ATTENDANCE RECORD

DATE(S)	SPONSORING ORGANIZATION	LOCATION
April 20, 2010 9:30 A.M.	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	U.S. Army Corps of Engineers New Orleans District Headquarters District Assembly Room 7400 Leake Ave., New Orleans, La.

PURPOSE **MEETING OF THE CWPPRA TECHNICAL COMMITTEE**

PARTICIPANT REGISTER*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER & EMAIL
Brad Crawford	EPA	214 665 7255
Cecelia Linder	NMFS	301 713 0174 X162
Alberetine McKimble	PPG	504.912.5973
P.J. HAHN	PPG	504-297-5631
HEATHER FINLEY	LDWF	225.765.2956
Robert Bourgeois	LDWF	225-765-0765
Kristi Murray	St John the Baptist Parish P+Z	985-651-5565
DAVID HASPEL	HASPEL & DAVIS MILLING & PLANTING	504 837 8460
Jennifer Haspel	Haspel & Davis	chitlins@charter.net
Kelley Templet	OCPR	kelley.templet@la.gov
DARRYL CLARK	USFWS	337-291-3111
Wynecia Fisher	CNO	658-4074 wmfisher@cityofno.com
Lynn Pruitt	Stanley Consultants	563.264.6311
Nic Matherne	Lafourche Parish	985-632-1666
Mark Schleifstein	Times Picayune	mschleifstein@tpmail.com 826-3327
Louis Delsemoch	Assoc. Vice Pres. St. Mary Financial Expl.	(303) 863-4328
Jenneke Visser	ULL	337 482 6966
BRIAN FORTSON	ST. TAMMANY - Environmental Specialist	(985) 898-2552
Murray Nelson	Congressman Cao LA 02	504-483-2325
Jen Roberts	Bayou Land RC&D	828-1866 x 104
Alton Gunn Jr	USDA-NRCS / Bayou Land RC&D	828-1866 x 3
KAREN WICKER	VICE PRESIDENT COASTAL ENVIRONMENTS, INC	225-383-7455 x 119 kwicker@coastalenv.com

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JAN 88

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

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PURPOSE **MEETING OF THE CWPPRA TECHNICAL COMMITTEE**

PARTICIPANT REGISTER*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER & EMAIL
David Peterson	La. Attorney General / Asst. AG	225-326-6000 petersond@ag.state.la.us
Margie Laws	Landowner	337-829-0271
Antoine Luke	" "	" " "
Clayton Breland	OCPR	225 342 6749
Chris Allen	"	225-342-4736
Brentin Mock	The Lens, reporter	334-868-7607 bmock@thelens.nola.com
Brian Vosburg	OCPR	225-342-4485
E.J. Deubler	River Rest LLC	504-874-0813
Mike Jennsonne	"	504-392-9902
Beth McCasland	Corps	504-862-2021
John Hebert	Jeff Parish Resident	504-481-0363
Angela Trahan	USFWS	337-291-3137
Allen Lottinger	Louisiana Sportsman	985-758-2795
Luke E LeBas	OCPR	luke.lebas@la.gov
Vickie Duffour	JP / Shaw	Vickie.duffourc@shawgrp.com
Michelle Fischer	Geographer USGS	michelle_fischer@usgs.gov
Bren Haase	OCPR	bren.haase@la.gov
William McCartney	St. Bernard Parish Govt.	wmccartney@sbpg.net
Susan Testroet-Bergeron	CWPPRA Outreach	337-266-8623 BergeronS@usgs.gov
Kevin Hargerich	Iberia Parish Public Works	khargerich@iberiagov.net 337 564 8474
Rachel Rodie	USACE	X 2537 Rachel.Rodie@usace.army.mil
Marnie Winter	Jeff. Parish	736-6440 mwinter@jeffparish.net

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PURPOSE **MEETING OF THE CWPPRA TECHNICAL COMMITTEE**

PARTICIPANT REGISTER*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER & EMAIL
Nicole Waguespack	VP Floating Island Environmental Solutions	225-923-2194 nicole@FloatingIslandES.com
Tim Hallko	Citizen / Jefferson Parish Env. Affairs	(504) 689.4504
Roy Frisgintertz	FWOL	504 874 3806
Henry Haller Jr.	Madison Land Co	228 324-6490
Desiree Suazo	Ascension Parish Govt	dsuazo@ascensionparish.net 985-873-6889
Todd Folse	OCPR	985-447-0991
Sean Duffy	GSMA	504-833-4190
JOHN FORET	NOAA/NMFS	337-291-2107
Ginger Hennington	MVN	504-862-2504
Susan Colley	PBSS	504841-2226 x227
Catherine Siracusa	Black Bear Conflict Manager St. Mary Parish Government	csiracusa@stmaryparishla.gov
Patra Ghergich	NRCS	Patra.Ghergich@la.usda.gov

