REGION I

Coastal Wetlands Planning, Protection and Restoration Act

20th Priority Project List

Region 1
Regional Planning Team Meeting

January 28, 2010
New Orleans, LA

1. Welcome and Introductions

RPT Region 1 Leader:
Kelley Templet -OCPR

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 1 Parishes

Eligible parishes for Pontchartrain basin in Region 1 include:

Plaquemines Parish
Jefferson Parish
Orleans Parish
St. Bernard Parish
Ascension Parish
Livingston Parish
St. James Parish
St. Charles Parish
St. John the Baptist Parish
St. Tammany Parish
Tangipahoa Parish

2. PPL 20 Process and Ground Rules

RPT Meetings

- Jan. 26-28, 2010 to accept project and demo proposals in 4 coastal regions brokein 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.
- Writen 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 decsion end of January 2011.

3. Region 1 Coast 2050 Regional Strategies

Projects nominated should be:

- consistent with the Coast 2050 Regional Ecosystem or Coastwide Strategies

Restore Swamps

- Small Mississippi River diversion at Blind River including outfall management
- Small Mississippi River diversion at Reserve Relief Canal including outfall management
- Restore natural drainage patterns
- Provide diversion related flood protection where needed

Restore and Sustain Marshes

- Small Mississippi River Diversion through Bonnet Carre Spillway by pulling spillway structure pins in an opportunistic manner
- Small diversion of Mississippi River into LaBranche wetlands
- Diversion from Jefferson Parish drainage into LaBranche wetlands
- Wetland sustaining diversion of 2-5,000 cfs thru Central Wetlands at Violet diversion once MRGO is closed
- Dedicated delivery of sediment for marsh building

Protect Bay and Lake Shorelines

Maintain shoreline integrity of Lake Pontchartrain

Maintain shoreline integrity of Lake Borgne and the Biloxi Marshes

Restore and Maintain Barrier Islands

- Maintain Chandeleur Islands with offshore sand as necessary

Maintain Critical Landforms

- Maintain Eastern Orleans Land Bridge by marsh creation and shoreline protection

Resolve the MRGO Problem

- Close MRGO to deep-draft navigation when adequate container facilities exist on the river
- Expedite planning for the Millennium Port
- Stabilize the entire north bank of MRGO
- Acquire oyster leases and create marsh in the southern lobes of Lake Borgne
- Constrict breaches between MRGO and Lake Borgne with created marshes
- Construct a sill at Seabrook

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. 24th 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

7. Adjourn

ATTENDANCE RECORD

DATE(S)	SPONSORING ORGANIZATION	LOCATION
January 28, 2010 1:00 P.M.	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	U.S. Army Corps of Engineers -New Orleans District District Assembly Room 7400 Leake Ave. New Orleans, LA

PURPOSE

MEETING OF THE REGIONAL PLANNING TEAM REGION I

PARTICIPANT REGISTER*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER/EMAIL
BRIAN FORTSON	Env. Spec. ST. TAMMANY PARISH	985 898 2552 mudc stpgov.org
Sean Burkes	J.V. Burkes Assoc	(985)649-0075 sburkes@vburkes
Sarah Johnson	legal assistant, Greg D'Angelo & assoc	(504)831-7100 parrecadangelo@yahoo
Susan Colley Theodoris	PBSJ	504 841-2226 x227
Meredith McKimble	PPG. Coastal MANAGER	504.912.5973
DAVID DUPRE	MEYER ENGINEERS / KENNER	504-885-9892
Rachael Hunter	Corps Resources	225-439-3931

LMV FORM 583-R
JAN 88

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

Region 1 - PONTCHARTRAIN BASIN

Project Number	Project Proposals
R1-PO-01	Unknown Pass to Rigolets Shoreline Protection
R1-PO-02	New Orleans Land Bridge Shoreline Stabilization and Marsh Creation Project
R1-PO-03	Bayou Bonfouca Marsh Creation Project
R1-PO-04	North Goose Point Marsh Restoration Project
R1-PO-05	Fritchie Marsh Terracing and Marsh Creation
R1-PO-06	Proctor Point Shoreline Stabilization
R1-PO-07	Kenner Effluent Discharge To Restore/Sustain LaBrancheMarsh and Wetlands
R1-PO-08	North Chandaleur Island Restoration
R1-PO-09	Northwest Lake Pontchartrain Shoreline Protection
R1-PO-10	Irish Bayou and Brazilier Island Marsh Creation

Region 1 PPL20 Proposed Projects

4 0 4 8 Kilometers

4 0 4 8 Miles

● **Pontchartrain Basin Project**

R1-PO-01 Unknown Pass to Rigolets Shoreline Protection
R1-PO-02 New Orleans Land Bridge Shoreline Stabilization and Marsh Creation (Hospital Wall Area)
R1-PO-03 Bayou Bonfouca Marsh Creation Project
R1-PO-04 North Shore Marsh Restoration Project
R1-PO-05 Fritchie Marsh Terracing and Marsh Creation Project
R1-PO-06 Proctor Point Shoreline Stabilization Project
R1-PO-07 Kenner Effluent Discharge to Restore/Sustain Labranche Marsh and Wetlands
R1-PO-08 North Chandeleur Island Restoration
R1-PO-09 Northwest Lake Pontchartrain Shoreline Protection
R1-PO-10 Irish Bayou and Brazilier Island Marsh Creation

Region 1 PPL20
Regional Planning Team Meeting
Held at USACE
New Orleans, LA
January 28, 2010
Background Image:
2009 Landsat Thematic Mapper 5 Mosaic

Region 1 - PONTCHARTRAIN BASIN

R1-PO-01-Unknown Pass to Rigolets Shoreline Protection

PPL19 PROJECT NOMINEE FACT SHEET
January 28, 2010

Project Name
Unknown Pass to Rigolets Shoreline Protection

***Coast 2050* Strategy**
- Regional – Maintain Eastern Orleans Land Bridge by marsh creation and shoreline protection.
- Regional – Maintain shoreline integrity of Lake Borgne.
- Coastwide – Maintenance of bay and lake shoreline integrity.

Project Location
Region 1, Lake Pontchartrain Basin, Orleans Parish, East Orleans Land Bridge Mapping Unit, along the northwest shoreline of Lake Borgne bounded by the Rigolets, Unknown Pass, the Gulf Intracoastal Waterway (GIWW), and Lake Borgne.

Problem
High wave energy, sea level rise and subsidence levels are impacting the wetland shorelines and inland marshes of lakes Pontchartrain, Borgne and St. Catherine, and Chef Pass, the Rigolets. These water bodies all outline the East Orleans Landbridge and are located in the Pontchartrain Basin. Identified in both *Coast 2050* and the LCA, this critical land bridge forms a barrier between Lake Pontchartrain and Lake Borgne, an eventual passage to the Gulf of Mexico. Along Lake Borgne between Unknown Pass and the Rigolets, there has been continued loss of shoreline and inland ponds have widened. This area holds the majority of remaining, contiguous wetland acres located in Orleans Parish.

Proposed Project Feature
- Foreshore rock (four miles) dike along the Lake Borgne shoreline from Unknown Pass to Rigolets.

Goals
- Maintain the East Orleans Landbridge by stopping shoreline erosion.
- Protect inland wetlands between Lake Borgne and Lake St. Catherine.

Preliminary Project Benefits
The project would maintain part of the East Orleans Landbridge shoreline and protect infrastructure and communities. Shoreline protection features would maintain structural components of the coastal ecosystem in the Pontchartrain Basin.

Identification of Potential Issues
No known issues at this time.

Preliminary Construction Costs
The construction cost $9 - $10 Million.

Preparers of Fact Sheet
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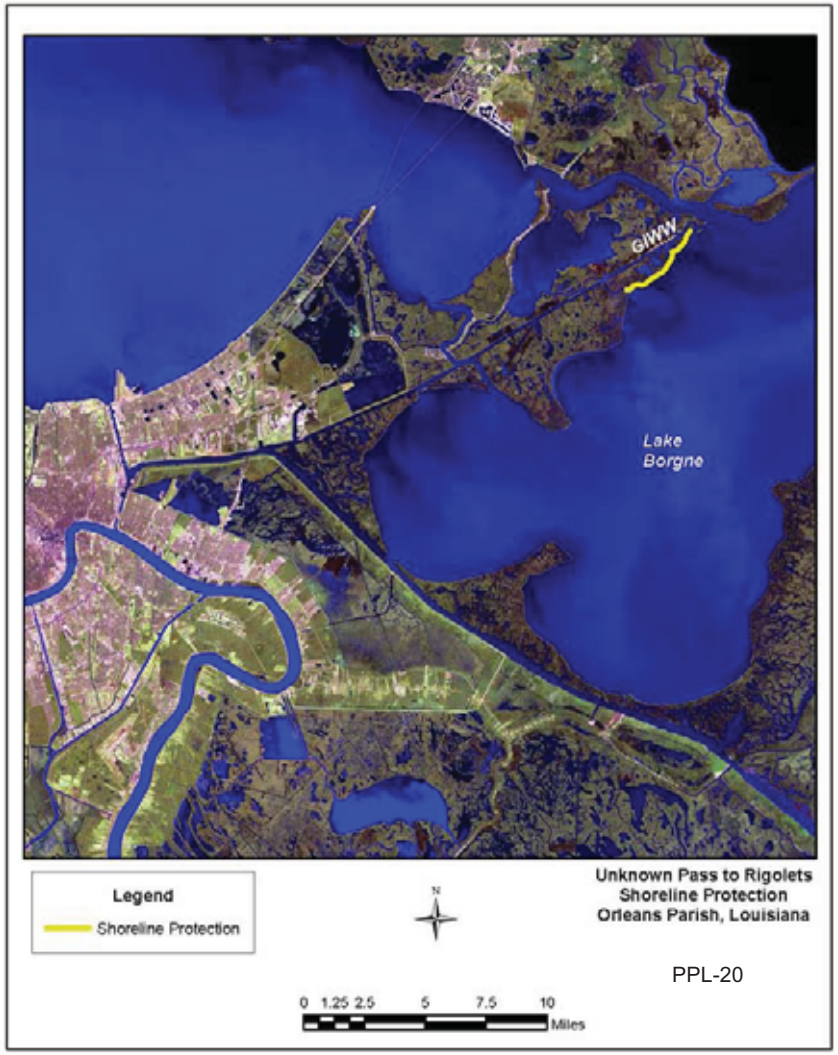
Unknown Pass to Rigolets Shoreline Protection



Unknown Pass to Rigolets Shoreline Protection

R1-PO-02-New Orleans Land Bridge Shoreline Stabilization and Marsh Creation Project

PPL 20 PROJECT NOMINEE FACT SHEET
January 28, 2010

Project Name:
New Orleans Land Bridge Shoreline Stabilization & Marsh Creation Project (Hospital Wall Area)

Coast 2050 Strategies:
Basin Strategies:
10. *Maintain shoreline integrity of Lake Pontchartrain to protect regional ecosystem values.*
15. Maintain Eastern Orleans Land Bridge by marsh creation and shoreline protection.

Project Location:
The project is located in Region 1, in the Pontchartrain Basin. The project site is located along the east portion of Pontchartrain west of HWY 90 between Hospital Road and Greens Ditch in Orleans Parish, Louisiana.

Problem:
Since 1956, the project area has lost more than 110 acres of wetlands along the east shore of Lake Pontchartrain between Hospital Road and the Greens Ditch area. The shoreline in the Hospital Wall Area has retreated approximately 450 feet since 1956. Wetland losses were accelerated by winds and storm surge caused by Hurricanes Katrina and Rita. Within the project area, these storms alone converted approximately 50 acres of interior marsh to open water ponds. Flooding of nearby communities during strong northwest winds 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 7 ft year. Some areas have a shoreline retreat as great as 15 ft year and have broken into the interior marsh. The continued loss of wetlands in the area has the potential to breach this land bridge into Lake St. Catherine if no action is taken to stabilize this shoreline.

Proposed Project Features:
1. Install approximately 7,183 linear feet of rock along the northwestern shoreline of the New Orleans Land bridge.
2. Dredging- fill placement to create/restore/nourish wetlands

Goals:
1. Stop shoreline erosion.
2. Create/restore/nourish/protect ~ 70 acres of wetlands.
3. Protect the New Orleans Landbridge

Preliminary Project Benefits:
The following questions should be addressed:
1) What is the total acreage benefited both directly and indirectly?
Directly benefited: Approximately 20 acres of marsh will be protected via the shoreline protection feature and approximately 50 acres of marsh restored via the marsh creation feature.

Indirectly: *Approximately 200 acres in the project area would be protected from the shoreline protection. Additionally, Hwy 90 would be protected from encroachment from Lake Pontchartrain.*

2) How many acres of wetlands will be protected/created over the project life?
At the end of 20 years, approximately 70 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%. Most of the interior land loss has been due to areas where the shoreline has broken into the interior 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?
The project maintains a portion of the rims of Lake Pontchartrain, which are structural components of the coastal ecosystem. The project also protects the New Orleans Land Bridge.
.
5) What is the net impact of the project on critical and non-critical infrastructure?
One key feature of this project is the protection of Hwy 90 which is used by the local communities as hurricane evacuation route. The project site is also located in a critical area that provides one of the last lines of defense against storm surge coming into the Lake Pontchartrain system .

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?
The project continues to protect the Lake Pontchartrain Rim which serves as the remaining critical reach that protects the west side of the New Orleans Land Bridge.

Identification of Potential Issues:
Rock shoreline protection projects historically require O&M.

Preliminary Construction Costs:
The construction cost including 25% contingency is approximately $13,650,000.

Preparers of Fact Sheet:
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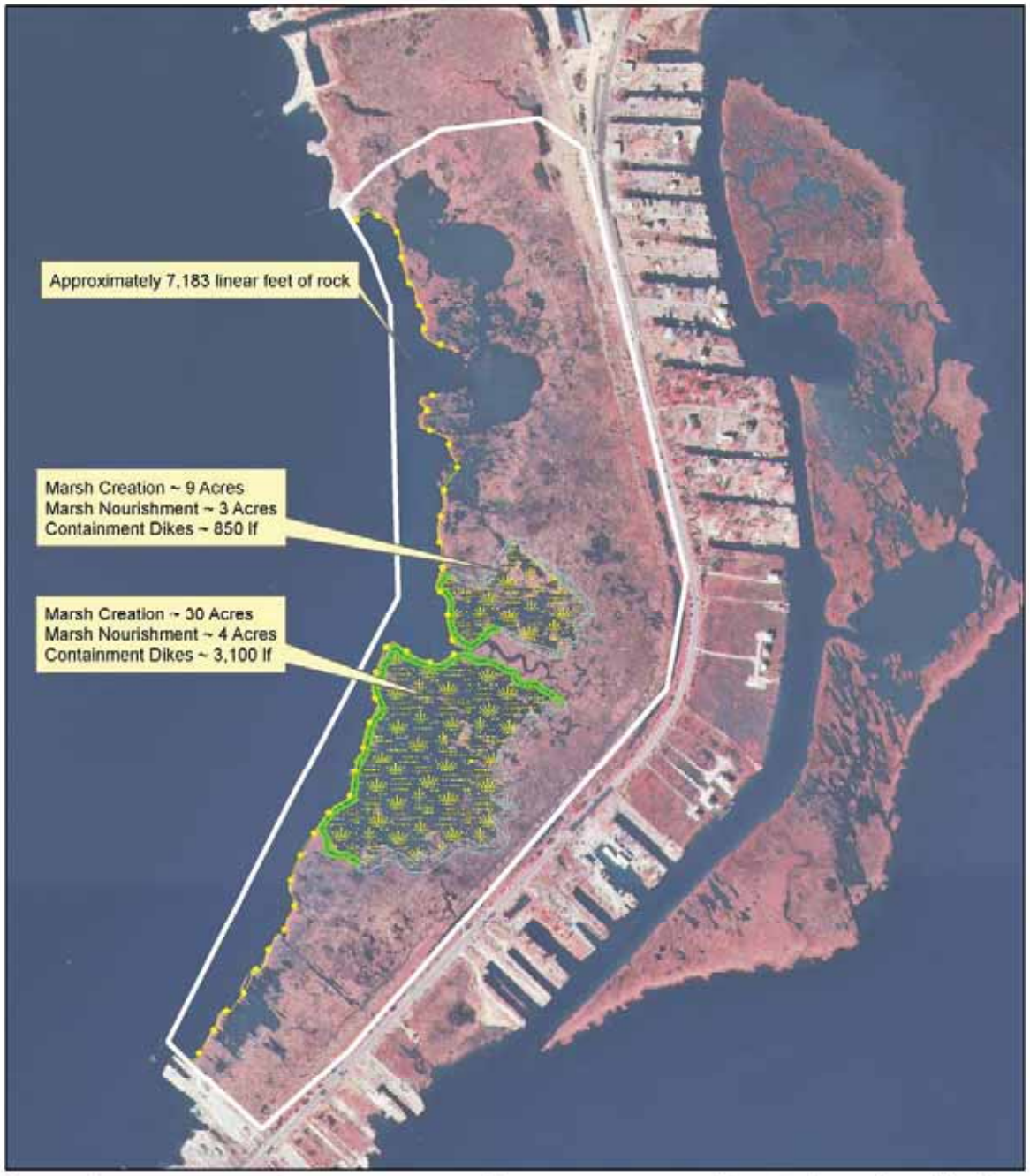
Travis Creel, USACE, 504-862-1071, Travis.J.Creel@usace.army.mil



