Lafourche Parish Govt.	855-632-4166
Chip Cahill	Jeff. Parish Marine Fisheries	1-504-2697394
ONELC MACIZOUK	SHAW / Jefferson	985-856-1575

DATE(S)  January 28, 2010 9:00 A.M.	SPONSORING ORGANIZATION  COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	LOCATION  U.S. Army Corps of Engineers -New Orleans District District Assembly Room 7400 Leake Ave. New Orleans, LA
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PURPOSE  
 MEETING OF THE REGIONAL PLANNING TEAM REGION II

PARTICIPANT REGISTER\*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER/EMAIL
David Walter	Ecosystems	251-979-2200
Mary Kelly	Ecosystems	985 705 5326
Susan Henning	USACE	
Wyneda Ferguson	CNO	658-4070
Barry Shaffer	SLU	985-549-2865
Paiky Camardelle	JJG	504-833-1737

## **Region 2 – MISSISSIPPI RIVER BASIN**

Project Number	Project Proposals
R2-MR-01	Coastwide Planting Project
R2-MR-02	Beneficial Use of Mississippi River Dredge Material via Hopper Dredge Pumpout Stations

## **Region 2 – BRETON SOUND BASIN**

R2-BS-01	Lake Lery Shoreline Marsh Creation
R2-BS-02	Monsecour Siphon
R2-BS-03	White Ditch Marsh Creation Sediment Delivery
R2-BS-04	Breton Marsh Restoration Project
R2-BS-05	Wills Point Marsh Creation
R2-BS-06	Delacroix Wetland Restoration Project
R2-BS-07	Reggio Area Marsh Creation Project
R2-BS-08	Lake Lery Marsh Restoration-Voss Family Property

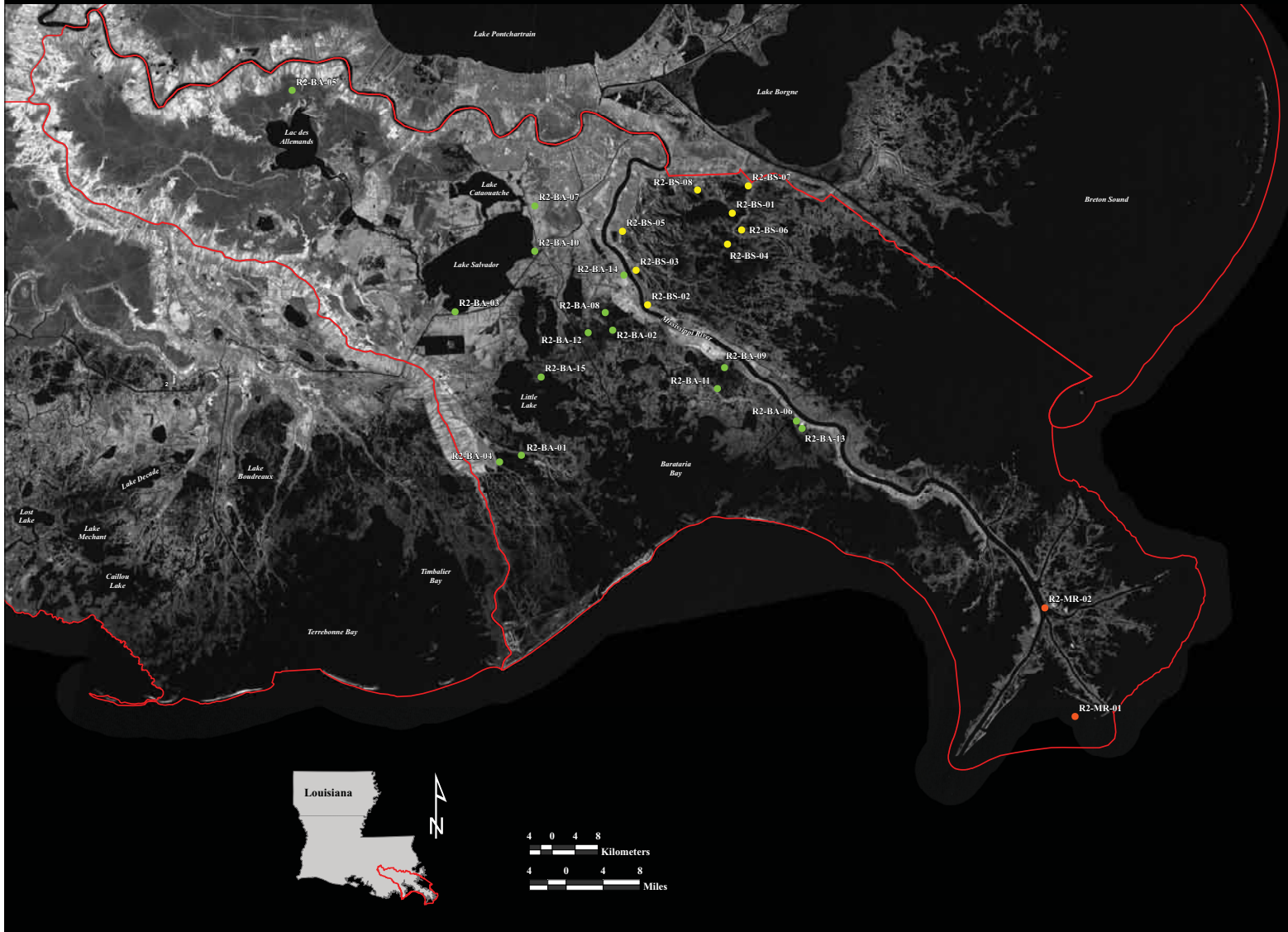
## **Region 2 – BARATARIA BASIN**

R2-BA-01	Bayou L'Ours Ridge Restoration and Terracing
R2-BA-02	Bayou Dupont Marsh and Ridge Creation Phase II
R2-BA-03	South Lake Salvador Shoreline Restoration Project
R2-BA-04	East Golden Meadow Marsh Creation
R2-BA-05	Mississippi River Reintroduction North of Lac des Allemands
R2-BA-06	Home Place Siphon

## **Region 2 – BARATARIA BASIN (CONT'D)**

R2-BA-07	Coastal Wetland Restoration by Backfilling Oil and Gas Canals in Jean Lafitte National Park
R2-BA-08	Bayou Dupont Sediment Delivery- Marsh Creation 3
R2-BA-09	West Pointe a la Hache Marsh Creation South
R2-BA-10	Bayou Villars Shoreline Stabilization Project
R2-BA-11	Bayou Grand Cheniere Marsh Creation
R2-BA-12	Bayou Dupont to Bayou Barataria Marsh Creation
R2-BA-13	Homeplace Marsh Creation
R2-BA-14	Naomi Siphon Improvement
R2-BA-15	Northeast Little Lake Shore Protection and Marsh Creation

# Region 2 PPL20 Proposed Projects



## ● Barataria Basin Project

- R2-BA-01 Bayou L'Ours Ridge Restoration and Terracing
- R2-BA-02 Bayou Dupont Marsh and Ridge Creation Phase 2
- R2-BA-03 South Lake Salvador Shoreline Restoration Project
- R2-BA-04 East Golden Meadow Marsh Creation
- R2-BA-05 Mississippi River Reintroduction North of Lac des Allemands
- R2-BA-06 Home Place Siphon
- R2-BA-07 Coastal Wetland Restoration by Backfilling Oil and Gas Canals in Jean Lafitte National Park
- R2-BA-08 Bayou Dupont Sediment Delivery-Marsh Creation 3
- R2-BA-09 West Point a la Hache Marsh Creation South
- R2-BA-10 Bayou Villars Shoreline Stabilization Project
- R2-BA-11 Bayou Grande Cheniere Marsh Creation
- R2-BA-12 Bayou Dupont to Bayou Barataria Marsh Creation
- R2-BA-13 Home Place Marsh Creation
- R2-BA-14 Naomi Siphon Improvement
- R2-BA-15 Northeast Little Lake Shore Protection and Marsh Creation

## ● Breton Sound Basin Project

- R2-BS-01 Lake Lery Marsh Creation
- R2-BS-02 Monsecur Siphon
- R2-BS-03 White Ditch Marsh Creation
- R2-BS-04 Breton Marsh Restoration
- R2-BS-05 Wills Point Marsh Creation
- R2-BS-06 Delacroix Wetland Restoration Project
- R2-BS-07 Reggio Area Marsh Creation Project
- R2-BS-08 Lake Lery Marsh Restoration-Voss Family Property

## ● Mississippi River Delta Project

- R2-MR-01 Coastwide Planting Project
- R2-MR-02 Beneficial Use of Mississippi River Dredge Material Via Hopper Dredge Pumpout Stations

Louisiana



## **Region 2 - MISSISSIPPI RIVER DELTA BASIN**



## R2-MS-01-Coastwide Planting Project

# PPL 20 PROJECT NOMINEE FACT SHEET

1/27/2010

## **Project Name**

Coastwide Planting Project

## **Coast 2050 Strategy**

Vegetative Planting

## **Project Location**

Coastwide

## **Problem**

The coastal restoration community has long recognized the benefits of vegetative plantings in restoration. Many marsh creation and most terracing project require planting to insure success. Coastal shoreline planting have also proven to be very effective and some have demonstrated the ability to not only stop shoreline erosion but to facilitate accretion. Recent hurricane events have exposed a need to have a mechanism in place to where large-scale planting efforts can be deployed coastwide to target areas of need in a timely fashion. Although the CWPPRA program can sufficiently fund a large-scale planting project, the program cycle for individual projects limits the timeliness of getting a targeted effort in place.

## **Proposed Project Features**

This project will provide a consistent annual mechanism for vegetative planting projects through the CWPPRA program designed to implement targeted restoration planting efforts. The project would set up advisory panel consisting of representatives from various state and federal agencies who would select projects for funding. The project would also set up a mechanism by which project nominations would be submitted for consideration by the advisory panel. The project would provide an annual report on activities.

## **Goals**

The goals of this project are to facilitate a consistent and responsive planting effort in coastal Louisiana that is flexible enough to both plant on a large scale routinely and be able to rapidly respond to “hot spots” following tropical storm events.

## **Preliminary Project Benefits**

The project is expected to yield approximately 588 acres of net benefits estimated from 70% plantings in interior marsh with 0.5% background loss rate and 25% functional marsh return per acre planted (450 acres) and 30% shoreline plantings at an average loss rate of 8 ft per year (138 acres).

## **Identification of Potential Issues**

None identified

## **Preliminary Construction Costs**

\$10 million

## **Preparer of Fact Sheet**

Ron Boustany, NRCS, (337) 291-3067, ron.boustany@la.usda.gov

# Coastwide Planting Project PPL-20



## Potential Vegetative Planting Projects:

- Shoreline stabilization
- Shallow mud flats
- Storm-damaged marshes
- Bankline stabilization
- Barrier Islands



R2-MS-02-Beneficial Use of MS River Dredge  
Material via Hopper Dredge Pumpout Stations

**PPL20 PROJECT NOMINEE FACT SHEET**  
**January 28, 2010**

**Project Name:**

**Beneficial Use of Mississippi River Dredge Material via Hopper Dredge Pumpout Stations**

**Coast 2050 Strategy:**

Coastwide Common Strategies- Beneficial Use of Dredged Material from Maintenance Operations

**Project Location:**

Region 1, Mississippi River Birdsfoot Delta, Plaquemines, east and west banks of Southwest Pass and area near Heads of Passes,

**Problem:**

Implementation of this project would prevent ocean dumping of valuable Mississippi River sediment and reduce the amount of double handling of river sediment near the Pass a Loutre. There has been several papers and one demonstration project that would indicate that this is a viable option. There have also been many papers written that document the value of the sediment that is utilized with river sediment while we are still dumping millions of cubic yards of sediment off the Louisiana Coast.

**Goals :**

This project hopes to make available to the Corps the option of using all or a large portion of the Mississippi River sediment dredged from the river and dumped into the ocean to create fresh and intermediate marshes near the banks of the Mississippi River and its passes.

**Proposed Solutions:**

The proposed project would create 4-8 mooring/pumpout sites along either side of the Mississippi River in the vicinity of Heads of Passes, West Bay and East Bay. These pumpout stations would be simple structures much like several of the loading sites that the oil and gas companies have along southwest pass. They would contain several large "post" bundled together with a cable and set in a series so the hopper dredge could temporarily moor to the site while pumping. The pumpout station would also have a small catwalk between the post and a pipe that would be attached to an arm that could be swung out to the hopper dredge. That pipe would run back into the marsh or open water area to receive the sediment.

There could be several scenarios; 1) CWPPRA pays for the pumpout stations and the Corps agrees to utilize them to the best extent practicable while the State would be responsible for moving the pipe, extending the pipe etc., in the deposition sites; 2) CWPPRA pays for the pumpout stations and also the incremental portion of the pumpout cost for a set amount of sediment. This would also allow any other agency or financial entity to also utilize these stations if they were to pay for the incremental costs.

Other scenarios may be possible.

**Preliminary Project Benefits:**

1) This is questionable, but creating 100 acres per year for 20 years should not be that difficult.

3) The anticipated loss rate reduction throughout the area of direct benefits over the project life is normally 50-74% with marsh creation projects.

4) The Mississippi River Birds Foot Delta should be considered a structural component of the coastal ecosystem and this project would help maintain this feature.

5) This project would protect several oil and gas infrastructure along the Southwest Pass and Head of Passes area.

6) If the Corps would agree to utilize the pumpout stations located near the Head of Passes, the Pass a Loutre project could possibly move forward.

**Identification of Potential Issues:**

At this time, it is not know if the Corps dredging operations would support this project. It is also not know if the State would also be supportive of this project. Some Corps employees have said in the past it is not feasible, but others have also said that it is feasible. Will the State support a beneficial use project in the Mississippi River Birds Foot Delta.

**Preliminary Construction Costs:**

Each mooring site may cost \$1 million including 25% contingency. If we have 8 mooring site estimated cost would be \$10,000,000.

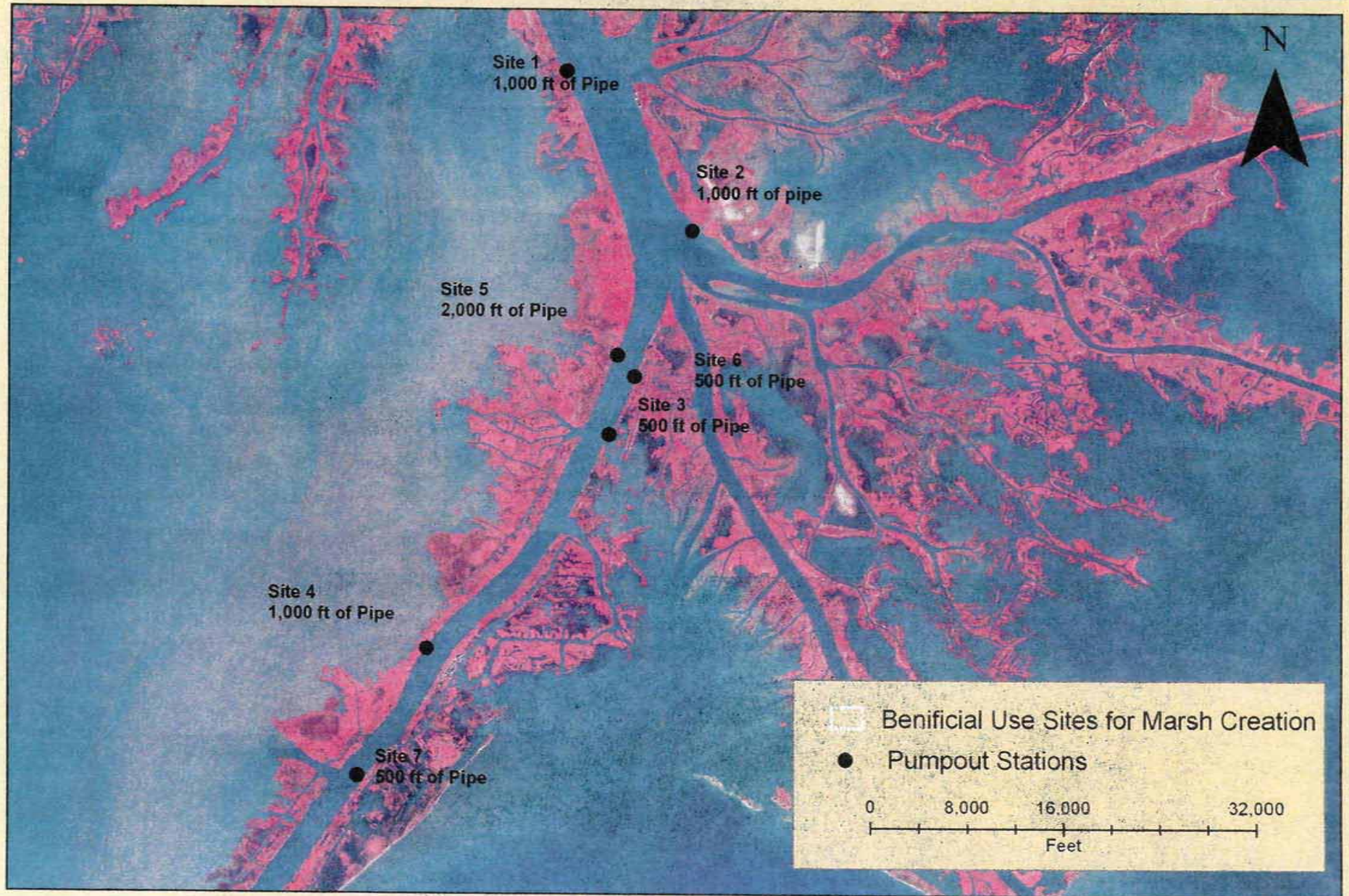
**Preparer(s) of Fact Sheet:**

Robert Dubois

U.S. Fish and Wildlife Service

(337) 291-3127

robert\_dubois@fws.gov



**Beneficial Use of Mississippi River  
Dredge Material via Hopper  
Dredge Pumpout Stations**

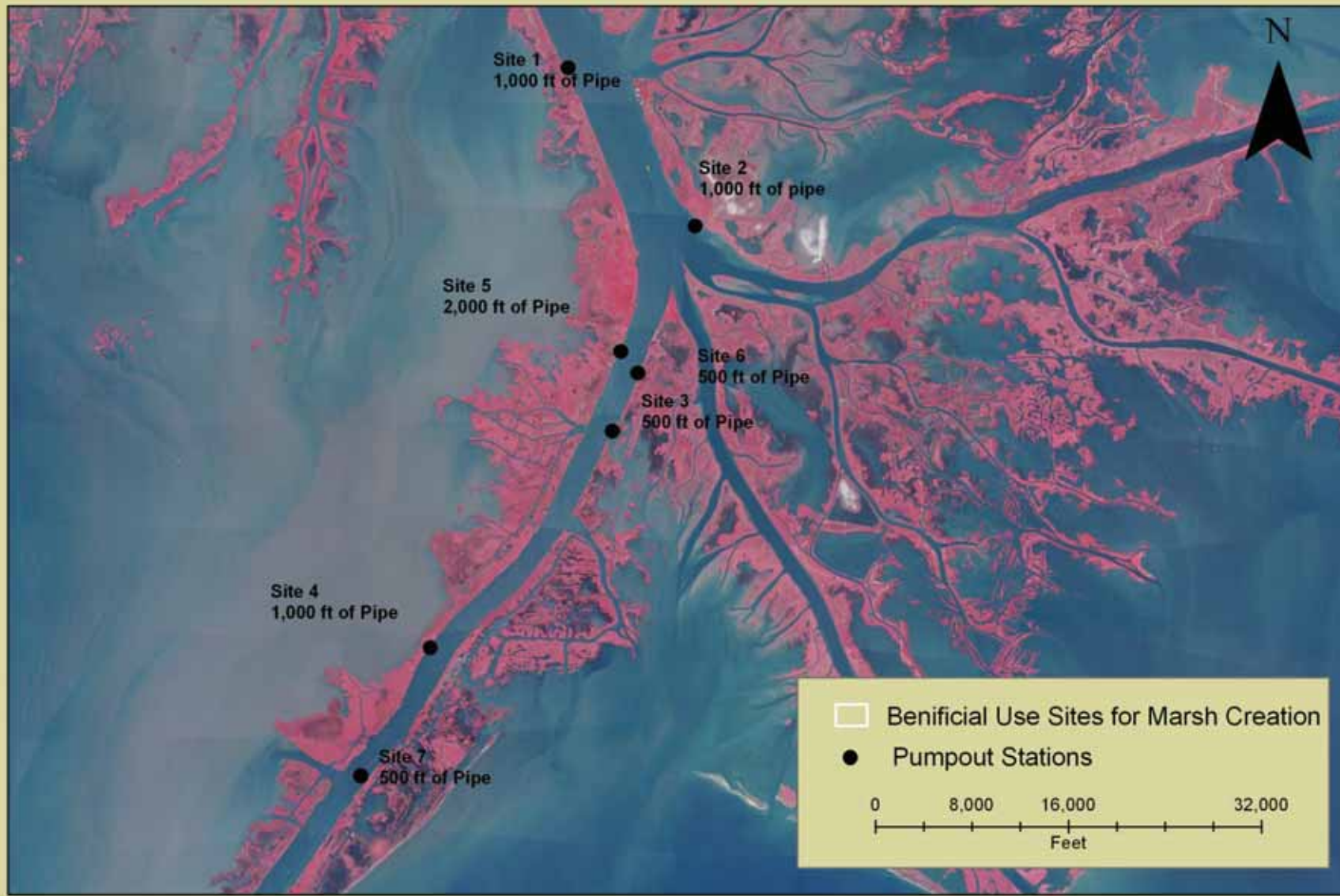


# Problem:

- The Corps dredges the river and passes for navigational purposes and either dumps that material in ocean dumping sites and is lost or they dump material a certain spots to come back and re-dredge that material at a combined cost that is probably well above the navigational standard.
- The marshes in the Mississippi River Birds Foot Delta subside at an extremely high rate and need to be continuously supplemented with river sediment and thus all or nearly all river sediment should be utilized beneficially to the best extent practicable.

# Proposed Solution:

- **The proposed project would create 4-8 mooring/pumpout sites along either side of the Mississippi River in the vicinity of Heads of Passes, West Bay and East Bay. These pumpout stations would be simple structures containing several large post bundled together with a cable and set in a series so the hopper dredge could temporarily moor to the site while pumping. The pumpout station would also have a small catwalk between the post and a pipe that would be attached to an arm that could be swung out to the hopper dredge. That pipe would run back into the marsh are open water area to receive the sediment.**



- There could be several scenarios:
- 1) CWPPRA pays for the pumpout stations and the Corps aggress to utilize them to the best extent practicable while the State would be responsible for the moving the pipe, extending the pipe etc., in the deposition sites;
- 2) CWPPRA pays for the pumpout stations and also the incremental portion of the pumpout cost for a set amount of sediment. This would also allow any other agency or financial entity to also utilize these stations if they were to pay for the incremental costs.
- Other scenarios may be possible.

# SUMMARY:

- It should be feasible to create 100 acres of marsh each year for the 20 year project life or 2,000 acres total.
- A biologist could cost this out to be \$ 1 million per mooring site. If we construct 8 then we might be looking at \$10 million.

## **Region 2 - BRETON SOUND BASIN**

R2-BS-01-Lake Lery Shoreline Marsh Creation

**PPL 20 PROJECT NOMINEE FACT SHEET**  
**January 28, 2010 RPT Meetings**

**Project Name:** Lake Lery Shoreline Marsh Creation

**Coast 2050 Strategy:**

- Coastwide – Dedicated dredging for wetland creation
- Coastwide – Maintenance of bay and lake shoreline integrity
- Coastwide – Vegetative plantings

**Project Location:**

The project is located in Region 2, Breton Basin, St. Bernard Parish, along the eastern rim of Lake Lery and extending toward Bayou Terre aux Boeufs.

**Problem:**

The marshes forming the eastern shoreline of Lake Lery and directly to the east of the former lake shoreline were severely deteriorated by Hurricane Katrina. Without directly rebuilding these marshes, the lake itself will likely continue to grow and will extend to Bayou Terre aux Boeufs.

**Goals :**

1. Create/nourish 460 acres of marsh through dedicated dredging and vegetative plantings
2. Restore/stabilize the eastern shoreline of Lake Lery

**Proposed Solutions:**

This project would create/nourish 460 acres of marsh along the eastern shore of Lake Lery using material dredged from Lake Lery and vegetative plantings. The target elevation for the marsh creation area will correspond with the elevation of healthy marsh in the surrounding areas. Temporary containment dikes will be constructed in situ around the marsh creation/nourishment area and will be gapped within 3 years of construction to allow greater tidal exchange and estuarine organism access.

**Preliminary Project Benefits:**

This project would create/nourish 460 acres of marsh and restore the eastern shoreline of Lake Lery. It is anticipated that background land loss rates would be reduced, although the extent of reduction is unknown at this point. The project would also help to protect the hurricane protection levee system to the north.

This project will complement several other projects and represents the final construction unit required to restore the Lake Lery shoreline. The projects directly complemented by this project include the following: 1) BS-16 Lake Lery Shoreline Restoration project, which will reestablish the southern shoreline of Lake Lery through marsh creation; 2) A CIAP project that will reinforce the western bank of Bayou Terre aux Boeufs; and 3) the Caernarvon 4<sup>th</sup> Supplemental project, which will create marsh to reestablish the western and northern shorelines of Lake Lery. This project will also utilize freshwater and nutrient inputs from the Caernarvon Freshwater Diversion to maintain healthy marsh once established.

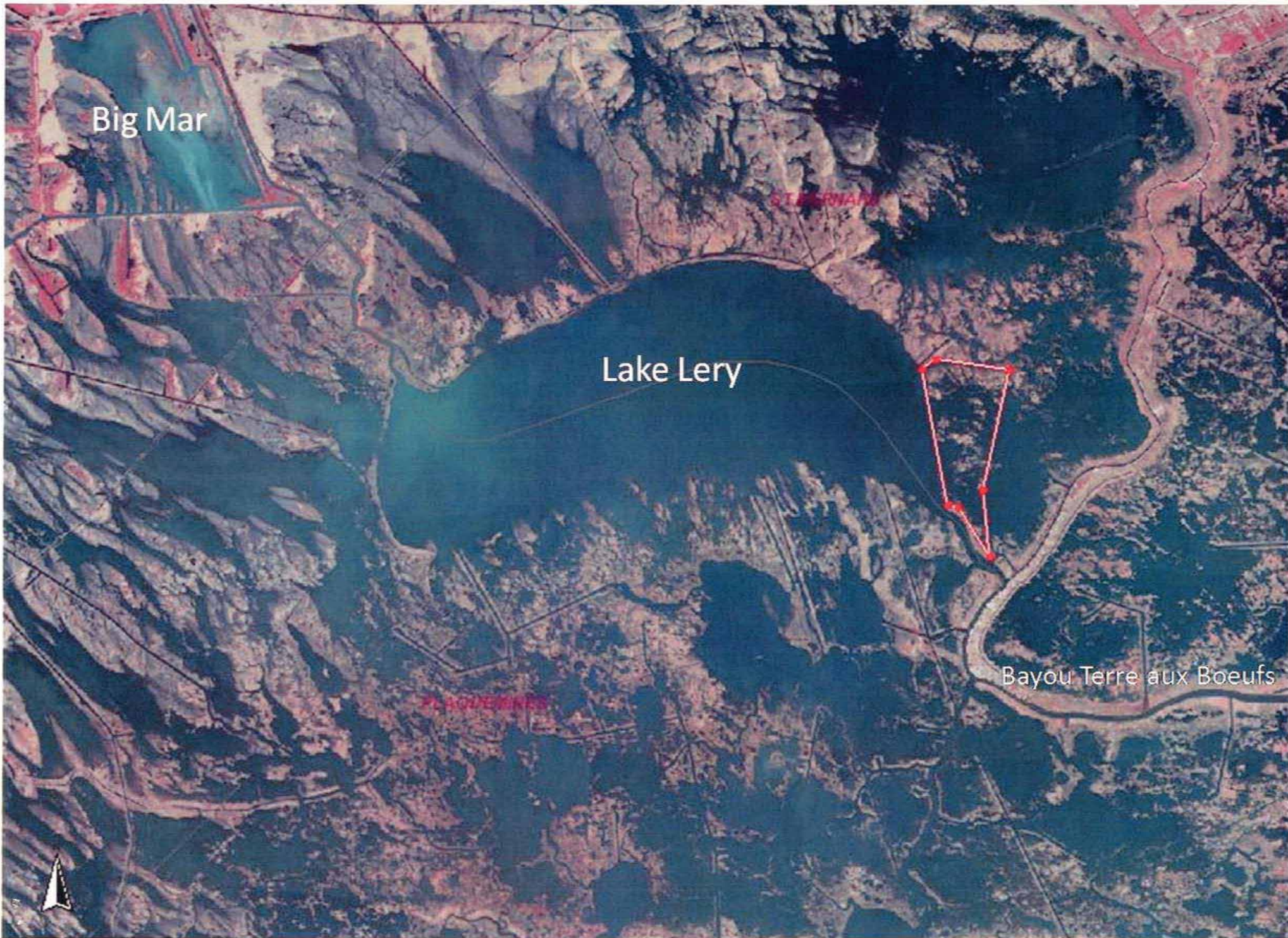
**Preliminary Construction Costs:**

\$19 million

**Preparer(s) of Fact Sheet:**

Chris Allen, OCPD, (225) 342-4736, [chris.allen@la.gov](mailto:chris.allen@la.gov)





Big Mar

Lake Lery

Bayou Terre aux Boeufs

# Lake Lery Marsh Creation Project





Louisiana Department of Natural Resources

0 0.50mi

2004



Louisiana Department of Natural Resources

0 0.50mi

2008

R2-BS-02- Monsecour Siphon

**PPL20 Project Nominee Fact Sheet**  
**January 28, 2010**

**Project Name**

Monsecour Siphon

**Coast 2050 Strategy**

Coastwide Common Strategies: Diversions and river discharge; Management of diversion outfall for wetland benefits.

Region 2 Regional Ecosystem Strategies: Restore and Sustain Marshes; Construct most effective small diversions.

**Project Location**

Region 2, Breton Sound Basin, Plaquemines Parish, north of Phoenix, LA.

**Problem**

This area has been disconnected from the Mississippi River since levees were constructed during the early 20<sup>th</sup> century. The lack of overbank flooding/crevasses ensures that wetlands here do not have sufficient sediment input to maintain elevation against subsidence. In addition, drainage canals and oil and gas canals and associated spoil banks probably create some undesirable impoundment and tidal scour/saltwater intrusion in the area. In addition to impoundment caused by canals and spoil banks, the area is probably somewhat naturally impounded due to natural ridges. Aerial photography clearly demonstrates the significant loss of marsh in this area.

**Proposed Project Features:**

Construct a siphon from the Mississippi River, with 2000 cfs maximum capacity (estimated average flow=1145 cfs). The project may require additional features for delivery and outfall management.

**Goals**

The project goal is to protect approximately 990 ac of intermediate marsh by reducing wetland loss rates, in turn by reintroducing an average of 1,145 cfs, and a maximum of 2,000 cfs, of Mississippi River water into the project area to increase sediment and nutrient loading.

**Preliminary Project Benefits**

The project would benefit 12,255 acres of intermediate marsh and open water. Approximately 990 net acres of intermediate and/or fresh marsh would be protected over the 20-year project life.

**Identification of Potential Issues**

None

**Project Costs**

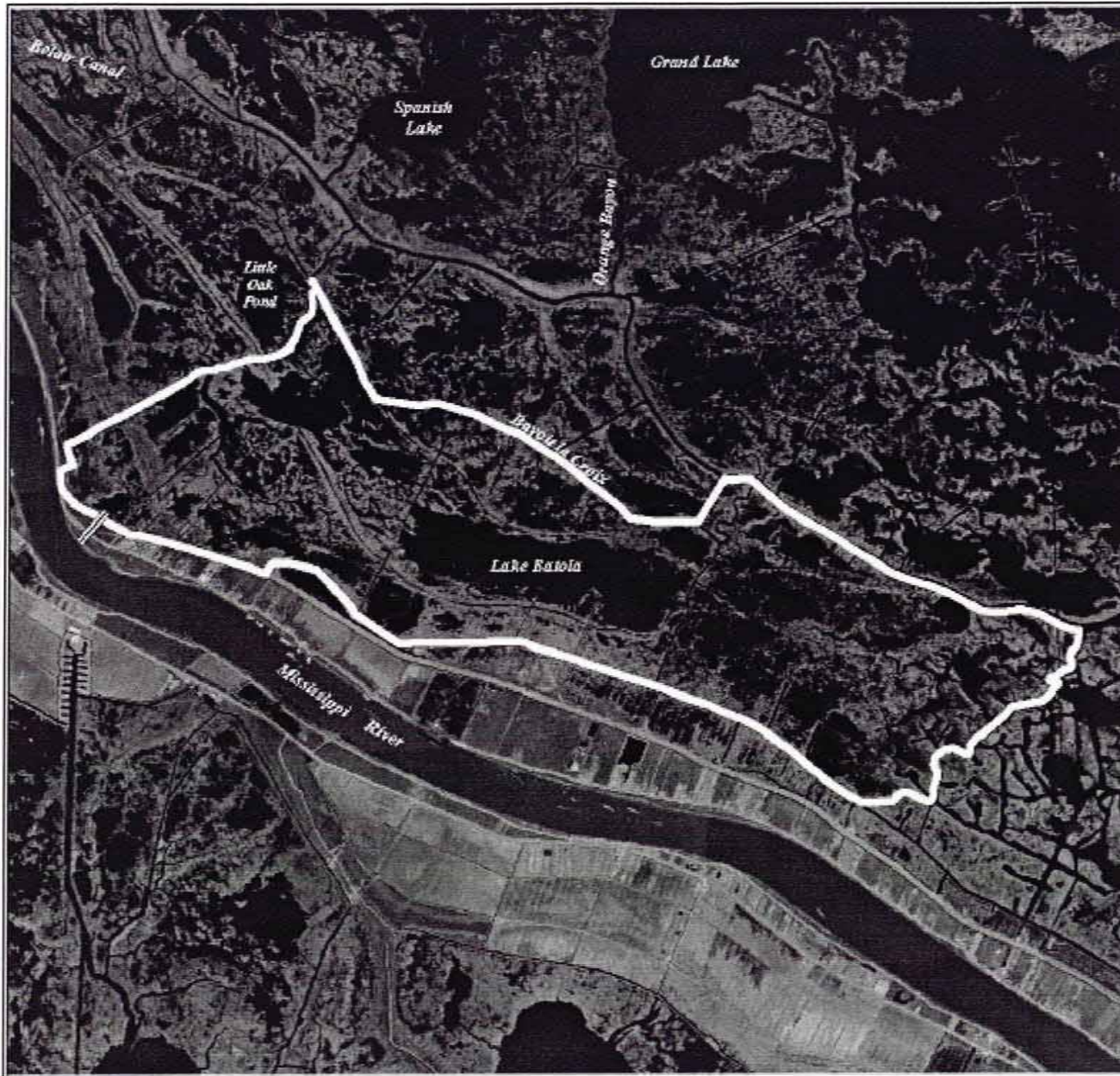
The total fully funded cost for the project is \$ 10,607,905.