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JAN 88

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BREAUX ACT

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
TECHNICAL COMMITTEE MEETING

AGENDA

April 20, 2010, 9:30 a.m.

Location:
U.S. Army Corps of Engineers Office
7400 Leake Ave.
New Orleans, Louisiana
District Assembly Room (DARM)

Documentation of Technical Committee meetings may be found at:
http://www.mvn.usace.army.mil/pd/cwppra_mission.htm

Tab Number	Agenda Item

1. **Report: Status of Breaux Act Program Funds and Projects (Gay Browning, USACE) 9:30 a.m. to 9:40 a.m.** Ms. Browning will provide an overview of the status of CWPPRA accounts and available funding in the Planning and Construction Programs.

2. **Report: Task Force Fax Vote Approving a Scope Change for the CWPPRA Bio-engineered Oyster Reef Demo Project. (Melanie Goodman, USACE) 9:40 a.m. to 9:45 a.m.** Ms. Goodman will report on a recent Task Force Fax Vote to approve a change in project scope to increase the CWPPRA PPL 17 Bio-engineered Oyster Reef Demonstration Project (LA-08) budget as requested by the National Marine Fisheries Service and the Louisiana Office of Coastal Protection and Restoration (LAOCPR).

3. **Report: Task Force Fax Vote Approving Construction of the CWPPRA Enhancement of Barrier Island Vegetation Demonstration Project. (Melanie Goodman, USACE) 9:45 a.m. to 9:50 a.m.** Ms. Melanie Goodman will report on a recent Task Force Fax Vote to approve construction of the CWPPRA PPL 16 Enhancement of Barrier Island Vegetation Demonstration Project (TE-53) as requested by the U.S. Environmental Protection Agency and the LAOCPR.

4. **Report: Status Lake Portage Evaluation (Britt Paul, NRCS) 9:50 to 10:00** Mr. Britt Paul of NRCS will provide a status update on the Lake Portage Land Bridge (TV-17)

5. **Report: Project Update for PPL 11- River Reintroduction into Maurepas Swamp Project (PO-29) (Brad Crawford, EPA/Kirk Rhinehart, OCPR/Tom Holden, USACE) 10:00 a.m. to 10:20 a.m.** The Environmental Protection Agency (EPA), in coordination with the State of Louisiana will provide a status on the River Reintroduction into Maurepas Swamp project design and gap analysis efforts.

6. **Report: Status of the PPL 1 - West Bay Sediment Diversion Project (MR-03) (Travis Creel, USACE/Cherie Price, USACE) 10:20 a.m. to 10:40 a.m.** The Corps of Engineers will provide a status on the West Bay Project, including development of project closure plans and the on going modeling work plan effort.

7. **Report: Status on Corps of Engineers and State of Louisiana Cost Sharing Agreement Negotiations. (Tom Holden, USACE) 10:40 a.m. to 10:50 a.m.** Mr. Holden will provide a status on negotiations between the Corps of Engineers and the State of Louisiana to resolve issues that have delayed completion of model Cost Sharing Agreements for Corps sponsored CWPPRA Cash Flow Projects.

8. **Discussion: Initial Discussion of FY11 Planning Budget Development (Process, Size, Funding, etc.) (Melanie Goodman, USACE) 10:50 a.m. to 11:10 a.m.** The FY11 Planning Program Budget development, including the PPL 21 Process, will be initiated.

9. **Decision: Selection of Ten Candidate Projects and up to Three Demonstration Projects to Evaluate for PPL 20 (Melanie Goodman, USACE/Angela Trahan, USFWS) 11:10 a.m. to 12:10 p.m.** The Technical Committee will consider preliminary costs & benefits of the Priority Project List 20 (PPL 20) Project Nominees and Demonstration Project Nominees listed below. The Technical Committee will select 10 projects and up to 3 demonstration projects as PPL 20 candidates to be evaluated for Phase 0 analysis, and which will be considered later for final selection of projects that will be approved for Phase I (Planning and Engineering and Design).