Legend

- Shoreline Protection_PPL 20
- Marsh Nurish_PPL 20
- Marsh Creation Dikes_PPL 20
- Marsh Creation_PPL 20
- Project Area

N

New Orleans Landbridge
Hospital Wall Area

1,100 550 0 1,100 Feet

Background Map: 2005 DOQQ

New Orleans Landbridge Shoreline Stabilization & Marsh Creation Project (Hospital Wall Area)

PPL 20
Region 1
Pontchartrain Basin

Project Area:

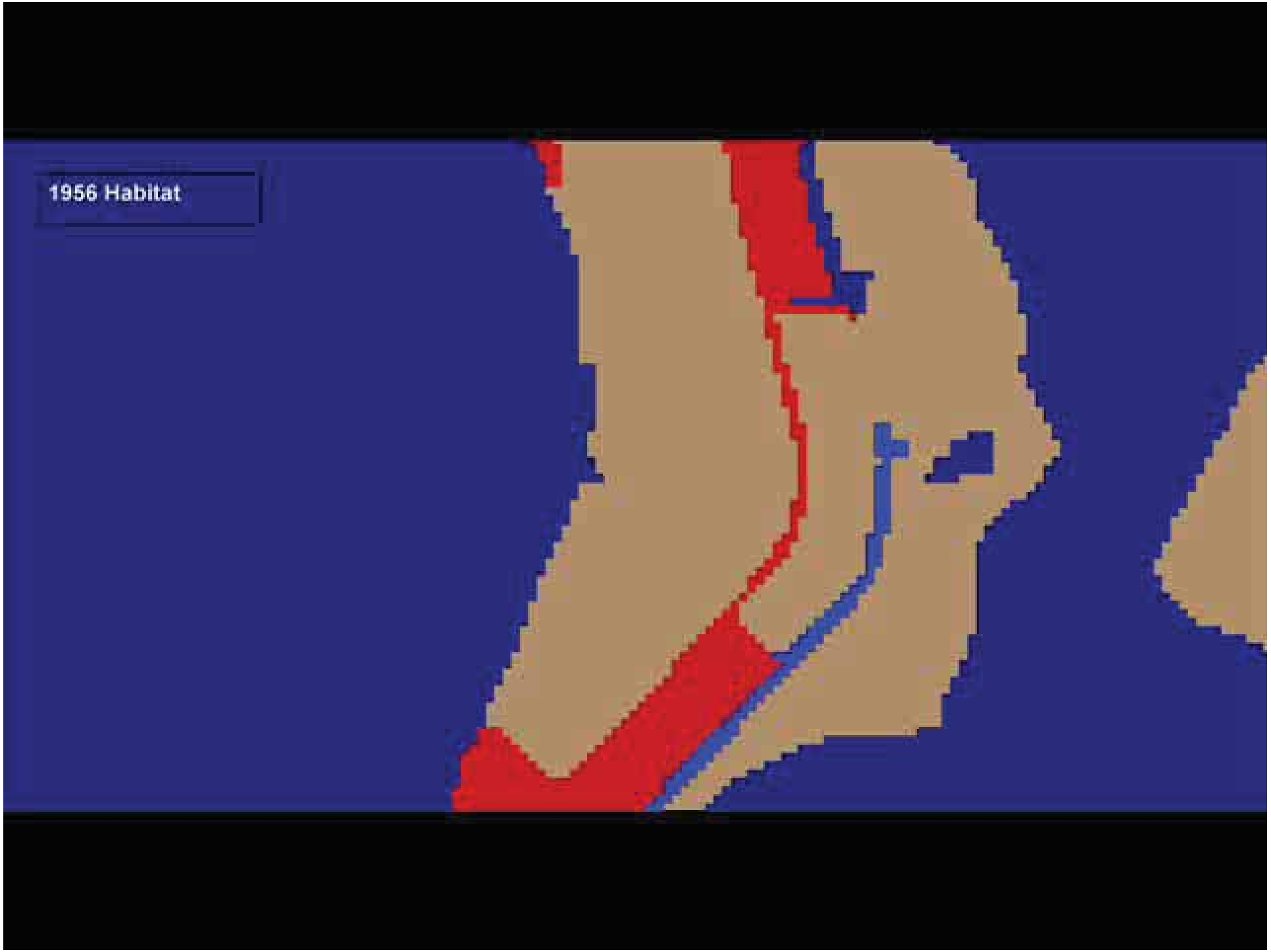
Problem:

- Since 1956, area has lost more than 110 acres of wetlands near the Hospital Road area.
- The east shore of Lake Pontchartrain has retreated ~ 450 feet since 1956, toward Hwy 90, a major hurricane evacuation route.
- Hurricanes Katrina alone converted approximately 50 acres of interior marsh to open water ponds.
- Flooding of nearby communities during strong northwest winds 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.
- Average shoreline retreat approximately 7’ per yr, with some areas as >15’ per yr

Pre-Katrina (2004 DOQQ):

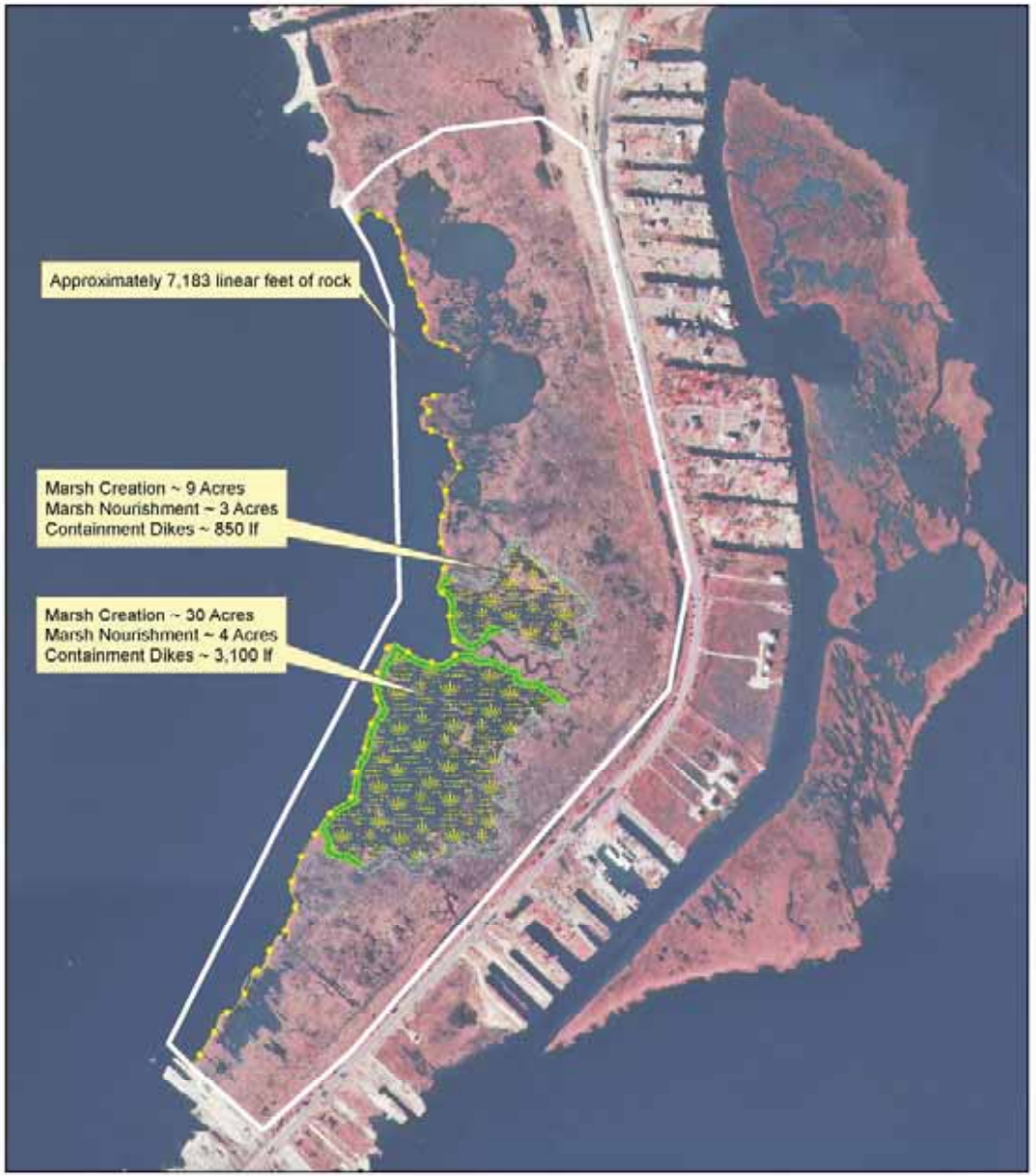
Post-Katrina(2005 DOQQ):

Current conditions (2008 DOQQ):


1956 Habitat

Shoreline Protection (~7,200 lf):

Marsh Creation and Nourishment:


Approximately 7,183 linear feet of rock
Marsh Creation ~ 9 Acres
Marsh Nourishment ~ 3 Acres
Containment Dikes ~ 850 lf
Marsh Creation ~ 30 Acres
Marsh Nourishment ~ 4 Acres
Containment Dikes ~ 3,100 lf
Legend
Shoreline Protection_PPL 20
Marsh Nurish_PPL 20
Marsh Creation Dikes_PPL 20
Marsh Creation_PPL 20
Project Area
N
New Orleans Landbridge
Hospital Wall Area
1,100 550 0 1,100 Feet
Background Map: 2005 DOQQ

Proposed Project Features:

- 7,200 linear feet of rock protection along the northwestern shoreline of the New Orleans Landbridge.
- Dredging- fill placement to create/restore/nourish wetlands ~ 50 acres of wetlands.

Preliminary Project Benefits:

- Stop shoreline erosion
- Create/restore/nourish/protect ~ 70 acres of wetlands.
- Protect the New Orleans Landbridge
- Protect the Hwy 90 Evacuation Route

R1-PO-03-Bayou Bonfouca Marsh Creation Project

PPL20 PROJECT NOMINEE FACT SHEET
January 28, 2010

Project Name:
Bayou Bonfouca Marsh Creation Project

Coast 2050 Strategy:
Coastwide- Dedicated Dredging to create, restore, or protect wetlands; Maintenance of Gulf, Bay and Lake Shoreline.
Reginal- #9 Dedicated delivery of sediment for marsh building; #10 Maintain shoreline integrity of Lake Pontchartrain to protect regional ecosystem values.
Mapping Unit- #27 Maintain Shoreline Integrity.

Project Location:
Region 1, St. Tammany Parish, Lake Pontchartrain Basin, along the north shore of Lake Pontchartrain, parts of the project located within Big Branch National Wildlife Refuge adjacent to Bayou Bonfouca.

Problem:
The marsh in this area was fairly stable prior to Hurricane Katrina in August 2005. There was extensive damage to the emergent marsh along the north shore of Lake Pontchartrain and especially localized in the marshes near Bayou Bonfouca when the storm surge removed many acres of marsh. Marsh loss rates should increase in the marsh surrounding these newly created open water areas due to an increase in wind driven fetch. Shoreline erosion rates in this area seem to be very low, currently there is one fairly large breach and several areas that breaches are imminent. These breaches provide direct connection between the fresher interior marshes and higher saline waters of Lake Pontchartrain. This was a recent event and we should fix any breaches in the bankline before they grow to become a major exchange point causing interior loss rates to further increase.

Goals :
Primary goals of the project are to create and/or nourish 460 acres of low salinity brackish marsh in open water areas adjacent to Bayou Bonfouca that were damaged by Hurricane Katrina and repair any breaches along the lake rim.

Proposed Solutions:
This project would consist of placing sediment hydraulically dredged from Lake Pontchartrain and placed in open water sites to a height of +1.5 to +2.0 NAVD 88 (+1.5 for emergent marsh and +2.0 shoreline) to create approximately 418 acres of emergent marsh and nourish an additional 42 acres. Each site would have some containment dikes that would be sufficiently gaped or degraded to allow for fisheries access no later than three years post construction.

Preliminary Project Benefits:
1) *What is the total acreage benefited both directly and indirectly*? Direct benefits would be the 418 acres created and 42 acres nourished.

2) *How many acres of wetlands will be protected/created over the project life*?
There would be approximately 400 acres of marsh within the project area at Target Year 20.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%)*? Interior loss rates would be reduced by 50 to 74%.
The internal land loss rate would be reduced by 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*? This project would help maintain portions of the north shore of Lake Pontchartrain.

5) *What is the net impact of the project on critical and non-critical infrastructure*? This project would have no impact on critical or non-critical infrastructure.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects*? This project would work synergisticly with the newly constructed Goose Point (PO-33) to continue maintaining the Lake Pontchartrain shoreline.

Identification of Potential Issues:
The borrow sites in Lake Pontchartrain are located within Gulf sturgeon critical habitat.

Preliminary Construction Costs:
Lump sum construction costs are estimated at $14.2, $17.8 with the 25% contingency added.
*Goose Point /Point Platte Marsh Creation Project (PO-33) constructed in 2008 cost less than $21 million and created 436 acres of marsh.

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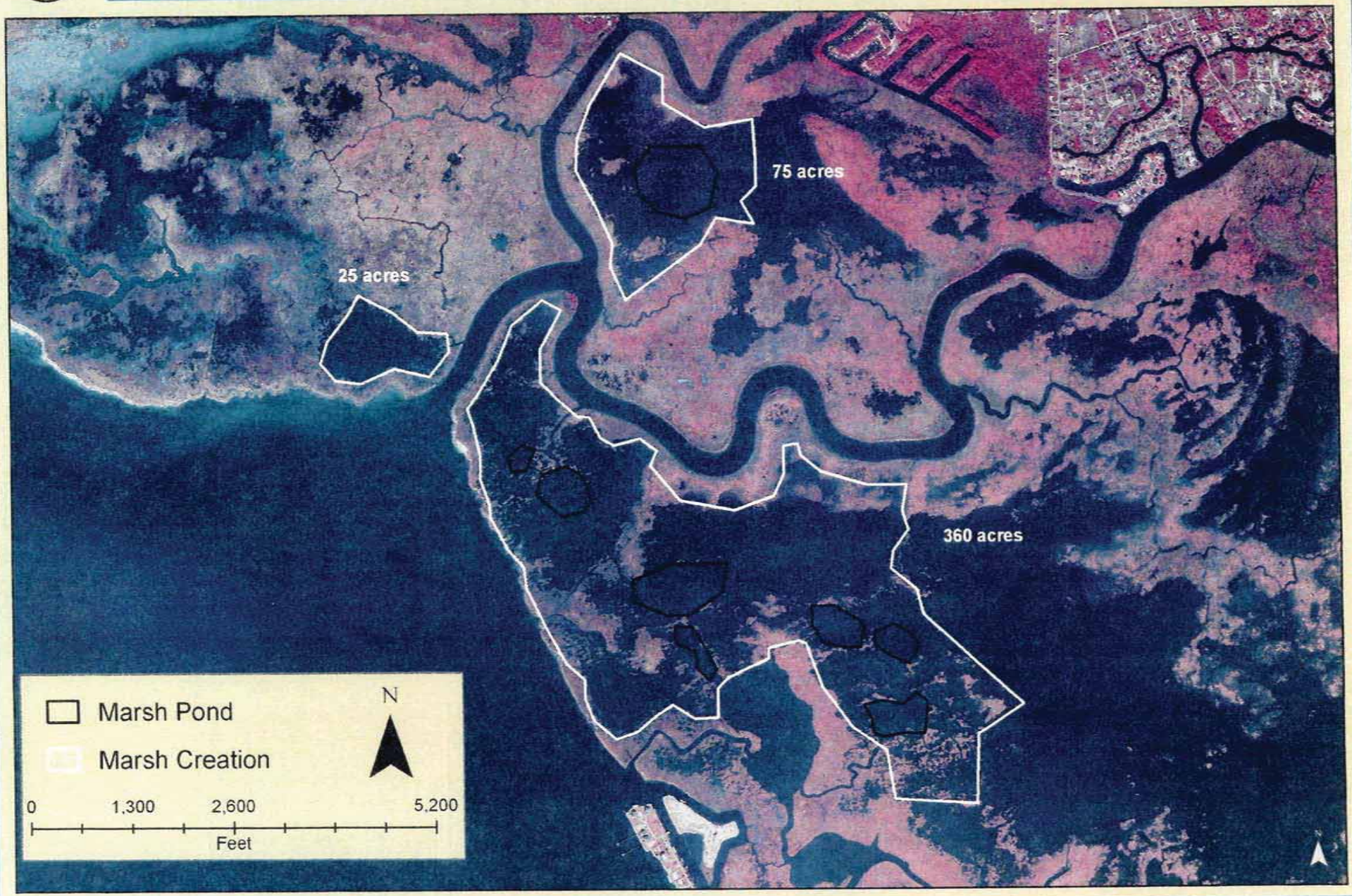
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

Bayou Bonfouca Marsh Creation Project



Bayou Bonfouca Marsh Creation Project

Problem: Hurricane Katrina removed much of the marsh in the project area resulting in large open water areas. Erosion along the Lake Pontchartrain shoreline has caused several breaches in the shoreline which is allowing the higher saline waters and higher wave energy to enter the shallow open water and broken marshes to the north.

Goal: To re-create approximately 418 acres of low salinity brackish marsh in open water areas adjacent to Bayou Bonfouca, nourish 42 acres, and repair several breaches along the Lake Pontchartrain shoreline.