**Preparer(s) of Fact Sheet:**

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

Paul Kaspar, EPA, (214) 665-7459; kaspar.paul@epa.gov

Brad Crawford, EPA, (214) 665-7255; crawford.brad@epa.gov



## Monsecour Siphon (PPL19 Candidate)



Siphon <sup>2</sup>



Project Boundary

\* denotes proposed features

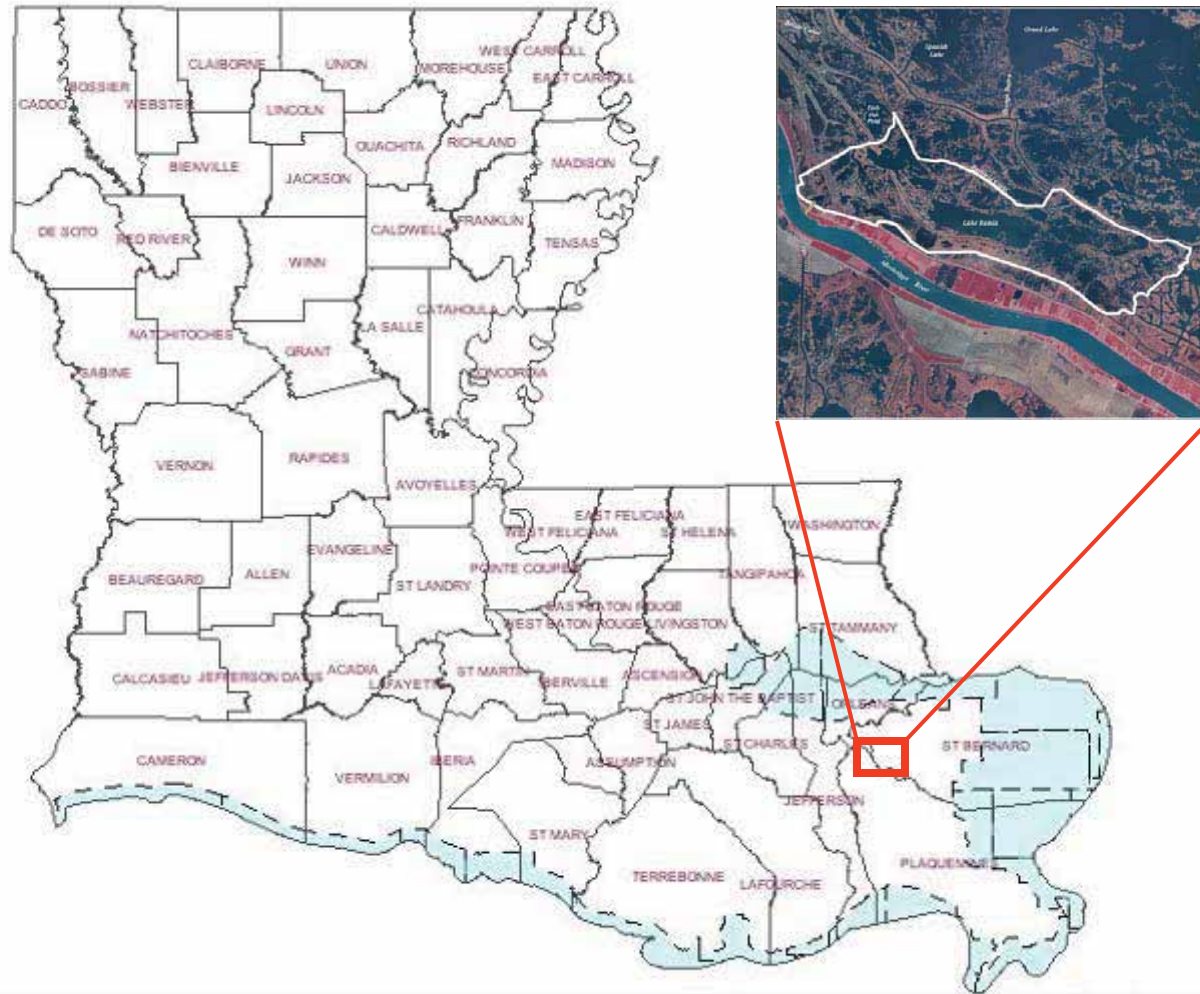


Produced by  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Field Station  
Baton Rouge, LA

Image Source:

2008 Digital Orthophoto Quarter Quadrangles

# Monsecour Siphon



# Monsecour Siphon



## Monsecour Siphon (PPL19 Candidate)

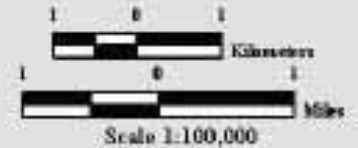


Siphon \*



Project Boundary

\* denotes proposed features



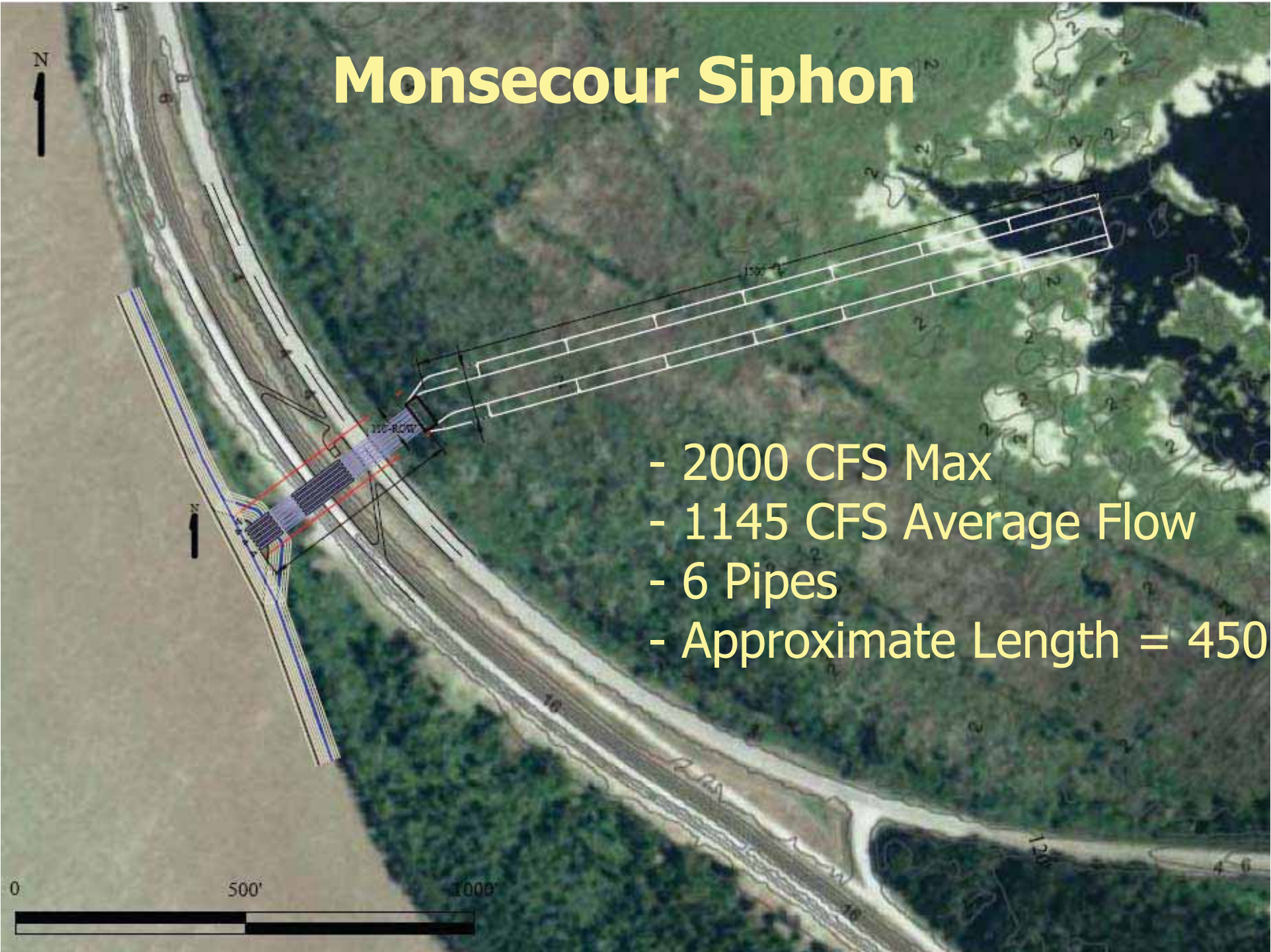
Produced by:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Field Station  
Baton Rouge, La

Image Source:  
2008 Digital Orthophoto Quarter Quad images



# Monsecour Siphon

- 2000 CFS Max
- 1145 CFS Average Flow
- 6 Pipes
- Approximate Length = 450



# Monsecour Siphon

## Goals:

- Reduce landloss
- Increase SAV

## •Project Benefits:

- 12,225 acres benefit area
- 990 net ac over 20 years

## Identification of Potential Issues:

- Landrights

## Preliminary Construction Costs:

- \$10.6 Million

# Monsecour Siphon

## Questions?

**Brad Crawford**  
**EPA Region 6**  
**(214)665-7255**  
**[Crawford.brad@epa.gov](mailto:Crawford.brad@epa.gov)**



R2-BS-03-White Ditch Marsh Creation Sediment  
Delivery

**PPL20 Project Nominee Fact Sheet**  
January 28, 2010

**Project Name**

White Ditch Marsh Creation Sediment Delivery

**Coast 2050 Strategy**

Coastwide Strategies: Dedicated Dredging, to Create, Restore, or Protect Wetlands; Off-shore and Riverine Sand and Sediment Resources.

Region 2 Regional Ecosystem Strategies: Restore and Sustain Marshes

**Project Location**

The proposed project is located in Region 2, Breton Sound Basin, east of the Mississippi River in the vicinity of Belair, Louisiana in Plaquemines Parish.

**Problem**

Historically, marshes in the area of the proposed project were intermediate to brackish. However, lack of freshwater input has resulted in their complete conversion to brackish marshes. These marshes were cut off from the historic overbank flooding of the Mississippi River since the early days of development in the New Orleans area. Much of the marsh in this proposed project area was originally converted to open water due to the failure of agricultural impoundments. Deterioration of the marshes has also resulted from the breakdown of an aging siphon built in 1963 which had ceased to deliver the freshwater and sediment necessary to sustain them, but was recently partly rehabilitated. Problems due to insufficient Mississippi River water, sediment, and nutrients, are exacerbated by the natural banks of the River Aux Chenes, which obstruct any freshwater that would otherwise be provided by the Caernarvon Freshwater Diversion, a Mississippi River diversion structure located north of the project area.

**Proposed Project Features**

Dredge sediments from the Mississippi River to create/nourish 380 acres of marsh. Vegetative planting may or may not be necessary. Funds will be budgeted for some planting in the event is determined to be necessary. The project will complement the White Ditch Resurrection and Outfall Management project (BS-12) currently in the engineering and design phase. BS-12 is intended to provide freshwater inputs through the rehabilitation or replacement of the existing siphon at White Ditch and the construction of an additional siphon of similar size. Freshwater input from the White Ditch siphon would work synergistically to help sustain marsh created via sediment delivery from the Mississippi River.

**Goals**

- Create/nourish approximately 380 acres of intermediate marsh using sediment from the Mississippi River
- Maintain approximately 218 ac of intermediate marsh over 20 years

**Preliminary Project Benefits**

- Create approximately 380 ac of intermediate marsh initially
- Maintain approximately 218 acres of marsh over 20 years.

**Preliminary Construction Costs**

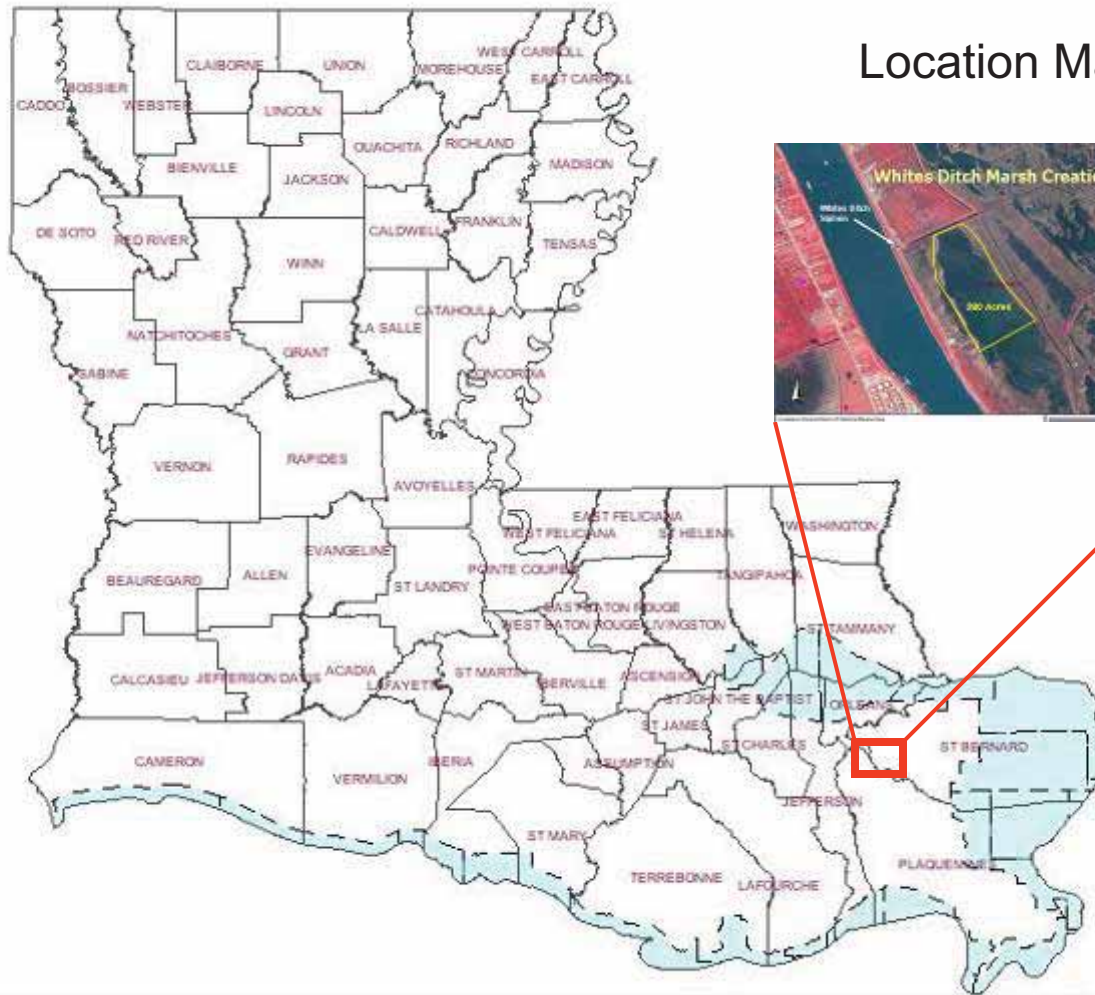
Preliminary construction cost + 25% contingency is \$19.5 million.

**Preparers of Fact Sheet:**

Brad Crawford, P.E., EPA (214) 665-7255; Crawford.Brad@epa.gov  
Kenneth Teague, EPA (214) 665-6687; Teague.Kenneth@epa.gov.



# Whites Ditch Marsh Creation



Location Map



# Whites Ditch Marsh Creation







# Whites Ditch Marsh Creation

## Goals:

- Create/Nourish ~380 ac intermediate marsh

## Preliminary Project Benefits:

- 218 net ac over 20 years

## Identification of Potential Issues:

- Oil & Gas

## Preliminary Construction Costs:

- \$15-\$20 million

# Whites Ditch Marsh Creation

## Questions?

Brad Crawford  
EPA Region 6  
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## R2-BS-04-Breton Marsh Restoration

**PPL20 PROJECT NOMINEE FACT SHEET**  
**January 28, 2010**

**Project Name:**

Breton Marsh Restoration Project

**Coast 2050 Strategy:**

- Dedicated dredging for wetland creation.

**Project Location:**

The project area is located in Region 2, Breton Basin, Plaquemines Parish, Caernarvon mapping unit, southeast of Delacroix, LA in an area south of Lake Lery between Bayou Terre aux Boeufs (near Delacroix) and River aux Chenes.

**Problem:**

The landfall of Hurricane Katrina in southeast Louisiana destroyed thousands of acres of marsh and other coastal habitats east of the Mississippi River. One of the areas most severely impacted was the Breton Sound Basin where it is estimated that 40.9 square miles of marsh were converted to open water. One of the most significant restoration tools used in this basin is the Caernarvon Freshwater Diversion. The operational plan of the Caernarvon Freshwater Diversion has proposed higher water discharge rates during the winter and spring to address hurricane impacts. Because much of the sediment and nutrients will be removed from the diversion water before it reaches the project area, the proposed increase in discharge rates will have little to no effect on project area's ability to rebuild. Without restoration, this region will begin to see the coalescence of water bodies, higher wave generated erosion rates, and a greater influence associated with the open brackish Black Bay system, especially during periods of reduced Caernarvon flow.

**Goals:**

The goal of this project is to restore marsh that was damaged by hurricane Katrina in 2005. Reestablishing this marsh would help restore marshes in the project area that once moderated the effects of the brackish waters from the Black Bay system moving north into the more intermediate marshes. Approximately 436 acres of marsh that have converted into shallow open water as a result of the recent hurricane loss will be restored through hydraulic dredging. Reestablishing this marsh will also help to restore the western shoreline of Bayou Gentilly.

**Proposed Solutions:**

Approximately 337 acres of marsh will be restored and 99 acres of marsh will be nourished through hydraulic dredging. It is estimated that 1.5 M cyds of renewable Mississippi River sediments that were deposited in Lake Lery as a direct result of the Caernarvon Diversion Project would be hydraulically dredged and pumped via pipeline to create marsh. Dredged material would be pumped into containment dikes to achieve an average height of 1.4 ft NAVD 88. The dikes would be gapped or degraded no later than three years post construction to allow for estuarine organism access.

**Preliminary Project Benefits:**

1) *What is the total acreage benefited both directly and indirectly?* Direct benefits include creation and/or nourishment of 426 acres of marsh through hydraulic dredging.

2) *How many acres of wetlands will be protected/created over the project life?* This project would net approximately 337 (77%) acres of marsh throughout the life of the project.

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 loss rate in the area of direct benefits would be reduced by >50-74%.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.* This project will help maintain the bank of Bayou Gentilly and is the last remaining landbridge before Gulf waters breach Lake Lery.

5) *What is the net impact of the project on critical and non-critical infrastructure?* This project would provide protection to some oil and gas infrastructure.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* This project would work synergistically with the Caernarvon Diversion and the Caernarvon Outfall Management/Lake Lery Shoreline Restoration Project (BS-16) that was recently been approved for Phase I funding.

**Identification of Potential Issues:**

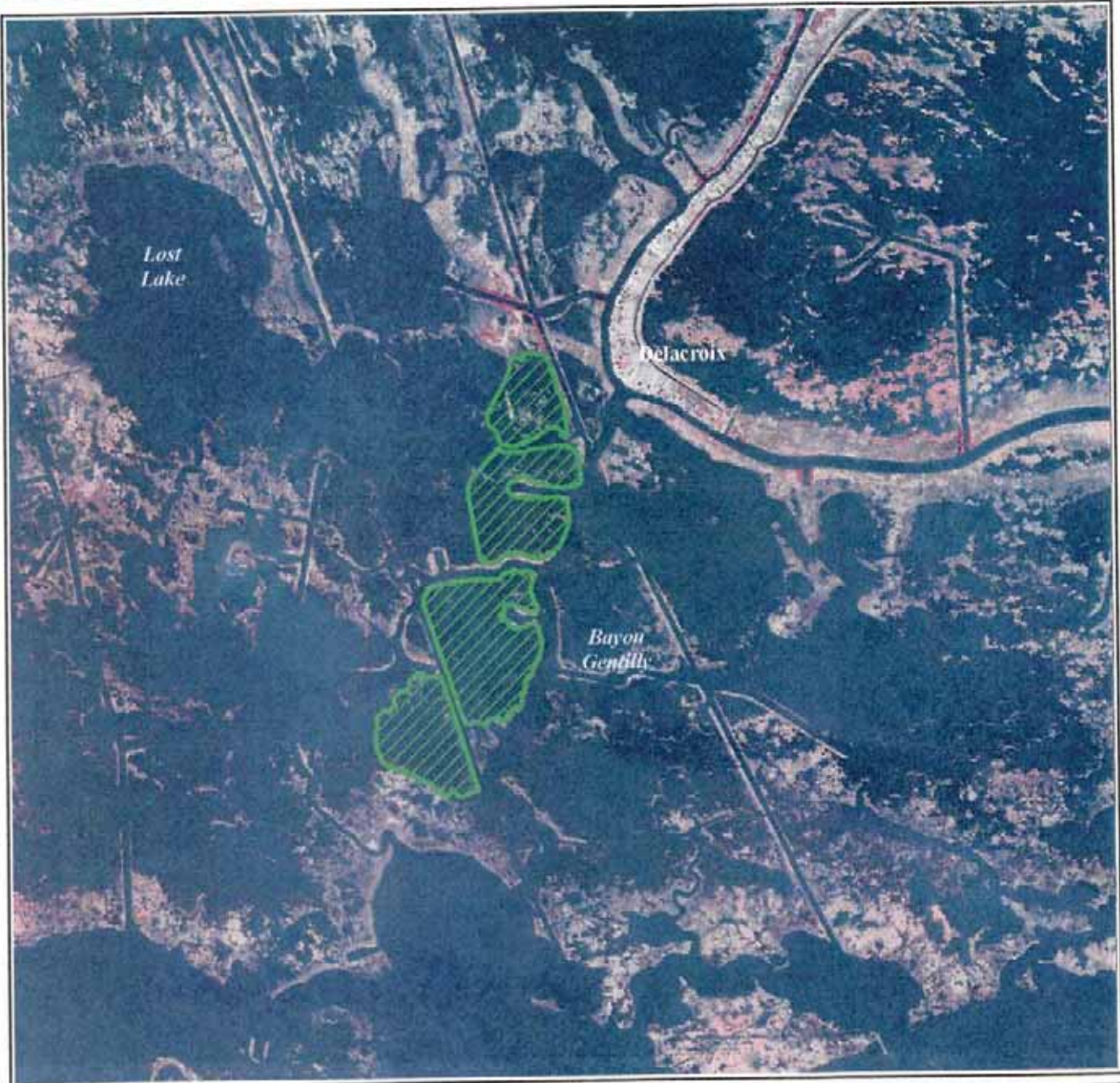
There are several pipelines in the area.

**Preliminary Construction Costs:**

Construction costs were estimated to be approximately \$8.8 million and \$11 million including a 25% contingency.


**Preparer(s) of Fact Sheet:**

Angela Trahan, USFWS, 337/291-3137, [Angela\\_Trahan@fws.gov](mailto:Angela_Trahan@fws.gov)  
Robert Dubois, USFWS, (337) 291-3127, [robert\\_dubois@fws.gov](mailto:robert_dubois@fws.gov)



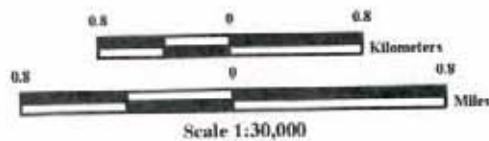
## Breton Marsh Restoration Project (PPL19 Candidate)



 Marsh Creation <sup>\*</sup>  
\* denotes proposed features



Produced by  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Field Station  
Baton Rouge, LA



Map ID: USGS-NWRC 2010-04-0001  
Map Date: October 09, 2009

Image Source:  
2008 Digital Orthophoto Quarter Quadrangles

# Breton Marsh Creation Project

## **Problem:**

- **Landfall of Hurricane Katrina destroyed thousands of acres of marsh. One of the most severely impacted areas was the Breton Sound Basin where is estimated that 40.9 sq miles of marsh was lost.**
- **Because most of the sediments and nutrients are removed from the water before it reaches the project area, the marshes do not have the ability to rebuild themselves.**
- **Without restoration, this region will begin to see the coalescence of water bodies and higher wave generated erosion rates and will see a greater influence associated with the open brackish Black Bay system.**




## Proposed Solutions:

- Dredge an estimated 1.5 M cyd of renewable Mississippi River sediments deposited over the years in Lake Lery and pump it into four marsh creation cells to create approximately 337 acres of marsh and nourish 99 acres of marsh. Marsh would be built to an average height of +1.4 NAVD 88.



**Breton Marsh Restoration Project  
(PPL19 Candidate)**



 **Marsh Creation \***  
\* denotes proposed features



Produced by:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Resources Field Station  
Baton Rouge, LA



Map ID: USGS-NWRMC 2010-04-0001  
Map Date: October 09, 2009

Image Source:  
2008 Digital Orthophoto Quarter Coverage

## Summary:

- The project would create/nourish a total of 426 acres of marsh.
- The project would net approximately 337 acres of marsh throughout the project life.
- Project Construction cost is estimated to be \$8.8 million and \$11 million with at 25% contingency.

R2-BS-05-Wills Point Marsh Creation

**PPL 20 PROJECT NOMINEE FACT SHEET**  
**20 January 2010**

**Project Name**

Wills Point Marsh Creation

**Coast 2050 Strategy**

Coastwide Strategy: Dedicated Dredging for Wetland Creation

**Project Location**

Region 1, Breton Sound Basin, Plaquemines Parish, east bank of Mississippi River, northeast of Wills Point and adjacent to local 40-Arpent levee.

**Problem**

The project area is mostly shallow water that appeared when marsh was lost between 1958 and 1974. Katrina caused some loss in the project area and extensive loss adjacent to it. The area lies between the natural ridge of Rive aux Chenes and Tigers Ridge. It is adjacent to the local 40-Arpent levee. Another hurricane could open the area more and impact the two natural ridges.

**Proposed Project Features**

Approximately 5.8 million CY of material would be mined from the Mississippi River from the point bar at Wills Point. It would be used to restore 630 acres of marsh near the Rive aux Chene and Tigers Ridges.

**Goals**

1. Restore 630 acres of marsh (478 acres created/152 acres nourished)
2. Provide additional protection to the 40-Arpent levee
3. Provide additional protection to the natural ridge of Rive aux Chene and Tigers Ridge.

**Preliminary Project Benefits**

- 1) What is the total acreage benefited both directly and indirectly?  
478 acres of marsh would be created immediately, and 152 acres of marsh would be nourished
- 2) How many acres of wetlands will be protected/created over the project life?  
Applying the half of the 0.42 % per year 1983-1990 loss rate from the Rive Aux Chenes Mapping Unit to 478 acres created for 20 years shows 458 acres remaining 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%)?  
50% loss rate reduction applied to the created marsh
- 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.  
Project protects 40-Arpent Levee, natural ridge of Rive aux Chenes and Tigers Ridge.
- 5) What is the net impact of the project on critical and non-critical infrastructure?  
Project protects 40-Arpent levee, which could be critical to inhabitants of Bertrandville and Wills Point.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?

The project provides synergy with the White Ditch project to the south, which also protects Rive aux Chenes.

**Identification of Potential Issues**

There are pipelines in the vicinity which could be a potential issue.

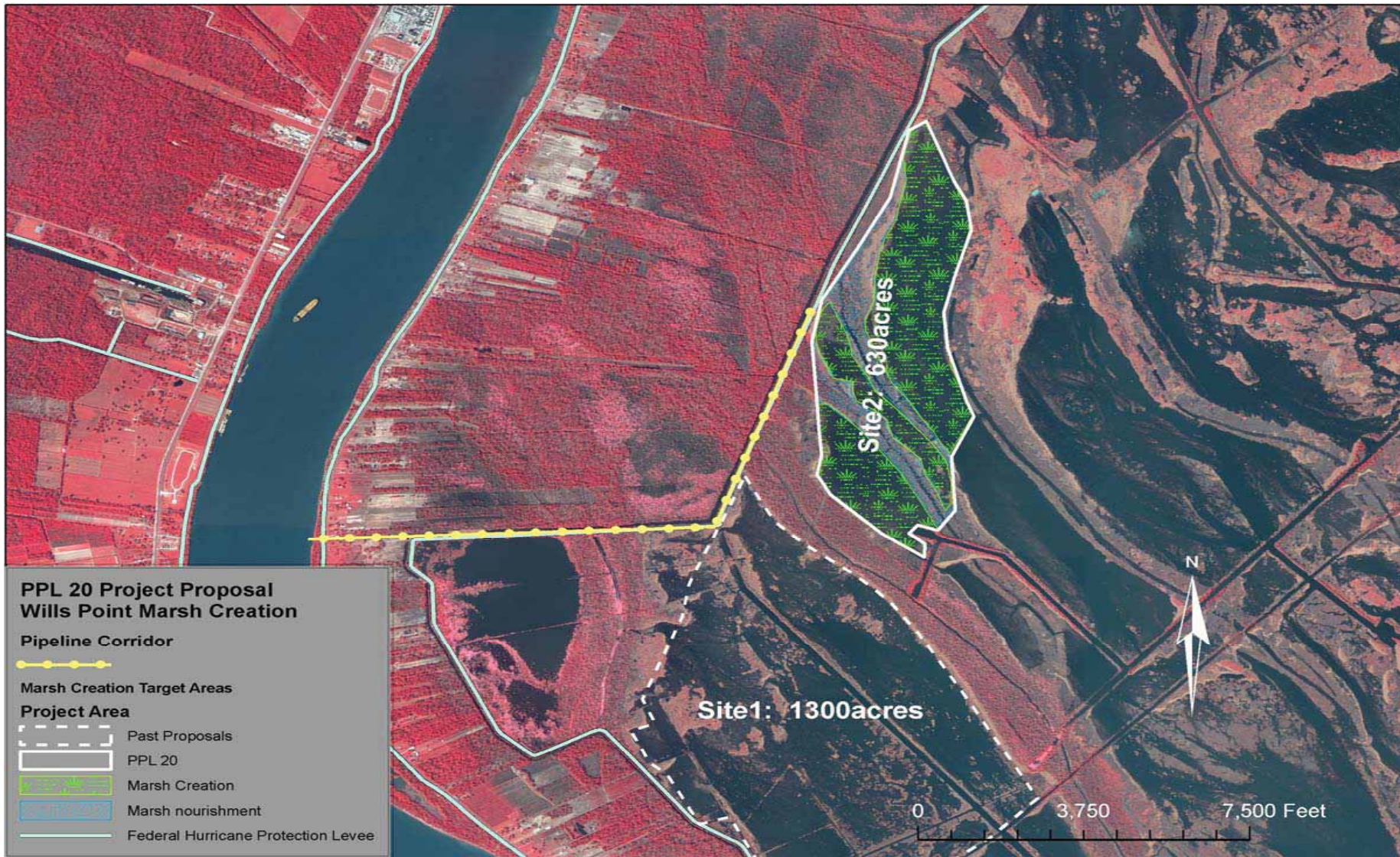
**Preliminary Construction Costs**

The construction cost including 25% contingency is approximately \$28,000,000.