Region	Basin	PPL 20 Nominees
1	Pontchartrain	Bayou Bonfouca Marsh Creation Project
1	Pontchartrain	Unknown Pass to Rigolets Shoreline Protection
1	Pontchartrain	New Orleans Land Bridge Shoreline Stabilization and Marsh Creation Project
2	Mississippi River Delta	Coastwide Planting Project
2	Mississippi River Delta	Beneficial Use of MS River Dredge Material via Hopper Dredge Pumpout Stations
2	Breton Sound	Lake Lery Shoreline Marsh Creation
2	Breton Sound	Monsecour Siphon
2	Barataria	Bayou L'Ours Ridge Restoration and Terracing
2	Barataria	Bayou Dupont Sediment Delivery – Marsh Creation 3
2	Barataria	Home Place Marsh Creation
3	Terrebonne	Lake Barre Marsh Creation
3	Terrebonne	Terrebonne Bay Marsh Creation-Nourishment Project
3	Terrebonne	Bayou Terrebonne Diversion Project
3	Atchafalaya	West Wax Lake Wetlands Diversion
3	Teche-Vermilion	Cole's Bayou Marsh Creation and Restoration
3	Teche-Vermilion	Cote Blanche Freshwater and Sediment Introduction and Shoreline Protection Project
4	Mermentau	Lower Mud Lake Terracing and Bankline Stabilization
4	Mermentau	Rockefeller Gulf of Mexico Shoreline Stabilization, Joseph's Harbor East
4	Calcasieu-Sabine	Cameron-Creole Watershed Grand Bayou Marsh Creation
4	Calcasieu-Sabine	Kelso Bayou Marsh Creation and Hydrologic Restoration

		PPL 20 Demonstration Project Nominees
Coastwide	DEMO	Floating Island Environmental Solutions Biohaven©
Coastwide	DEMO	Ecosystems Wave Attenuator
Coastwide	DEMO	The Wave Robber Wave Suppressor Sediment Collection System
Coastwide	DEMO	Use of Sand Derived from Pulverized Glass As Beach Nourishment on Barrier Island Restoration Projects

10. **Discussion/Decision: Request for Riverine Mining/Scofield Island Project Scope Change (Rachel Sweeny, NMFS) 12:10 p.m. to 12:25 p.m.** Ms. Sweeny will discuss a request by the National Marine Fisheries Service (NMFS) and LAOCPR for a Technical Committee recommendation for Task Force approval to change the scope of the Riverine Mining/Scofield Island Project (BA-40) due to project cost increases.

11. **Discussion/Decision: Pending Deauthorization of the Brown Lake Hydrologic Restoration Project (Melanie Goodman, USACE) 12:25 p.m. to 12:35 p.m.** The Task Force initiated procedures to deauthorize the Brown Lake Hydrologic Restoration Project on October 28, 2009. Deauthorization procedures are pending Corps sufficiency review of justification for deauthorization.

12. **Discussion/Decision: Deauthorization of the Lake Borgne/MRGO Shoreline Protection Project (Melanie Goodman, USACE) 12:35 p.m. to 12:45 p.m.** The Task Force initiated procedures to deauthorize the Lake Borgne/MRGO Shoreline Protection Project on January 20, 2010. Notice of the pending deauthorization was sent to Congress and the State House and Senate Natural Resources Committee chairs of the intent to deauthorize.

13. **Additional Agenda Items (Tom Holden, USACE) 12:45 p.m. to 12:50 p.m.**

    - **Preliminary Report: Monitoring Work Group CWPPRA Monitoring Program Evaluation** (Dr. John Foret and Dr. Jenneke Visser). Dr. Foret will provide a preliminary report on the Monitoring Work Group findings concerning the CWPPRA Monitoring Program.

14. **Request for Public Comments (Tom Holden, USACE) 12:50 p.m. to 12:55 p.m.**

15. **Announcement: Date of Upcoming CWPPRA Program Meeting (Melanie Goodman, USACE) 12:55 p.m. to 1:00 p.m.** The Task Force meeting will be held June 23, 2010 at 9:30 a.m. at the Estuarine Fisheries and Habitat Center, 646 Cajundome Blvd., Lafayette, Louisiana. Note: this date has recently changed.