Solutions: This project would consist of hydraulically dredging sediment from Lake Pontchartrain and place that material north in interior open water sites to a height of +1.5 to +2.0 NAVD 88 (+1.5 for interior emergent marsh and +2.0 shoreline). This would create approximately 418 acres of emergent marsh and nourish an additional 42 acres. Each site would have some containment dikes that would be sufficiently gaped or degraded to allow for fisheries access no later than three years post construction.

U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

Bayou Bonfouca Marsh Creation Project

U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

Bayou Bonfouca Marsh Creation Project


11/17/2008


11/17/2008


11/17/2008


11/17/2008


11/17/2008


11/17/2008

Summery:

- Create 418 acres and nourish 42 acres of low salinity brackish marsh.

- Repair several breaches along the Lake Pontchartrain shoreline.

R1-PO-04-North Shore/ Goose Point Marsh Restoration Project

PPL1 PROJECT NOMINEE FACT SHEET
January 28, 2010

Project Name: North Goose Point Marsh Restoration Project
(Originally named North Shore Marsh Restoration Project)

Coast 2050 Strategy, Region 1

- Coastwide – Dedicated Dredging to Create, Restore, or Protect Wetlands; Maintenance of Gulf, Bay and Lake Shoreline.
- Regional – (#9) Dedicated Delivery of Sediment for Marsh Building; (#10) Maintain Shoreline Integrity of Lake Pontchartrain to Protect Regional Ecosystem Values.
- Mapping Unit – (#27) Maintain Shoreline Integrity.

Project Location
Region 1, St. Tammany Parish, Lake Pontchartrain Basin, along the north shore of Lake Pontchartrain, within Big Branch Marsh National Wildlife Refuge and Fountainebleau State Park.

Problem
Interior ponding and, to a lesser extent shoreline erosion, are the major causes of wetland loss in the project area. From 1974 to 1990 marsh loss rates averaged approximately 35 acres/year. Those high loss rates are associated with hydrologic alterations which allowed saltwater to penetrate the fresher marshes. In addition, the passage of Hurricane Katrina also contributed to the loss of as much as 3.6 square miles of wetlands within the project area. During the transition to a more brackish plant community coupled with the storm events of 2005, large ponds have formed. A narrow strip of land separates those ponds from Lake Pontchartrain. Although the shoreline erosion rates are relatively low, the shoreline is already breached in several areas, and marsh loss in the interior ponds is expected to increase as the shoreline is breached.

Proposed Project Features
Sediment would be hydraulically dredged from Lake Pontchartrain and placed in designated areas within the ponds to create approximately 450 acres of emergent marsh and nourish approximately 300 acres of marsh. In all the ponds, marsh would be created to widen the shoreline so that the ponds would not be breached during the course of normal shoreline retreat. Sediment would be pumped within open water areas and allowed to over flow existing marsh. Containment dikes would be constructed to ensure marsh elevations are achieved. Initial elevations would depend on conditions of the dredged material, but would be pumped to approximately 2.5 ft above marsh level to achieve final target elevation of +0.5 ft above marsh elevation.

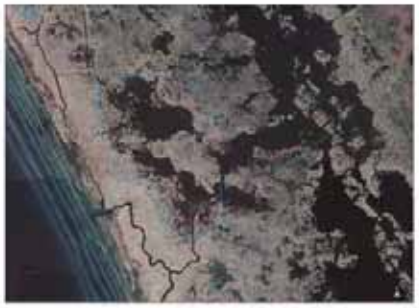
Goals
The primary goal is to re-create marsh habitat in the open water areas immediately behind the shoreline within Big Branch Marsh NWR. This will maintain the lake-rim function along this section of the north shore of Lake Pontchartrain.

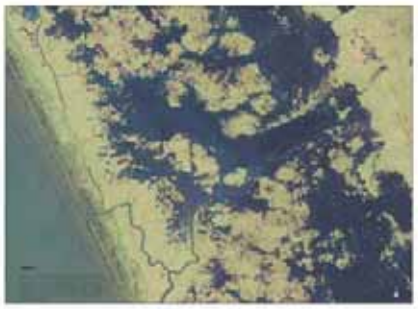
Identification of Potential Issues
The borrow areas in Lake Pontchartrain are located within Gulf sturgeon critical habitat.

Preliminary Construction Costs
Preliminary construction costs are estimated at $16 million which based on construction costs of the Goose Point/Point Platte Marsh Creation project (PO-33).

Preparer of Fact Sheet
Angela Trahan, USFWS, (337) 291-3137, Angela_Trahan@fws.gov

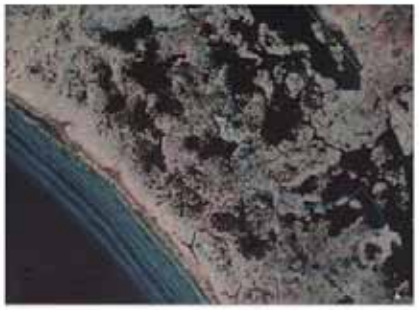
L-Pond (Big Branch Marsh NWR)





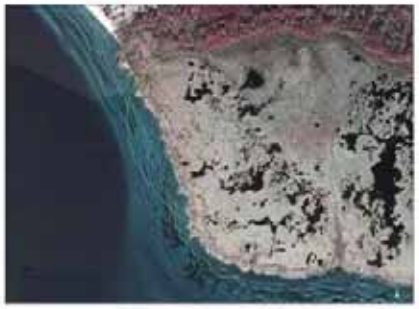
2004 2007

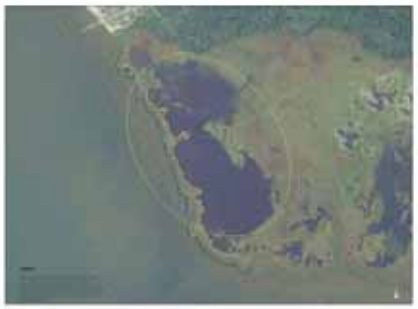
North Pond (Big Branch Marsh NWR)



2004 2007

Fountainebleau State Park





2004 2007

North Shore
Marsh Restoration Project

PPL 20

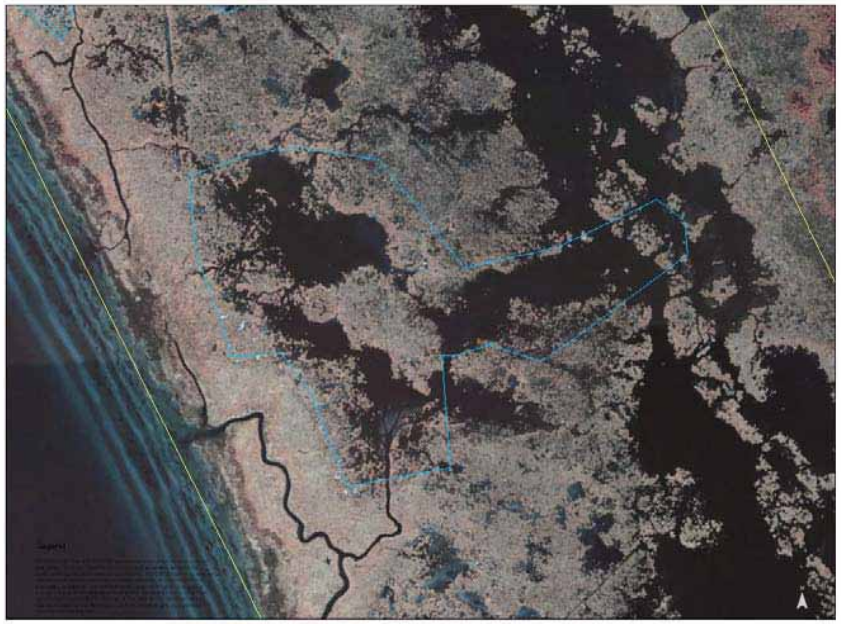
Region 1, Lake Pontchartrain Basin

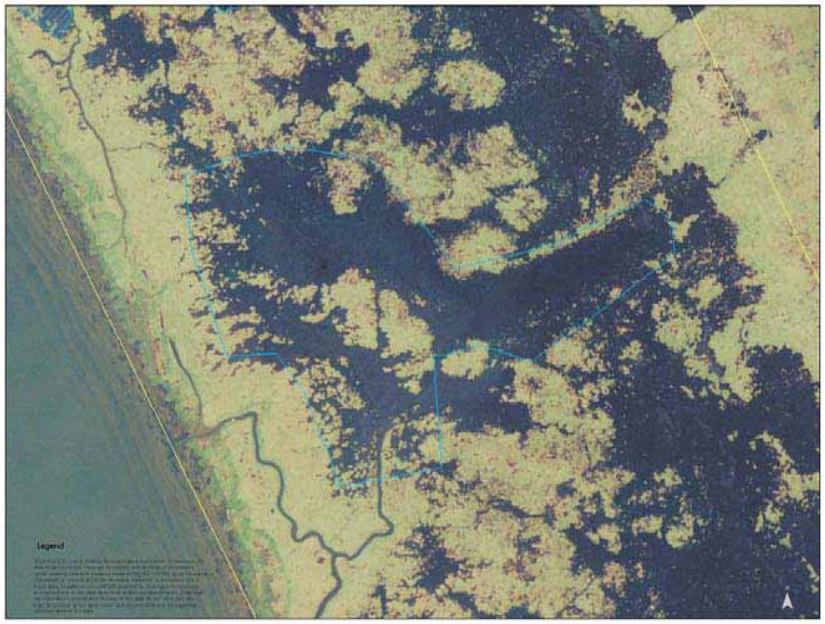
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

North Shore Marsh Restoration Project (PPL 20)

L-Pond (Big Branch Marsh NWR)





2004

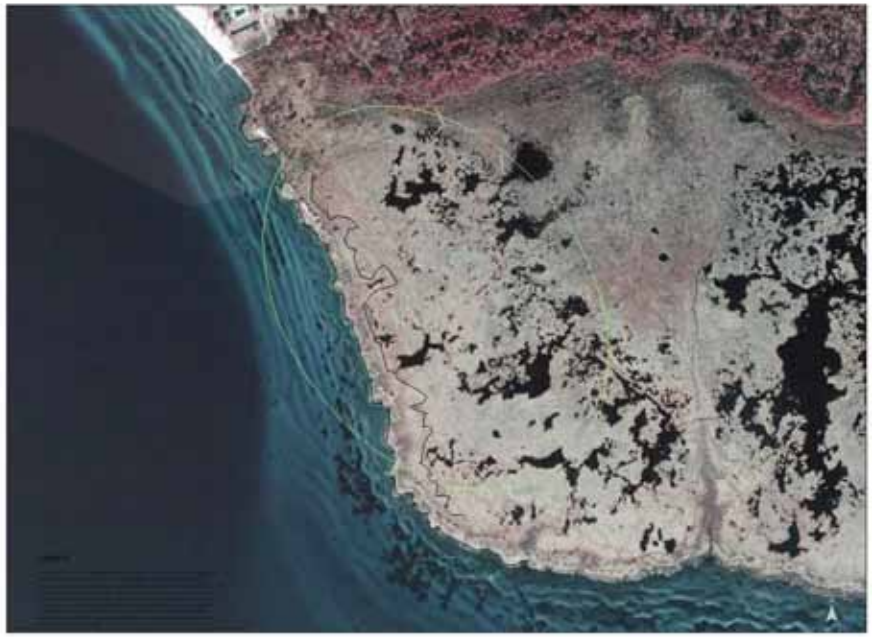
2007

North Pond (Big Branch Marsh NWR)

2004

2007

Fountainebleau State Park



2004

2007

R1-PO-05- Fritchie Marsh Terracing and Marsh Creation

PPL-20 Fritchie Marsh Terracing and Marsh Creation

Coast 2050 Strategy:
Coastwide Strategy – Dedicated Dredging, to Create, Restore, or Protect Wetlands

Project Location:
Region 1, Pontchartrain Basin, St. Tammany Parish, within the Fritchie Marsh watershed bordered by Hwy 90.

Problem:
Although the CWPPRA PO-06 project was completed in 2001 and resulted in improved hydrology and marsh restoration throughout the area, a significant portion of the Fritchie Marsh was lost due to Hurricane Katrina. This once stable land mass was severely damaged by the passing storm that in some locations marsh was stacked over nine feet high along the tree line. Now shallow open water areas dominate the landscape which reduces the effectiveness of the PO-06 project. Wetlands in the project vicinity are being lost at the rate of –1.31%/year based on USGS data from 1985 to 2006, which is largely due to the significant acreage lost during Hurricane Katrina. These marshes cannot recover without replacement of lost sediment, which is critical if the northshore marshes are to be sustained.

Goals:
Project goals include 1) creating 400 acres of intermediate marsh, 2) creating 130,000 linear feet of vegetated, earthen terraces, 3) reducing wave fetch and erosion of adjacent interior marshes, and 4) improving tidal connection and ingress/egress of marine organisms within the marsh creation area and south into the Rigolettes under Hwy 433.

Proposed Solution:
The project will construct approximately 400 acres of marsh platform, with 270 acres being created south of Salt Bayou in the southeastern corner of the Fritchie watershed, and 130 acres being created just north of Salt Bayou adjacent to the terrace field. Additionally, 130,000 linear feet of earthen terraces occupying 1,200 acres of open water will be constructed just north of Salt Bayou. Approximately 2 million cubic yards of material will be dredged from Lake Pontchartrain to build the marsh. In addition, culverts will be installed to improve drainage throughout the area, largely along the southern perimeter which is the area that has been artificially impounded by upland development and Hwy 433. The terraces are proposed with ten foot crowns and +3 ft elevation. The terraces will be planted immediately following compaction of the soil.

Project Benefits:
The project would benefit 1726 acres of brackish fresh marsh and open water. Approximately 449 net acres of intermediate marsh would be created/protected over the 20-year project life.

Project Costs:
The total fully funded cost for the project developed in PPL-19 is $ 25,000,000. The construction cost plus 25% contingency is $18,650,000.

Preparer(s) of Fact Sheet:
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cheryl.brodnax@noaa.gov

Fritchie Marsh Terracing and Marsh Creation Project (PPL19 Candidate)

- Marsh Creation *
- Culverts *
- Terraces *
- Extended Boundary

* denotes proposed features

0.8 0 0.8 Kilometers

0.8 0 0.8 Miles

Scale 1:45,000

USGS science for a changing world

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

Map ID: USGS-NWRC 2009-11-0287
Map Date: July 27, 2009

1998


Louisiana Department of Natural Resources
0
1mi

2004


Louisiana Department of Natural Resources
0
1mi

2004


Louisiana Department of Natural Resources
0
1mi

2005


Louisiana Department of Natural Resources
0
1mi

R1-PO-06-Proctor Point Shoreline Stabilization Project

R1 - P0 - 06

Pontchartrain Basin
Proctor Point Shoreline Stabilization Project
PPL-20 Project Nomination

Coast 2050 Strategies:
Coastwide Common Strategies: Maintenance of Lake Shoreline Integrity;
Region 1 regional ecosystem strategies: Maintain shoreline integrity of Lake Borgne.

State Plan Strategy: Maintain MRGO-Lake Borgne Landbridge

Project Location: Region 1, Pontchartrain Basin, St. Bernard Parish, along a portion of the southwest shoreline of Lake Borgne including Proctor Point.

Problem: Hurricane Katrina caused significant erosion on the end of the point and on both of its flanks. As a result several interior ponds have opened directly into Lake Borgne furthering the deterioration of exposed interior marshes. The nominated project area represents the only reach along the southwestern shoreline of Lake Borgne that has not been stabilized or planned for stabilization under various authorities (CIAP and USACE). Left unprotected, this shoreline will continue to erode and wetlands will continue to deteriorate within the Proctor Point landform. Deterioration of the point will result in a greater fetch across Lake Borgne in a northwest – southeast direction potentially resulting in higher waves affecting the eastern lake shoreline.

Goals: The project goals are to prevent continued shoreline retreat, to re-establish a sustainable shoreline, to prevent or reduce loss of emergent vegetation, and to complete protection for the last remaining unprotected reach along the landbridge separating Lake Borgne from the Mississippi River Gulf Outlet (MRGO).

Proposed Solution: Approximately 8.4 miles of continuous nearshore breakwaters would be constructed in a manner similar to nearby CWPPRA projects (PO-30, PO-32) in Lake Borgne. The breakwaters would be constructed in 2 ft of water and any material dredged for construction equipment flotation access would be placed between the structures and the existing shoreline.

Project Benefits: The project would benefit approximately 1,000 acres of brackish marsh. The project would prevent the expansion of Lake Borgne into the MRGO-Lake Borgne Landbridge and provide some storm and wave dampening protection.

Project Costs
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

Pontchartrain Basin
Proctor Point Shoreline Stabilization Project
PPL-20 Project Nomination

R1-PO-07-Kenner Effluent Discharge to Restore/Sustain Labranche Marsh and Wetlands

R1-P0-07

PPL19 PROJECT NOMINEE FACT SHEET
1/28/10

Project Name: Kenner Effluent Discharge To Restore/Sustain LaBranche Marsh and Wetlands

Coast 2050 Strategy: Region Strategy – Restore/sustain marshes by discharging secondarily-treated municipal effluent into the LaBranche wetlands to reduce impacts of saltwater intrusion and subsidence.