**Preparers of Fact Sheet**

Scott Wandell, USACE, 504-862-1878 [Scott.F.Wandell@usace.army.mil](mailto:Scott.F.Wandell@usace.army.mil)

Travis Creel, USACE, 504-862-1071 [Travis.J.Creel@usace.army.mil](mailto:Travis.J.Creel@usace.army.mil)





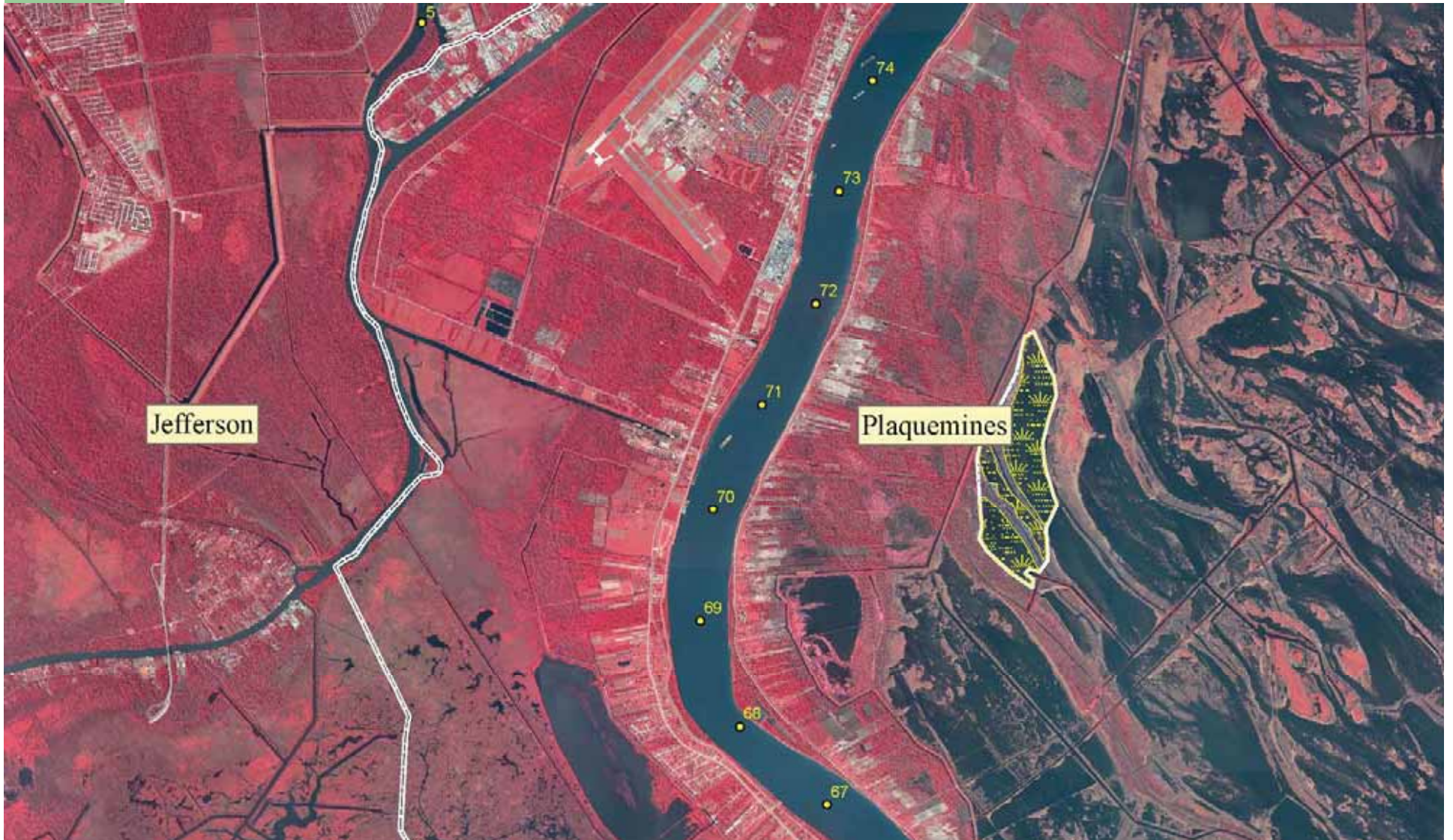
# **Wills Point Marsh Creation**



**PPL 20**  
**Region 2**  
**Breton Sound Basin**



# Project Area:

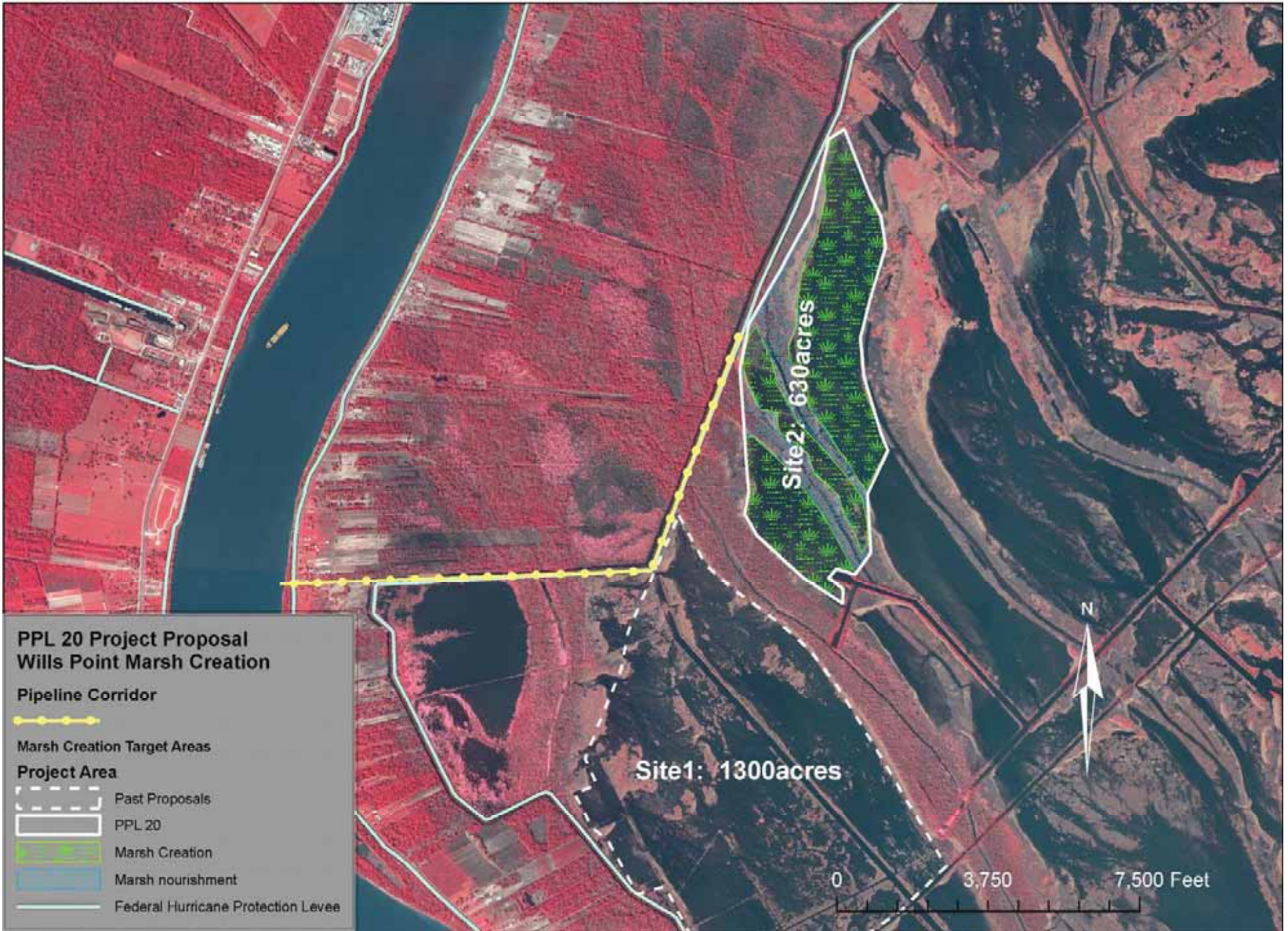


## Problem:

- The project area is mostly shallow water that appeared when marsh was lost between 1958 and 1974.
- Katrina caused additional loss in the project area.
- The location is adjacent to the 40-Arpent levee, which provides storm protection to the communities of Bertrandville and Wills Point.

# Proposed Project Features:

- Restore 630 acres of marsh (478 acres created/152 acres nourished)
- Approximately 5.8 million CY of material would be mined from the Mississippi River
- The existing canals and ridges would be used to contain the dredge material.
- Containment Dikes would be used on the southeast side of the marsh creation cell.



**PPL 20 Project Proposal  
Wills Point Marsh Creation**

**Pipeline Corridor**



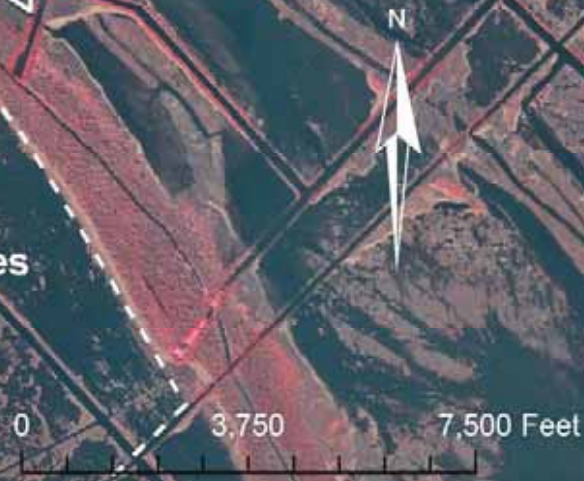
**Marsh Creation Target Areas**

**Project Area**

- Past Proposals
- PPL 20
- Marsh Creation
- Marsh nourishment
- Federal Hurricane Protection Levee

Site1: 1300acres

Site2: 630acres



## Preliminary Project Benefits:

- Create 478 acres of wetlands
- Nourish 152 acres of wetland
- Provide additional protection to the natural ridge of Rive aux Chene and Tigers Ridge.

R2-BS-06-Delacroix Wetland Restoration  
Project

**Breton Sound Basin  
Delacroix Wetland Restoration Project  
PPL-20 Project Nomination**

**Coast 2050 Strategy:**

Coastwide Common Strategies: Dedicated dredging to create, restore, or protect coastal wetlands.

**State Plan Strategy:**

Maintain and restore the Breton Sound marshes.

**Project Location:**

Region 2, Breton Sound Basin, St. Bernard Parish, adjacent to, and east of, the Town of Delacroix and LA HWY 300.

**Problem:**

This mapping unit, which consisted of 15,880 ac of marsh vegetation in 1932, lost 3,260 ac of marsh by 1990. Significant loss of marsh continued after 1990, particularly during the past decade as the result of hurricane related impacts, the most notable being Hurricane Katrina in 2005. The lack of wetlands adjacent to the Town of Delacroix with its runoff and discharges invariably contributes to lessened water quality. Loss of wetlands in the area has eliminated a natural protection buffer adjacent to the Delacroix community.

**Goals:**

The project goal is to restore ~500 acres of vegetated wetlands in a marsh area heavily damaged by Hurricane Katrina.

**Proposed Solution:**

The project would utilize dedicated dredging from Lake Lery to create approximately 468 ac of marsh. The project would incorporate existing features (e.g., LA HWY 300 embankment and canal/slip spoil banks) to maximize its utility and cost effectiveness. The dredge pipe would be jack and bored under LA HWY 300 or placed directly across the highway. If the latter alternative is used, a temporary ramp would be constructed in order to accommodate local traffic.

**Project Benefits:**

The project would benefit approximately 500 acres of brackish marsh.

**Project Costs:**

Estimated project costs have not been identified at this time.

**Fact Sheet Contact:**

Gregory Miller, (504) 862-2310      Corps of Engineers      [gregory.b.miller@usace.army.mil](mailto:gregory.b.miller@usace.army.mil)

**Breton Sound Basin  
Delacroix Wetland Restoration Project  
PPL-20 Project Nomination**





# CWPPRA PPL20 Delacroix Marsh Restoration Project Nomination

Gregory Miller  
January 2010



**US Army Corps  
of Engineers®**



# Delacroix Wetland Restoration



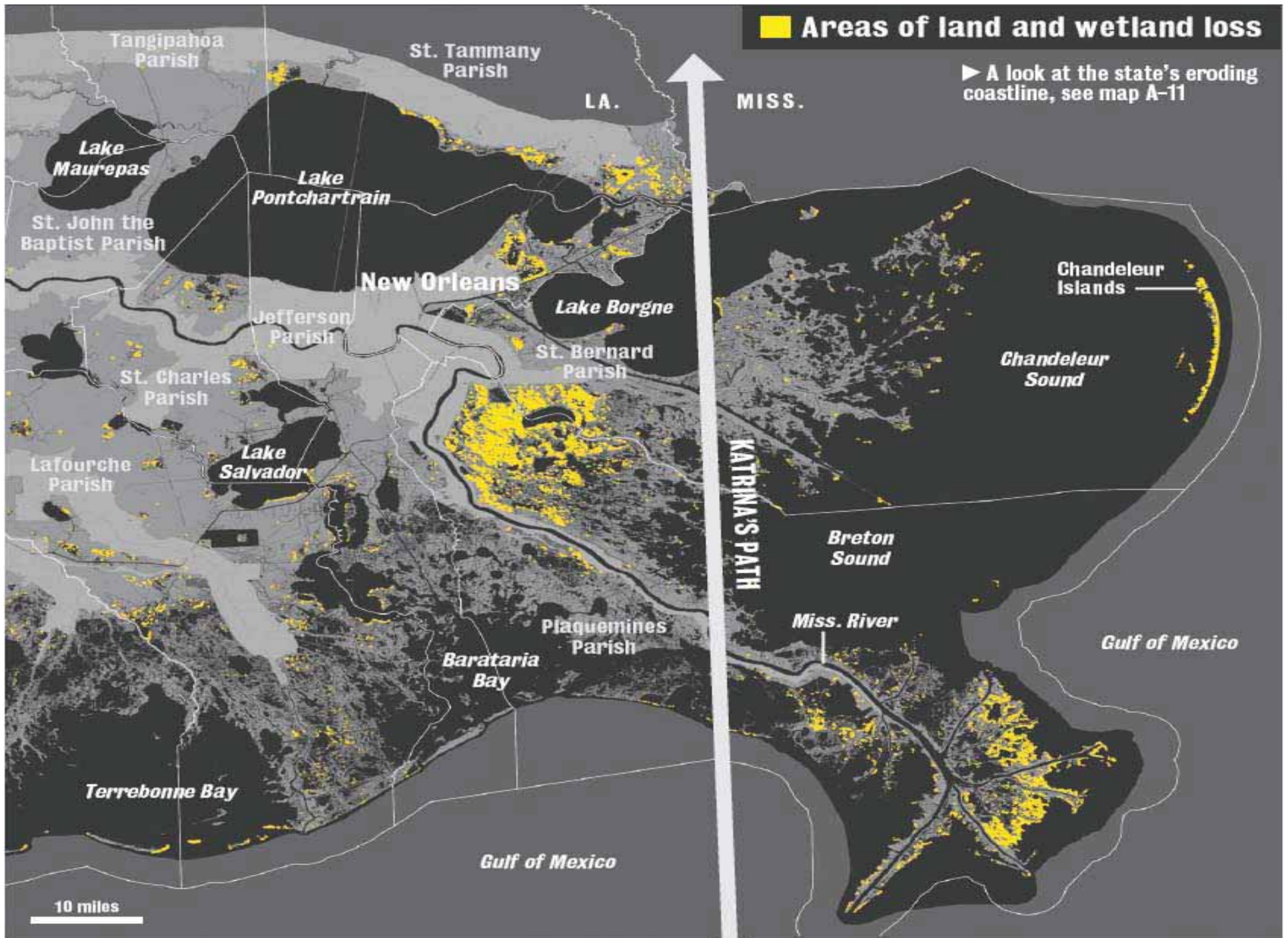


Image courtesy of U.S. Geological Survey/STAFF GRAPHIC

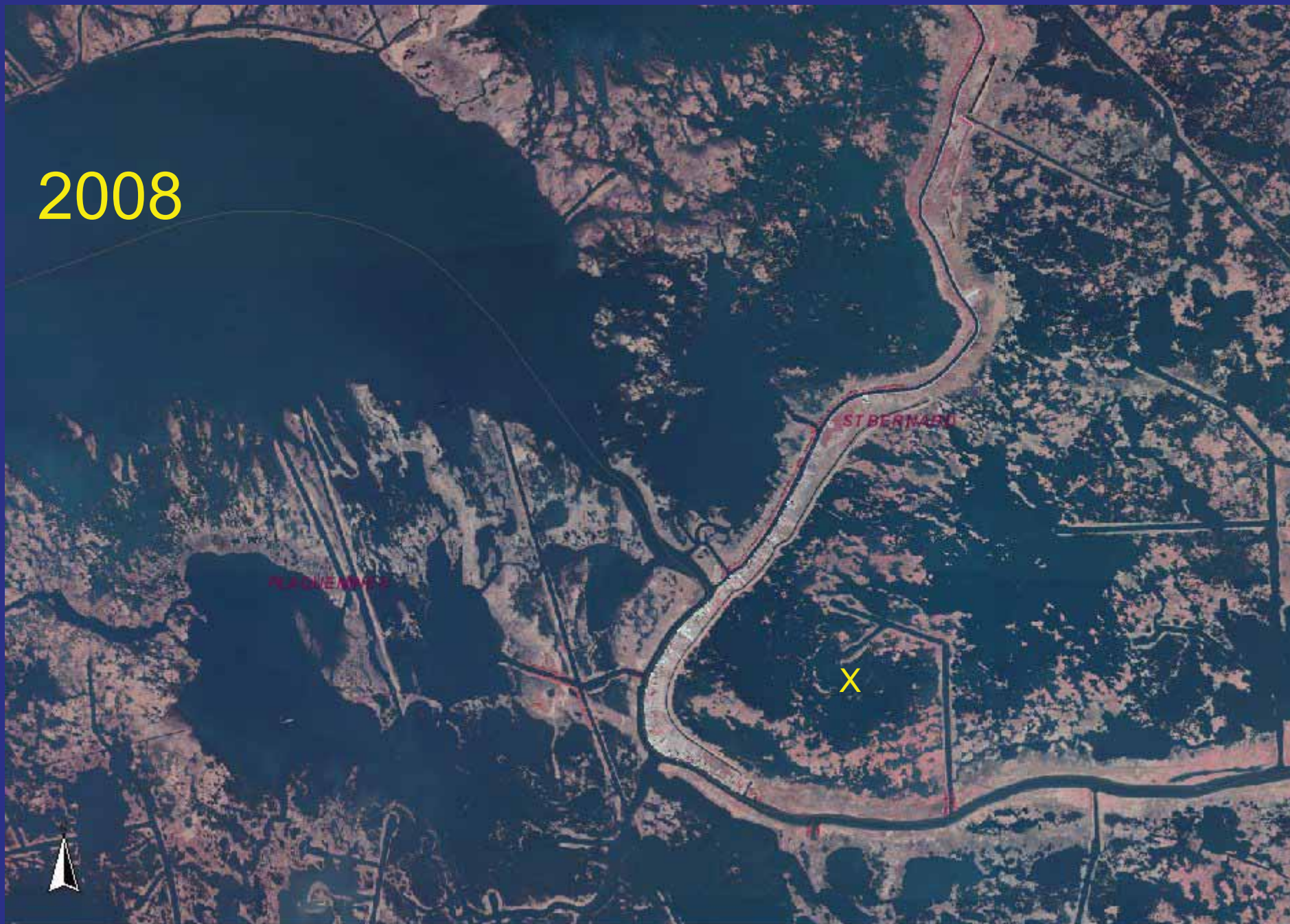
1998



2004



2008





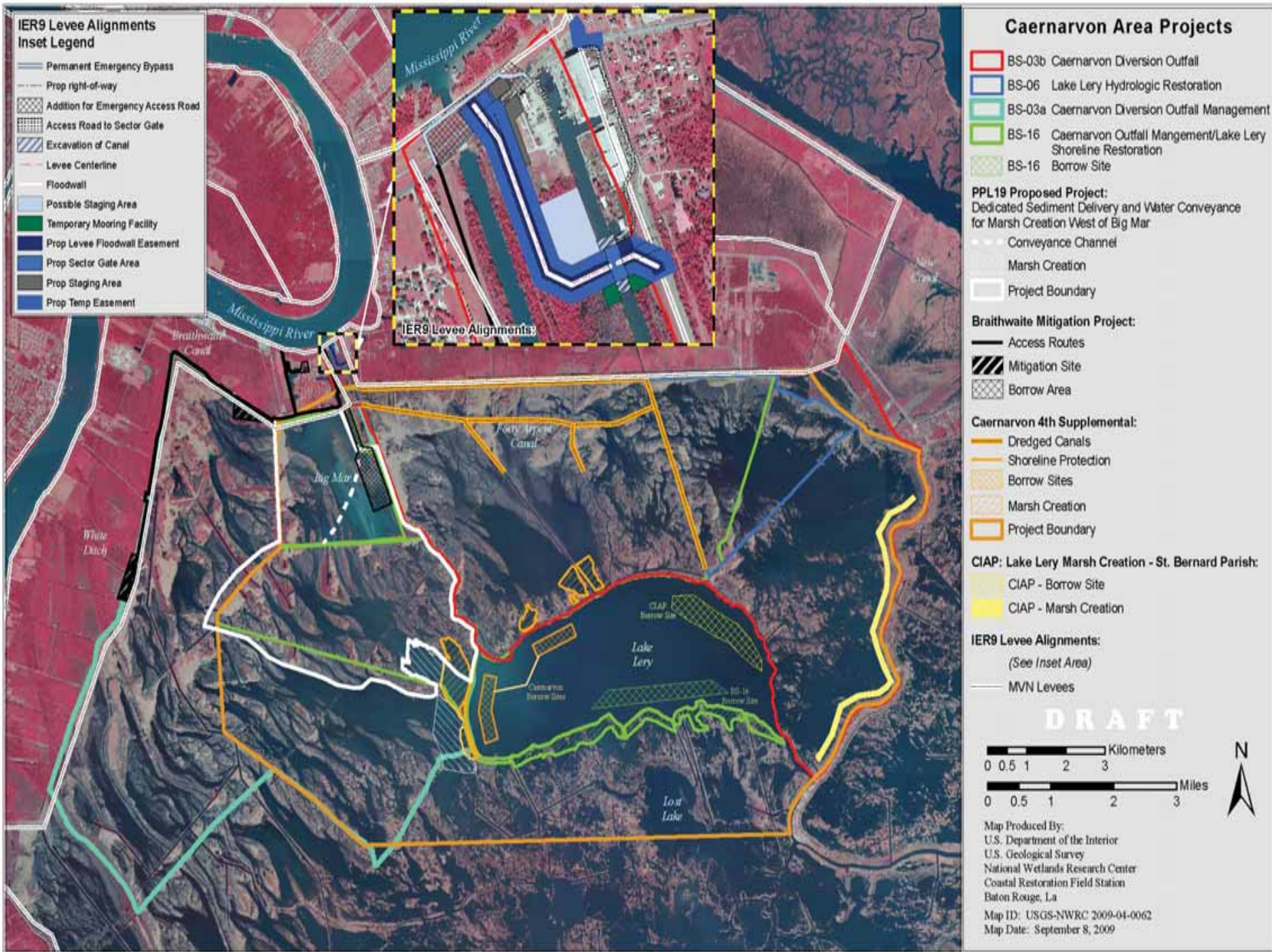
MARSH RESTORATION  
468 ACRES



# Proposed Project Features

- Containment for dredged material
- Hydraulic fill to create marsh elevation
- Vegetative plantings
- Containment dike gapping





# Supports Goals of Other Plans

- Coast 2050
- State of LA – CPRA Master Plan
- St. Bernard Parish

R2-BS-07-Reggio Marsh Creation Project

**Breton Sound Basin  
Reggio Area Marsh Creation Project  
PPL-20 Project Nomination**

**Coast 2050 Strategy:**

Coastwide Common Strategies: Dedicated dredging to create, restore, or protect coastal wetlands.

**State Plan Strategy:**

Maintain and restore the Breton Sound marshes.

**Project Location:**

Region 2, Breton Sound Basin, St. Bernard Parish, near the community of Reggio and Louisiana Highway 300.

**Problem:**

The marshes located between Lake Lery and the Bayou Terre aux Boeufs ridge were decimated by Hurricane Katrina in 2005. Open water areas in this region are continuing to expand eroding the few remaining areas of marsh. This site proposed for a marsh creation project is a natural pond close to the bayou and Delacroix Highway. Erosion of nearby wetlands has created a two-mile expanse of open water stretching from the edge of Lake Lery to the site. This large open water area has caused flooding of nearby property and roads during the past three hurricane seasons.

**Goals:**

The project goal is to create ~400 acres of vegetated wetlands in an open water area buffering the west side of the community of Reggio.

**Proposed Solution:**

The project would utilize dedicated dredging from Lake Lery to create approximately 400 acres of marsh.

**Project Benefits:**

The project would benefit approximately 400 acres of brackish marsh.

**Project Costs:**

Estimated project costs have not been identified at this time.

**Preparers of Fact Sheet:**

Gregory Miller, (504) 862-2310      Corps of Engineers      [gregory.b.miller@usace.army.mil](mailto:gregory.b.miller@usace.army.mil)

**Breton Sound Basin  
Reggio Area Marsh Creation Project  
PPL-20 Project Nomination**



# CWPPRA PPL20 Reggio Marsh Restoration Project Nomination

Gregory Miller  
January 2010



**US Army Corps  
of Engineers®**



# Reggio Marsh Restoration



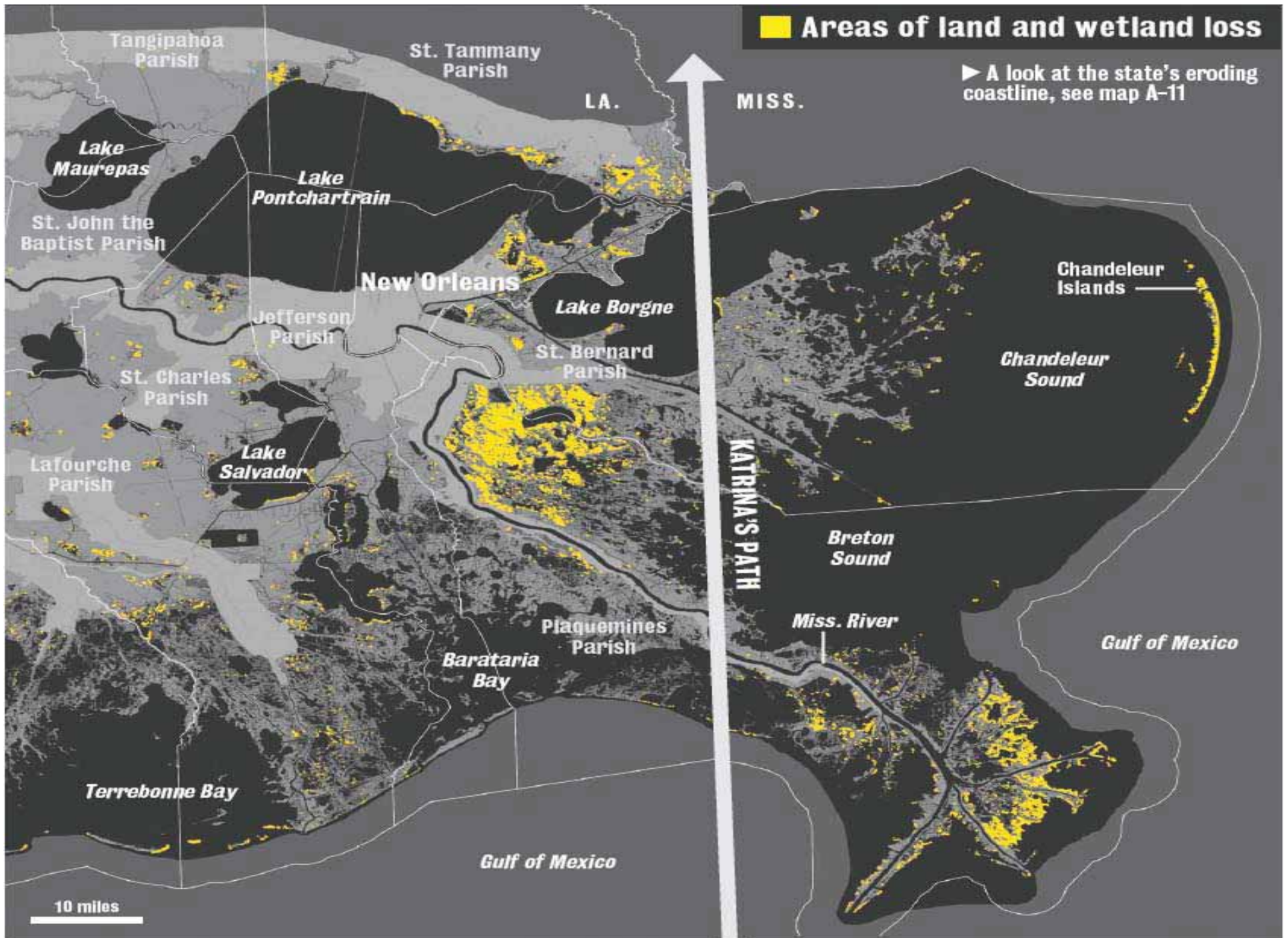


Image courtesy of U.S. Geological Survey/STAFF GRAPHIC



1998

X

PLAQUEMINES



2005

X

ST. JOHN RIVER

LA. 4000000000



2008

X

STATION 1

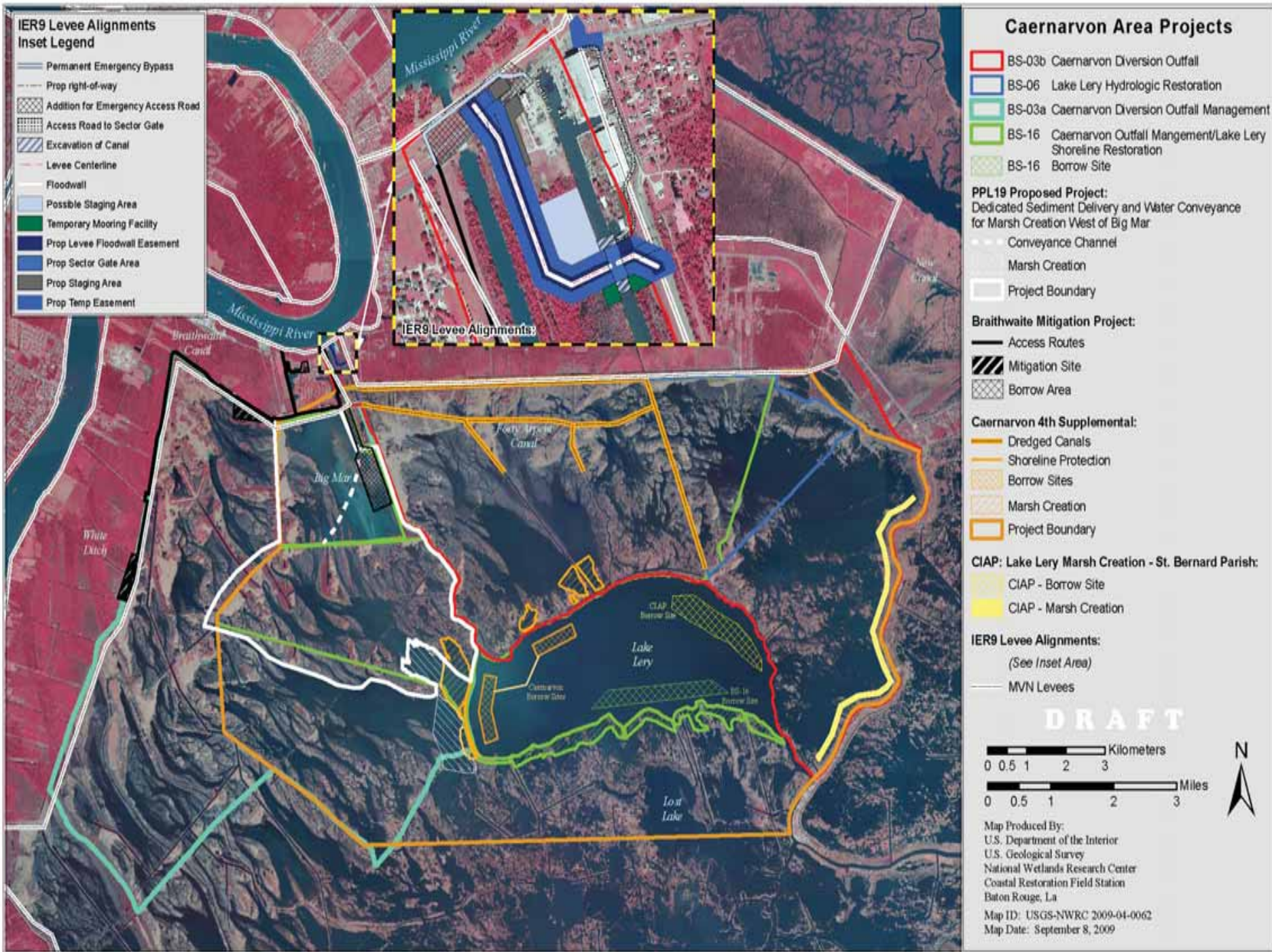
PLANTING





# Proposed Project Features

- Containment for dredged material
- Hydraulic fill to create marsh elevation
- Vegetative plantings
- Containment dike gapping



# Supports Goals of Other Plans

- Coast 2050
- State of LA – CPRA Master Plan
- St. Bernard Parish

R2-BS-08-Lake Lery Marsh Restoration – Voss  
Family Property



**Breton Sound Basin  
Lake Lery Marsh Restoration –Voss Family Property  
PPL-20 Project Nomination**

**Coast 2050 Strategy**

Coastwide - Dedicated dredging to create, restore, or protect wetlands.

**Project Location**

Region 2, Breton Sound Basin, St. Bernard Parish, north of Lake Lery.

**Problem**

This mapping unit had 12,260 acres of marsh in 1932. By 1990, the area had lost 3,260 acres of marsh; 1,000 acres of this loss occurred between 1974-1990. In 1991, the Caernarvon Freshwater Diversion structure began operating benefiting area marshes. However, since 2005 Hurricane Katrina and other storms have heavily damaged and destroyed marshes in the area. As a result of the storms the majority of the proposed restoration site is now shallow open water.

**Goals**

The goal of this project is to restore marsh in a contained area west of Creedmore Canal. Restoring the integrity of these wetlands will ensure opportunities for continued recreational and commercial uses of natural resources and will help protect the communities of Delacroix and buffer a portion of the Verret to Caernarvon levee.