16. **Announcement: Scheduled Dates of Future Program Meetings (Melanie Goodman, USACE) 1:00 p.m. to 1:05 p.m.**

2010

June 23, 2010	9:30 a.m.	Task Force	Lafayette
September 22, 2010	9:30 a.m.	Technical Committee	Baton Rouge
October 27, 2010	9:30 a.m.	Task Force	New Orleans
November 16, 2010	7:00 p.m.	PPL 20 Public Meeting	Abbeville
November 17, 2010	7:00 p.m.	PPL 20 Public Meeting	New Orleans
December 1, 2010	9:30 a.m.	Technical Committee	Baton Rouge

17. **Decision: Adjourn**

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

STATUS OF BREAUX ACT PROGRAM FUNDS AND PROJECTS

Ms. Gay Browning will provide an overview of the status of CWPPRA accounts and available funding in the Planning and Construction Programs.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

TASK FORCE FAX VOTE APPROVING A SCOPE CHANGE FOR THE CWPPRA BIO-ENGINEERED OYSTER REEF DEMO PROJECT

For Report:

Ms. Goodman will report on a recent Task Force Fax Vote to approve a change in project scope to increase the CWPPRA PPL 17 Bio-engineered Oyster Reef Demonstration Project (LA-08) budget as requested by the National Marine Fisheries Service and the Louisiana Office of Coastal Protection and Restoration (LAOCPR).

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

February 10, 2010

Mr. Thomas Holden
Deputy District Engineer
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Re: Bio-Engineered Oyster Reef Demonstration Project (LA-08)
Demonstration Project Construction Cost Increase Request

Dear Mr. Holden:

As the Federal sponsor, NOAA Fisheries Service is requesting initiation of fax vote procedures by both the Technical Committee and the Task Force to increase funds for the construction of the Bio-Engineered Oyster Reef Demonstration Project (LA-08) due to a change in project design. As a Priority Project List 17 demonstration project, this project was authorized for design and construction on October 2007 by the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Task Force for $1,981,822. NOAA Fisheries is requesting a cost increase in the amount of $343,713. If approved, the revised fully funded project cost would be $2,325,535. The State of Louisiana, acting through the Office of Coastal Protection and Restoration, concurs with this funding request.

The goal of this demonstration project is to evaluate an alternative to traditional shoreline protection techniques as a cost effective approach for protecting shorelines with poor load bearing capacities and enhancing oyster colonization. The project consists of an "Oysterbreak," two 300' long x 34' wide near shore breakwaters with a 145' gap between them. The Oysterbreak is a lightweight, modular shore protection device that uses accumulating biomass (an oyster reef) to dissipate wave energy. The bioengineered structure is designed to grow rapidly into an open structured oyster reef utilizing specifically designed structural components with spat attractant (agricultural byproducts) and enhanced nutrient conditions conducive to rapid oyster growth. The Oysterbreak is constructed by placing modular units into an open interlocked configuration. A project status of probable project cost presentation was made to the Technical Committee on September 29, 2009. Recommendations from the Technical Committee suggested that if the probable costs were extrapolated into a full-scale project, it was likely that the CWPPRA program could not afford such a restoration technique. The project design team reevaluated all design criteria and discovered that with a reduction in the wave height criteria of 5% (from 50% reduction to 45% reduction in wave height behind the structure) the design cross section was reduced by approximately 50%. The Technical Committee was briefed at their December 2 meeting. At that time, only the construction costs were presented, as the fully

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funded cost had not been generated. The Technical Committee recommended that we continue towards the fully funded cost estimate and report to the Task Force in January.

NOAA Fisheries is requesting the fax vote process so that the project could potentially take advantage of the spat settlement season this year as oyster spat are at maximum densities along coastal Louisiana during June. Additionally, the Rockefeller Refuge Shoreline Protection demonstration that was funded by the Coastal Impact Assistance Program was completed on December 4, 2009, and there would be some benefit in being able to compare the relative performance of these various shoreline protection techniques without an additional six-month lag time in construction.

Enclosed please find the project factsheet and map, approved fully funded cost analysis, the material presented at the January 2010 Task Force meeting, and concurrence from OCPR. Should additional information be requested for this project I can be reached at (301) 713-0174, ext. 162. Thank you for your consideration of this request.