Project Location: Region 1, Pontchartrain Basin, St. Charles/City of Kenner, Jefferson Parish, the LaBranche wetlands located between the Bonne Carre Spillway and the Parish line canal between St. Charles and Jefferson Parish. The project area is bounded on the west by the Bonne Carre Spillway, on the east by the City of Kenner/Jefferson Parish Line Canal, on the north by Lake Pontchatrain, and on the south by Louisiana Highway 61.

Problem: The City of Kenner, Louisiana is evaluating options related to the discharge of secondarily-treated municipal effluent into the LaBranche wetlands, located west of Kenner, Louisiana.

Goals: Reduce the impacts of saltwater intrusion and subsidence on the severely degraded cypress swamps and freshwater marshes in the eastern portion of the LaBranche wetlands, while substantially increasing the sewerage treatment capacity of the Kenner wastewater treatment plant and decreasing the adverse effects of sanitary sewer overflows during wet weather events.

Proposed Solution: In 1983, the City built a third wastewater treatment plant (WWTP3) to consolidate the discharge from their existing two treatment facilities and re-route flow to WWTP3. Recently, consolidation was completed, but the City now must address how to dispose of sanitary sewer overflow during wet weather events and how to further reduce nutrients in treated effluent. Discharge into the LaBranche wetlands is one solution to this problem that is being considered. Wetland assimilation will provide the most economical approach for the City of Kenner to meet its water quality objectives while enhancing the restoration of coastal wetland marsh.

Preliminary Project Benefits: In addition to providing water quality improvement, the LaBranche wetlands will be greatly enhanced by the addition of treated municipal effluent. These wetlands are currently in a severely degraded state and the addition of nutrients and freshwater via treated effluent will lead to enhanced hurricane protection, in addition to the future potential for wetland mitigation banking and carbon sequestration banking.

Identification of Potential Issues: No issues identified at this time.

Preliminary Construction Costs: $4 million for 17 MGD wastewater treatment

Preparers of Fact Sheet: Prat P. Reddy, P.E , Deputy C.A.O., City of Kenner
Consultants: David Dupre, Meyer Engineers Ltd. (504-885-9892)
John Day, PhD, Comite Resources, Inc. (225-654-8847)
Rachael Hunter, PhD, Comite Resources, Inc. (225-439-3931)

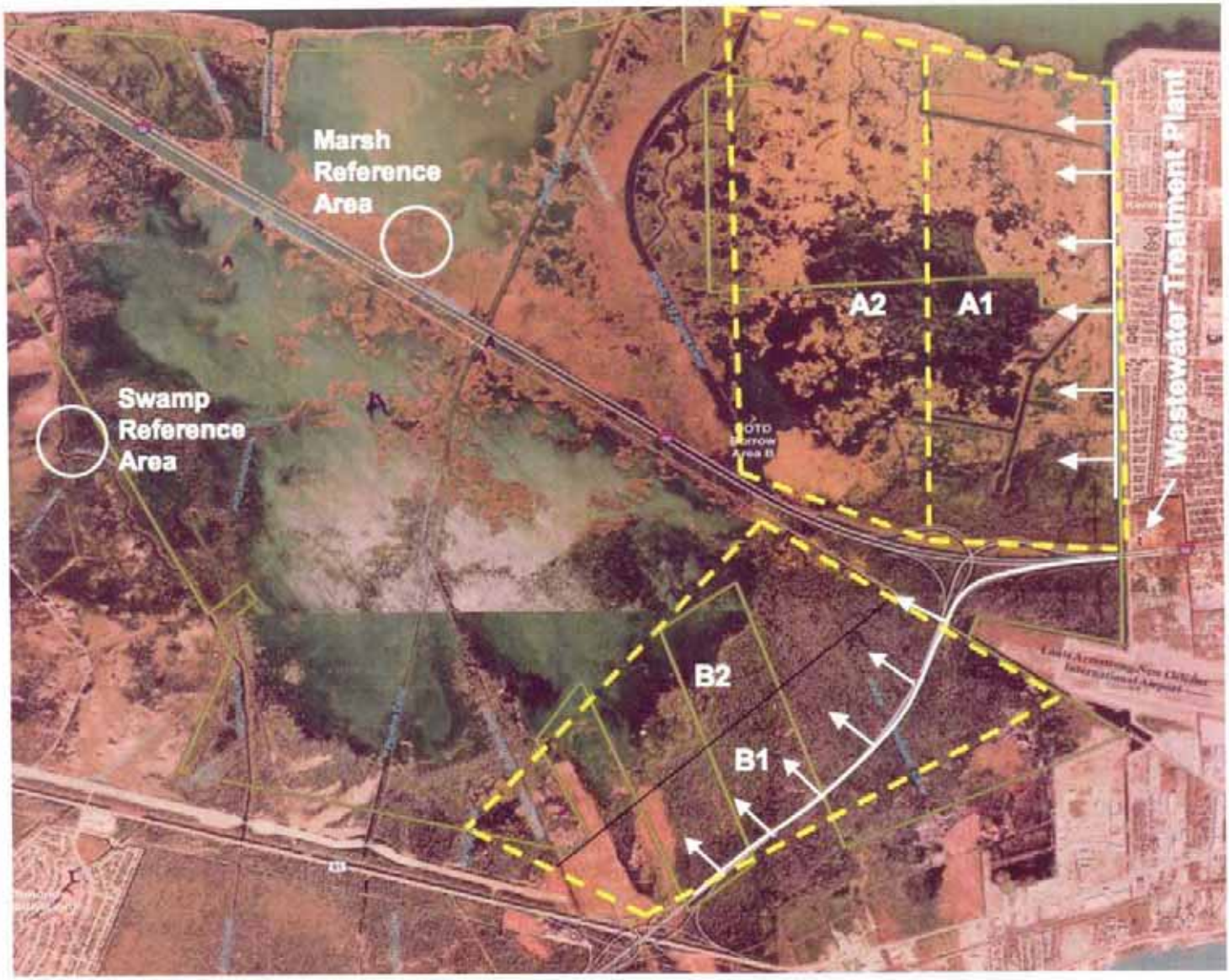
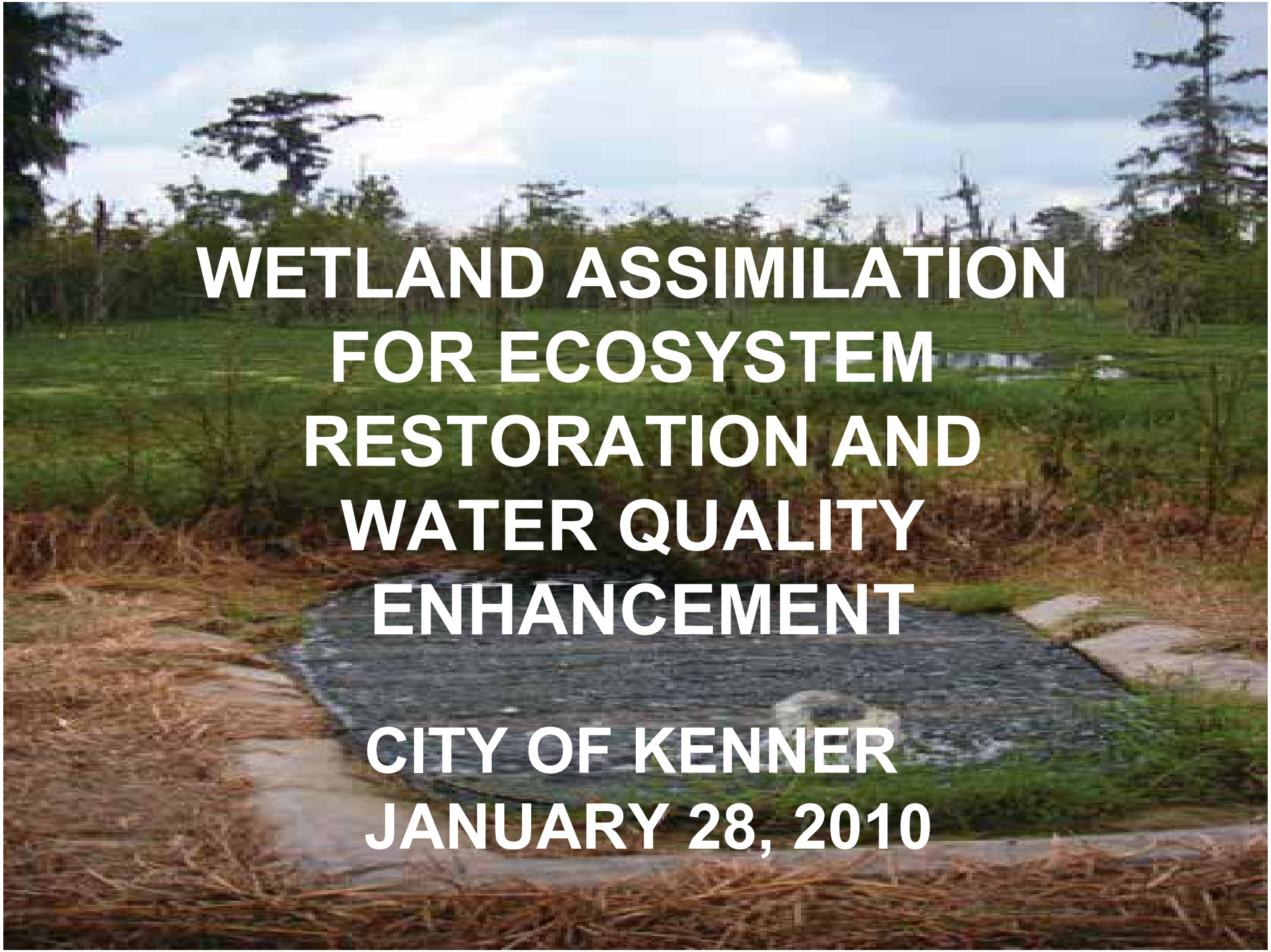


Figure 1. Location of proposed treated effluent discharge (shown by arrows) and wetland area where effluent will be discharged (shown in dotted yellow lines).


WETLAND ASSIMILATION
FOR ECOSYSTEM
RESTORATION AND
WATER QUALITY
ENHANCEMENT
CITY OF KENNER
JANUARY 28, 2010

Project Objectives

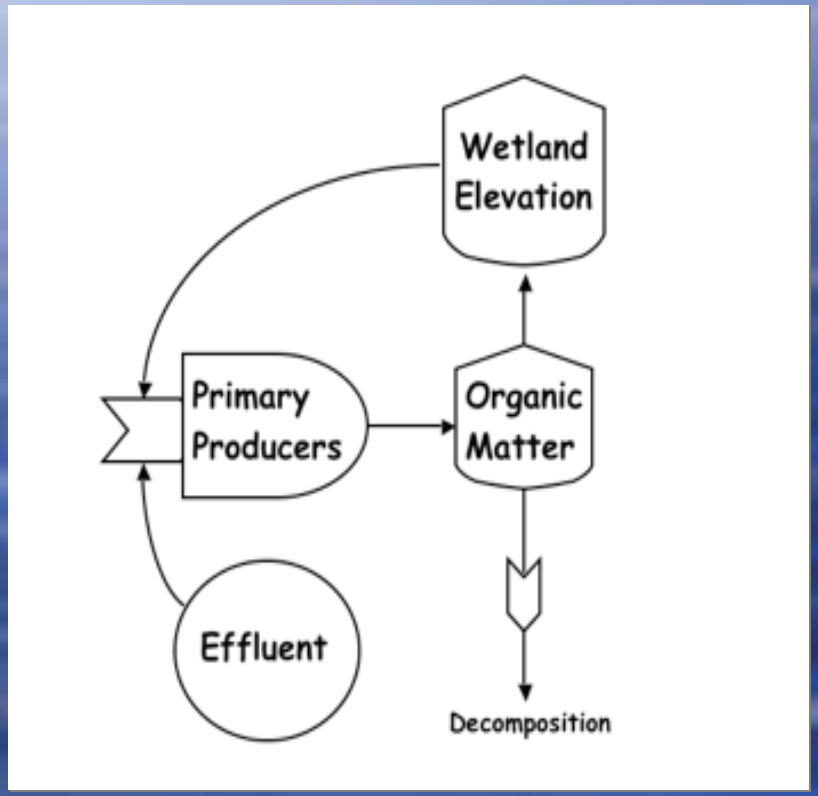
- Enhance LaBranche wetlands through the addition of fresh water and nutrients
- Reduce nutrients in secondarily-treated effluent
- Disposal of sanitary sewer overflow during wet weather events
- Lower effluent pumping costs by discharging into wetlands rather than the Mississippi River
- Meet more stringent nutrient criteria for effluent discharge into water bodies


Lake Pontchartrain
Bonnet
Carre
Spillway
Parish
Line
Canal
I-10
LaBranche
Wetlands
Kenner
Wastewater
Treatment
Plant
Norco
US 61
US 310
New Sarpy

Municipalities using Wetland Assimilation

Benefits of Wetland Assimilation

- Addition of nutrients and freshwater in treated effluent will enhance growth and accretion
- Improvement of degraded habitat
- Future potential for wetland mitigation banking and carbon sequestration banking
- Enhance hurricane protection by improving degraded wetlands