**Proposed Solution**

The project would utilize dedicated dredging from Lake Lery to restore ~850 acres of marsh destroyed by Hurricane Katrina. Spoil banks surround the area and would be used to contain the dredged material during construction. After dewatering, gaps would be cut into the spoil bank at natural waterways and otherwise as needed to allow tidal exchange. All of the created marsh area would be planted with wetland vegetation. Landscape design features such as ponds and tidal creeks would be included in the project to increase estuarine productivity and maintain opportunities for traditional fish and wildlife use of the marsh.

**Project Benefits**

The project would benefit approximately 850 acres of marsh.

**Project Costs**

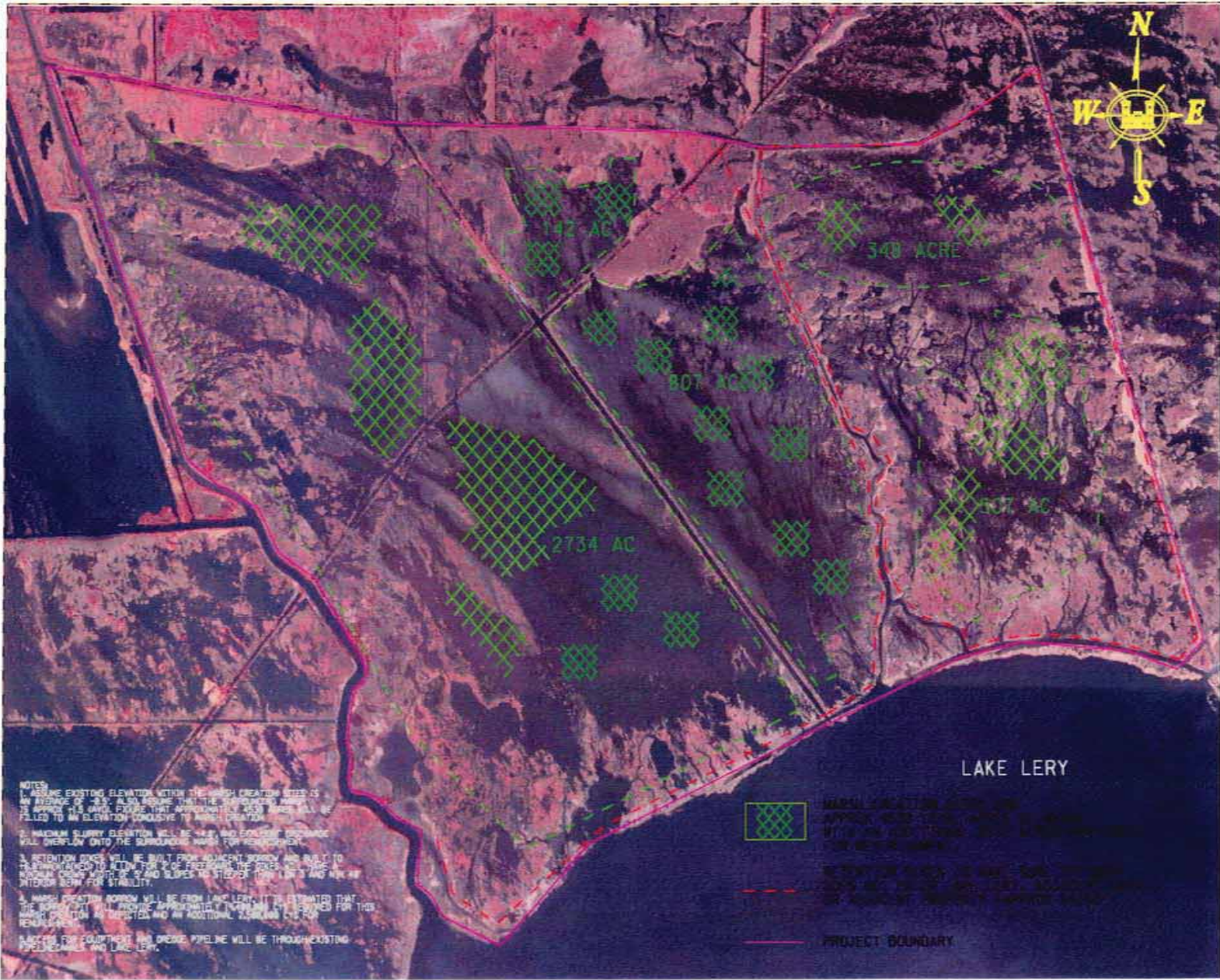
Costs have not been identified at this time.

**Property Owner Contact**

Michael Voss, (504) 452-0882      [mjvoss@cox.net](mailto:mjvoss@cox.net)

**Supporting Agency Contact**

Gregory Miller, (504) 862-2310      Corps of Engineers      [gregory.b.miller@usace.army.mil](mailto:gregory.b.miller@usace.army.mil)



18  
 18 Army Corps of Engineers  
 Vicksburg District Office

NO.	DATE	DESCRIPTION	BY

NO.	DATE	DESCRIPTION




NOTES:

1. ASSUME EXISTING ELEVATION WITHIN THE MARSH CREATION AREA IS AN AVERAGE OF +2.9'. ALSO ASSUME THAT THE SURROUNDING MARSH IS APPROX. 2.5' HIGHER ELEVATION. APPROXIMATELY 1453 ACRES WILL BE FILLED TO AN ELEVATION CONCLUSIVE TO MARSH CREATION.
2. MAINDAM SLURRY ELEVATION WILL BE 148.0' AND ELEVATION BEDROCK WILL OVERLAY ONTO THE SURROUNDING MARSH FOR REINFORCEMENT.
3. RETENTION DORIES WILL BE BUILT FROM ADJACENT MARSH AND BUILT TO SUBMERGED TO ALLOW FOR 2' OF FREEBOARD. THE DORIES WILL HAVE MINIMUM CREST RISE OF 9' AND SLOPES NO STEEPER THAN 1:1.5 AND MIN. AN RATIO FOR BANK STABILITY.
4. MARSH CREATION MARSH WILL BE FROM LAKE LERY. IT IS ESTIMATED THAT THE SURFACE OF THE MARSH AND ADJACENT MARSH WILL BE 2' TO 3' FOR THIS MARSH CREATION. AN ADDITIONAL 2.5' MINIMUM 1:1.5 FOR REINFORCEMENT.
5. ACCESS FOR EQUIPMENT AND DREDGE PIPELINE WILL BE THROUGH EXISTING PIPELINE CANALS AND LAKE LERY.



MARSH CREATION AREA. THIS AREA IS TO BE FILLED TO AN ELEVATION CONCLUSIVE TO MARSH CREATION. APPROXIMATELY 1453 ACRES WILL BE FILLED TO AN ELEVATION CONCLUSIVE TO MARSH CREATION.



PROJECT BOUNDARY

LAKE LERY

# CWPPRA PPL20 Lake Lery Marsh Restoration Project Nomination

Voss Family Property

Gregory Miller  
January 2010



**US Army Corps  
of Engineers®**

# Lake Lery Marsh Restoration



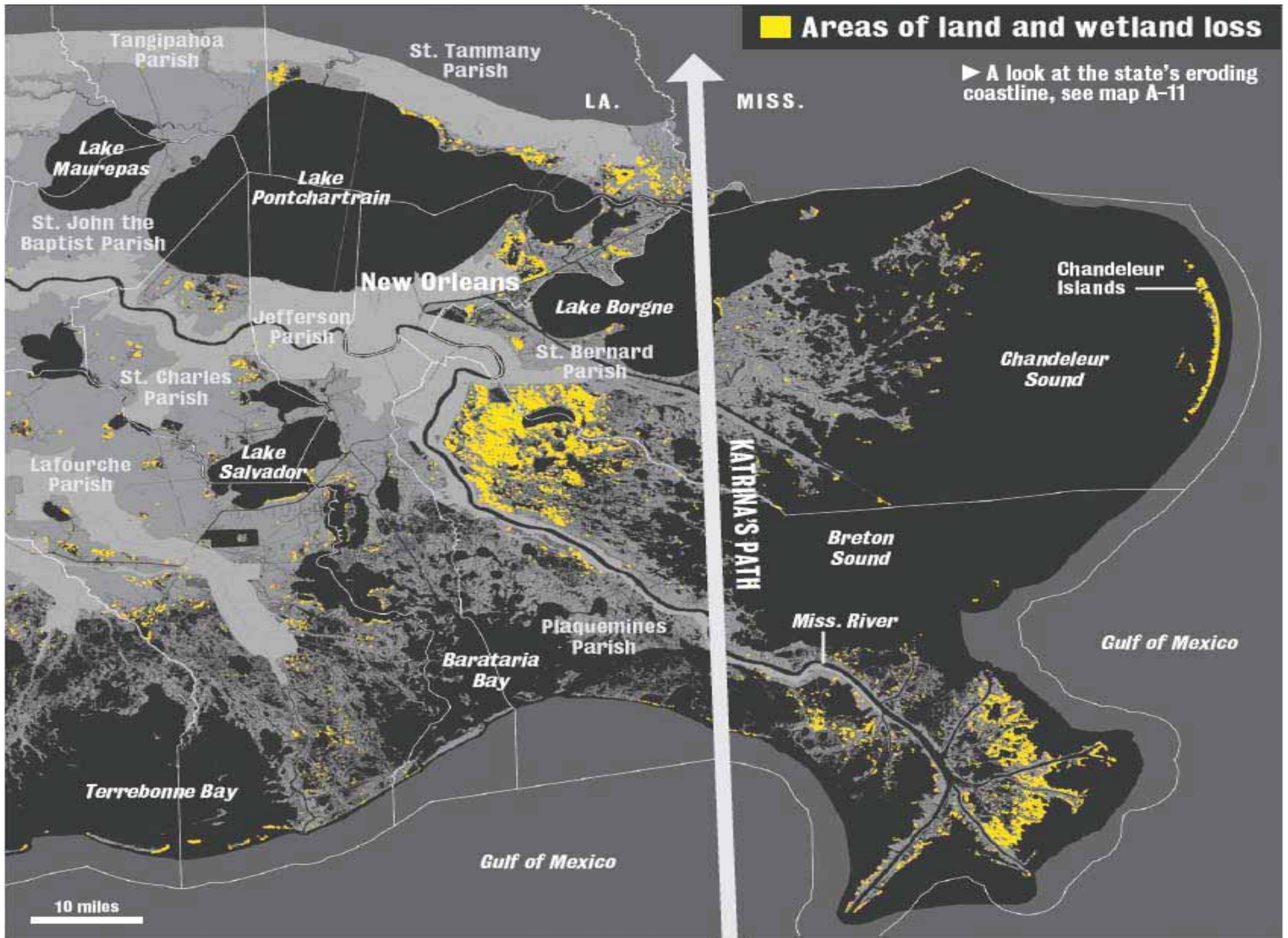


Image courtesy of U.S. Geological Survey/STAFF GRAPHIC

2004



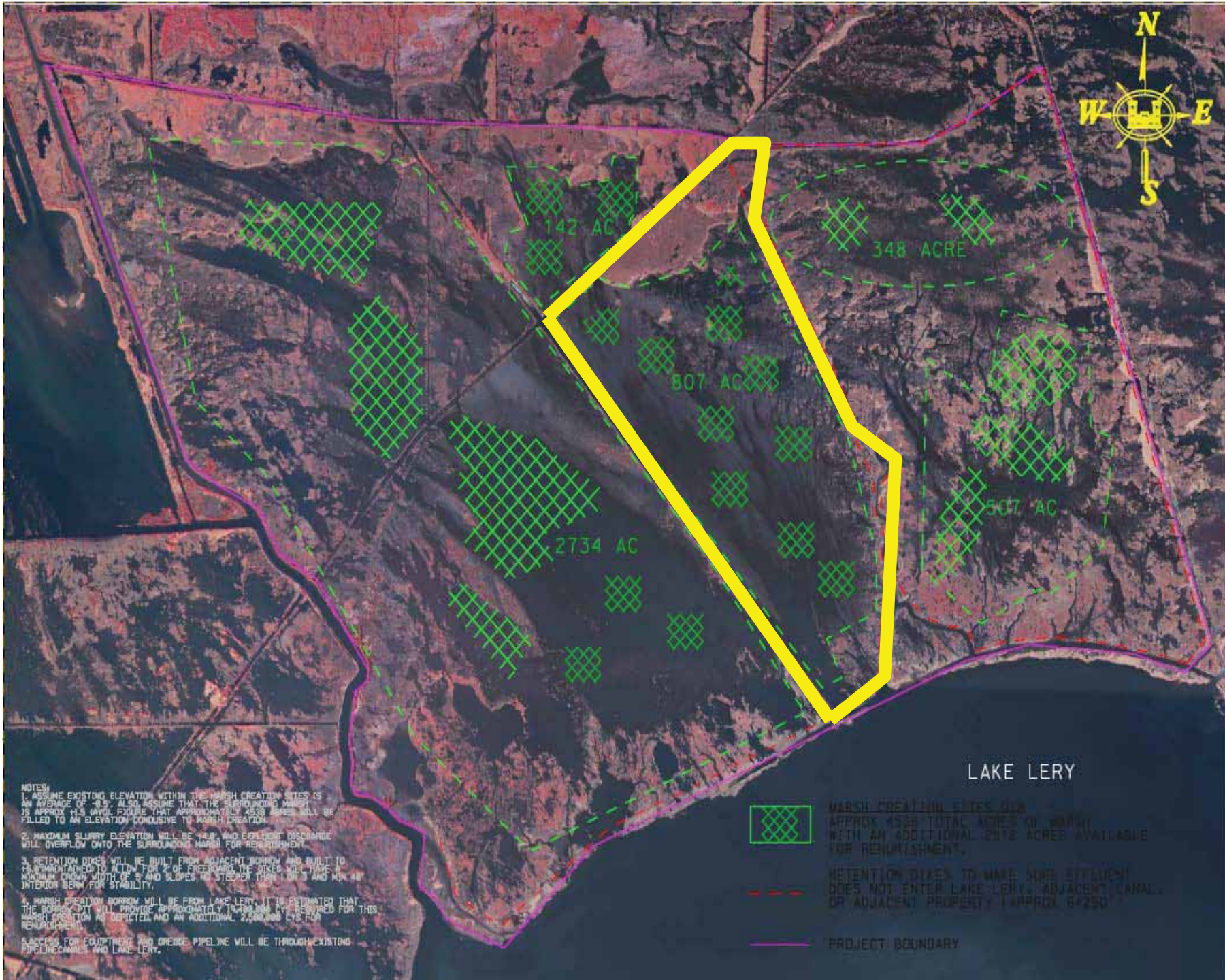
2005



2008







**NOTES**  
 1. ASSUME EXISTING ELEVATION WITHIN THE MARSH CREATION SITES IS AN AVERAGE OF -0.5'. ALSO ASSUME THAT THE SURROUNDING MARSH IS APPROX 1.5' AVOID FIGURE THAT APPROXIMATELY 4538 ACRES WILL BE FILLED TO AN ELEVATION CONDUCTIVE TO MARSH CREATION.

2. MAXIMUM SLURRY ELEVATION WILL BE 4.0' AND EXCESS DISCHARGE WILL OVERFLOW ONTO THE SURROUNDING MARSH FOR RENOURISHMENT.

3. RETENTION DIKES WILL BE BUILT FROM ADJACENT BORROW AND BUILT TO 2% MAINTAINED TO ALLOW FOR 2' OF FREEBOARD. THE DIKES WILL HAVE A MINIMUM CHAIN WIDTH OF 5' AND SLOPES TO STEEPEN THAN 1 ON 3 AND MIN 8' INTERIOR BERM FOR STABILITY.

4. MARSH CREATION BORROW WILL BE FROM LAKE LERY. IT IS ESTIMATED THAT THE BORROW PIT WILL PROVIDE APPROXIMATELY 1,000,000 CYB REQUIRED FOR THIS RENOURISHMENT.

5. ACCESS FOR EQUIPMENT AND DREDGE PIPELINE WILL BE THROUGH EXISTING PIPELINES AND LAKE LERY.

LAKE LERY



MARSH CREATION SITES DIA  
 APPROX 4538 TOTAL ACRES OF MARSH  
 WITH AN ADDITIONAL 2012 ACRES AVAILABLE  
 FOR RENOURISHMENT.



RETENTION DIKES TO MAKE SURE STILLBURN  
 DOES NOT ENTER LAKE LERY, ADJACENT CANAL,  
 OR ADJACENT PROPERTY (APPROX 84250)



PROJECT BOUNDARY



DATE	BY	DESCRIPTION

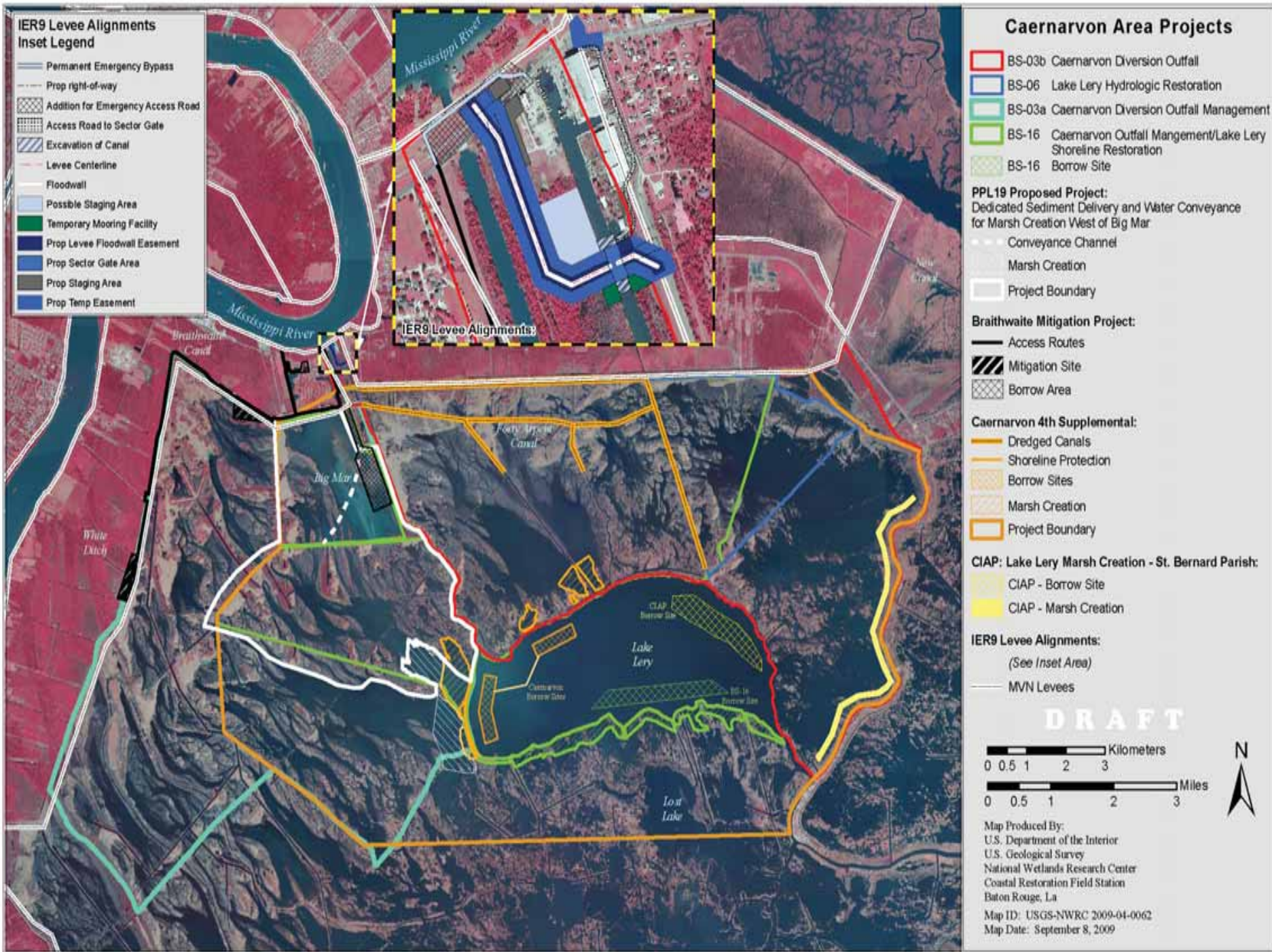
NO.	DATE	DESCRIPTION

U.S. ARMY CORPS OF ENGINEERS  
 MISSOURI DISTRICT  
 MISSOURI DIVISION  
 MISSOURI DISTRICT  
 MISSOURI DIVISION

**PROJECT IDENTIFICATION**

# Proposed Project Features

- Containment for dredged material
- Hydraulic fill to create marsh elevation
- Vegetative plantings
- Containment dike gapping
- Wetland landscape features (ponds and tidal creeks)



# Supports Goals of Other Plans

- Coast 2050
- State of LA – CPRA Master Plan
- St. Bernard Parish



## **Region 2 - BARATARIA BASIN**

R2-BA-01- Bayou L'Ours Ridge Restoration and  
Terracing

**PPL 20 PROJECT NOMINEE FACT SHEET**  
**FINAL – January 22, 2010**

**Project Name**

Bayou L'Ours Ridge Restoration and Terracing

**Coast 2050 Strategy**

Coastwide: Maintain or Restore Ridge Functions

Terracing

Vegetative Plantings

Local and Common Strategies: Maintain function of Bayou L'Ours Ridge

Restoration of the Bayou L'Ours ridge is part of the State of Louisiana's Master Plan.

**Project Location**

Region 2, Barataria Basin, Lafourche Parish, east of Galliano, and south of Little Lake

**Problem**

The gapping of the Bayou L'Ours ridge by pipeline canals has altered the hydrology of the area and contributed to the degradation of the marsh north of the ridge. Additionally, the tidal flow through these canals is causing the depth of these openings to increase. Also, portions of the marsh along the southern shore of the ridge are being eroded at a rate of about three feet per year.

**Goals**

The project will restore the function of the Bayou L'Ours ridge, partially restore the hydrology north of the ridge, and will halt the deepening of the gaps. Terraces will be created in areas near the ridge to help restore the ridge's natural function and prevent further erosion of the marsh immediately south of the ridge.

**Proposed Solutions**

Three of the gaps will be closed completely. Two additional gaps will be decreased in size and armored to prevent any further scouring. A 325-acre terracing field, consisting of approximately 30,000 linear feet of terraces will be constructed south of the ridge to provide additional protection to the ridge. The bankline of the canal south of closure 4 will be restored to prevent salt water intrusion into the terracing field.

**Preliminary Project Benefits**

1) *What is the total acreage benefited both directly and indirectly?* The terraces will create 30 acres which will be directly benefited. The project area of approximately 8,000 acres, of which approximately 2,600 acres are land, will be benefited indirectly due to a decrease in salinity.

2) *How many acres of wetlands will be protected/created over the project life?* At the end of 20 years, 24 of the terrace acres will remain. Additionally, 7 acres of erosional loss will be prevented in the marsh south of the Bayou L'Ours ridge. Assuming a 10% reduction in the loss rate north of the ridge due to salinity reduction, 76 acres would be preserved over 20 years. Thus, the net acres benefited would be 107.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life?* <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.* restores the function of the Bayou L'Ours ridge by providing a barrier to salt water intrusion

5) *What is the net impact of the project on critical and non-critical infrastructure?* Provides additional storm surge protection for the Clovelly Dome Oil Storage Terminal, the Larose to Golden Meadow levee system, and communities along Bayou Lafourche.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* Reduces salt water intrusion to the area near the Little Lake Shoreline Protection (BA-37) Project. With increased usage of the Davis Pond diversion, the closure of the ridge will help restore the degraded marsh north of the ridge.

#### **Identification of Potential Issues**

Past projects in this area have had landowner issues, but landowners in the area, including the owners of the Tidewater Canal, have publicly expressed their support of the project.

#### **Preliminary Construction Costs**

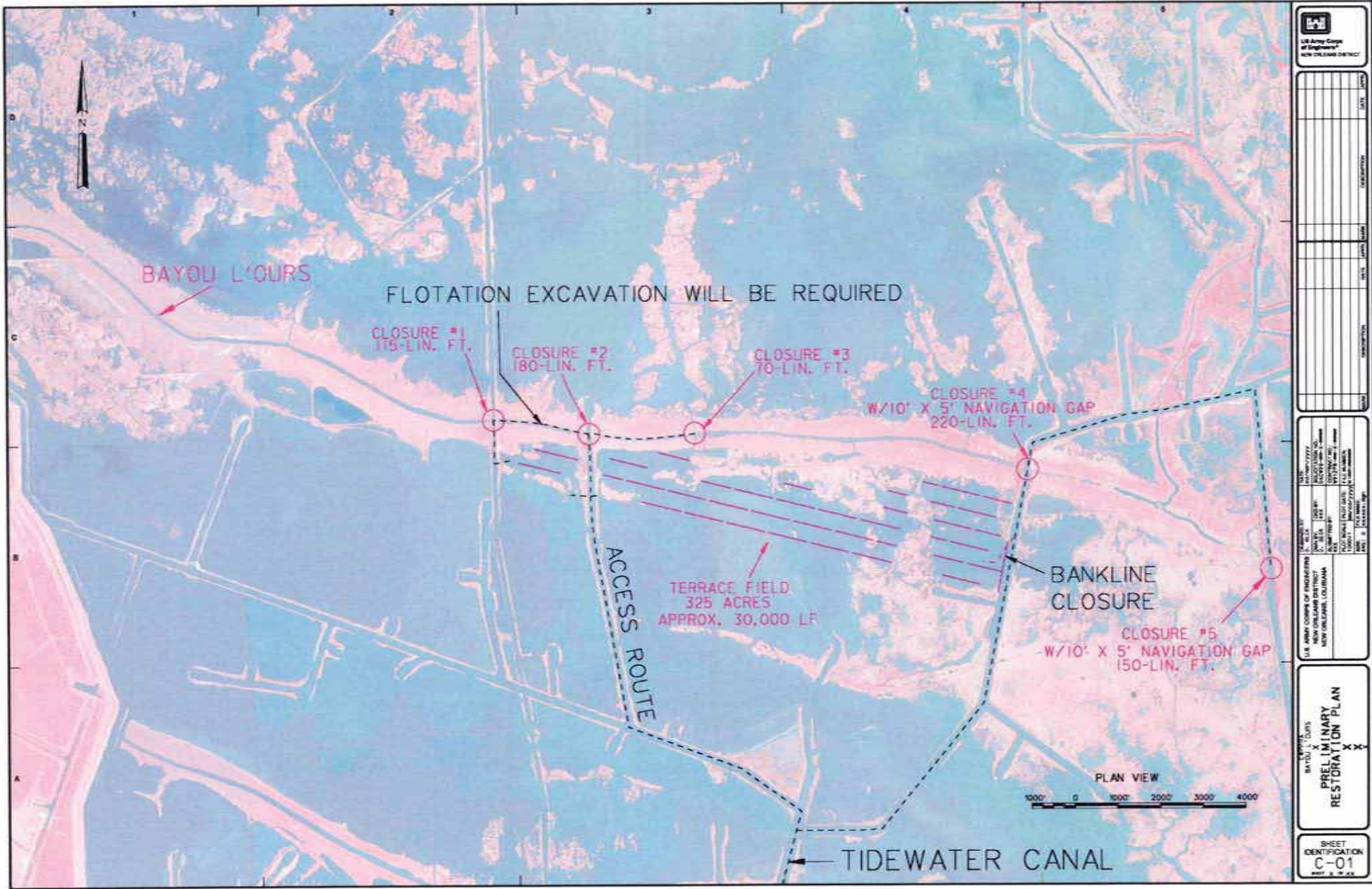
The construction cost including 25 % contingency is approximately \$6,000,000.

#### **Preparer(s) of Fact Sheet**

Fay Lachney, USACE, 504-862-2309, [Fay.V.Lachney@usace.army.mil](mailto:Fay.V.Lachney@usace.army.mil)

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Kim LeSaicherre, USACE, 504-862-1795, [Kim.M.LeSaicherre@usace.army.mil](mailto:Kim.M.LeSaicherre@usace.army.mil)



  
 Licensed Professional Engineer  
 State of Louisiana

NO.	DATE	DESCRIPTION

U.S. ARMY CORPS OF ENGINEERS  
 NEW ORLEANS DISTRICT  
 NEW ORLEANS, LOUISIANA  
 PROJECT NO. 17-0000-0001  
 DRAWING NO. 17-0000-0001-0001  
 SHEET NO. C-01

BAYOU L'OURS  
 PRELIMINARY  
 RESTORATION PLAN

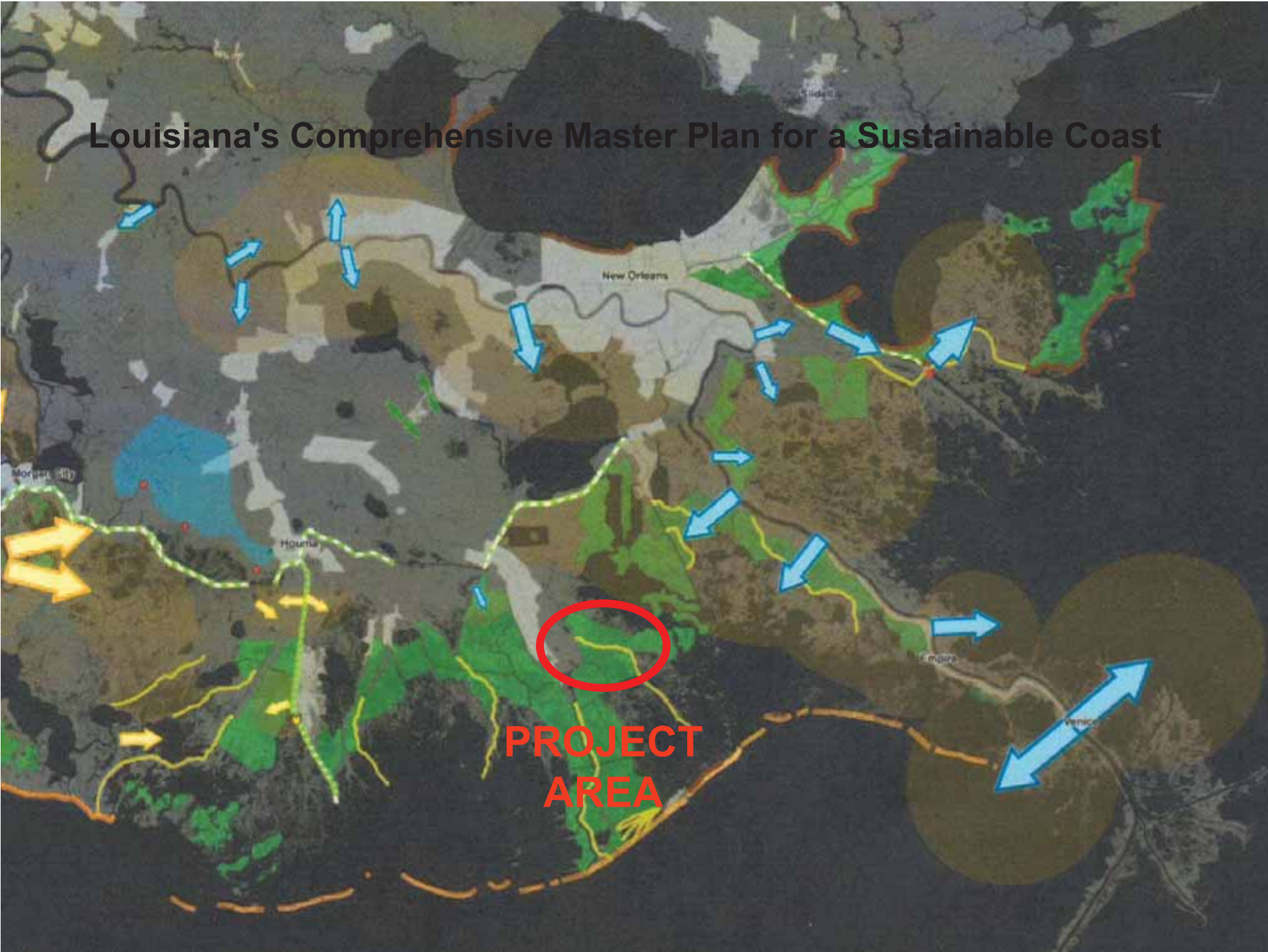
SHEET  
 IDENTIFICATION  
 C-01

A photograph of a bayou landscape. In the foreground, there is a grassy bank with some tall grasses and a wire cage partially submerged in the water. To the left, a large metal building with corrugated siding is visible. In the middle ground, a wooden dock extends into the water, and a small structure with a white roof is situated on the bank. The background shows a wide expanse of water surrounded by dense green trees and vegetation under a cloudy sky.