Sincerely,

Cecelia Linder

Cecelia Linder
Program Officer
NOAA National Marine Fisheries Service

Enclosures

Cc: Members of the CWPPRA Technical Committee
John Foret, Project Manager, NOAA NMFS
Kenneth Bahlinger, Project Manager, OCPR

CPRA
Coastal Protection and
Restoration Authority of Louisiana

State of Louisiana

BOBBY JINDAL
GOVERNOR

February 8, 2010

Ms. Cecelia Linder
NMFS Restoration Center, F/HC3
1315 East West Highway
Silver Spring, MD 20910

Re: Bioengineered Oyster Reef Demonstration Project (LA-08)
Statement of Local Sponsor Concurrence

Dear Ms Linder:

The CWPPRA Design Review Conference was held on July 15, 2009 for the Bioengineered Oyster Reef Demonstration Project (LA-08) Project. Based on our review of the technical information compiled to date, the land ownership investigation, and the final designs, we, as local sponsor, concur to proceed with requesting additional funding for Phase II construction funding for the project.

In accordance with the CWPPRA Project Standard Operating Procedures Manual, we request that you forward this letter of concurrence along with the revised project cost estimate request to the Technical Committee and the Planning and Evaluation Subcommittee. We also request that our project manager, Kenneth Bahlinger, be copied on all correspondence concerning this project.

Please do not hesitate to call if I may be of any assistance.

Sincerely,

Christopher P. Knotts

Christopher Knotts, P.E., Director

cc: Richard Hartman, NOAA Fisheries
John Foret, NOAA Fisheries
Chris Williams, Administrator
Kirk Rhinehart, Administrator
Whitney Thompson, Project Engineer
Kenneth Bahlinger, Project Manager

Post Office Box 44027 • Baton Rouge, Louisiana 70804-4027 • 450 Laurel Street • Suite 1200, Chase Tower North • Baton Rouge, Louisiana 70801
(225) 342-7308 • Fax (225) 342-9417 • http://www.lacpra.org/
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March 2009
Cost figures as of: February 2010

Bio-Engineered Oyster Reef Demostration (LA-08)

Project Status

Approved Date: 2007 **Project Area:** N/A
Approved Funds: $1.98 M **Total Est. Cost:** $1.98 M
Net Benefit After 5 Years: N/A
Status: Engineering and Design
Project Type: Shoreline Protection

Location

The project is located along the Rockefeller Wildlife Refuge Gulf of Mexico shoreline west of Joseph Harbor canal in Cameron Parish, Louisiana.

Problems

The purpose of this project is to test a new, bio-engineered, product to address rapid shoreline retreat and wetland loss along the Gulf of Mexico Shoreline in areas with soils of low load bearing capacity. For example, at Rockefeller Refuge, the direct Gulf of Mexico frontage and extremely low soil load bearing capacity (250-330psf), coupled with an average shoreline retreat of 30.9 ft/yr, present unique engineering challenges with a subsequent direct loss of emergent saline marsh.

Top: Existing beach formation at Rockefeller Wildlife Refuge gulf shoreline. Beach material is primarily made up of lightweight Boyster shell fragments (hash).
Bottom: An example of ongoing shoreline erosion on Rockefeller Wildlife Refuge. Dark areas in photo are remnant organic marsh.

Restoration Strategy

The goal of this demonstration project is to evaluate the proposed technique as a cost effective technique for protecting areas of Coastal Louisiana's Gulf of Mexico Shoreline with poor load bearing capacities.

The demonstration project would consist of an Oysterbreak, approximately 1000' long. The Oysterbreak is a light-weight, modular shore protection device that uses accumulating biomass (an oyster reef) to dissipate wave energy. The bioengineered structure is designed to grow rapidly into an open structured oyster reef utilizing specifically designed structural components with spat attractant (agricultural byproducts) and enhanced nutrient conditions conducive to rapid oyster growth. The Oysterbreak is constructed by placing modular units into an open interlocked configuration. The units are sized to be stable under storm wave conditions. The height and width of the Oysterbreak are designed to achieve a moderate initial wave energy reduction. As successive generations of encrusting organisms settle on the Oysterbreak, the structure's ability to dissipate wave energy increases.

Progress to Date

The cooperative agreement between the National Marine Fisheries Service and the Louisiana Department of Natural Resources has been executed. The project design report is nearing completion.