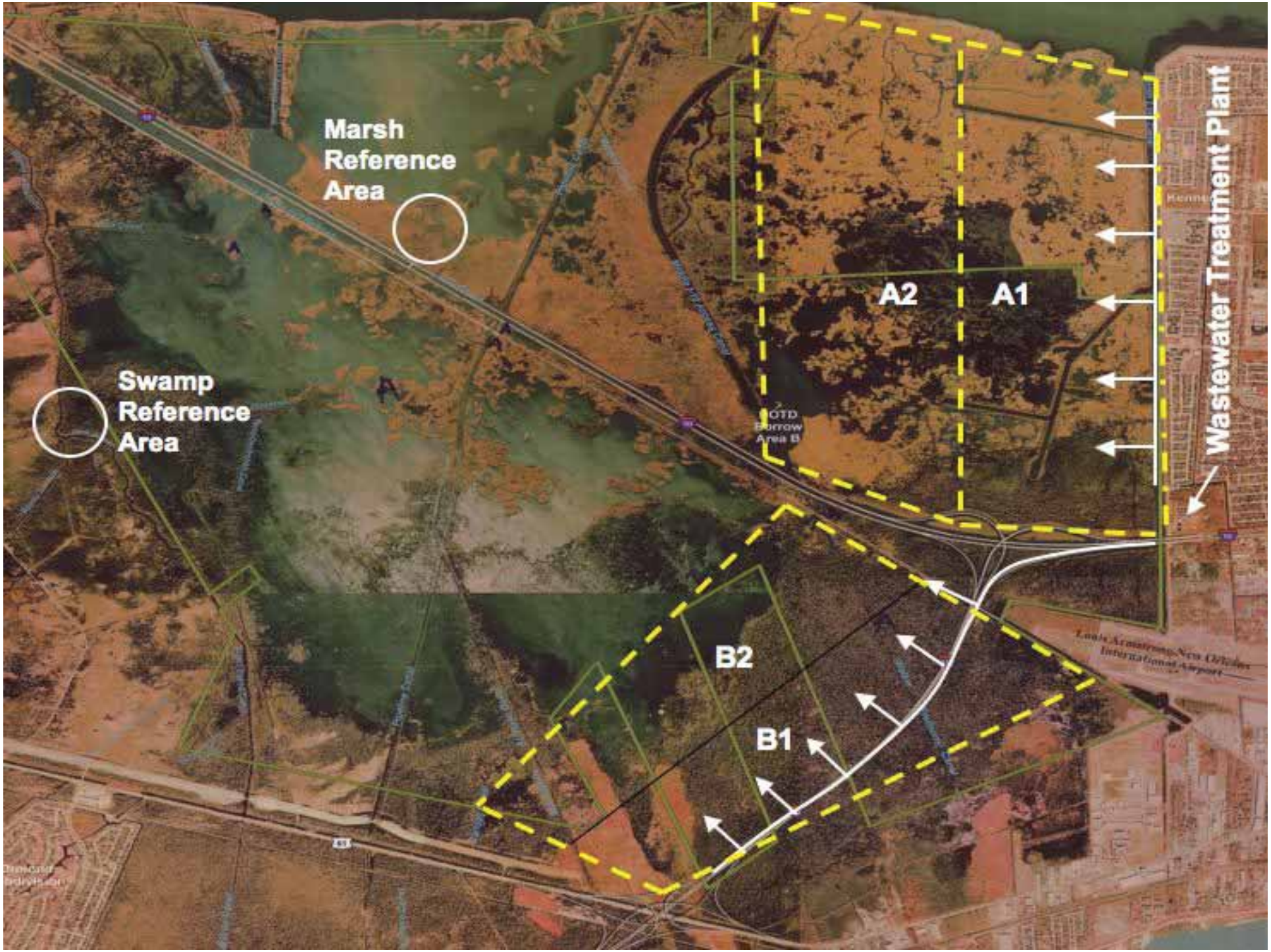


Feasibility Study

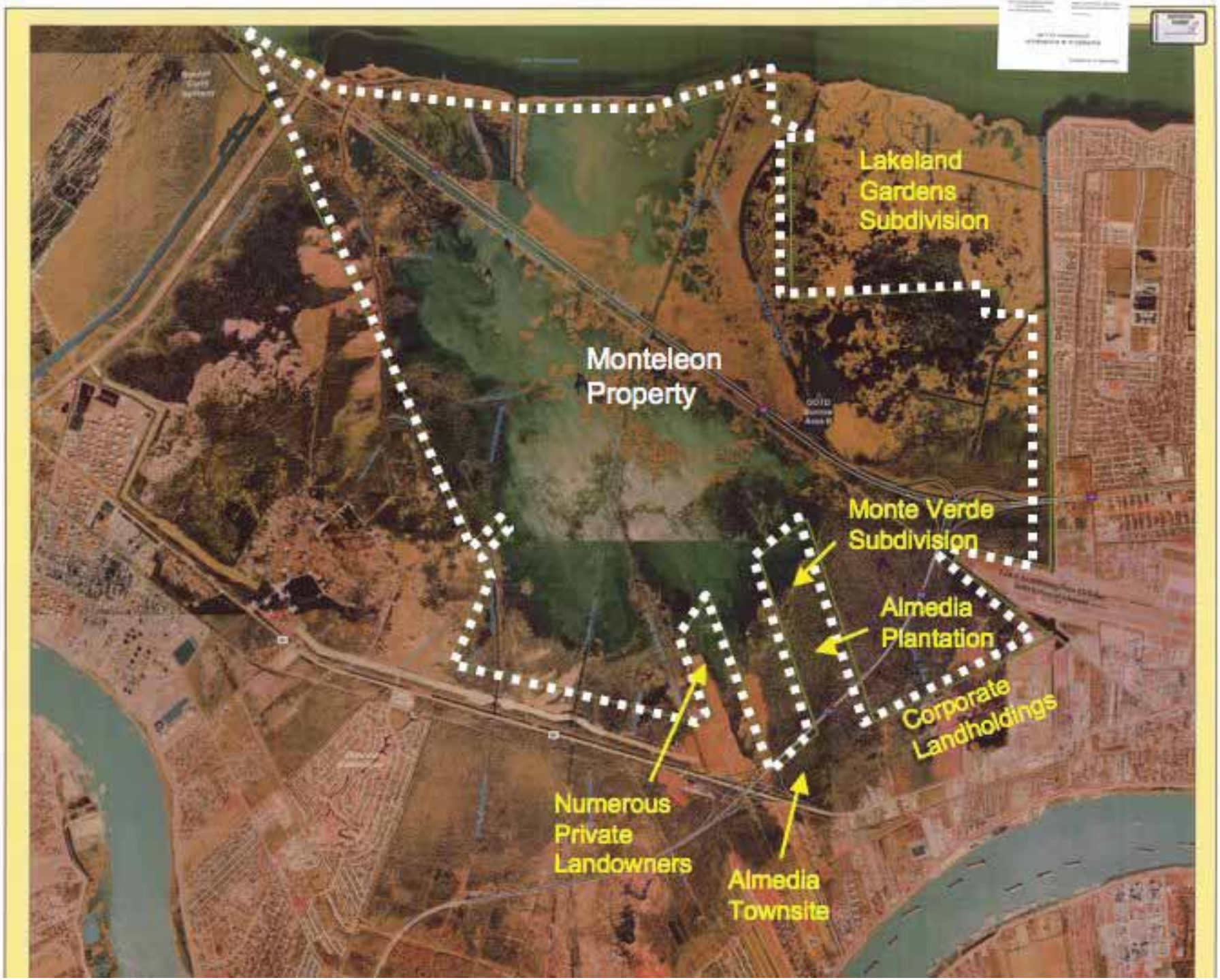
- Completed in April 2009
- Evaluated feasibility of discharging secondarily-treated municipal effluent into an area of the LaBranche wetlands (vegetation, loading rates, distribution system, regulatory, land ownership, funding)
- Comite Resources, Inc. determined that discharge of freshwater would greatly benefit wetlands
- Currently collecting data for an Ecological Baseline Study

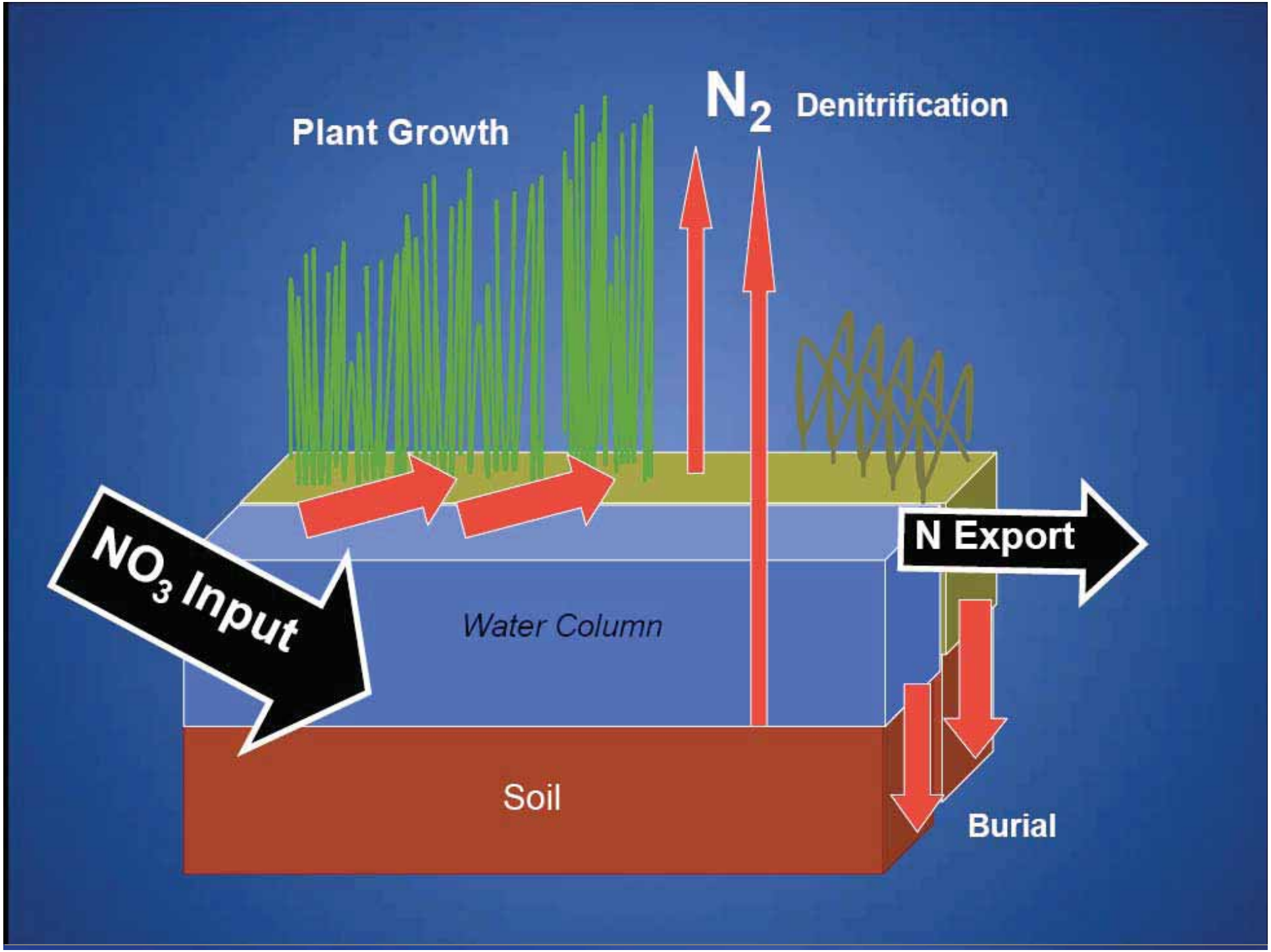
Loading Rate Analysis

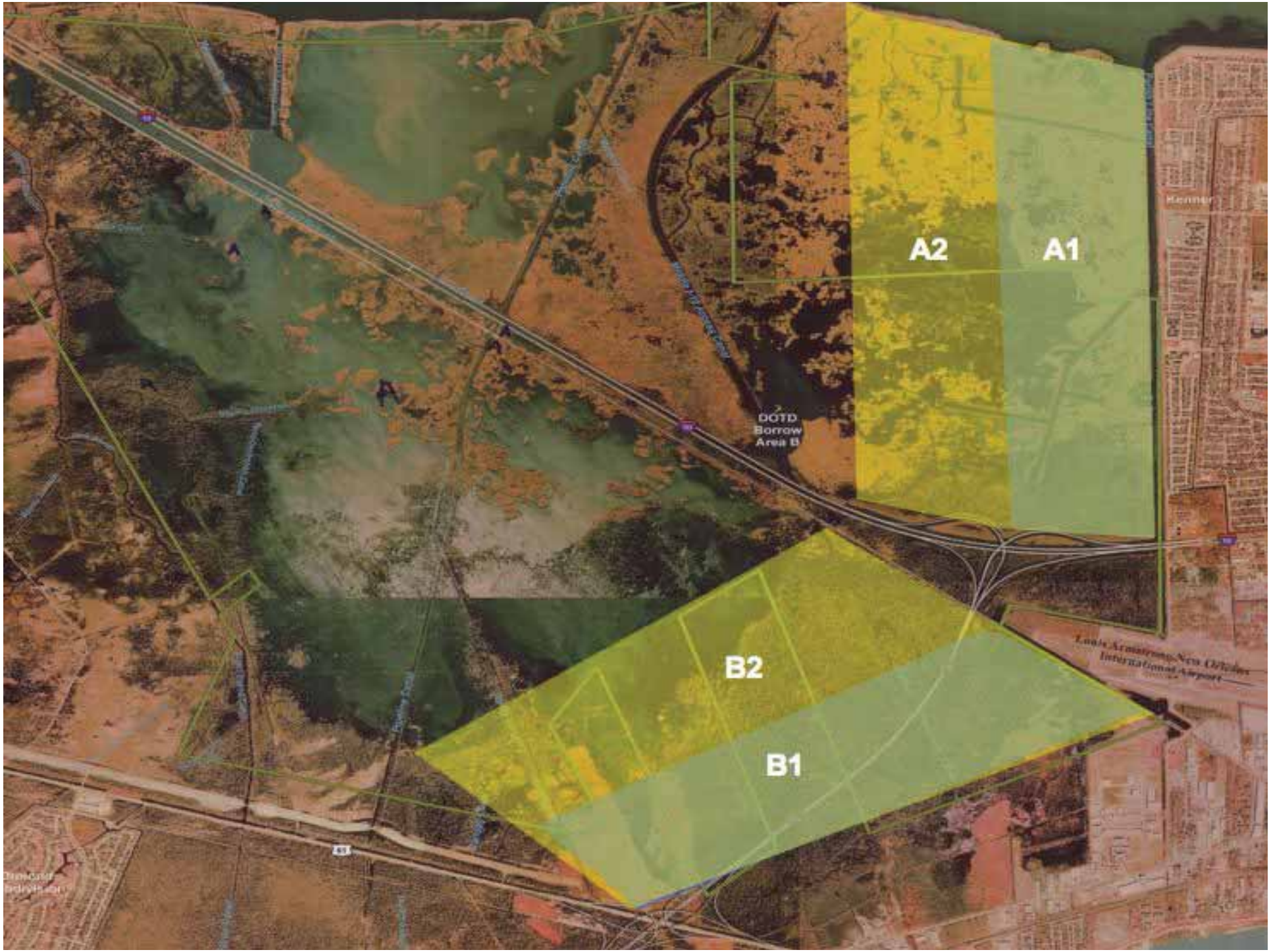
	1140 ha (2817 ac)		2240 ha (5535 ac)	
	TN	**TP**	**TN**	**TP**
Discharge (MGD)	11	11	11	11
Nutrient Conc. (mg/L)	10	3	10	3
Loading Rate ($g/m^2/yr$)	13.2	4.0	6.8	2.0
Predicted Reduction	50-70%	40-60%	70-90%	60-80%
Discharge (MGD)	17.5	17.5	17.5	17.5
Nutrient Conc. (mg/L)	10	3	10	3
Loading Rate ($g/m^2/yr$)	21.2	6.4	10.8	3.2
Predicted Reduction	45-65%	38-58%	55-75%	45-65%


Marsh
Reference
Area
Swamp
Reference
Area
A2
A1
B2
B1
Wastewater Treatment Plant

Questions?


Lakeland
Gardens
Subdivision
Monteleon
Property
Monte Verde
Subdivision
Almedia
Plantation
Corporate
Landholdings
Numerous
Private
Landowners
Almedia
Townsite


Plant Growth
N_2 Denitrification
NO_3 Input
N Export
Water Column
Soil
Burial


A2
A1
DOTD
Borrow
Area B
B2
B1
Kenner
Louis Armstrong New Orleans
International Airport

LaBranche Wetlands

- 20,000 acres of mostly degraded cypress swamp, intermediate marsh, and shallow open water
- Degradation caused by hydrologic modifications that led to saltwater intrusion, subsidence, & lack of freshwater and sediment input

R1-PO-08-Northern Chandeleur Island Restoration

PPL20 PROJECT NOMINEE FACT SHEET
January, 28 2010

Project Name:
Northern Chandeleur Island Restoration

Coast 2050 Strategy:
Dedicated Dredging for Wetland Creation (Coastwide Common Strategy); Maintain Chandeleur Islands if necessary (Region 1 Strategy 12); and Vegetative Plantings (Chandeleur mapping unit strategy 57)

Project Location:
Region 1, Chandeleur Islands, St. Bernard Parish, North of Redfish Point and South of Hewes Point

Problem:
The Chandeleur Islands have played a historical role in attenuating mainland storm impacts, regulating estuarine gradient between the Sound and Gulf of Mexico, supporting the recreation and tourism industry, and providing diverse fishery assemblages and wildlife habitat unique to coastal Louisiana. A net loss of barrier island sand to deepwater down-drift sinks has resulted in a reduction of total island area from 17.2 mi^2 in 1855 to 1.8 mi^2 in 2005. Increased hurricane intensity and frequency in the northern Gulf of Mexico during the past decade has accelerated this land loss trend, forcing the Chandeleur Islands into a mode of rapid dissection and transgressive submergence. Recent island area reduction rates are estimated at about 250 acres/year (Fearnley et al 2009). Based on extrapolated historical land loss and shoreface retreat rates, the islands will be completely converted to a system of submerged shoals within approximately 25 years (Thompson et al, 2009).

Goals:
- Increase longevity of existing and most stable landmass through the re-introduction of sand
- Restore/create beach fill landward to minimize offshore sediment losses
- Restore/create back barrier platform to provide structural framework for overwash
- Restore/create barrier island beach and bay inter-tidal habitat
- Reduce projected losses of seagrass habitat unique to Louisiana

Proposed Solutions:
In order to address the sand deprived problem observed along the Chandeleur Islands, the project location and orientation (north-south) was located on the most stable area of the island based on longshore transport rates and structural underlying (former spit) foundation. This information was obtained from data collected by the University of New Orleans and provided in the a report to the Corps of Engineers in support of MRGO ecosystem restoration efforts (Thompson, 2009).

The design was selected to minimize offshore losses from the constructed beach fill and overwash losses to the constructed back barrier platform. This information was obtained from the sediment budget map and island migration data input extrapolated from the above referenced report. The beach fill template is strategically designed to construct a 250 ft wide and landward supratidal berm to a +4.0 NAVD elevation to restore15,150 ft of gulf shoreline. The back barrier platform was designed to construct a 1200 to 1400 ft wide platform to an inter-tidal elevation of +2.0 NAVD to provide a low but wide roll over platform during over wash events in order to maximize the longevity of the sand being re-introduced into the barrier island system.

An estimated 500 million cubic yards of sand exists at the northern flank of the Chandeleur Island chain at Hewes Point that is approximately 8 miles distance from the project. Recent core sampling from University of New Orleans has indentified the sand to be of high quality and coarse grain suitable for barrier island restoration. The project proposes to mine this sand source from Hewes Point in a semi-confined discharge to construct the beach and back barrier platform template. The estimated cost

(mobilization and fill placement) to deliver 2.4 million cubic yards of material "in-place" from Hewe's Point to the project area is $30 million. The unit cost estimate was obtained from the MRGO report and tailored to fill quantity of the proposed project and the distance from Hewe's Point to the project area.

Preliminary Project Benefits:

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

In total, the project will benefit 452 acres of barrier island habitat. The project will create/restore 365 acres of back barrier platform. The project will also benefit about 87 acres of Gulf shoreline through the restoration of beach (15,150 ft in length, 250' created landward at +4.0 ft NAVD).

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

The total net benefit will be 222 acres remaining at TY20 (based from WVA assumptions in the MRGO report and scaled to this project size).

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%).

It is anticipated that the loss rate reduction would be 50-75% throughout the area of direct benefits over the project life. based from WVA assumptions in the MRGO report and scaled to this project size.

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

The project would maintain barrier shoreline landscape features.

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

No.

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

No.

Identification of Potential Issues:

U.S. Fish and Wildlife wilderness designation

Preliminary Construction Costs:

The estimated construction costs including 25% contingency is $37 million.