**Bayou L'Ours Ridge Restoration and  
Terracing Project**

**Region 2, Barataria Basin  
Lafourche Parish**

# Louisiana's Comprehensive Master Plan for a Sustainable Coast



# PROJECT AREA PROBLEMS

LOSS OF NATURAL RIDGE FUNCTION DUE TO O&G DEVELOPMENT

INCREASED SIZE OF DREDGED CHANNELS RESULTING IN INCREASED TIDAL SCOURING

INCREASED SALT WATER INTRUSION

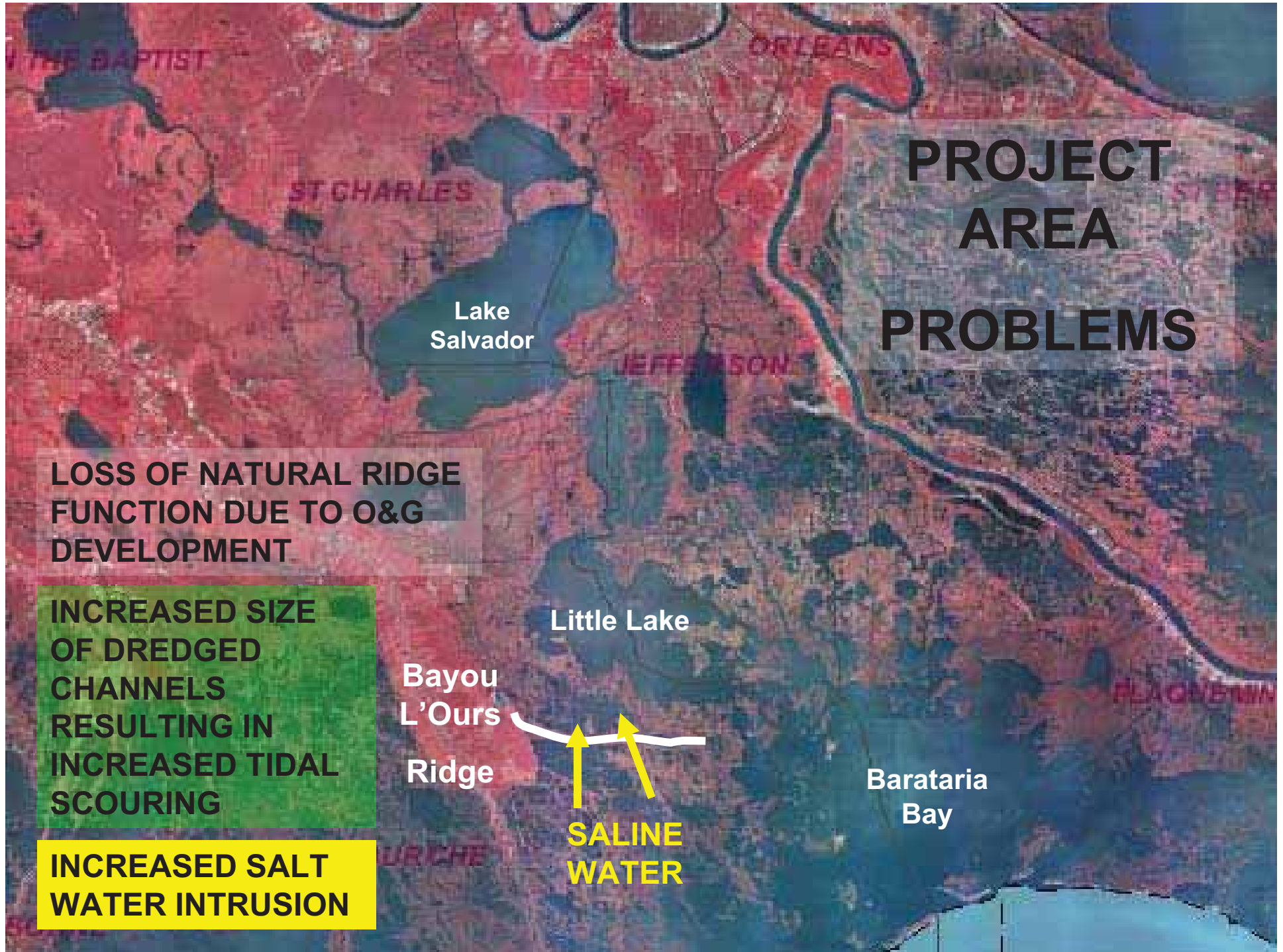
Lake Salvador

Little Lake

Bayou L'Ours  
Ridge

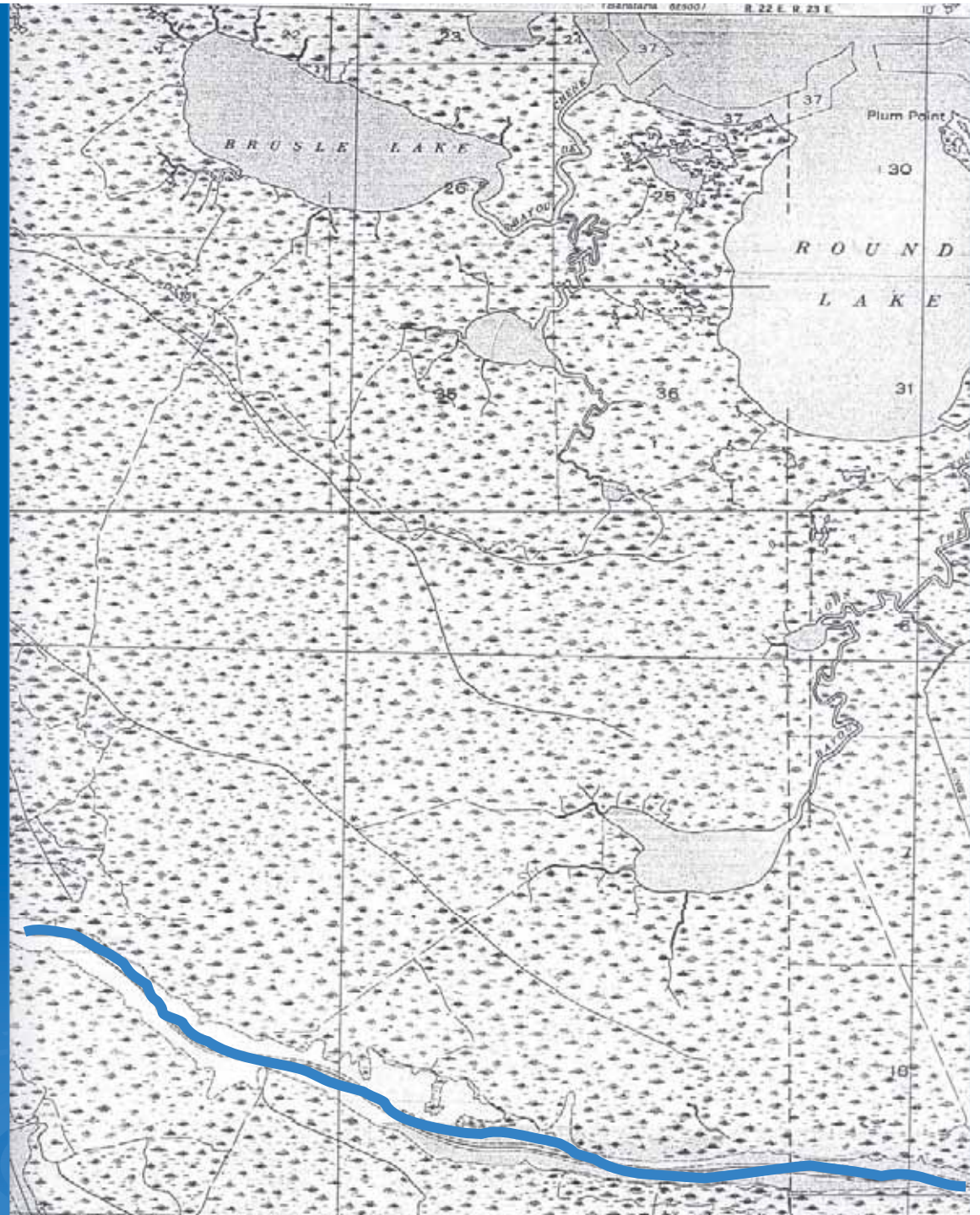
SALINE WATER

Barataria Bay



# 1932 Quadrangle Map

Bayou L'Ours Ridge



Oct 15, 2007

2007

Image USDA Farm Service Agency

©2009 Google







# PROJECT FEATURES



**PLUG**



**10'X5' BOAT BAY**



**TERRACES**

**325 ACRES  
(30,000 LF)**

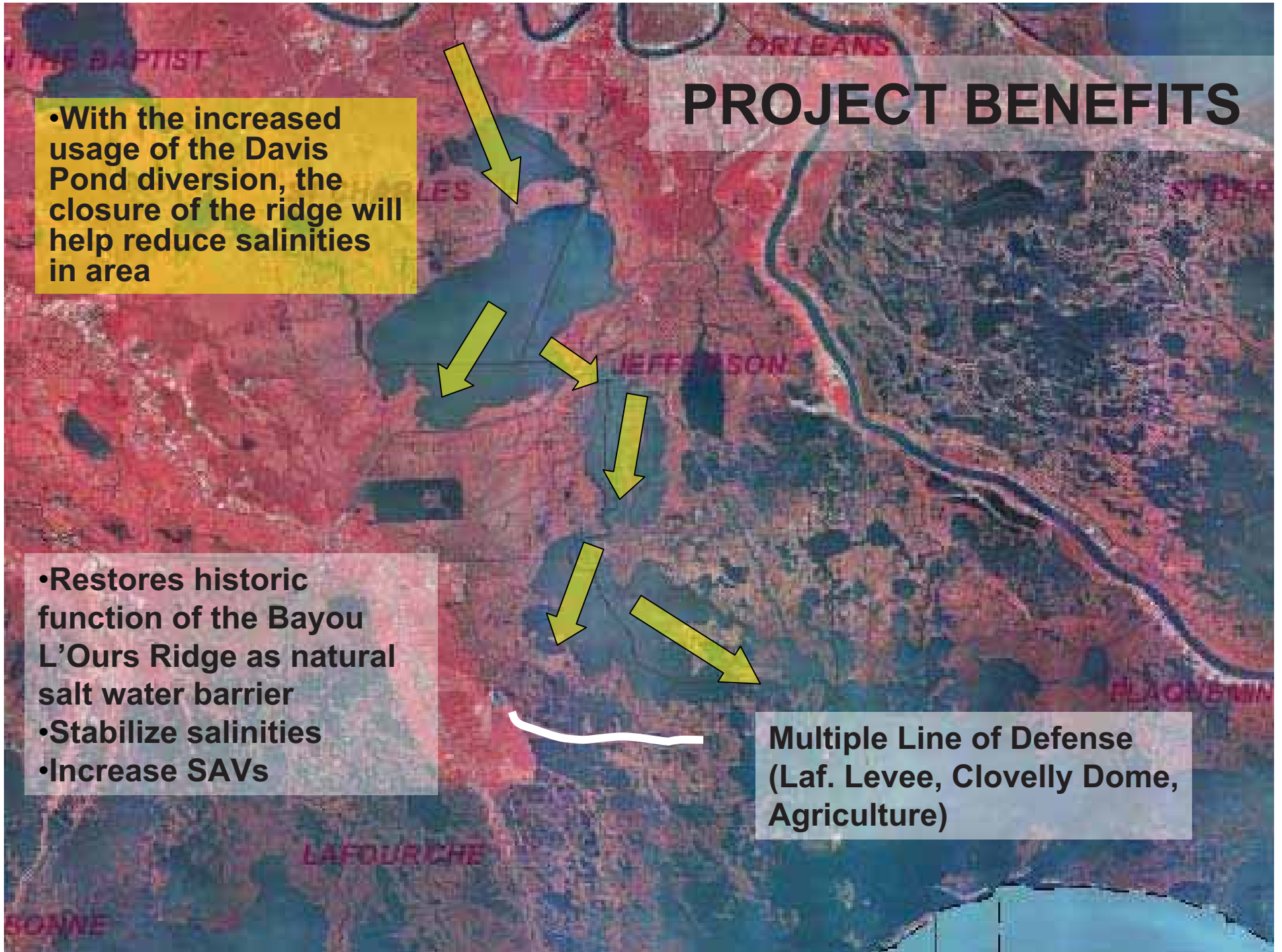
**ESTIMATED PROJECT  
COST \$7M**

# PROJECT BENEFITS

•With the increased usage of the Davis Pond diversion, the closure of the ridge will help reduce salinities in area

•Restores historic function of the Bayou L'Ours Ridge as natural salt water barrier  
•Stabilize salinities  
•Increase SAVs

Multiple Line of Defense  
(Laf. Levee, Clovelly Dome, Agriculture)





# Project Advantages

- Low cost
- **State Master Plan and Coast 2050 plan**
- **Regional Support from landowners** including those needed for access to construct the project
- **Regional Support by Laourche Parish, Jefferson Parish, St. Charles Parish, and Plaquemines Parish**
- **#1 project for Lafourche Parish**

An aerial photograph of a region in Louisiana, showing a network of waterways and land parcels. The map is overlaid with semi-transparent red and blue lines, likely representing project boundaries or property lines. Several parish names are visible in red text: 'WHITE BAPTIST' in the top left, 'ORLEANS' in the top right, 'ST CHARLES' in the middle left, 'ST. BEAUVENUE' in the middle right, 'LAFOURCHRE' in the bottom left, and 'BOONE' in the bottom left corner. The title 'SPECIAL NOTES' is centered at the top in large, bold, black letters.

# SPECIAL NOTES

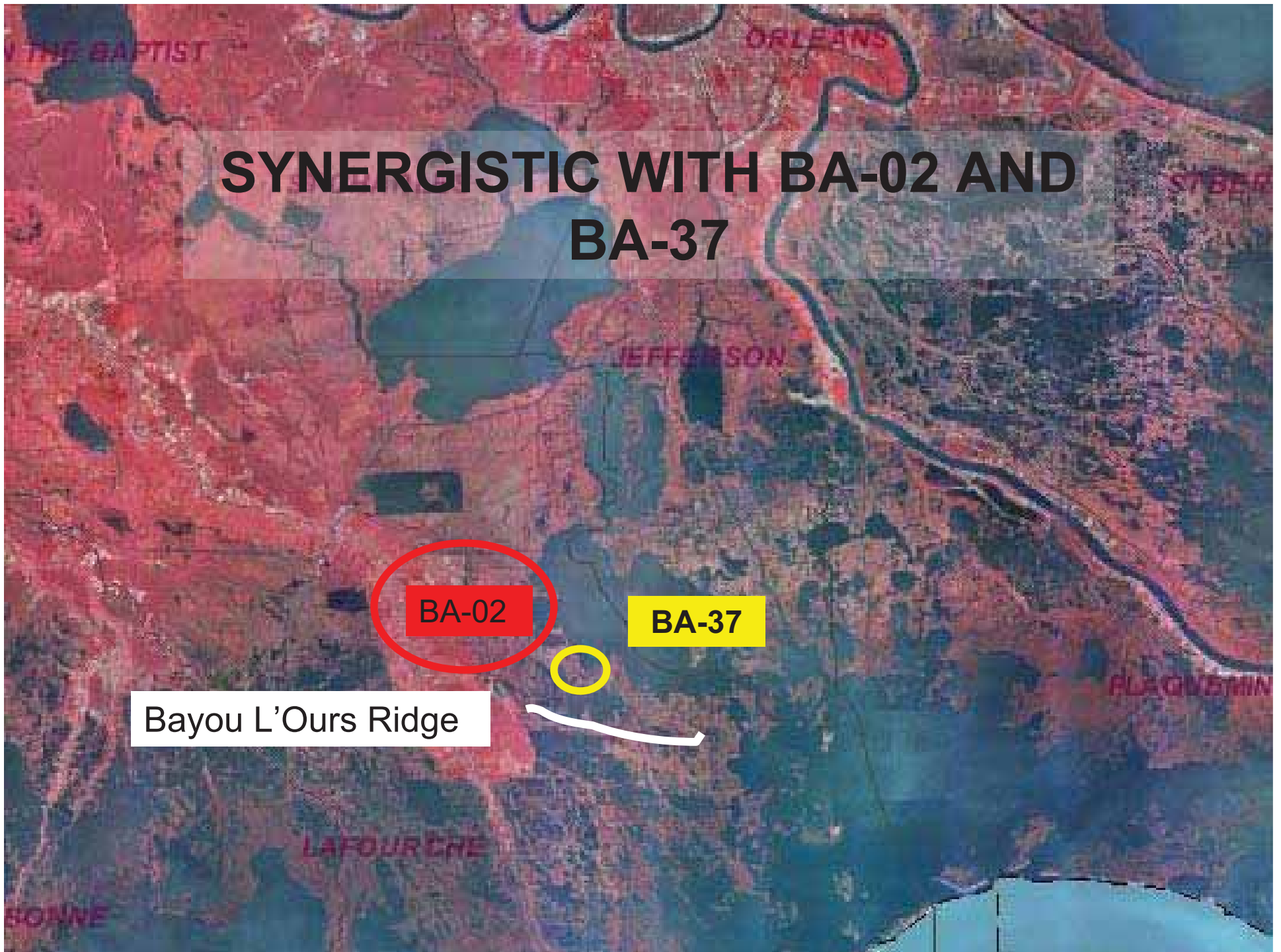
- Number 11 project for PPL-19
- Part of de-authorized Bayou L'Ours Ridge Hydrologic Restoration (BA-22)
  - Reason for de-authorization was landowner would not allow ROW access across his property for construction equipment
  - Land has since been bought by Castex Energy, Inc. whom is in total support of proposed project and would allow equipment access

# SYNERGISTIC WITH BA-02 AND BA-37

BA-02

BA-37

Bayou L'Ours Ridge



R2-BA-02- Bayou Dupont Marsh and Ridge  
Creation Phase II

**PPL-20 PROJECT NOMINEE FACT SHEET****Project Name:**

Bayou Dupont Marsh and Ridge Creation Phase II

**Coast 2050 Strategy:**

Coastwide Strategy – Dedicated Dredging, to Create, Restore, or Protect Wetlands

**Project Location:**

Region 2, Barataria Basin, along the southwestern bankline of Bayou Dupont in Jefferson Parish.

**Problem:**

There is widespread historic and continued rapid land loss in the project area due to altered hydrology, wind erosion, and subsidence. Wetlands in the project vicinity are being lost at the rate of  $-1.72\%/year$  based on USGS data from 1988 to 2006.

**Goals :**

The project goal is to create approximately 320 acres of marsh and 20 acres of natural levee ridge.

**Proposed Solutions:**

Roughly 340 acres of marsh and ridge would be created via confined disposal of sediment dredged from the Mississippi River. Of this acreage, up to 20 acres of natural levee ridge would be created along the bayou to an elevation of approximately +4.5 ft. The design would largely be based on geotechnical investigation and surveys of the designed BA-48 project. The created ridge would be planted with appropriate species and Chinese Tallow control would be conducted for the ridge as needed. This would be the second step to restore the banklines of Bayou Dupont.

**Preliminary Project Benefits:**

Approximately 340 acres would be directly benefited from the project. Given the protective-aspects of the ridge, several hundred additional acres north of the ridge near the hurricane protection levee could experience reduced land loss rates as well. 2) Approximately 282 net acres of wetlands would be created over the 20-year project life, this does not include secondary benefits to adjacent marsh. 3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life is 50-74%. 4) The project features restore the structural integrity of a portion of Bayou Dupont. 5) There is net positive impact of the project on non-critical oil and gas infrastructure and minor net positive impact on critical infrastructure (non-Federal levee). 6) The project would have synergy with previous small dredge projects and the Bayou Dupont Marsh and Ridge Creation project undergoing engineering and design.

**Identification of Potential Issues:**

The proposed project has the following potential issues: utilities/pipelines and canal closures

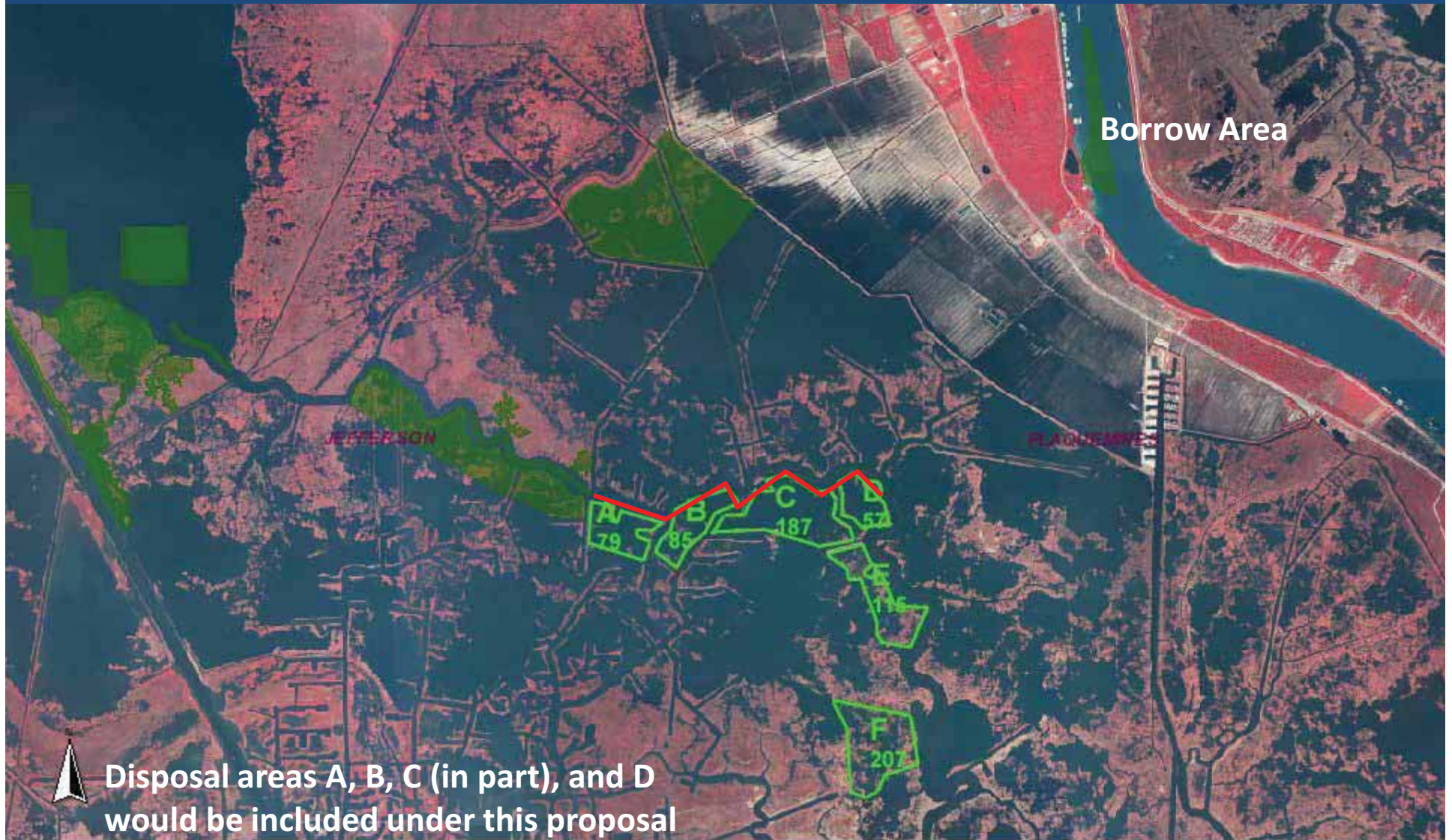
**Preliminary Construction Costs:**

The construction cost plus 25% contingency would be approximately \$29.4 M.

**Preparer(s) of Fact Sheet:**

Patrick Williams and Cheryl Brodnax, NOAA's National Marine Fisheries Service, (225) 389-0508, ext 208; [patrick.williams@noaa.gov](mailto:patrick.williams@noaa.gov), [cheryl.brodnax@noaa.gov](mailto:cheryl.brodnax@noaa.gov).

# Bayou Dupont Marsh and Ridge Creation Phase II



— Ridge Restoration

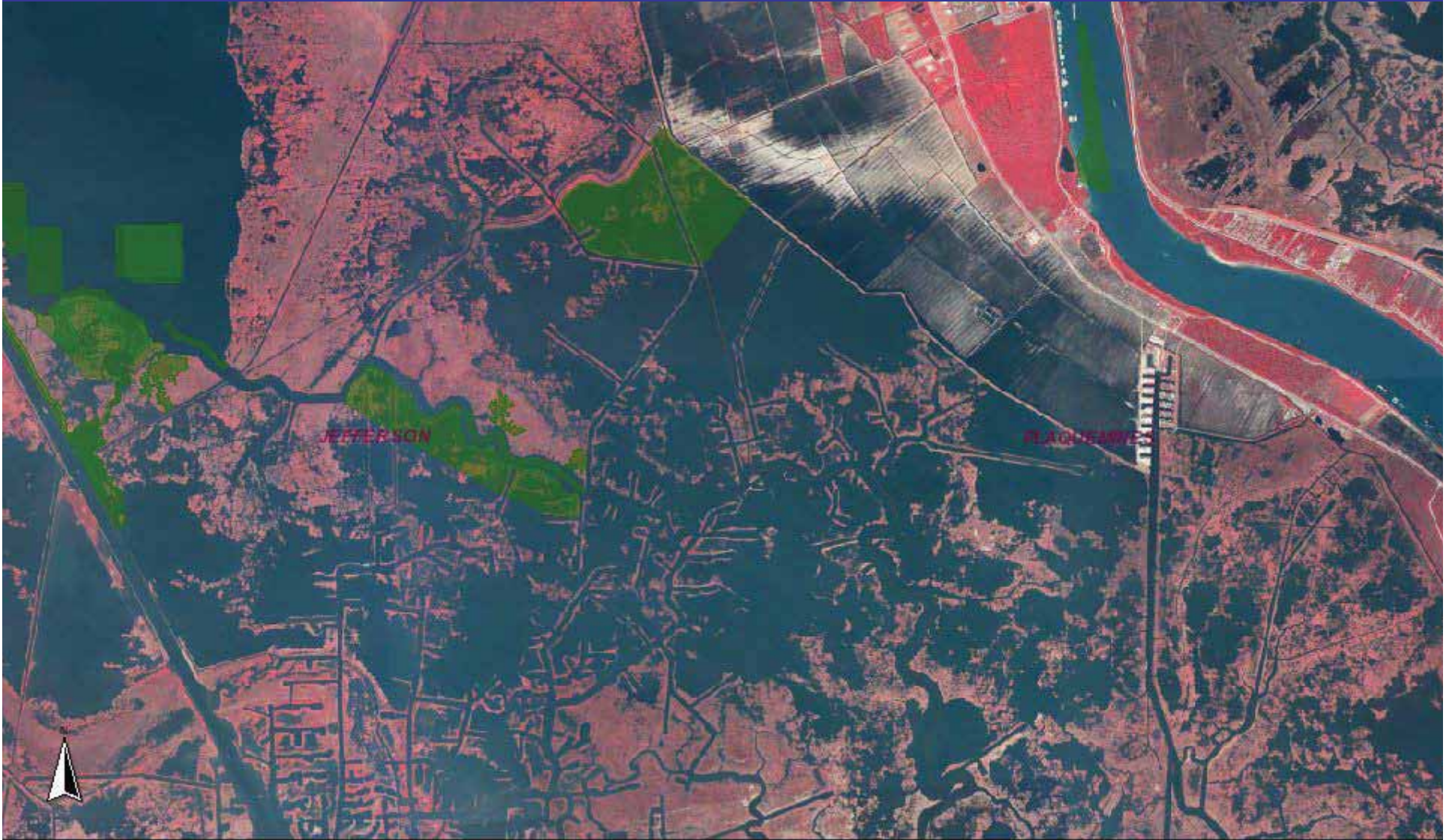
Existing projects either built or in design



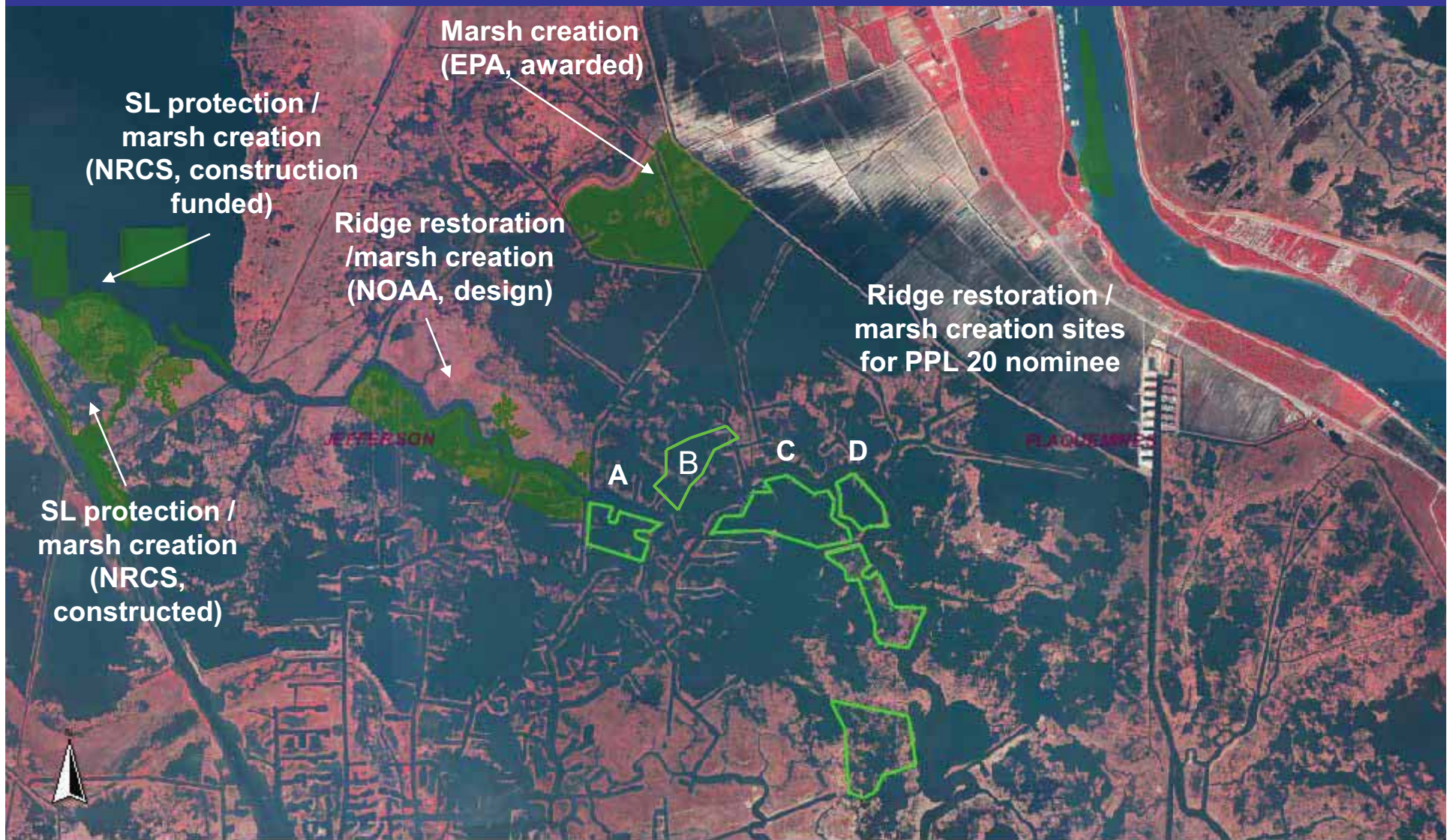
## Current Bayou Dupont Area



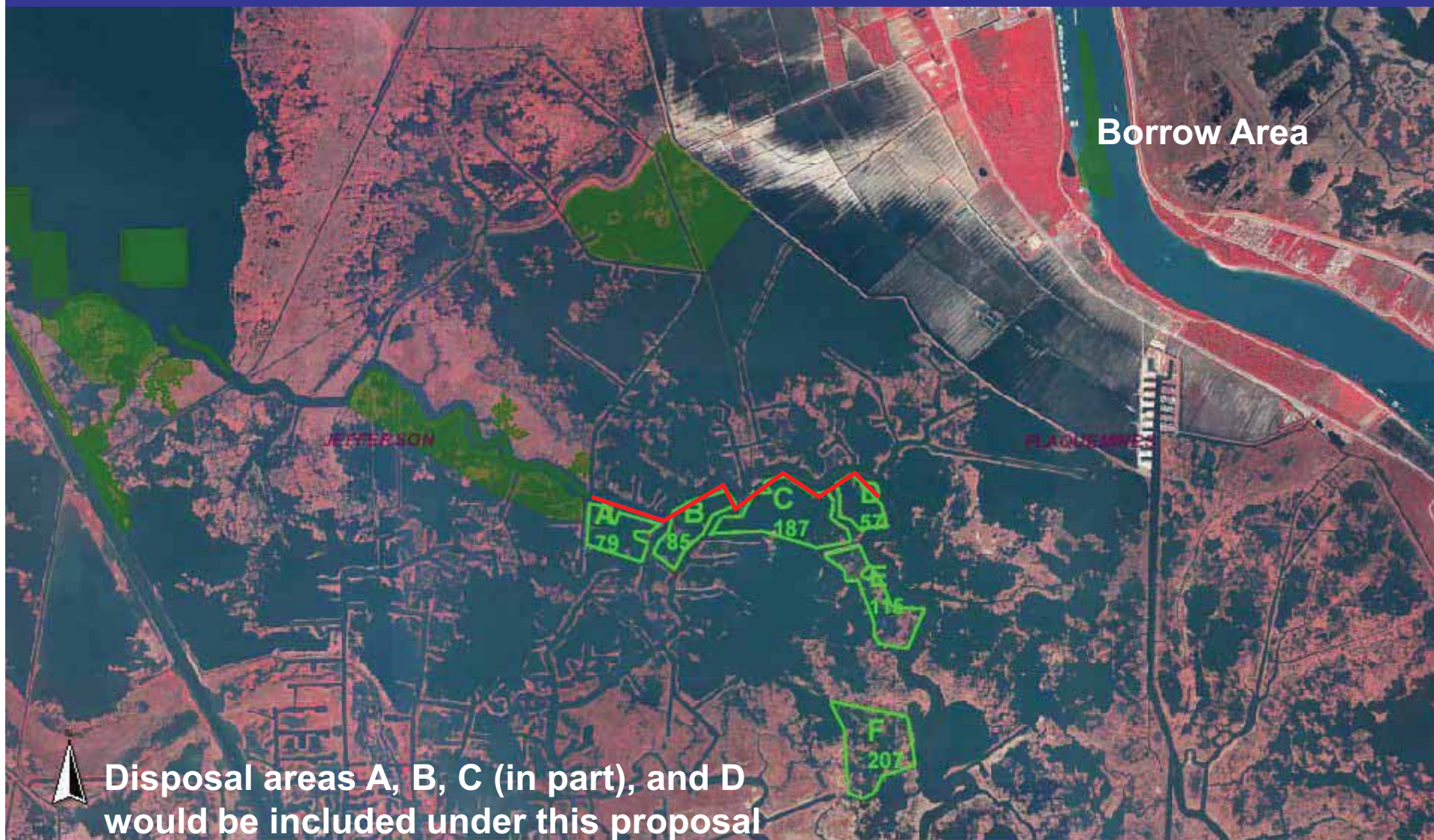




# NOAA PPL 19 concept for extension of Bayou Dupont ridge/marsh restoration project



# Bayou Dupont Marsh and Ridge Creation Phase II



Disposal areas A, B, C (in part), and D would be included under this proposal

Louisiana Department of Natural Resources

0 1mi

— Ridge Restoration

R2-BA-03-South Lake Salvador Shoreline  
Restoration Project

## **PPL-20 PROJECT NOMINEE FACT SHEET**

### **Project Name:**

South Lake Salvador Shoreline Restoration Project

### **Coast 2050 Strategy:**

Coastwide Strategy – Dedicated Dredging, to Create, Restore, or Protect Wetlands

### **Project Location:**

Region 2, Barataria Basin, along the southern shoreline of Lake Salvador in Lafourche Parish.