This project is on Priority Project List 17.

For more project information, please contact:

Federal Sponsor:
National Marine Fisheries Service
Baton Rouge, LA
(225) 389-0508

Local Sponsor:
Office of Coastal Protection and Restoration
Baton Rouge, La.
(225) 342-4122

Bio-Engineered Oyster Reef Demonstration (LA-08)

Project Boundary *

* denotes proposed feature

N

0.2 0 0.2 0.4 Kilometers

0.2 0 0.2 0.4 Miles

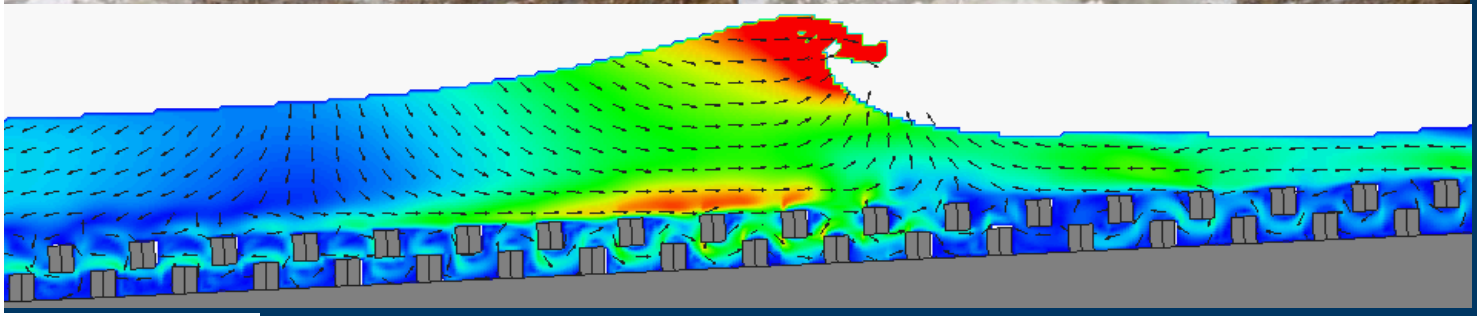
Map Produced by:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Baton Rouge, La.

Background Imagery:
2007 USDA-FSA-APFO NAIP MrSID Mosaic

Map Date: March 11, 2009
Map ID: USGS-NWRC 2009-11-0149
Data accurate as of: March 11, 2009

Science, Service, Stewardship

Bio-Engineered Oyster Demonstration Project LA-08 CWPPRA Task Force Meeting



NOAA FISHERIES SERVICE

Coastal Protection and Restoration Authority of Louisiana

COAST & HARBOR ENGINEERING

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Project Goals

- Evaluate the Oysterbreak™ system's capability to reduce and/or prevent shoreline retreat and wetland loss on the open coast of Louisiana.
- Reduce erosion on open Gulf shorelines with weak (low bearing capacity) soils.
- Compare Oysterbreak™ with Rockefeller CIAP test structures as a restoration technique.
- Enhance nutrient conditions conducive to rapid oyster growth.

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Project Location Selection

Project
Area

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Coastal Processes at Site

- Primary processes controlling erosion:
  - Day-to-day waves
  - Extra-tropical storms

- Secondary processes controlling erosion:
  - Tropical storms and hurricanes
  - Relative sea level rise

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Performance Evaluation Criteria

- Positive Shoreline Response
- Structure Stability
  - —Geotechnical stability
  - —Hydrodynamic stability
  - —Unit durability
- Oyster Growth
- Constructability
- Cost

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Alternatives Development

- Design must maximize performance (reduce wave energy) while maintaining stability
- Controlling Parameters
  - —Geotech Stability (soil bearing capacity): structure height and unit density
  - —Hydrodynamic Stability: unit weight
  - —Performance: structure height & width
- Rock and Oysterbreak alternatives
- Cross-Shore structure location