Preparer(s) of Fact Sheet:

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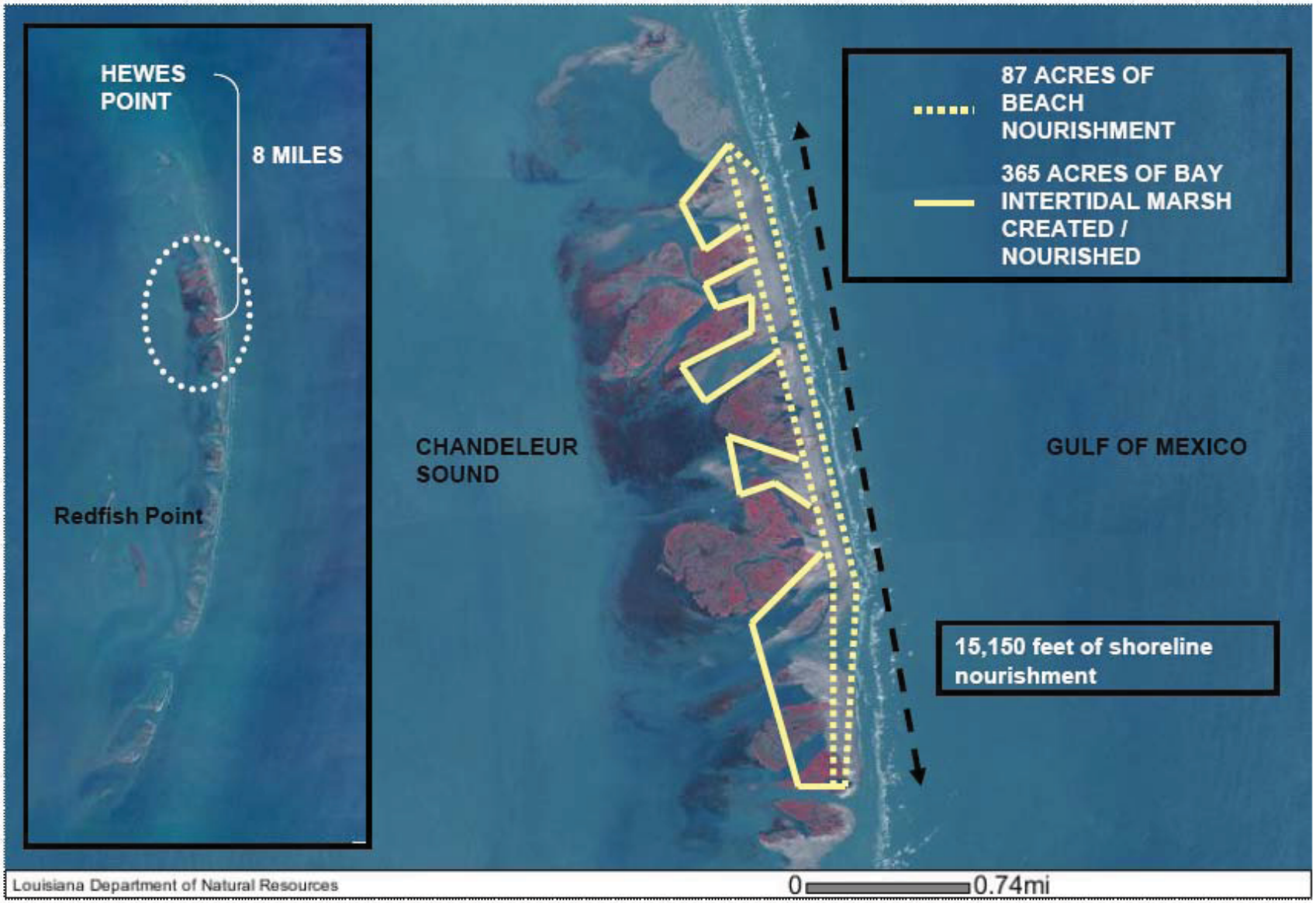
Rachel Sweeney, NOAA, 225.389.0508 ext 206, Rachel.Sweeney@noaa.gov

References

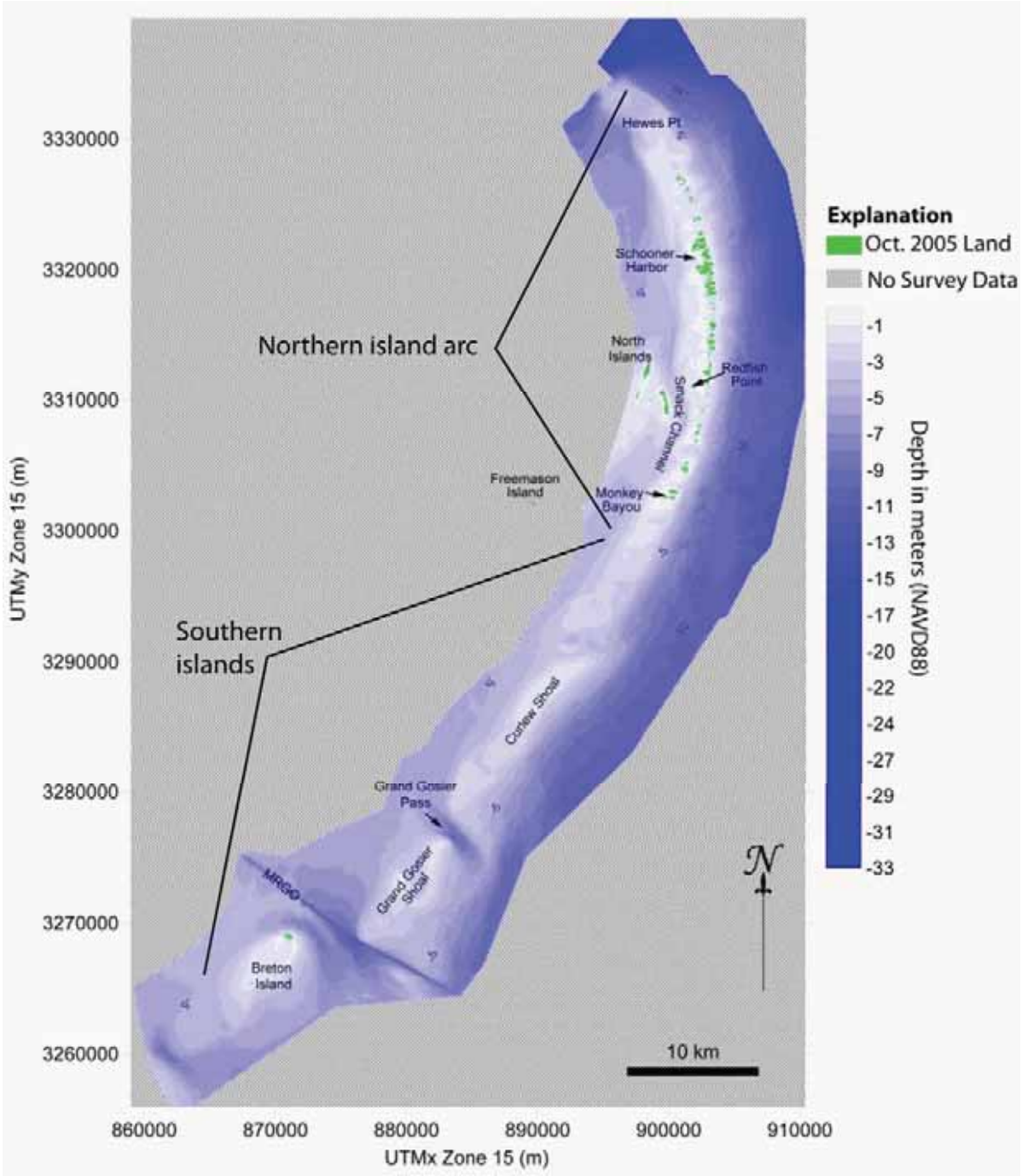
Fearnley, S.M., Miner, M., Kulp, M, Bohling, C., and Penland, S. Hurricane impact and recovery shoreline change analysis of the Chandeleur Islands, Louisiana, USA: 1855 to 2005, Geo-Mar Lett (2009) 29:455–466

Thompson, G., Miner, M. Wycklendt, A., and Rees, M., 2009. *MRGO Ecosystem Restoration Feasibility Study – Chandeleur and Breton Islands*. Boca Rotan, Florida: Coastal Planning & Engineering, Inc. 96p. (Report prepared for USACE under contract to URS).

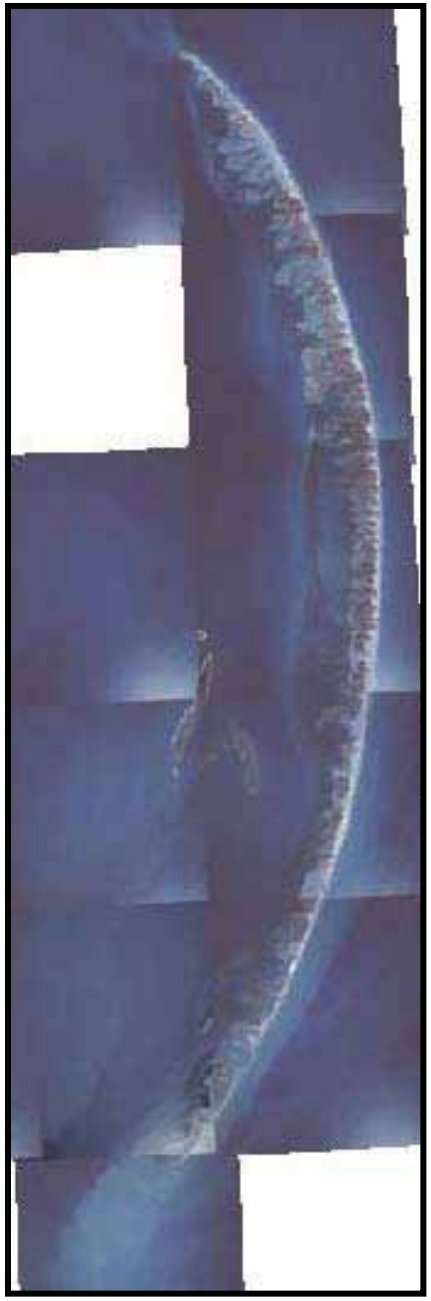
Northern Chandeleur Project Area



PPL 20
Northern Chandeleur Island Restoration



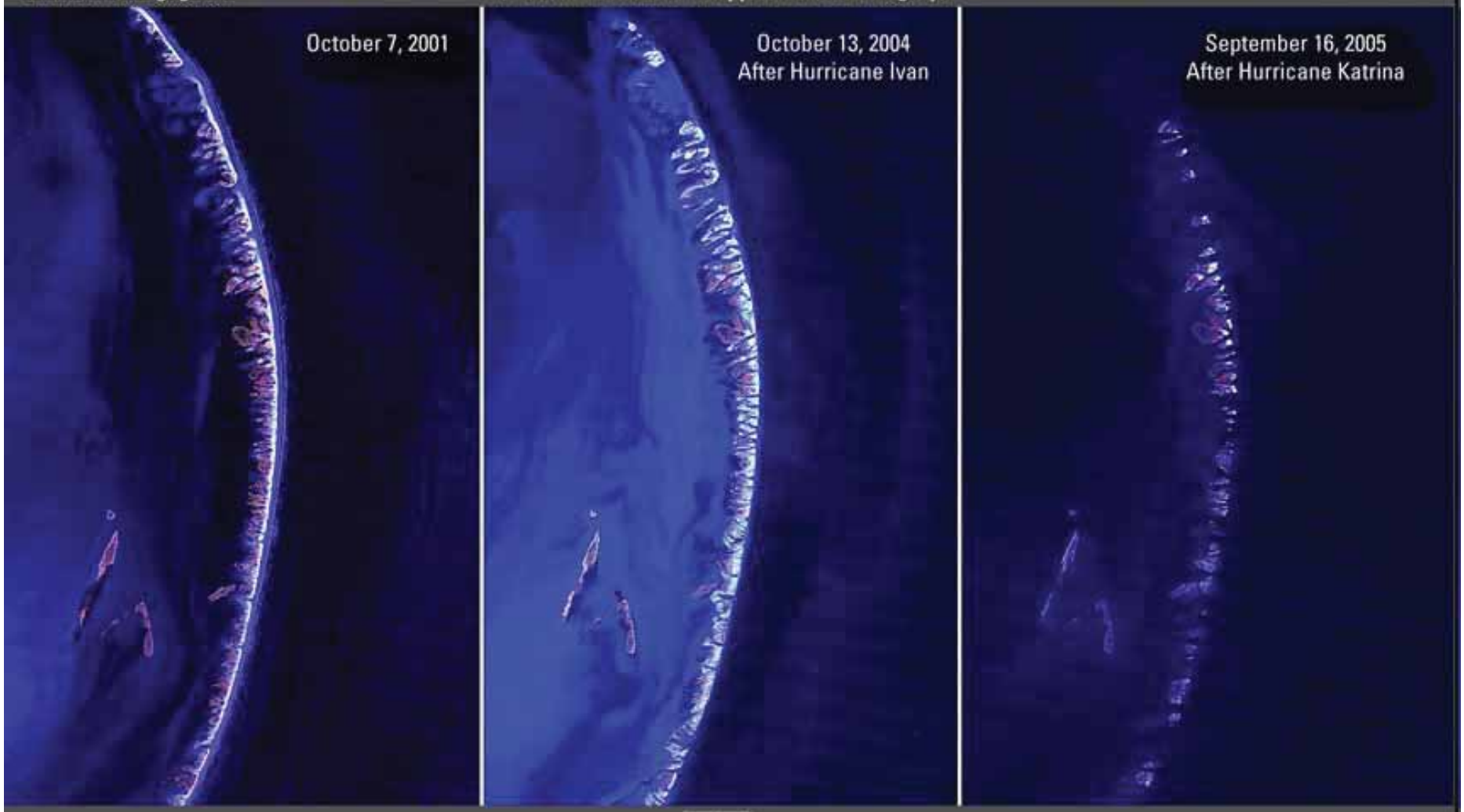
2007 bathymetric map of the southern Chandeleur Islands. From Miner et al. (2009c).



SONRIS 1998 2004 2008

USGS
science for a changing world

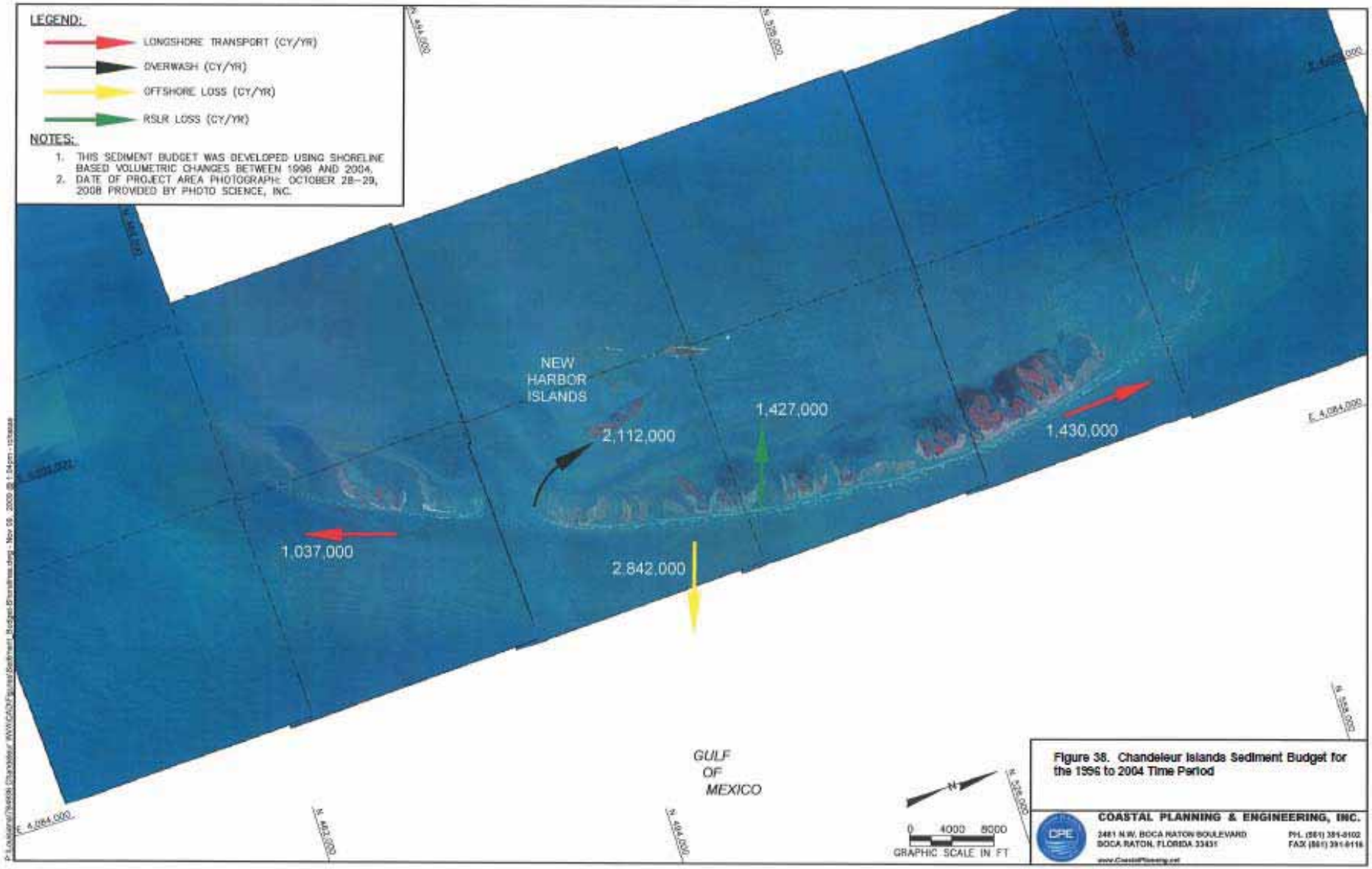
Chandeleur Islands, Louisiana
Before and After Hurricanes Katrina and Rita
(Landsat 5 Thematic Mapper Satellite Imagery)