### **Problem:**

The Lake Salvador area has been experiencing high rates of land loss and the lake is expanding due to a documented shoreline erosion rate of approximately 15 ft per year. This erosion has caused the lake to breach in several areas into adjacent water bodies. Along the south shore of the lake breaching is imminent with the GIWW, which not only has the ability to impede safe navigation but also to heighten erosion into the marshes south of the GIWW that are currently buffered by the lake rim.

### **Goals :**

The project goal is to create approximately 400 acres of intertidal marsh and protect the shoreline of south Lake Salvador from breaching into the GIWW.

### **Proposed Solutions:**

Approximately 400 acres of marsh would be created via confined disposal of sediment dredged from Lake Salvador. Additionally, 2.5 miles of hard shoreline stabilization would be constructed along the south shore of the lake to further fortify, and redefine, the lake rim.

### **Preliminary Project Benefits:**

Approximately 400 acres would be directly created via dedicated sediment delivery, and an additional 90 acres of existing marsh would be benefited from the shoreline protection feature for a total of 490 acres benefited from the project. Additionally, protection to a vulnerable reach of a major navigation channel would be provided by the project.

### **Identification of Potential Issues:**

None known at this time.

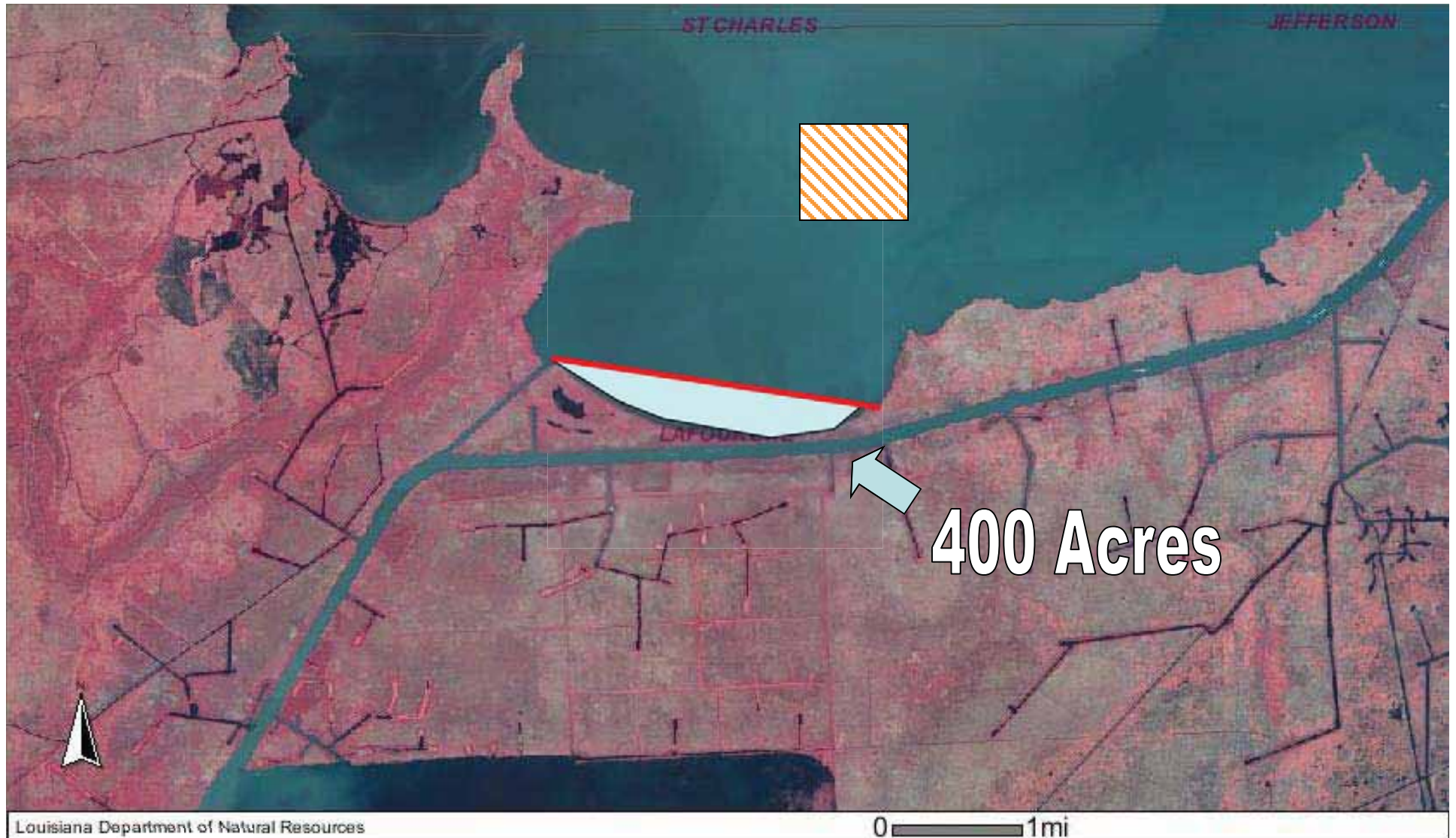
### **Preliminary Construction Costs:**

The construction cost plus 25% contingency would be approximately \$19.2 M.

### **Preparer(s) of Fact Sheet:**

Nick Matherne, Lafourche Parish Coastal Zone Advisory Committee with assistance from Cheryl Brodnax, NOAA National Marine Fisheries Service.

# South Lake Salvador Shoreline Restoration



 Breakwater

 Marsh creation area



R2-BA-04-East Golden Meadow Marsh Creation

**PPL20 PROJECT NOMINEE FACT SHEET**  
**January 25, 2010**

**Project Name**

East Golden Meadow Marsh Creation

**Coast 2050 Strategy**

Region 2 Strategy#16. Dedicated dredging and/or beneficial use of dredged material to create marsh in Clovelly, Little Lake, Caminada Bay and Fourchon mapping units.

**Louisiana's Comprehensive Master Plan for a Sustainable Coast**

From page 52 of the Master Plan, "The Master Plan also proposes marsh restoration projects that are not directly associated with river diversions. Such projects are recommended in Lafourche and Terrebonne Parishes where it is difficult to access river water and sediment for natural land building. In areas like these, using dredged material may be the most viable technique for restoring wetlands." See Figure 10, page 57 of the Master Plan.

**Project Location**

Region 2, Barataria Basin, Lafourche Parish, East of Golden Meadow near hurricane protection levee.

**Problem**

What problem will the project solve? There is virtually no marsh remaining in the near vicinity of the hurricane protection levee; the lack of marsh causes the levee to be completely exposed to wind generated waves. The proposed marsh creation will help protect the levee.

What evidence is there for the nature and scope of the problem in the project area? 2008 aerial imagery confirms the absence of marsh east of the hurricane protection levee.

**Goals**

Create 287 acres of marsh just to the east of the hurricane protection levee. The proposed marsh creation will help protect the levee

**Proposed Solution**

287 acres of marsh creation. Material for marsh creation will be excavated from nearby open water area.

**Preliminary Project Benefits**

- 1) What is the total acreage benefited both directly and indirectly? 287 acres created; undetermined acres more secure inside hurricane protection levee.
- 2) How many acres of wetlands will be protected/created over the project life? 287 acres
- 3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%). All the marsh is gone—the created marsh will represent newly created land.

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 new marsh will be built parallel and perpendicular to Bayou Raphael and Bayou L'Ours ridges, thereby partially restoring their hydrologic function.

5) What is the net impact of the project on critical and non-critical infrastructure? Newly created marsh will reduce the fetch east of the hurricane protection levee.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? Despite the severe land loss problem and the threatened condition of the hurricane protection levee, the nearest restoration project (Little Lake Shoreline Protection/Dedicated Dredging) is located a few miles away.

#### **Identification of Potential Issues**

The proposed project has the following potential issues: no issues presently identified.

#### **Preliminary Construction Costs**

\$12.3 million (including contingency)

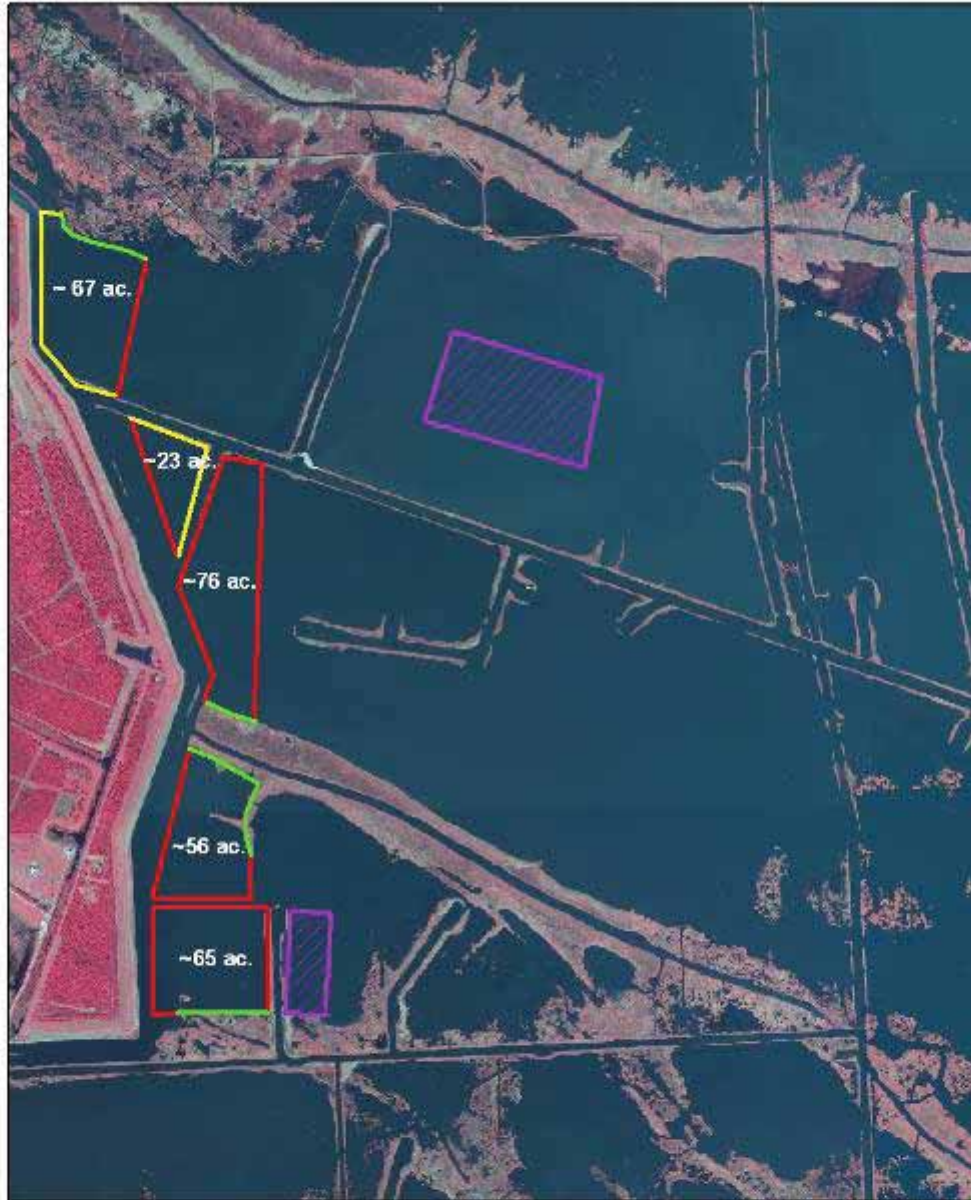
#### **Preparer of Fact Sheet**

Quin Kinler

USDA-NRCS

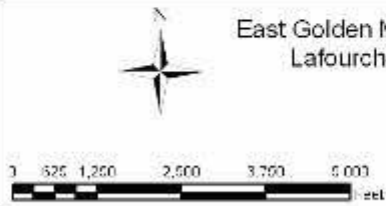
225-382-2047

[quin.kinler@la.usda.gov](mailto:quin.kinler@la.usda.gov)



**Legend**

- Existing\_Spoil\_Bank
- Existing\_Marsh\_Edge
- Need\_Containment\_Dike
- Borrow\_Area



East Golden Meadow Marsh Creation  
 Lafourche Parish, Louisiana  
 PPL-20

R2-BA-05-MS River Reintroduction North of Lac  
Des Allemands

**PPL20 PROJECT NOMINEE FACT SHEET**

January 28, 2010

**Project Name**

Mississippi River Reintroduction North of Lac des Allemands (MR RiNOLDA) (Bayou Becnel or Bayou Lassene)

**Coast 2050 Strategy**Coastwide Strategies: Diversions and riverine discharge; Management of diversion outfall for wetland benefits  
Region 2 Regional Ecosystem Strategies: Restore and Sustain Marshes: #8: Construct most effective small diversions**Project Location**

Region 2, upper Barataria Basin, St. John the Baptist Parish, north of Lac des Allemands, Bayou Becnel or Bayou Lassene.

**Problem**

Swamps and marshes in the upper Barataria Basin have been isolated from the Mississippi River for many years now, which was historically their primary source of water, sediments, and nutrients. Swamps here are now dependent on local rainfall and flooding due to wind-driven high coastal water levels. Subsidence is moderate, and because of the lack of sediment input and low swamp productivity, there is an accretion deficit which results in increasing flooding of swamps. Some information indicates increased salinity in lac des Allemands, but it is not clear whether this is a significant risk yet or not.

**Proposed Project Features**

Divert 400-1000 cfs of Mississippi River water into the swamps northwest of Lac des Allemands via a siphon. If needed, gap spoil banks and install culverts as necessary to facilitate seasonal flooding and draining of the swamps (outfall management).

**Goals**

- Increase swamp productivity
- Increase regeneration of cypress and tupelo trees
- Increase sediment accretion in swamps.
- Reduce salinity if it is found to be a problem.
- Improve swamp forest stand structure
- Improve swamp water regime

**Preliminary Project Benefits**

This proposed project would not directly create wetland acreage. Wetland loss rates in this area are low compared to other wetland types, so loss rate reduction due to this proposed project would also be low. However, diversion of river water into these swamps would restore natural hydrologic regimes, increase nutrient availability, and restore some sediment input. This would result in increased productivity and increased sediment accretion (organic and some inorganic), which over time should also counter subsidence sufficiently to improve cypress and tupelo regeneration. Without the project, over a sufficiently-long period of time, swamp habitat is expected to be converted to open water, floating aquatic vegetation, and/or fresh marsh due to the effects of subsidence and the accretion deficit. The project would improve swamp forest stand structure and water regime. If salinity is a problem, the project would eliminate this problem.

**Identification of Potential Issues**

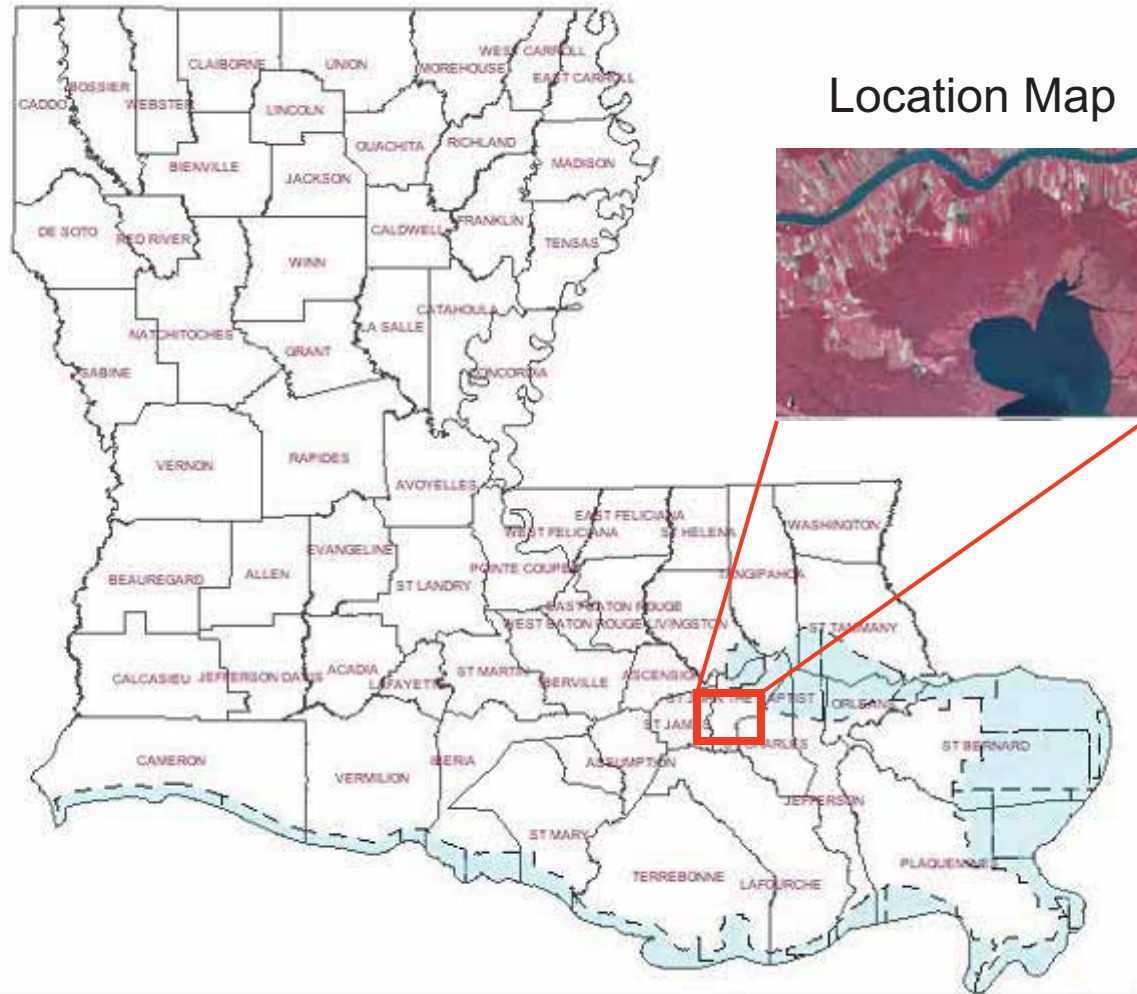
Landrights

**Preliminary Construction Costs**  $725\% = \$15 \text{ million}$ 

Total project costs (Phase I and II) are estimated to be \$9,783,875, based on cost estimates for BA-34, PPL10, subtracting out costs for features not proposed for this project (e.g. tree planting, culverts). Actual cost estimates may be lower since the distance between the river and the swamps may be less for this project than for BA-34.

**Preparer of Fact Sheet**Ken Teague, EPA, (214) 665-6687, teague.kenneth@epa.gov  
Brad Crawford, EPA, (214) 665-7255, Crawford.brad@epa.gov

# Mississippi River Reintroduction North of Lac des Allemands



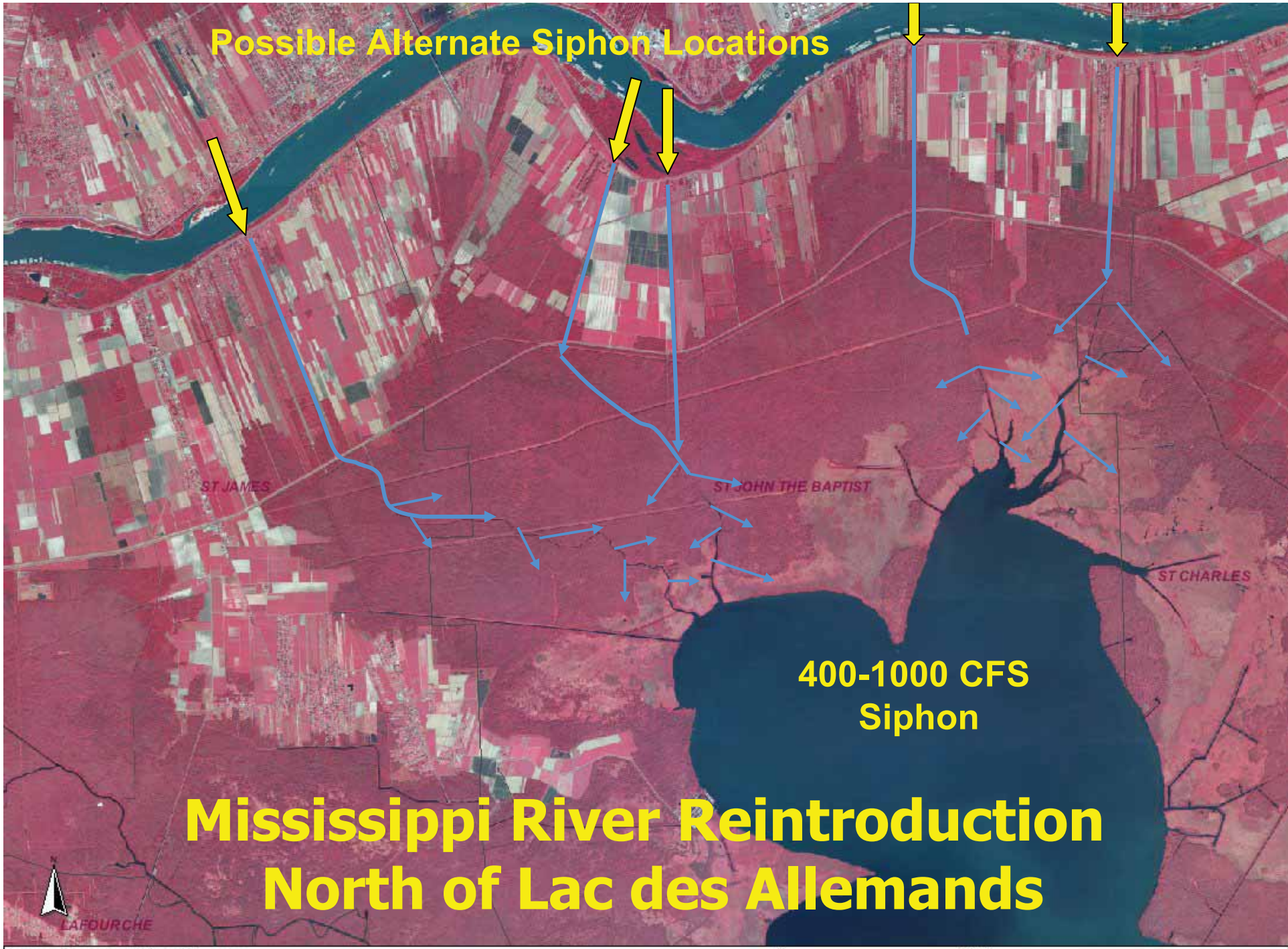
Louisiana Department of Natural Resources

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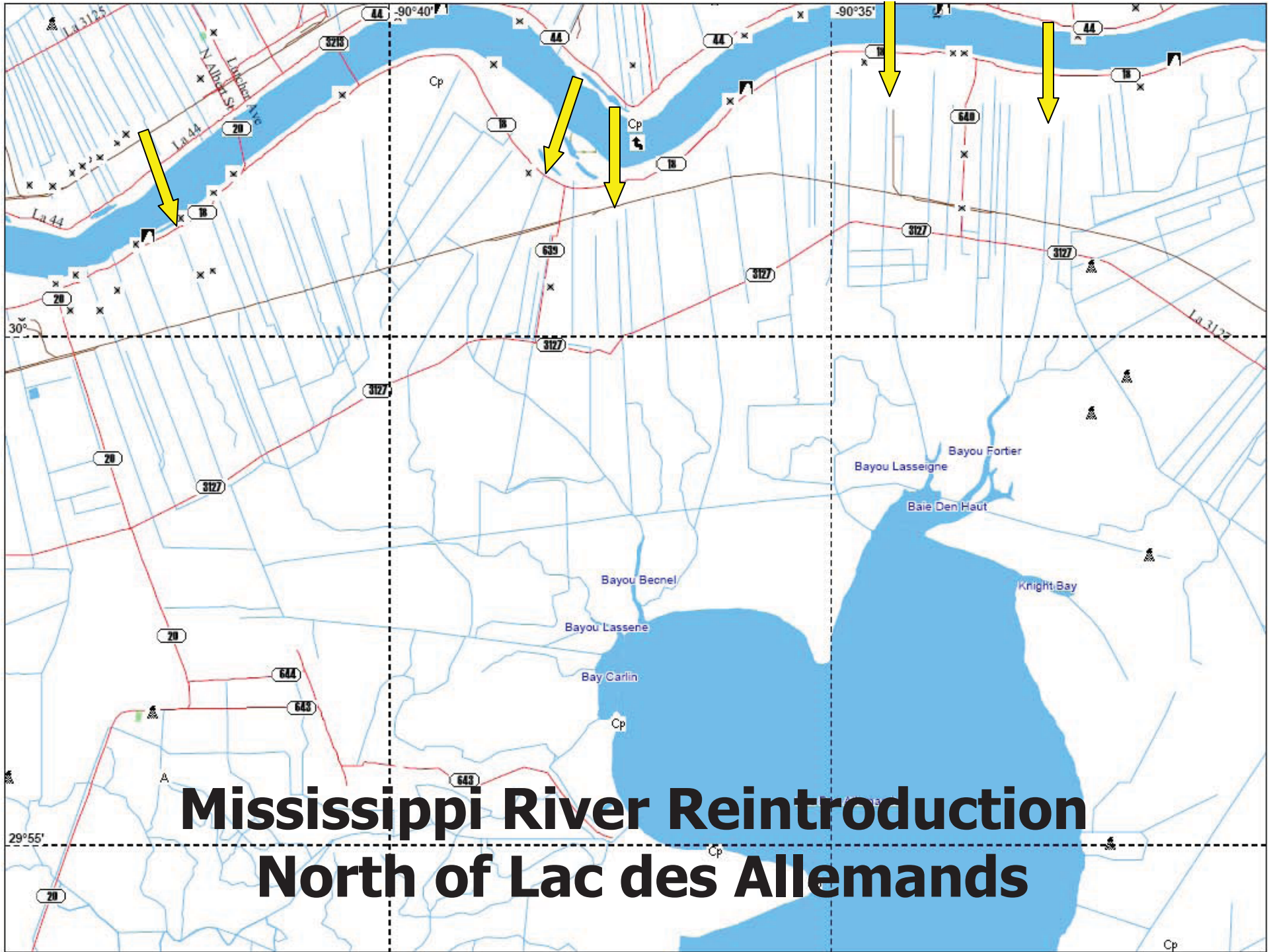
Louisiana Department of Natural Resources

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# Mississippi River Reintroduction North of Lac des Allemands

# Mississippi River Reintroduction North of Lac des Allemands

## Goals:

- Increase cypress & tupelo productivity and regeneration
- Increase sediment accretion
- Reduce salinity if it is a problem
- Improve swamp forest stand structure
- Improve swamp water regime

## Preliminary Project Benefit Area:

- 2000-5000 acres

## Identification of Potential Issues:

- Landrights

## Preliminary Construction Costs + 25%:

- \$15 Million

# Mississippi River Reintroduction North of Lac des Allemands

## Questions?

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R2-BA-06- Home Place Siphon

**PPL20 PROJECT NOMINEE FACT SHEET**  
**January 28, 2010**

**Project Name**

Home Place Siphon

**Coast 2050 Strategy**

Coastwide Strategies: Diversions and river discharge; Management of diversion outfall for wetland benefits.

Region 2 Regional Ecosystem Strategies: Restore and Sustain Marshes: #8: Construct most effective small diversions

**Project Location**

Region 2, Barataria Basin, Plaquemines Parish, West Bank of Mississippi River, near Port Sulphur, LA.

**Problem**

Leveeing of the Mississippi River for flood control and navigation deprived the area of sediment needed to maintain elevation against subsidence, as well as freshwater to maintain low salinity marshes. Aerial photography clearly shows that much wetland loss has occurred in this area.

**Proposed Project Features**

Construct a 1,500-2,000 CFS Mississippi River siphon.

**Goals**

- Create marsh and/or reduce rate of marsh loss.
- Restore intermediate and fresh marshes.
- Increase SAV cover.

**Preliminary Project Benefits**

- Create and/or protect 500-750 ac of marsh
- The project will help protect the Mississippi River Levee in the vicinity of the project area.

**Identification of Potential Issues**

The proposed project has potential land rights issues.

**Preliminary Construction Costs**

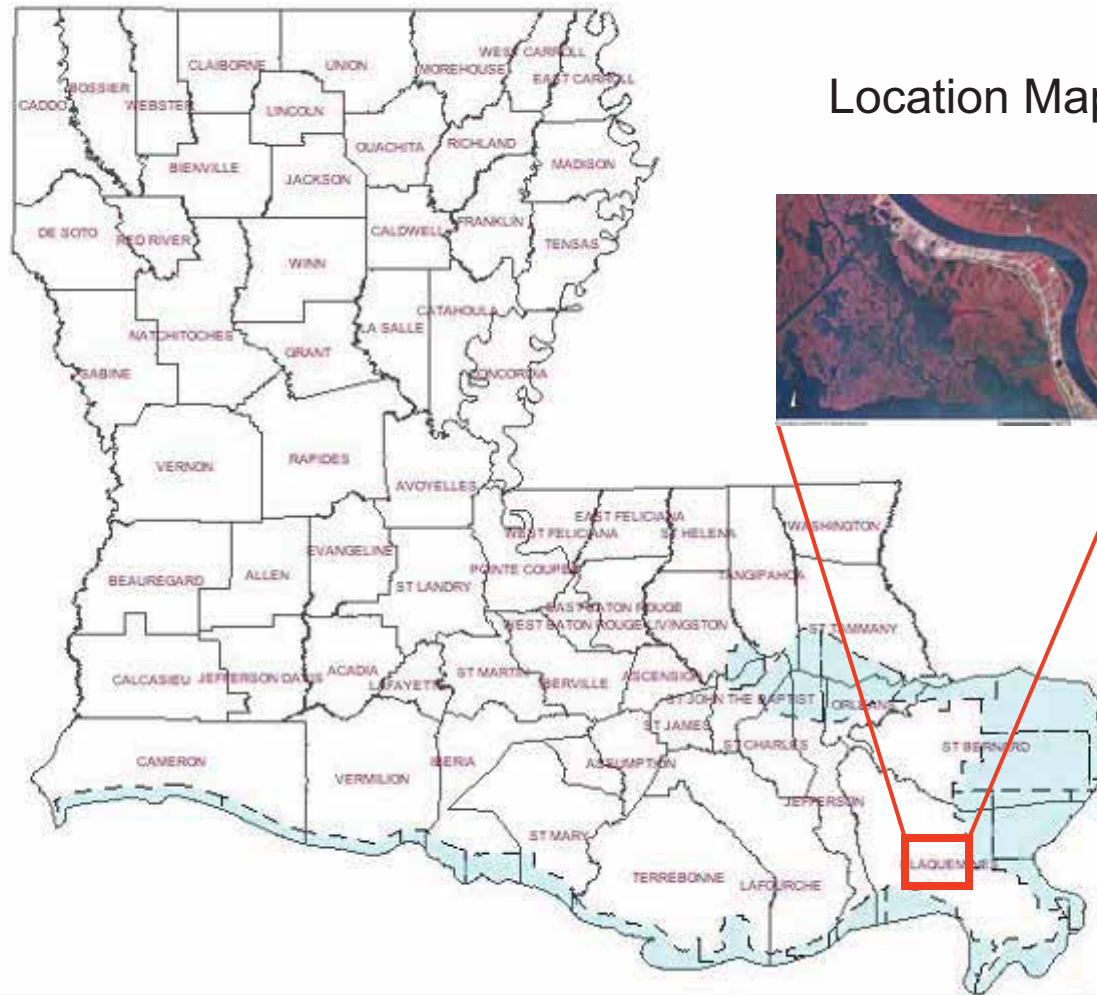
The estimated construction cost including 25% contingency is \$16 Million

**Preparer of Fact Sheet:**

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# Home Place Siphon



Location Map



# Home Place Siphon

1,500-2,000 CFS  
Siphon

~10,000 acres

PLAQUEMINES



# Home Place Siphon

## Goals:

- Create/maintain marsh
- Restore fresh/intermediate marsh

## Preliminary Project Benefits:

- 750 net ac over 20 years

## Identification of Potential Issues:

- Landrights

## Preliminary Construction Costs + 25%:

- \$16 Million
- FFC estimate = ~\$23Million



# Home Place Siphon

## Questions?

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R2-BA-07-Coastal Wetland Restoration by  
Backfilling Oil and Gas Canals in Jean Lafitte  
National Park

**PPL20 PROJECT NOMINEE FACT SHEET**

January 28, 2010

**Project Name**

Coastal Wetland Restoration by Backfilling Oil &amp; Gas Canals in Jean Lafitte National Park

**Coast 2050 Strategy**

Coastwide Strategy: Restore/sustain marshes; Region 2 Jean Lafitte Mapping Unit Strategy: Restore hydrology

**Project Location**

Region 2, Barataria Basin, Jefferson Parish, Jean Lafitte National Park

**Problem**

Canal dredging has contributed significantly to land loss in Louisiana, yet little has been done to reverse the damage caused by canals and spoil banks. Canals have turned marsh to open water, and spoil banks have replaced marsh with an upland environment. Spoil banks also restrict water flow above and below the marsh surface and cause increased periods of flooding and drying of the marsh behind them. Increased flooding can lead to stress and mortality of marsh vegetation, while drying the soil increases subsidence through oxidation of organic matter. These hydrologic alterations also limit sediment deposition in the adjacent marshes.

**Proposed Project Features**

This project will backfill a system of oil and gas canals (est. 15 mi of canals) at strategic locations in Jean Lafitte National Park. Backfilling will involve removing the existing spoil banks and disposing of the dredged material in the canals. While there is probably not sufficient sediment volume remaining in the spoil banks to fill the canals to marsh elevation, typically there is enough to significantly shallow the canals, and over time some filling to marsh elevation is typically observed. In addition, removal of the spoil banks will restore natural hydrology across the marsh surface over a larger area in the vicinity of the canals/spoil banks, typically restoring marsh here and reducing future marsh loss rates.

**Goals**

- Convert approx 539 ac of upland spoil bank habitat to emergent marsh habitat in year 1
- Create approx 23 ac of marsh in backfilled canals in year 1
- Begin to convert deepwater habitat in 233 ac of canals to shallow water habitat beginning in year 1, increasing until all canal area is either emergent wetland or shallow water habitat
- Convert 233 acres of canal (100% of canals in project area) to emergent marsh over the project life
- Increase SAV cover to 50% in 233 ac of open water in the target canals by year 3
- Restore hydrology

**Preliminary Project Benefits**

- 23 ac of marsh created in backfilled canals in year 1
- 539 ac of spoil bank converted to marsh in year 1
- Conversion of 233 ac of open water in canals to marsh in 20 years
- 50% SAV cover in canals by year 3
- Increased shallow water habitat in year 1, increasing until shallow water becomes emergent wetland
- Restore hydrology

**Identification of Potential Issues**

None

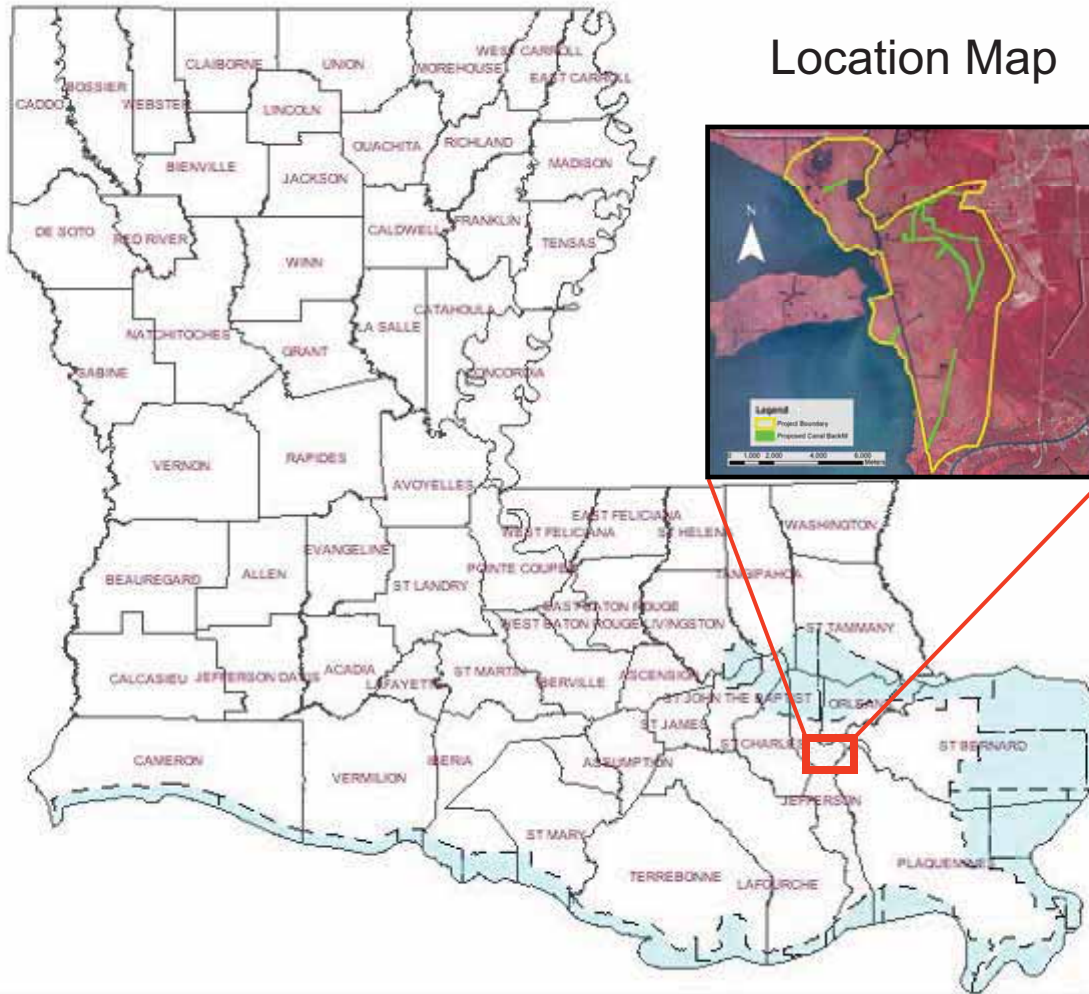
**Preliminary Construction Costs**

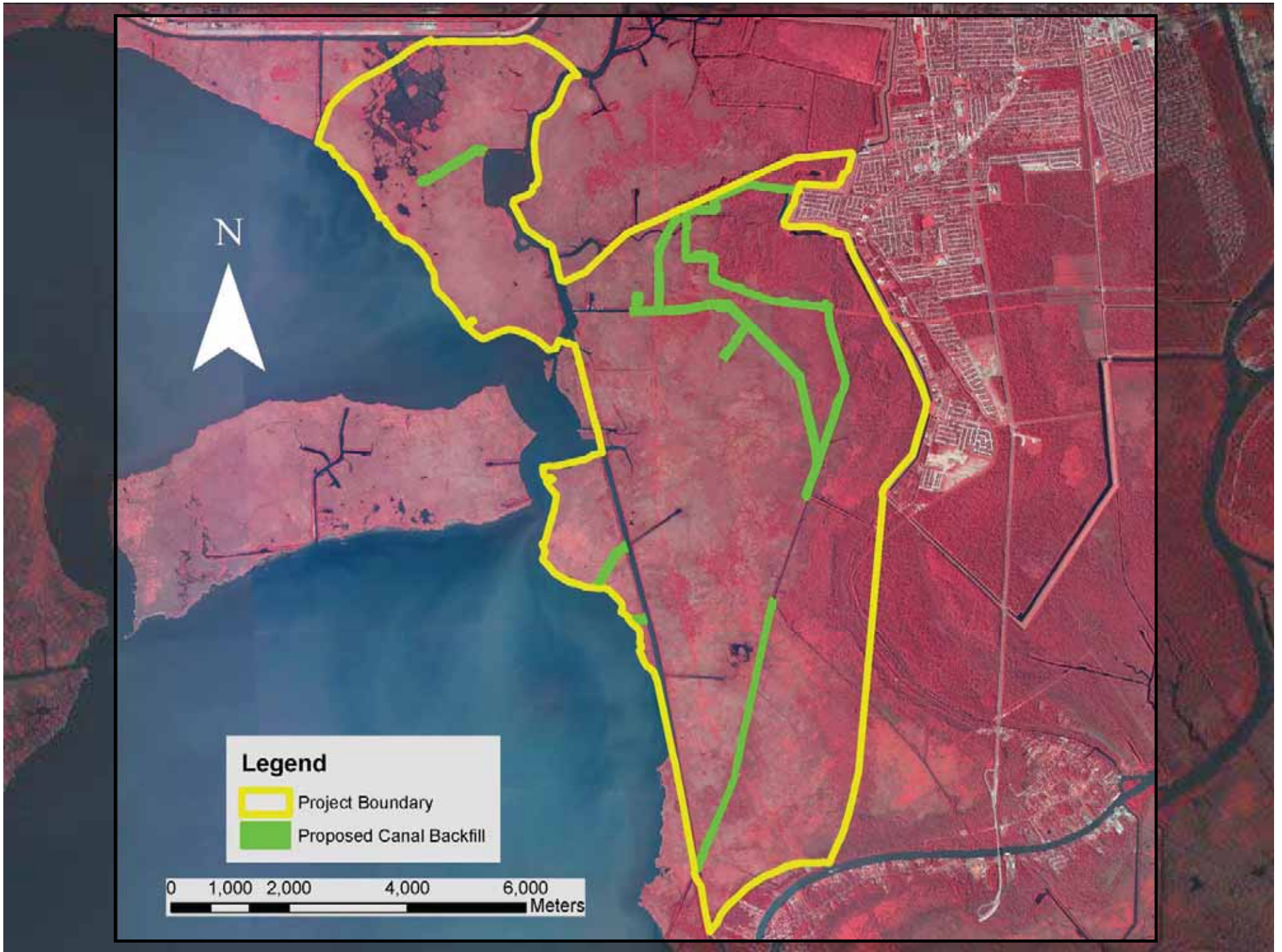
The estimated construction cost including 25% contingency is \$18,388,500

**Preparer of Fact Sheet**Kenneth Teague, EPA, (214) 665-6687; [Teague.Kenneth@epa.gov](mailto:Teague.Kenneth@epa.gov)

Chris Llewellyn, EPA ORISE intern (214) 665-7239

# Coastal Wetland Restoration By Backfilling Oil & Gas Canals In Jean Lafitte National Park





N

**Legend**

- Project Boundary
- Proposed Canal Backfill

0 1,000 2,000 4,000 6,000 Meters



# **Coastal Wetland Restoration By Backfilling Oil & Gas Canals In Jean Lafitte National Park**

## **Goals:**

- **Restore hydrology**
- **Convert 539 ac spoil bank (14+ mi) to marsh**
- **Convert 233 ac of canal to marsh**
- **Convert 233 canal to SAV and shallow water early**

## **Preliminary Project Benefits:**

- **See above**

## **Identification of Potential Issues:**

- **None**

## **Preliminary Construction Costs:**

- **\$18,388,500**

# Coastal Wetland Restoration By Backfilling Oil & Gas Canals In Jean Lafitte National Park

## Questions?

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R2-BA-08- Bayou Dupont Sediment Delivery –  
Marsh Creation 3



**PPL20 PROJECT NOMINEE FACT SHEET**

January 28, 2010

**Project Name**

Bayou Dupont Sediment Delivery – Marsh Creation 3

**Coast 2050 Strategy**

Coastwide Strategy: Dedicated dredging to create, restore, or protect wetlands; Off-shore and riverine sand and sediment resources.

Region 2 Ecosystem Strategy: Restore and Sustain Marshes

**Project Location**

Region 2, Barataria Basin, Plaquemines and Jefferson Parishes

**Problem**

The wetlands in the Barataria Basin were historically nourished by the fresh water, sediment and nutrients delivered by the Mississippi River and the many distributary channels. Following the creation of levees along the lower river for flood control and navigation, these inputs ceased. In addition, numerous oil and gas canals in the area contributed significantly to wetland losses.

Data suggests that from 1932 to 1990, the basin lost over 245,000 ac of marsh, and from 1978 to 1990, Barataria Basin experienced the highest rate of wetland loss along the entire coast.

**Proposed Project Features**

Create approximately 550 ac marsh using sediment from the Mississippi River, transporting the sediment by pipelines into mostly shallow open water. After construction, the newly constructed marsh will be assessed to determine if vegetative plantings are necessary. The proposed project will utilize the existing crossing constructed by the CWPPRA project entitled Mississippi River Sediment Delivery System (BA-39).

**Goals**

- Create approximately 550 ac of emergent brackish marsh using sediment from the Mississippi River
- Maintain approximately 363 ac of brackish marsh over 20 years

**Preliminary Project Benefits**

- Initially, 550 ac of brackish marsh created
- After 20 years, 363 ac of brackish marsh maintained

**Identification of Potential Issues**

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

**Preliminary Construction Costs**

The estimated construction cost including 25% contingency is \$28,000,000

**Preparer(s) of Fact Sheet:**

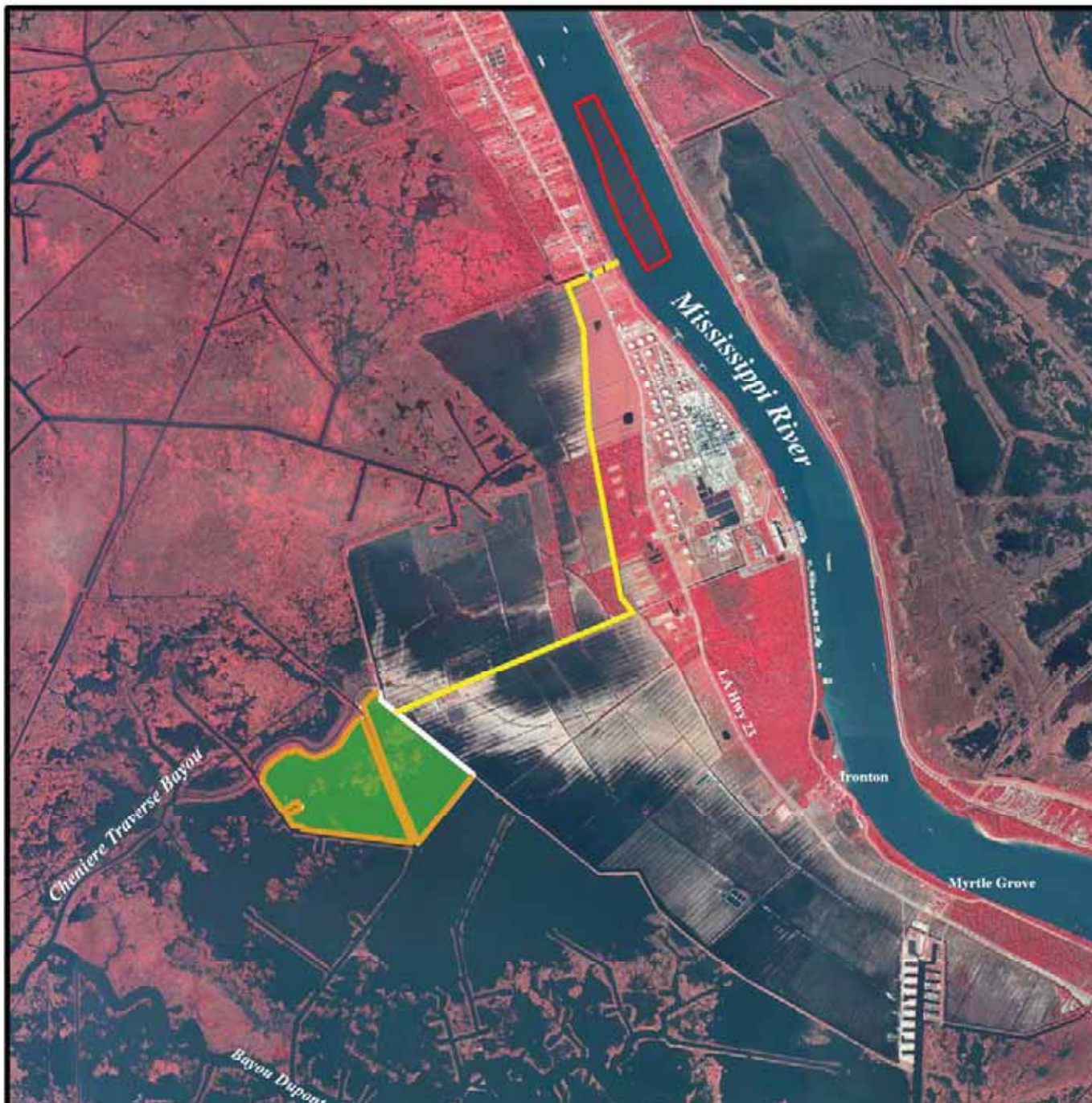
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# Bayou Dupont Sediment Delivery Marsh Creation 3

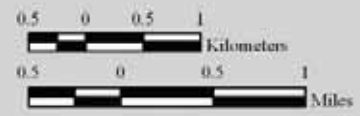
Location Map





## Mississippi River Sediment Delivery System - Bayou Dupont (BA-39)

-  Railroad Crossing
  -  Highway Crossing
  -  Temporary Containment Dikes \*
  -  Sediment Delivery System \*
  -  Borrow Site \*
  -  Marsh Creation \*
  -  Project Boundary
- \* denotes proposed feature



Produced by:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Field Station

Background Imagery:  
2005 Digital Orthophoto Quarter Quadrangle

Map Date: November 27, 2007  
Map ID: USGS-NWRC 2008-11-0069  
Data accurate as of: November 27, 2007

# Bayou Dupont Sediment Delivery Marsh Creation 3

Bayou Dupont 1  
Project Limits

550 Acres

PPL 17 Project Limits



# Bayou Dupont Sediment Delivery Marsh Creation



# Bayou Dupont Sediment Delivery Marsh Creation 3

## Goals:

- Create/Nourish 550 ac intermediate marsh

## Preliminary Project Benefits:

- 363 net ac over 20 years

## Identification of Potential Issues:

- Land rights and Utilities/Pipelines

## Preliminary Construction Costs:

- \$25-\$30 million



# Bayou Dupont Sediment Delivery Marsh Creation 3

## Questions?

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R2-BA-09- West Pointe a la Hache Marsh  
Creation South



**PPL20 PROJECT NOMINEE FACT SHEET**

January 28, 2010

**Project Name**

West Pointe a la Hache Marsh Creation South

**Coast 2050 Strategy**

Coastwide Strategy: Dedicated dredging to create, restore, or protect wetlands: Off-shore and riverine sand and sediment resources.

Region 2 Regional Ecosystem Strategy: Restore and Sustain Marshes

**Project Location**

Region 2, Barataria Basin, Plaquemines Parish, in the southern portion of the West Pointe a la Hache siphon outfall area

**Problem**

An unintended consequence of the Mississippi River levee is the isolation of the West Pointe a la Hache wetlands from the historic overbank flooding of the river. Without continued sediment input, marshes couldn't maintain viable elevations due to ongoing subsidence. In addition, oil and gas canals disrupted hydrology and facilitated saltwater intrusion, further degrading the marsh. Beginning in 1993, the siphons at West Pointe a la Hache were operated to reintroduce Mississippi River water, fine sediments, and nutrients into this general area. However, land loss rates continue to be high. An opportunity exists to create marshes in the southern portion of the siphon outfall area using sediment from the nearby Mississippi River. The created marshes should benefit from the effects of the reintroduced Mississippi River water from the siphons.

**Proposed Project Features**

Create 240 ac of intermediate marsh using sediments dredged from the Mississippi River. Vegetative planting may be necessary. Funds are budgeted for this contingency.

**Goals**

- Convert approximately 240 acres of open water habitat to intermediate marsh
- Maintain about 200 acres of created/nourished marsh over the 20-year project life

**Preliminary Project Benefits**

- Create 240 ac of intermediate marsh
- Maintain 200 ac of intermediate marsh over 20 years
- Protect the Mississippi River Levee in the vicinity of the project

**Identification of Potential Issues**

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

**Preliminary Construction Costs**

The estimated construction cost including 25% contingency is \$13,000,000

**Preparer(s) of Fact Sheet:**

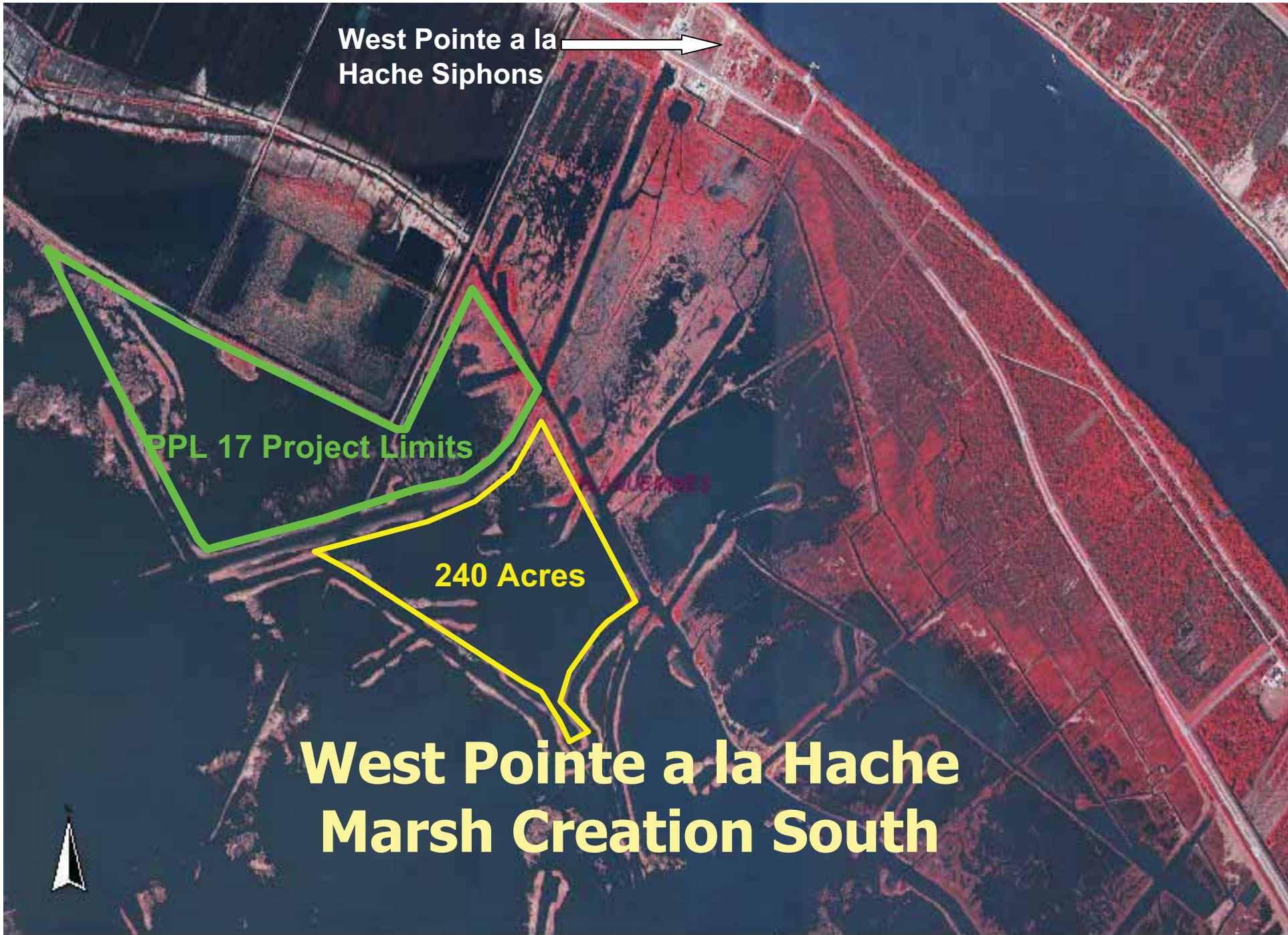
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# West Pointe a la Hache Marsh Creation 2

Location Map





West Pointe a la Hache Siphons →

PPL 17 Project Limits

240 Acres

# West Pointe a la Hache Marsh Creation South

# Marsh Creation Using Sediment Delivery





## West Pointe a la Hache Marsh Creation 2

### Goals:

- Create/Nourish ~240 ac intermediate marsh

### Preliminary Project Benefits:

- 200 net ac over 20 years

### Identification of Potential Issues:

- Land rights, Utilities/Pipelines/Oil & Gas

### Preliminary Construction Costs:

- \$10-\$15 million

# West Pointe a la Hache Marsh Creation 2

## Questions?

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R2-BA-10- Bayou Villars Shoreline Stabilization  
Project

**PPL 20 PROJECT NOMINEE FACT SHEET**  
**January 26, 2010**

**Project Name:**

Bayou Villars Shoreline Stabilization Project

**Coast 2050 Strategies:**

Basin Strategies: 6) Stabilize shorelines to preserve marsh. Cataouatche/Salvador Mapping Unit Strategy: "maintaining shoreline integrity along the lakes..."

**Project Location:**

The project is located in Region 2, in the Barataria Basin. The project site is located along the east portion of Lake Salvador near the Barataria Preserve of Jean Lafitte National Historical Park and Preserve and lands south of Bayou Villars in Jefferson Parish, Louisiana.

**Problem:**

Within the past 50 years, the project area has lost more than 650 acres of wetlands along the east shore of Lake Salvador. The opening of Bayou Villars at Lake Salvador has retreated approximately 5,100 feet into the Gulf Intracoastal Water Way (GIWW). Shoreline retreat and wetland loss were accelerated by winds and storm surge caused by Hurricanes Katrina and Rita. Within the project area, these storms eroded the shoreline 100 feet in places and interior marsh was compacted or torn apart creating open water ponds. Flooding of Crown Point, Jean Lafitte, and Barataria communities may be partially attributed to these high wetland losses. Stabilizing the shoreline and protecting the remaining marsh would protect natural coastal resources, communities and infrastructure.

The average shoreline retreat in the project area is approximately 38' year. Some areas have a shoreline retreat as great as 89' year. The shoreline retreat along the southern bank of Bayou Villars is encroaching on the GIWW. Currently the opening at the GIWW is at 2,000 lf. The opening at Bayou Villars has the potential to open to approximately 10,000 lf in 20 years once the islands to the south of Bayou Villars are lost to shoreline retreat.

**Proposed Project Features:**

1. Install approximately 31,000 tons of rock along 5,500 linear feet of shoreline from existing pipeline crossing north of Bayou Villars the north bank of the mouth of Bayou Villars
2. Install approximately 44,000 tons of rock along 8,000 linear feet of shoreline from existing pipeline crossing south of Bayou Villars the south bank of the mouth of Bayou Villars

**Goals:**

1. Stop shoreline erosion.

**Preliminary Project Benefits:**

The following questions should be addressed:

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

*Directly benefited: Approximately 200 acres protected.*

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

*At the end of 20 years, approximately 200 acres should remain.*



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 >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 maintains a portion of the rims of Lake Salvador and Bayou Villars, which are structural components of the coastal ecosystem*

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

*One key feature of this project is the protection for local communities of Jean Lafitte, Barataria and Crown Point and adjacent infrastructure. The project site is located in a critical area 15 miles south of New Orleans that provides one of the last lines of defense against storm surge coming toward the Metropolitan Area from Lake Salvador and the Barataria Bay. The project also prevents Lake Salvador from continuing to break through into the GIWW. In addition, oil and gas infrastructure in the immediate area would be protected.*

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?

*This project is synergistic with existing shoreline protection projects that have been constructed on the Barataria Preserve.*

**Identification of Potential Issues:**

Rock shoreline protection projects historically require O&M.

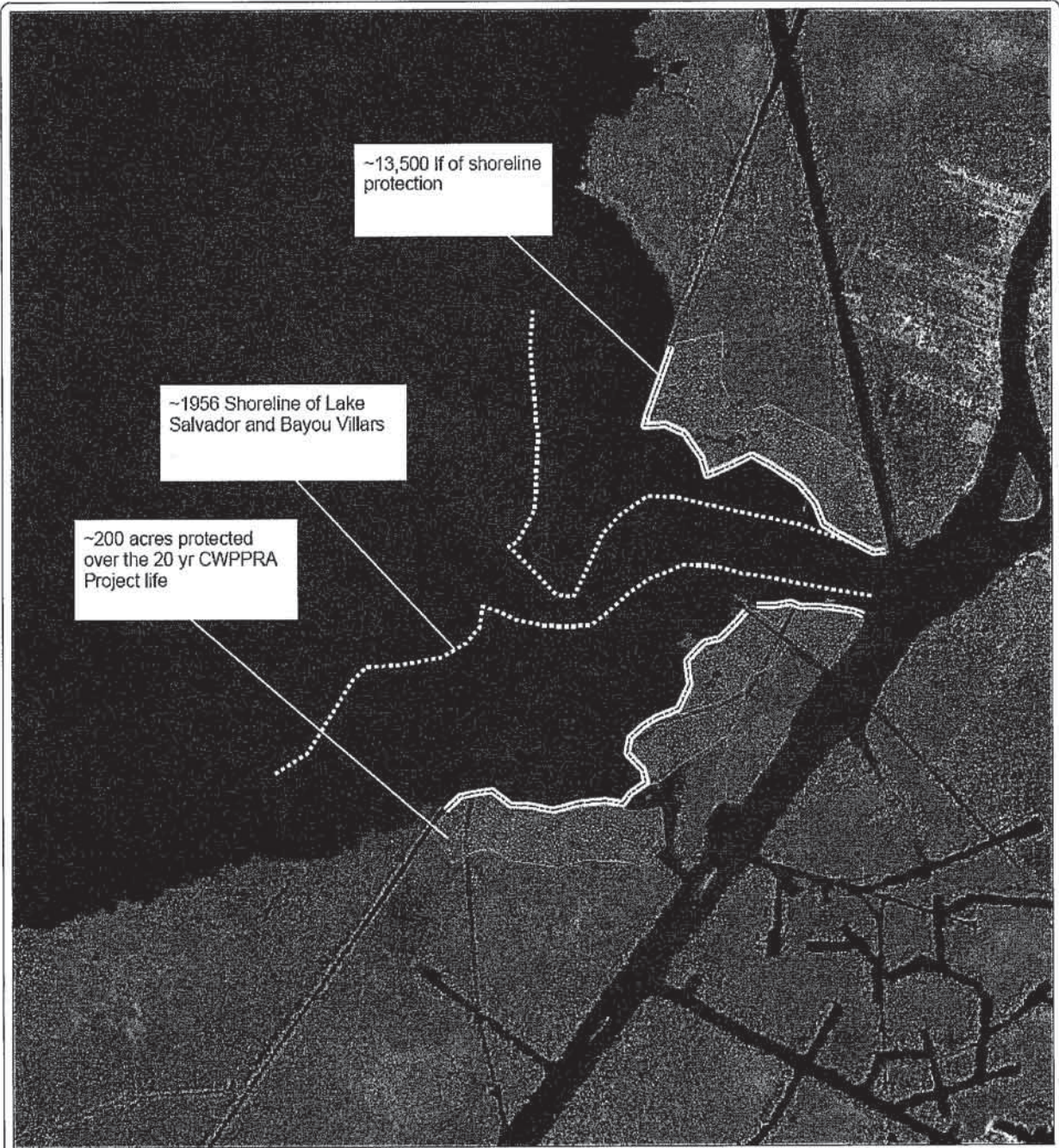
**Preliminary Construction Costs:**

The construction cost including 25% contingency is approximately \$10,000,000.