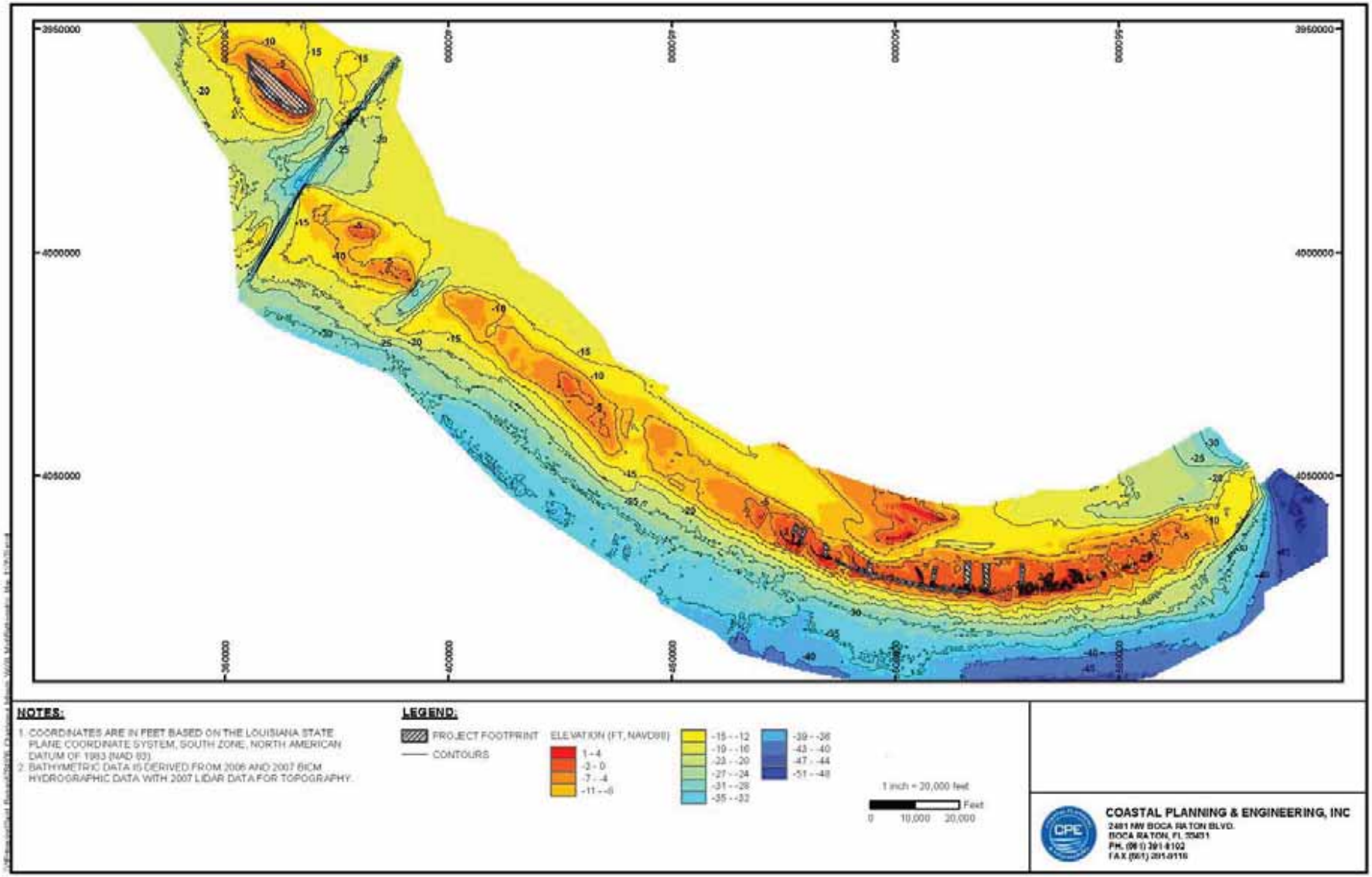
Data Series 281

U.S. Department of the Interior
U.S. Geological Survey

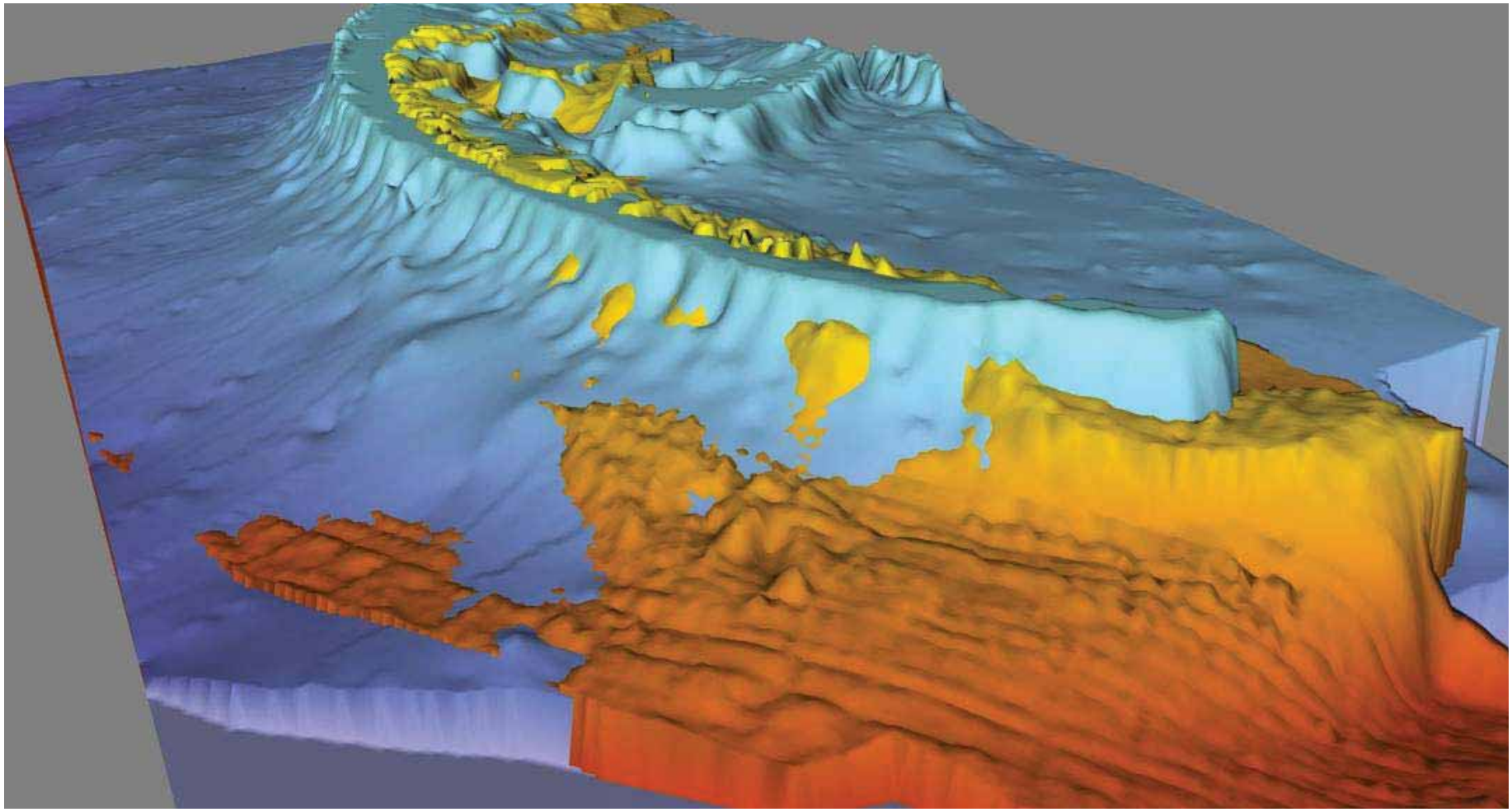
Image Source:
Landsat 5 Thematic Mapper Satellite Imagery is provided by the USGS Center for Earth Resources Observation and Science. Bands 4 (near-ir), 5 (mid-ir), and 3 (visible red) are displayed.



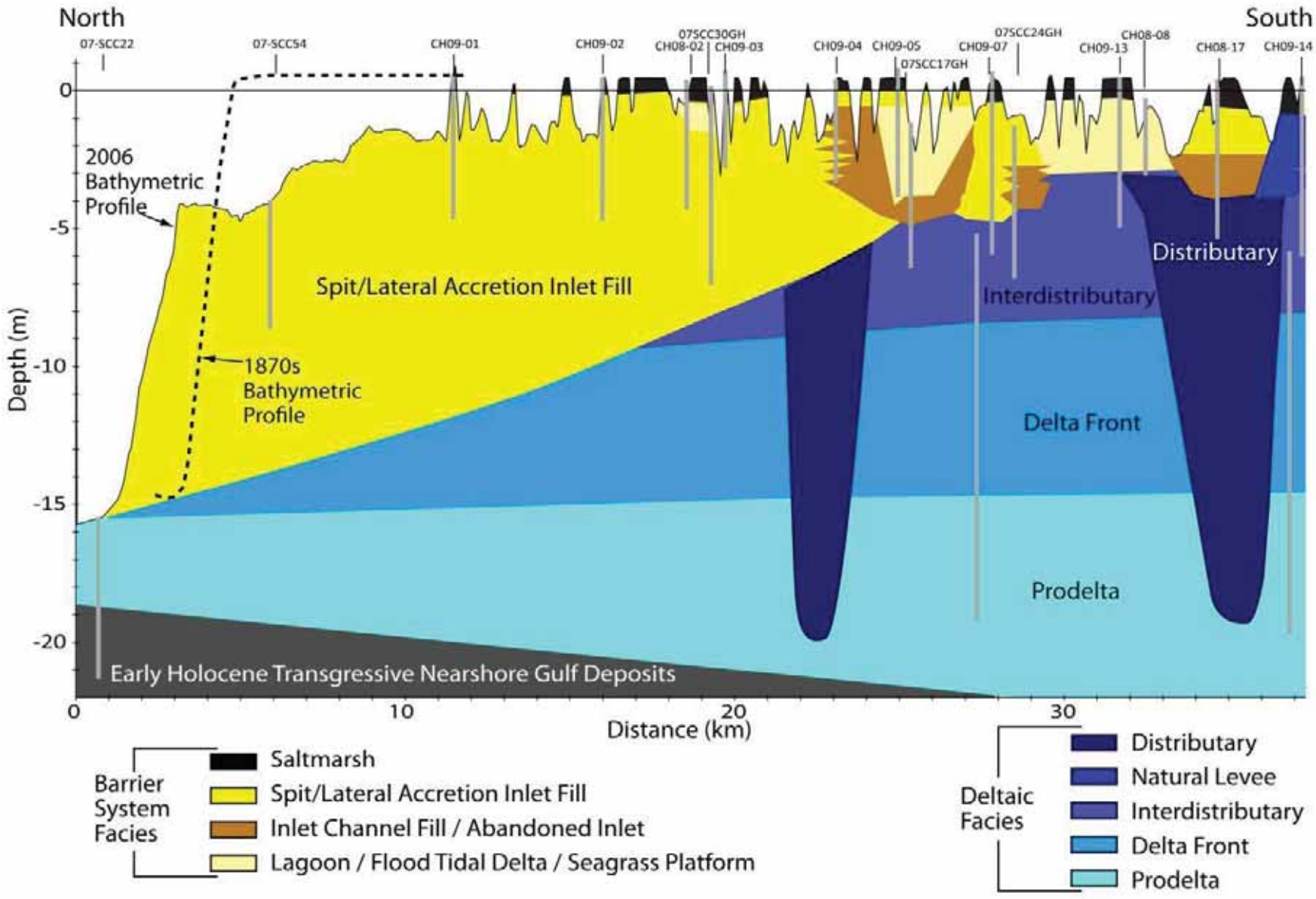
Sediment Budget (CPE, MRGO Report 2009)



Compiled from 2006 LIDAR data and 2006/2007 BICM data (CPE, MRGO Report 2009)



Digital Elevation Model of bathymetric surfaces for two time periods (1870's – blue; and 2006 - red). Data from M. Miner et al. (2009)

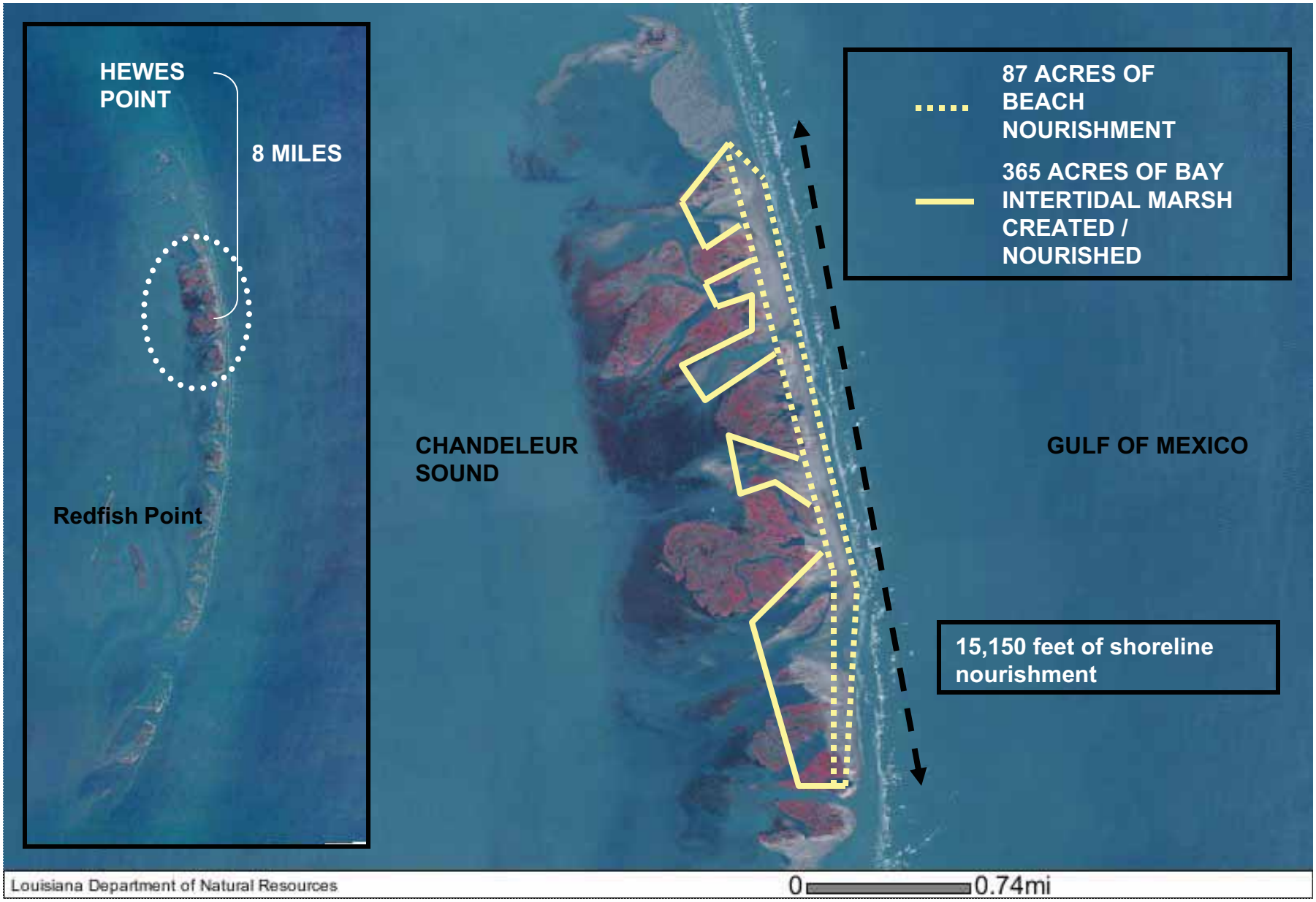


Geologic cross-section trending along the northern Chandeleur island arc. Profiles from Miner et. Al 2009

Project Goals:

- Increase longevity of existing and most stable landmass through the re-introduction of sand
- Restore/create beach fill landward to minimize offshore sediment losses
- Restore/create back barrier platform to provide structural framework for overwash
- Restore/create barrier island beach and bay inter-tidal habitat
- Reduce projected losses of seagrass habitat unique to Louisiana

Northern Chandeleur Project Area



Project Features/Benefits:

- **15,150** linear ft of shoreline
- **87** acres constructed beach fill
- **365** acres of constructed back barrier platform
- Vegetative plantings

TY20 (estimates)	***Low** (acres)	***High** (acres)
Supra-tidal:	0	0
Gulf intertidal:	0	6
Bay intertidal:	167	277
SAV:	*2344*	*3829*
	net:	***222***

**These estimates Low (FWOP) and High (FWP) are based on assumptions from the WVA information provided in the MRGO report.*

Questions??


Coastline of Chandeleur Islands, Louisiana
Photograph by Annie Griffiths Belt
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R1-PO-09-Northwest Lake Pontchartrain Shoreline Protection

PPL19 PROJECT NOMINEE FACT SHEET
January 28, 2010

Project Name
Northwest Lake Pontchartrain Shoreline Protection

***Coast 2050* Strategy**
- Mapping Unit Strategy – Maintain shoreline integrity of Lake Pontchartrain by creating wave breaks and fisheries habitat with rubble.
- Mapping Unit Strategy – Maintain shoreline integrity of Lake Pontchartrain.
- Regional – Beneficial use of dredge material.
- Regional – Maintain shoreline integrity of Lake Pontchartrain.
- Coastwide – Maintenance of bay and lake shoreline integrity.