**Preparers of Fact Sheet:**

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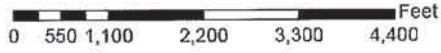


**Legend**

- ~ Shoreline\_1956
- Area\_Protected\_20yr
- Shoreline Protection



**Bayou Villars Shoreline Protection**



Background Map: 2005 DOQQ

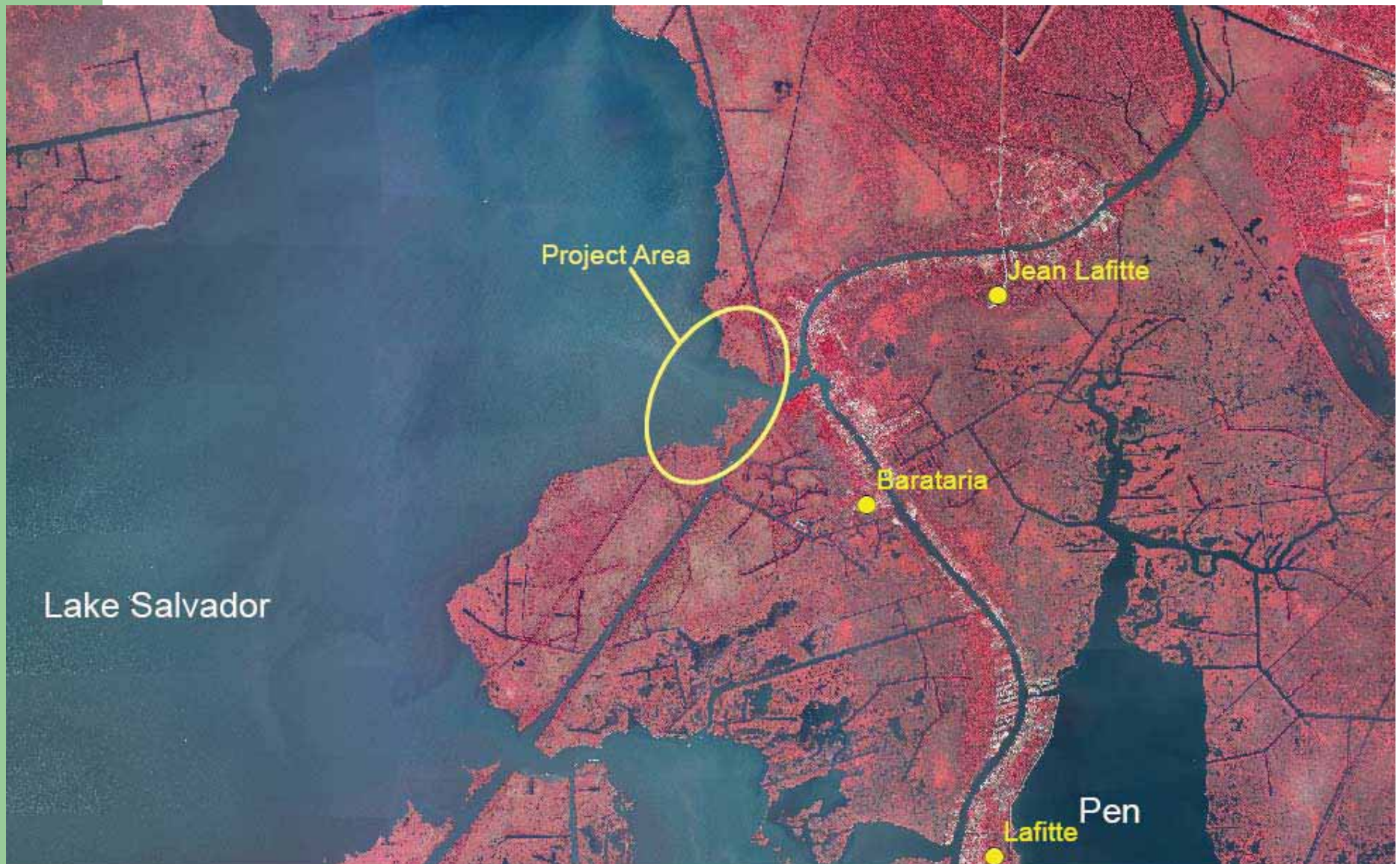


# **Bayou Villars Shoreline Stabilization Project**



**PPL 20  
Region 2  
Barataria Basin**

# Project Area:



# Problem:

- ~650 acres of wetlands lost along the east shore of Lake Salvador
- Bayou Villars at Lake Salvador has retreated ~ 5,100 feet into the GIWW
- Flooding of Crown Point, Jean Lafitte, and Barataria communities may be partially attributed to these high wetland losses
- Opening at the Bayou Villars currently at 2,000 lf.
- Has the potential to open to approximately 10,000, once the islands to the south of Bayou Villars are lost to shoreline retreat.
- Average shoreline retreat approximately 38'year

1956

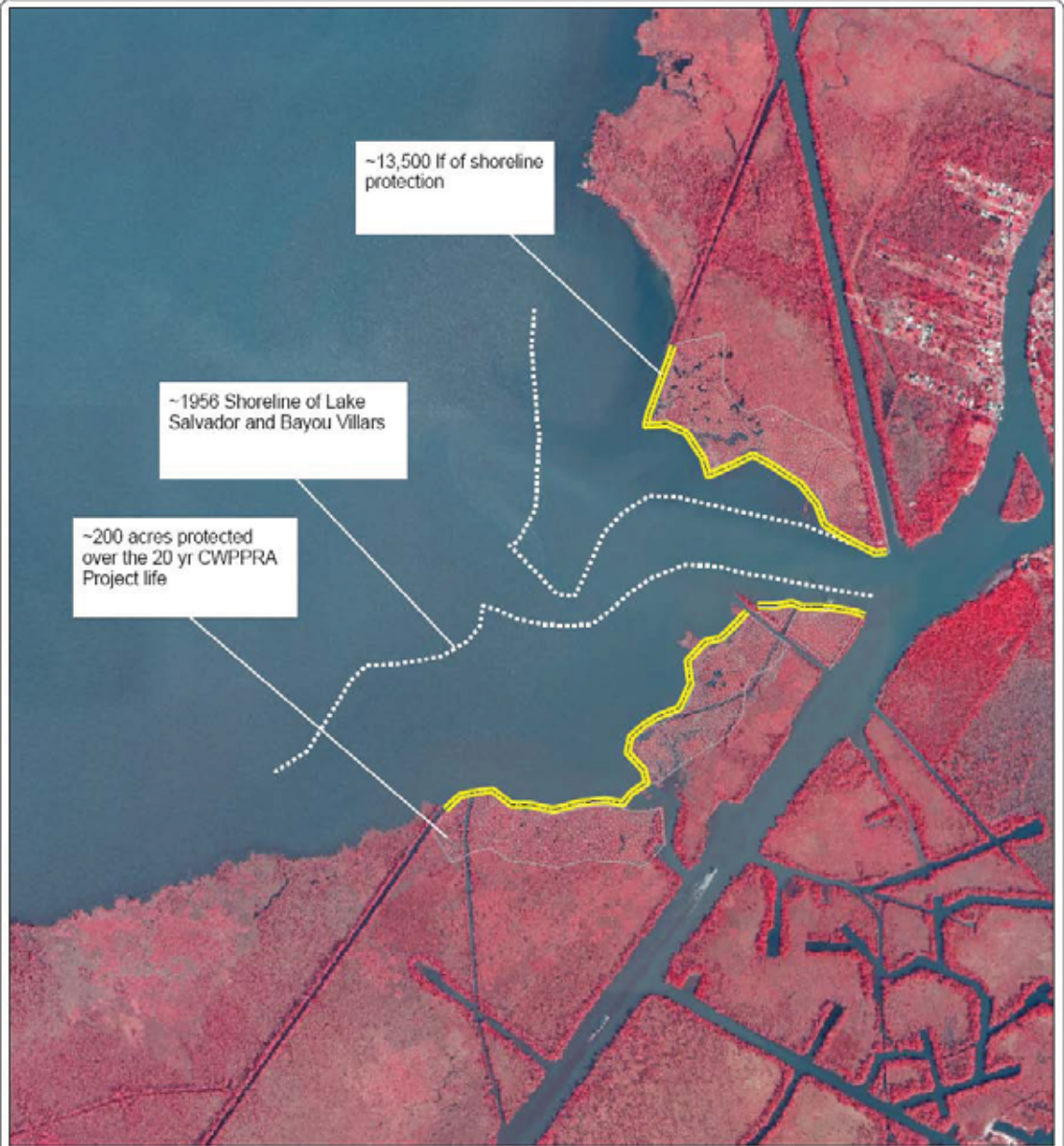




1956 Shoreline

2004 Shoreline

2005 Shoreline



**Legend**

- ~ Shoreline\_1956
- Area\_Protected\_20yr
- Shoreline Protection



**Bayou Villars Shoreline Protection**



Background Map: 2005 DOQQ



## Proposed Project Features:

- 5,500 linear feet of shoreline protection from the existing pipeline crossing north of Bayou Villars the north bank of the mouth of Bayou Villars
- 8,000 linear feet of shoreline protection from existing pipeline crossing south of Bayou Villars the south bank of the mouth of Bayou Villars

## Preliminary Project Benefits:

- Stop shoreline erosion
- Stabilize the Bayou Villars opening
- Protect approximately 200 acres
- Protect the Crown Point, Jean Lafitte, and Barataria communities

R2-BA-11-Bayou Grande Cheniere Marsh  
Creation

**PPL20 PROJECT NOMINEE FACT SHEET**  
**January 28, 2010**

R2-BA-11

**Project Name:** Bayou Grande Cheniere Marsh Creation

**Coast 2050 Strategy**

- Coastwide: Dedicated dredging to create, restore, or protect wetlands
- Coastwide: Utilize off-shore and riverine sand and sediment resources

**Project Location**

Region 2, Barataria Basin, Plaquemines Parish, near Lake Hermitage, along Bayou Grande Cheniere ridge

**Problem**

From 1932 to 1990, the West Point a la Hache Mapping Unit lost 38% of its marsh. Through 2050, 28% of the 1990 marsh acreage is expected to be lost. That loss is expected to occur even with operation of the West Point a la Hache Siphons. Significant marsh loss has occurred south of Lake Hermitage with the construction of numerous oil and gas canals.

**Goals**

The primary goal is to re-create marsh habitat in the open water areas and nourish marsh along the eastern side of the Bayou Grande Cheniere ridge. Terraces are proposed to reduce fetch in large open water bodies and to capture suspended sediment delivered via the West Pointe a la Hache siphons.

**Proposed Project Features**

1. Riverine sediments will be hydraulically dredged and pumped via pipeline to create approximately 500 acres of marsh in the project area.
2. Approximately 60,000 linear feet of terraces (50 acres) will be constructed to reduce fetch and turbidity and capture suspended sediment.

**Preliminary Project Benefits**

- 1) The total acreage benefited directly would be 550 acres (500 acres of marsh creation/nourishment and 50 acres of terraces). Indirect benefits would occur to the Bayou Grand Cheniere ridge and within the 1,000-acre terrace field.
- 2) The total net acres protected/created over the project life would be between 400-500 acres.
- 3) Background loss rates would be reduced by 50% in the marsh creation and marsh nourishment areas.
- 4) The project would help maintain the Bayou Grande Cheniere ridge.
- 5) The project would not protect any significant infrastructure.
- 6) The project would provide a synergistic effect with the Lake Hermitage Marsh Creation Project (PPL15), the West Pointe a la Hache Marsh Creation Project (PPL17), and the West Pointe a la Hache Siphon Enhancement Project (PPL3). All of these projects would work in conjunction to restore wetlands within the Lake Hermitage Basin.

**Identification of Potential Issues**

Numerous oil and gas canals; borrow site.

**Preliminary Construction Costs**

Preliminary construction costs are estimated at \$25 million, which includes 25% contingency.

**Preparer of Fact Sheet**

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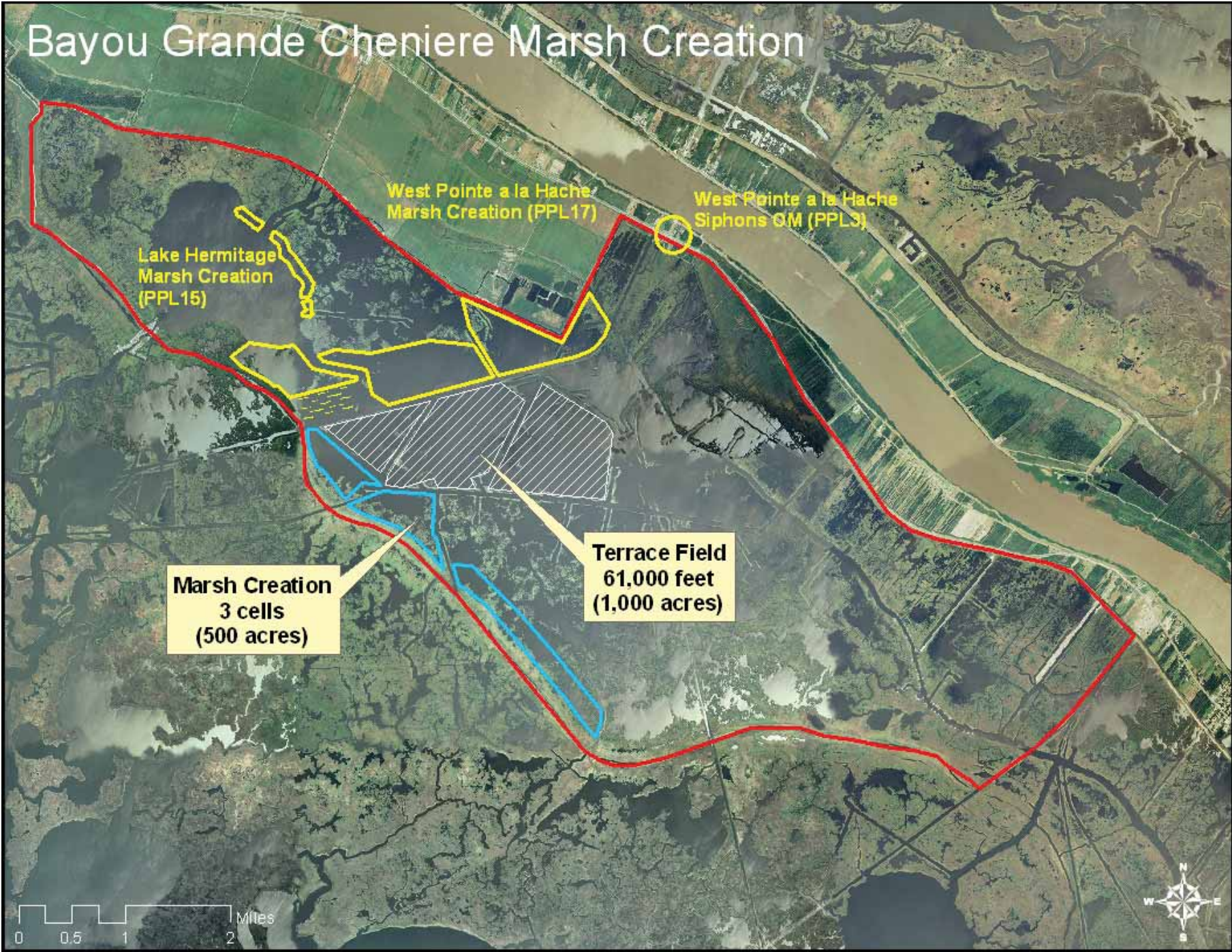
# Bayou Grande Cheniere Marsh Creation Project



**PPL 20**

**Region 2, Barataria Basin**

# Bayou Grande Cheniere Marsh Creation



R2-BA-12- Bayou Dupont to Bayou Barataria  
Marsh Creation

**PPL20 PROJECT NOMINEE FACT SHEET**  
**January 25, 2010**

**Project Name**

Bayou Dupont to Bayou Barataria Marsh Creation

**Coast 2050 Strategy**

Region 2 Regional Strategy#26. Dedicated dredging to create marsh on the land bridge.

**Louisiana's Comprehensive Master Plan for a Sustainable Coast**

From page 52 of the Master Plan, "One way to accelerate the benefits of diversions would be to mechanically restore lost marsh by pumping sediments via pipeline from the bed of the Mississippi River, offshore, or from navigation channels. Combining land sustaining diversions and this type of mechanical marsh restoration could rapidly convert open water to wetlands and help the restored marsh remain viable. Pipeline conveyance of sediment is seen as a particularly good option for areas like Myrtle Grove and West Point a la Hache, where the Master Plan recommends situating land sustaining diversions. Together, diversions and pipeline conveyance of sediment could rebuild marsh quickly areas where land loss has reached crisis level." See Figure 10, page 57 of the Master Plan.

**Project Location**

Region 2, Barataria Basin, Jefferson Parish, extending southward from the PPL17 Bayou Dupont project (BA-48) to the Bayou Barataria ridge.

**Problem**

What problem will the project solve? The marshes located between Bayou Dupont and Bayou Barataria are very deteriorated. The deteriorated marsh, along with numerous canals, allows a level of tidal exchange that is considerably greater than historic conditions. The proposed marsh creation and nourishment will restore critical marsh acreage; the restored marsh and rock dike will partially restore the area's hydrology.

What evidence is there for the nature and scope of the problem in the project area? 2008 aerial imagery confirms that the areas marshes are severely deteriorated.

**Goals**

Create 240 acres and nourish 50 acres of marsh between Bayou Dupont and Bayou Barataria. Prevent erosion of created marsh from Barataria Bay Waterway and partially restore area hydrology

**Proposed Solution**

290 acres of marsh creation and nourishment. Material for marsh creation will be excavated from The Pen.

1,740 feet of bankline protection along the east bank of the Barataria Bay Waterway.

**Preliminary Project Benefits**



1) What is the total acreage benefited both directly and indirectly? 290 acres created and / or nourished.

2) How many acres of wetlands will be protected/created over the project life? 290 acres

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

4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc. The project will serve to re-connect Bayou Dupont and Bayou Barataria with a band of healthy marsh, partially restoring the area's hydrology. Consideration will be given to re-establishing ridge elevation along the former Bayou Barataria ridge in the southern portion of the project area.

5) What is the net impact of the project on critical and non-critical infrastructure? Created and nourished marsh will reduce storm surge that would otherwise approach The Pen and the community of Lafitte unimpeded.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? The proposed project's northern boundary is the southern boundary of the PPL17 Bayou Dupont Project. The proposed project's southern limit is in close proximity to a landowner / Duck's Unlimited sponsored terracing project that was constructed 2006-07 and ties into the CWPPRA BA-26 project.

#### **Identification of Potential Issues**

The proposed project has the following potential issues: no issues presently identified.

#### **Preliminary Construction Cost**

\$21 million (including 25% contingency)

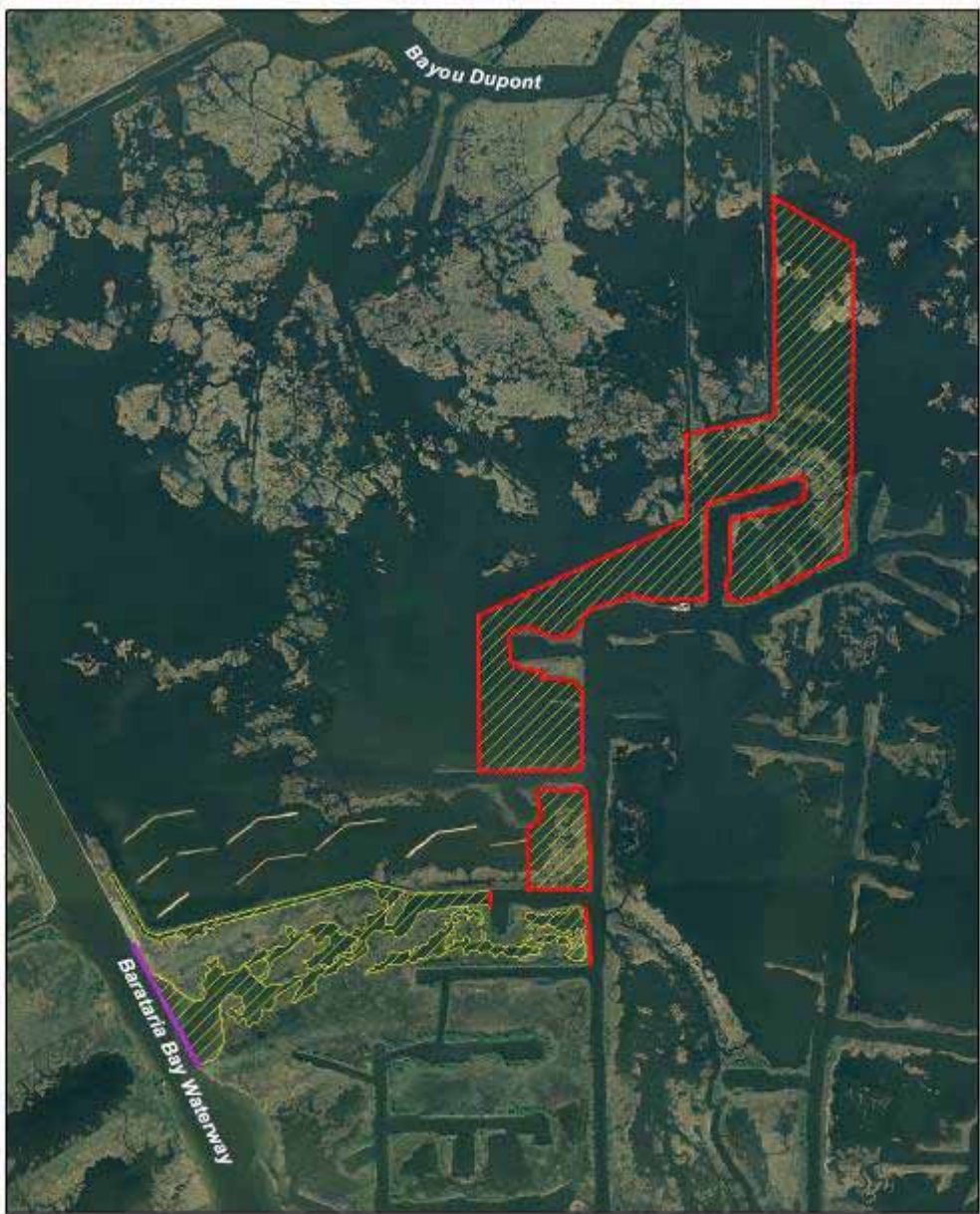
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Bayou Dupont to Bayou Barataria  
Marsh Creation  
Jefferson Parish, Louisiana  
PPL 20 Nominee



2008 DOQQ

R2-BA-13- Home Place Marsh Creation

**PPL19 PROJECT NOMINEE FACT SHEET**  
**January 25, 2010**

**Project Name**

Homeplace Marsh Creation

**Coast 2050 Strategy**

Coastwide Strategy. Dedicated dredging for wetland creation

**Louisiana's Comprehensive Master Plan for a Sustainable Coast**

From page 52 of the Master Plan, "One way to accelerate the benefits of diversions would be to mechanically restore lost marsh by pumping sediments via pipeline from the bed of the Mississippi River, offshore, or from navigation channels. Combining land sustaining diversions and this type of mechanical marsh restoration could rapidly convert open water to wetlands and help the restored marsh remain viable. Pipeline conveyance of sediment is seen as a particularly good option for areas like Myrtle Grove and West Point a la Hache, where the Master Plan recommends situating land sustaining diversions. Together, diversions and pipeline conveyance of sediment could rebuild marsh quickly areas where land loss has reached crisis level." See Figure 10, page 57 of the Master Plan.

**Project Location**

Region 2, Barataria Basin, Plaquemines Parish, near Homeplace, west of hurricane protection levee.

**Problem**

What problem will the project solve? The marsh located between the hurricane protection levee and Bay Lanaux / Bay de la Cheniere is severely degraded; the lack of healthy marsh at this location poses a threat to the hurricane protection levee. The proposed marsh creation / marsh nourishment will help protect the levee.

What evidence is there for the nature and scope of the problem in the project area? 2008 aerial imagery confirms the deteriorated of marsh west of the hurricane protection levee.

**Goals**

Create 250 acres of marsh between the hurricane protection levee and Bay Lanaux / Bay de la Cheniere. The proposed marsh creation will help protect the levee.

**Proposed Solution**

250 acres of marsh creation. Material for marsh creation/nourishment will be excavated from the Mississippi River.

**Preliminary Project Benefits**

- 1) What is the total acreage benefited both directly and indirectly? 250 acres created.
- 2) How many acres of wetlands will be protected/created over the project life? 250 acres

3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%). Not yet determined

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 created and nourished marsh will re-establish the hydrologic function of the former Bayou de la Cheniere ridge.

5) What is the net impact of the project on critical and non-critical infrastructure? The created/nourished marsh will reduce the fetch west of the hurricane protection levee.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? The project will complement other efforts to establish / nourish marshes west of the Mississippi River – Mississippi River Sediment Delivery- Bayou Dupont; West Bay Sediment Diversion, Lake Hermitage Marsh Creation.

#### **Identification of Potential Issues**

The proposed project has the following potential issues: no issues presently identified.

#### **Preliminary Construction Costs**

\$22 million (including 25% contingency)

#### **Preparer of Fact Sheet**

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

Data Source:  
2007 DDDG Aerial Photography  
Map Date: January 22, 2010



**Homeplace Marsh Creation**  
**Plaquemines Parish, Louisiana**  
**PPL 20**  
**~250 Acres**



**Legend**  
Marsh Creation

## R2-BA-14-Naomi Siphon Improvement

**PPL19 PROJECT NOMINEE FACT SHEET**  
**January 25, 2010**

**Project Name**

Naomi Siphon Improvement

**Coast 2050 Strategy**

Region 2 Strategy No. 8 – Construct most efficient small diversions.

**Louisiana’s Comprehensive Master Plan for a Sustainable Coast**

From page 52 of the Master Plan, “Along these lines, it is important to review the operation of Davis Pond, Caernarvon, and other land sustaining diversions in Delta Plain. It is a state priority to ensure that these diversions are providing maximal ecosystem restoration results in conjunction with other restoration measures.”

**Project Location**

Region 2, Barataria Basin, Plaquemines Parish, near Naomi

**Problem**

The siphon’s estimated maximum discharge is 2,144 cfs with the optimum river stage and full, faultless operation. From 1993 through 2003, the structure was only in operation 69% of the time and averaged 819 cfs when fully operational (i.e. all eight pipes), and 519 cfs over the entire period, including times of no flow (Boshart et al. 2004).

**Goals**

The project will address the mechanical shortcomings that are associated with reduced or lost siphon operations.

**Proposed Solution**

Implement the following improvements to the existing siphon:

- 1) On-site and remote instrumentation to provide continuous monitoring and measurement of actual flow rates, instead of interpolated spreadsheet values;
- 2) Remote instrumentation to provide a means of immediate notification of when any pipes lose their prime.
- 3) On-site vacuum pump, control equipment, and instrumentation to allow speedy re-establishment of siphon flow;
- 4) Air release system;

In addition to the items listed above, additional improvement items may be investigated during E&D:

- 5) Extension of intake pipes to prevent the loss of vacuum due to ship passage during lower Mississippi River stages, thereby extending siphon operations;
- 6) Installation of a flange attachment for coupling with dredge operations to enrich one or more of the pipes with fine sediment.

**Preliminary Project Benefits**



The Naomi Siphon components and design are the same as for the West Pointe a la Hache siphon which is located approximately 15 miles downriver. Recently, an analysis was performed regarding improvements to the West Pointe a la Hache siphon. That analysis yielded an estimated increase in average discharge from 795 cfs to 1,488 cfs, as well an increase in net acres at the end of 20 years of 648 acres.

Because 1) the Naomi and West Pointe a la Hache siphons are of the same design, 2) the proposed improvements are the same for both projects, 3) the project areas are similar in size, but 4) the Naomi siphon is 15 miles upriver, anticipated that the benefits of the Naomi Siphon Improvement Project will be similar to, or greater than, those for the West Pointe a la Hache siphon improvements.

1) What is the total acreage benefited both directly and indirectly? The Naomi Siphon (BA-03) project area is 13,140 acres. Land/Water Analysis for 2000 indicated that the project area consisted of 9,057 acres of land and 4,083 acres of water.

2) How many acres of wetlands will be protected/created over the project life? The West Pointe a la Hache WVA for siphon improvement yielded an estimate of 648 net acres at the end of 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 West Pointe a la Hache WVA for siphon improvement estimated a 66% loss rate reduction.

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 siphon improvements will help maintain marsh on the Barataria Basin Landbridge.

5) What is the net impact of the project on critical and non-critical infrastructure? The siphon improvements will help maintain the marshes that front the western back levees of Plaquemines Parish.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? The project will complement other projects to protect / establish / nourish marshes west of the Mississippi River, including Mississippi River Sediment Delivery- Bayou Dupont; Bayou Dupont Ridge Creation and Marsh Restoration; South Shore of The Pen Shoreline Protection and Marsh Creation; Barataria Bay Waterway East Bank Protection, and the State's Small Dredge Marsh Creation projects.

### **Identification of Potential Issues**

The proposed project has the following potential issues: no issues presently identified.

### **Preliminary Fully Funded Estimate**

\$5.4 million

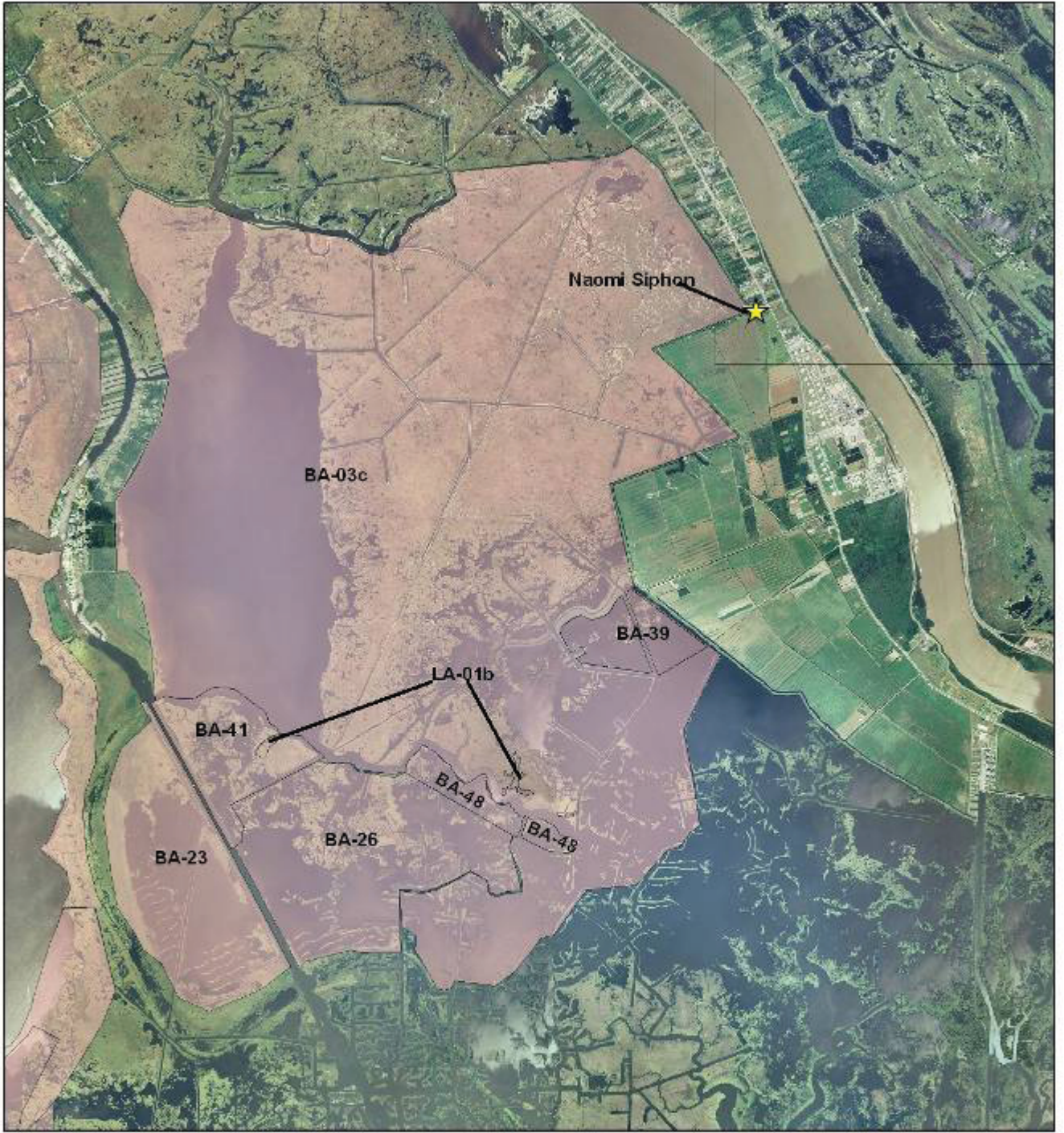
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**Legend**

 Nearby Restoration Projects

Naomi Siphon Improvement  
Jefferson Parish, Louisiana  
PPL 20



R2-BA-15-Northeast Little Lake Shore  
Protection and Marsh Creation

**PPL20 PROJECT NOMINEE FACT SHEET**  
**January 25, 2010**

**Project Name**

Northeast Little Lake Shore Protection and Marsh Creation

**Coast 2050 Strategy**

Region 2 Regional Strategy #24: Preserve bay and lake shoreline integrity on the landbridge

Region 2 Regional Strategy #25: Dedicated dredging and/or beneficial use of dredged material on the landbridge

**Louisiana's Comprehensive Master Plan for a Sustainable Coast**

From page 52 of the Master Plan, "One way to accelerate the benefits of diversions would be to mechanically restore lost marsh by pumping sediments via pipeline from the bed of the Mississippi River, offshore, or from navigation channels. Combining land sustaining diversions and this type of mechanical marsh restoration could rapidly convert open water to wetlands and help the restored marsh remain viable. Pipeline conveyance of sediment is seen as a particularly good option for areas like Myrtle Grove and West Point a la Hache, where the Master Plan recommends situating land sustaining diversions. Together, diversions and pipeline conveyance of sediment could rebuild marsh quickly areas where land loss has reached crisis level." See Figure 10, page 57 of the Master Plan.

**Project Location**

Region 2, Barataria Basin, Jefferson Parish, Harvey Cutoff -- Turtle Bay – Little Lake

**Problem**

What problem will the project solve? a) Shoreline erosion along the east bank of Harvey Cutoff, northwest shore of Turtle Bay, and northeast shoreline of Little Lake; and b) marsh deterioration between the northeast shoreline of Little Lake and Harvey Cutoff.

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

Based on Britsch and Dunbar (1996) map for 1930's -1990 the erosion rate is roughly estimated at 10 to 25 feet per year. The 2003 USGS map of "100+ Years of land Change for Coastal Louisiana" illustrates a prediction for continued shoreline and interior land loss in the proposed project area.

**Proposed Project Features**

35,000 feet of shoreline protection, leaving opening(s) as needed for oil and gas access and/or water exchange. About 200 acres of marsh creation.

**Goals**

Shoreline protection will eliminate erosion from Harvey Cutoff, Turtle Bay, and Little Lake. Marsh creation effort will restore about 200 acres of emergent marsh.

**Preliminary Project Benefits**

- 1) What is the total acreage benefited both directly and indirectly? Direct: eliminate loss of 200 to 250 acres over project life, plus create about 200 acres. Indirect: not yet determined.
- 2) How many acres of wetlands will be protected/created over the project life? 400 to 450 acres.
- 3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%). Not yet determined
- 4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc. This project would contribute to protection of the Central Barataria Basin Landbridge.
- 5) What is the net impact of the project on critical and non-critical infrastructure? The communities of Lafitte and Barataria lie to the north of this important landmass which serves to buffer the effect of tropical weather events. Numerous oil and gas wells, pipelines, and supporting infrastructure would benefit from reducing land loss in the area.
- 6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? This project would work in sync with BA-2, BA-27, BA-20, BA-23, BA-03a, BA-26, and BA-41, contributing to protection of the Central Barataria Basin Landbridge.

#### **Identification of Potential Issues**

The proposed project has the following potential issues: coordination with oil and gas entities would be required so that some canals could be closed at the shoreline, allowing access through only one or two canal through the shoreline.

#### **Preliminary Construction Costs**

\$ 15 million (including 15% contingency)

#### **Preparer of Fact Sheet**

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**Legend**

- Shore\_Protection  
~ 28,000 linear feet
- ▨ Marsh\_Creation  
~200 Acres



NE Little Lake  
Marsh Creation/Shoreline Protection  
Jefferson Parish, Louisiana  
PPL-20