Project Location
Region 1, Lake Pontchartrain Basin, along the Northwest shoreline between Stinking Bayou and the Tchefuncta River.

Problem
High wave energy, sea level rise and subsidence levels are impacting the wetland shorelines and inland marshes of Lake Pontchartrain. Erosion rates have been measured to be 18 feet of shoreline loss per year.

Proposed Project Feature
- Foreshore rock (five to seven miles) dike along Lake Pontchartrain in critical areas with high erosion rates. The dike will be designed to allow fisheries access to the marshes behind the shoreline protection feature. Any material dredged for access will be beneficially used to create marsh behind the dike.

Goals
- Maintain the shoreline of Lake Pontchartrain by stopping shoreline erosion.
- Create marsh along the rim of Lake Pontchartrain.
- Protect inland wetlands along the northwest shoreline of Lake Pontchartrain.

Preliminary Project Benefits
Shoreline protection features would maintain structural components of the coastal ecosystem in the Pontchartrain Basin. Project benefits will include marsh creation acres and acres protected due to the shoreline protection measures.

Identification of Potential Issues
No known issues at this time.

Preliminary Construction Costs
The construction cost $10 - $15 Million.

Preparers of Fact Sheet
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PPL 20
Northwest Lake Pontchartrain Shoreline Protection

R1-PO-10-Irish Bayou and Brazilier Island Marsh Creation

R1-PO-10

PPL20 PROJECT NOMINEE FACT SHEET
January 28, 2010

Project Name:
Irish Bayou and Brazilier Island Marsh Creation

Coast 2050 Strategy:
Coastwide Strategy – Dedicated Dredging, to Create, Restore, or Protect Wetlands
Coastwide Strategy – Maintenance of Gulf, Bay, and Lake Shoreline Integrity

Project Location:
Region 1, Pontchartrain Basin, along the southeastern shoreline of Lake Pontchartrain on both sides of Chef Menteur Pass in Orleans Parish.

Problem:
Hurricane Katrina and subsequent high water events with storm passage has eroded and breached the Lake Pontchartain shoreline and induced interior wetland loss in the vicinity of Irish Bayou, Bayou Chevee, and Brazilier Island. Currently only a portion of the lakeshore is protected by a rock dike (PPL 5, PO-22) with additional reaches planned for protection with materials demolished from the Twin Spans. However, the portion from I-10 south to the existing PO-22 rock remains unaddressed. The shoreline erosion rate measured from 1988 to 2005 for a portion of the unaddressed reach is -2 ft/yr. The interior loss from 1988 to 2006 is -0.75%/yr.

Goals:
The project goal is to create between 375 to 400 of brackish marsh.

Proposed Solutions:
Increment 1
Approximately 375 to 400 acres of marsh would be created via confined disposal of sediment dredged from Lake Pontchartrain. Sediment would be placed in a manner to achieve a settled target elevation of +1.5 ft NAVD 88. Containment dikes would be degraded and/or breached no later than three years after construction. The borrow area would be designed in a manner to avoid wave refraction/diffraction impacts on the existing shoreline, adverse impacts on dissolved oxygen, and adverse impacts on critical habitat for gulf sturgeon. Project specific monitoring of dissolved oxygen in the borrow site will be included.

Increment 2
To evaluate addressing those areas not presently or planned for shoreline protection, a rock foreshore dike could be constructed in two segments. Segment one would be approximately 4,980 lf extending south of I-10 to Irish Bayou. Segment two would be approximately 12,880 lf extending from Irish Bayou to the existing PO-22 rock. There would be fish dips no less than every 1,000 feet with a top width of 25 feet and a crest elevation equal to the pre-project water depth including rock for scour protection.

Preliminary Project Benefits:
The following questions should be addressed: 1) Approximately 417 acres would be in the project area and therefore be benefited both directly and indirectly. 2) Approximately 371 net acres of wetlands would be created over the 20-year project life for Increment 1 and 16.4 net

acres for increment 2. 3) The anticipated loss rate reduction throughout the area of direct benefits over the project life is 50-74% for the created marsh and 75-100% for the protected marsh. 4) The project features restore the structural integrity of a portion of Irish Bayou and Little Cedar Bayous. 5) There is minor net positive impact on critical infrastructure (Highway 11). 6) The project would have synergy with the PO-22 and soon to be constructed Twin Spans shoreline protection projects.

Identification of Potential Issues:
Dredging of areas designated as gulf sturgeon critical habitat is the only known potential issue at this time. Adequate resolution is expected to be possible through consultation with NMFS, Protected Resources Division.

Preliminary Construction Costs:
Increment 1
The construction cost plus 25% contingency would be approximately $18 M for 371 net acres.

Increment 2
The construction cost plus 25% contingency would be approximately $6.4 M for 16.4 net acres.

Preparer(s) of Fact Sheet:
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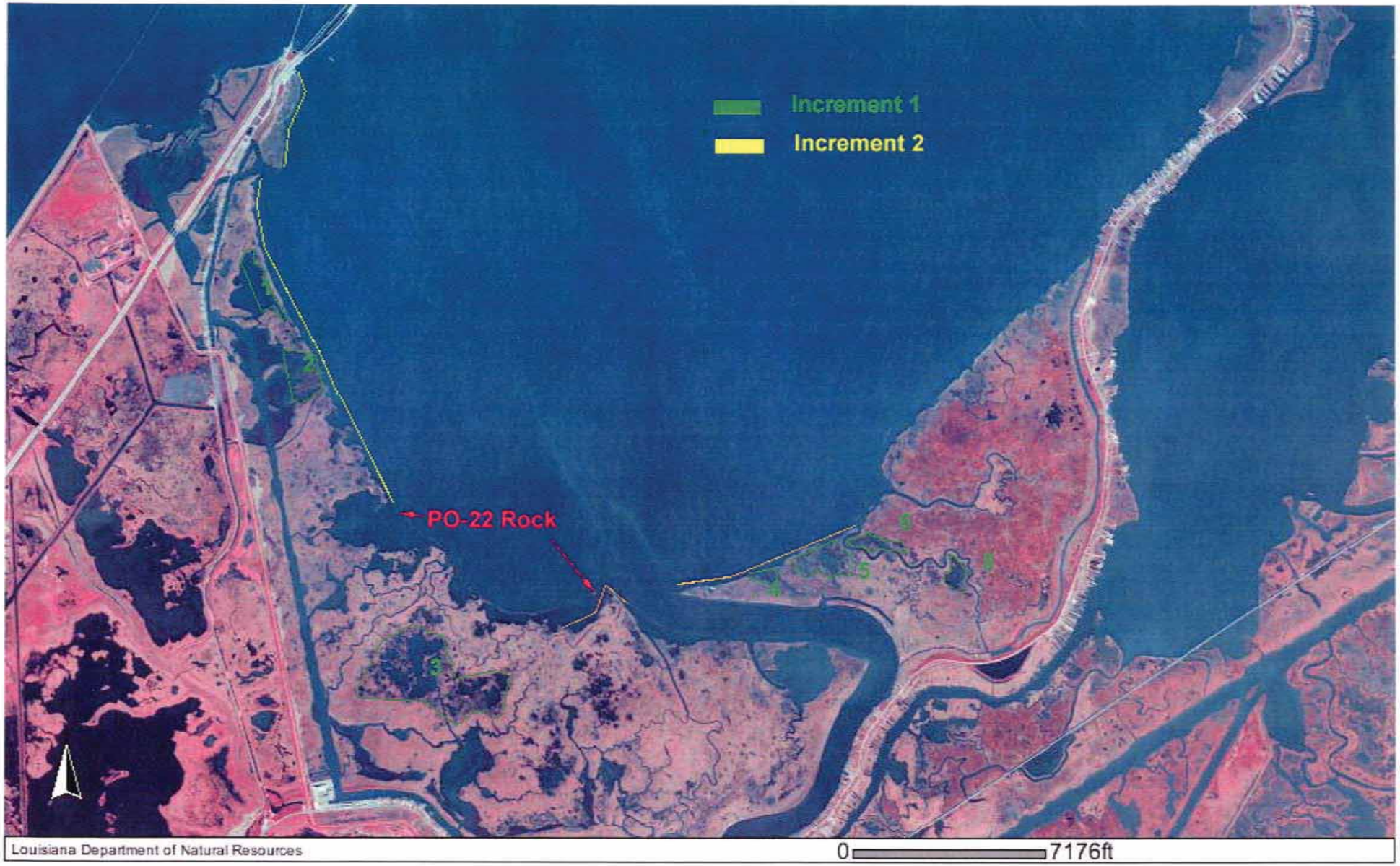
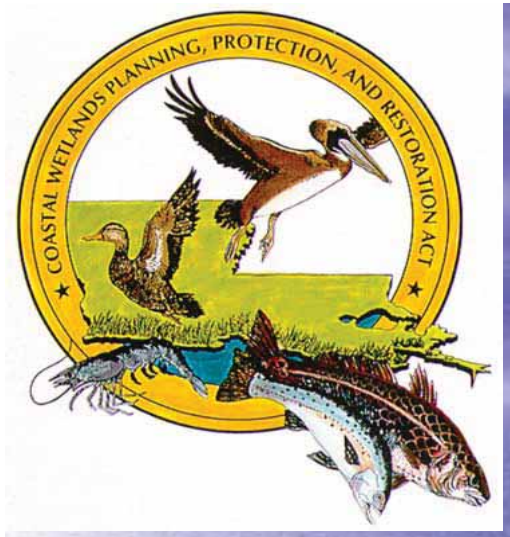
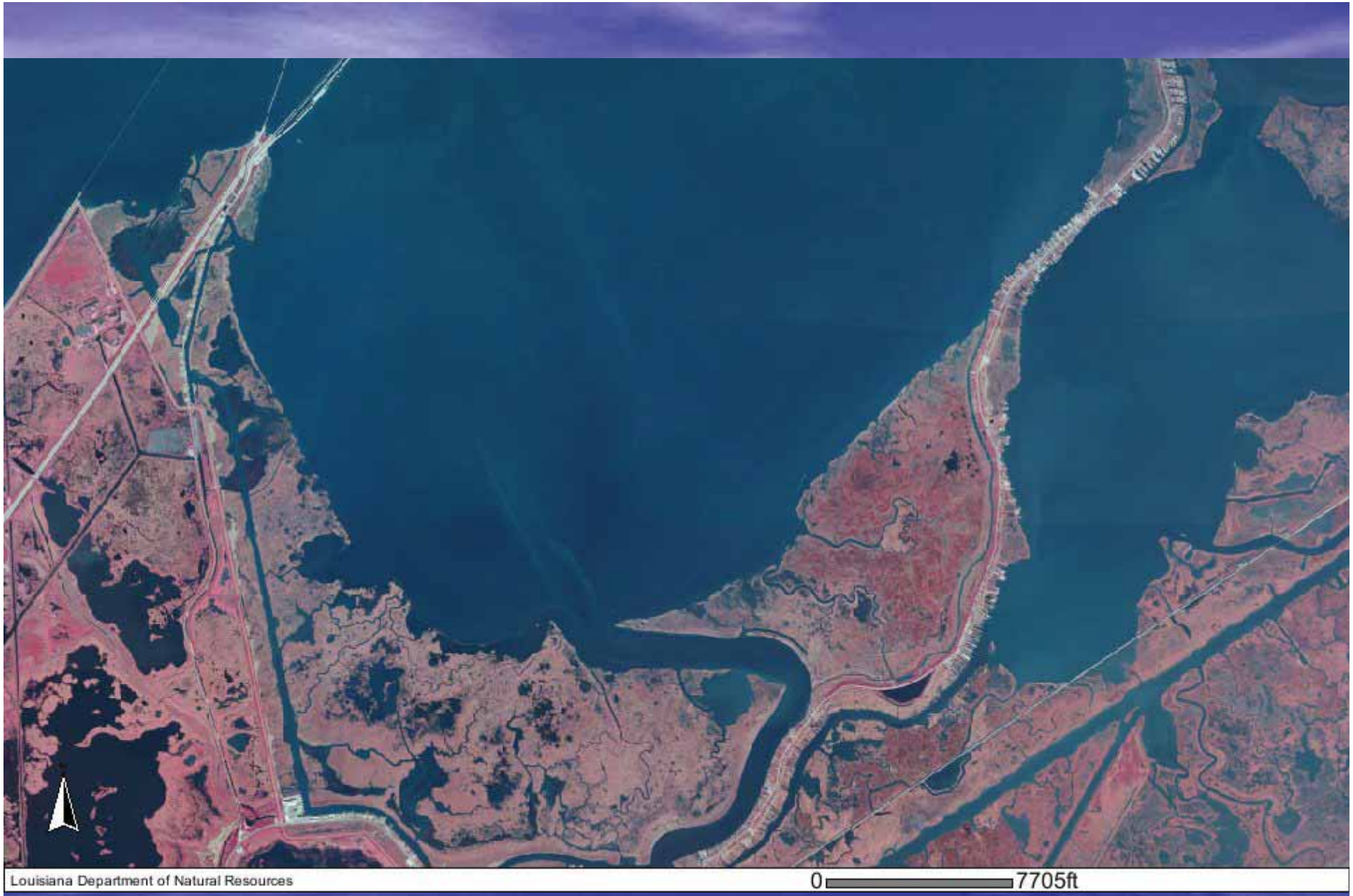
Irish Bayou and Brazilier Island Marsh Creation PPL20 Nominee



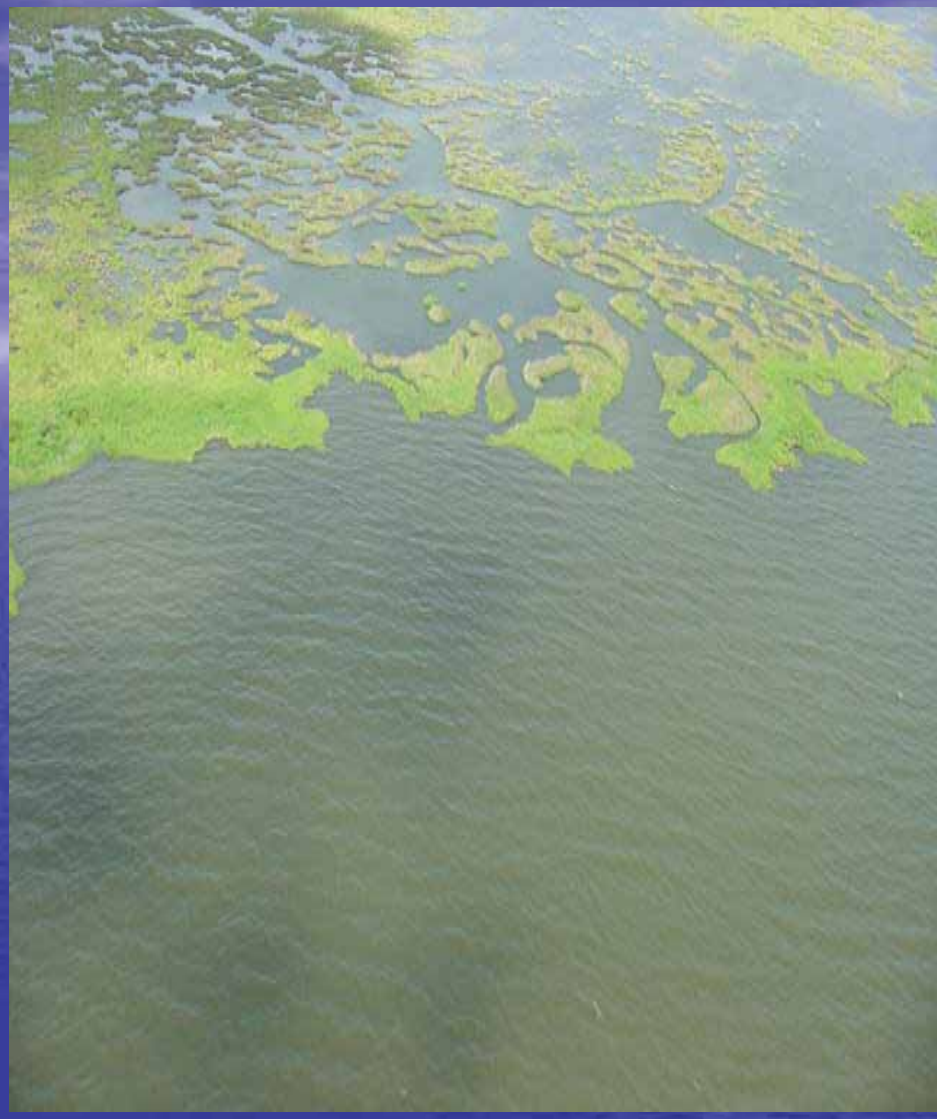


Irish Bayou and Brazilier Island Marsh Creation

1998



2008



2007 Photographs

Restoration Options Considered

Marsh Creation – Increment 1

Shoreline Protection – Increment 2

- -Oyster Reef
- -Gravel to mimic a shell shoreline
- -Foreshore Rock Dike

2008


Increment 1
Increment 2
PO-22 Rock
1
2
3
4
5
6
8
Louisiana Department of Natural Resources
0
7176ft