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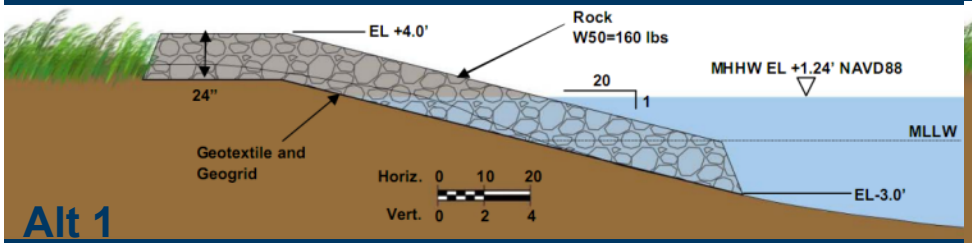
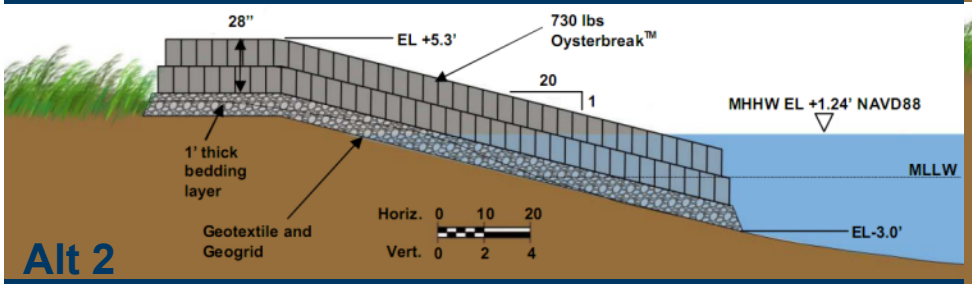
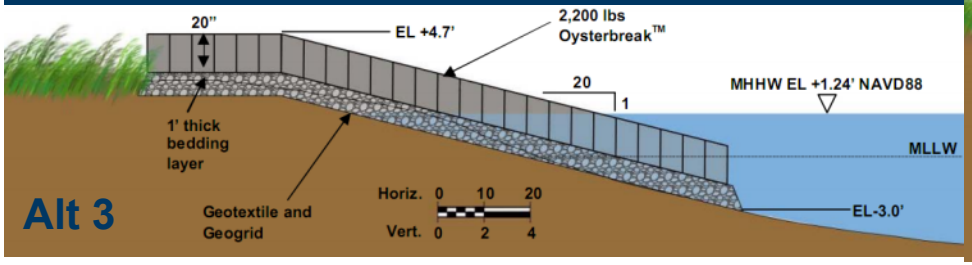
Alternatives Development

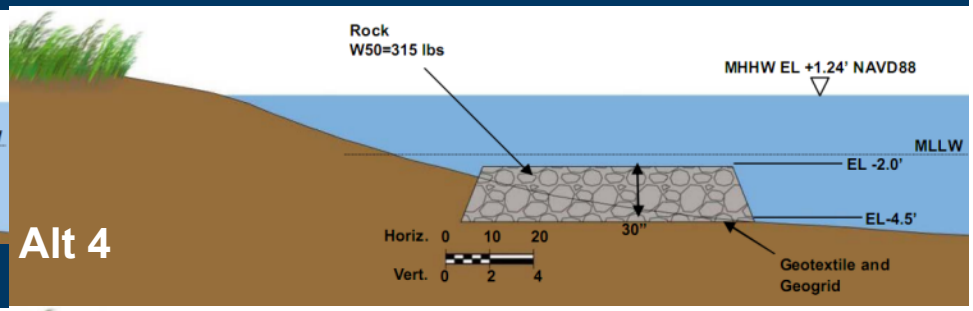
Onshore Alternatives

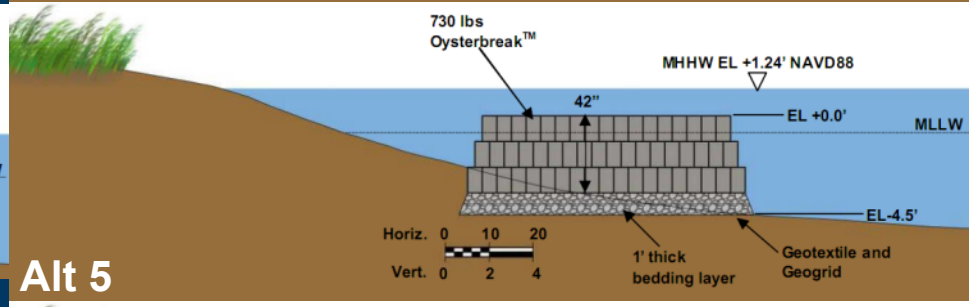


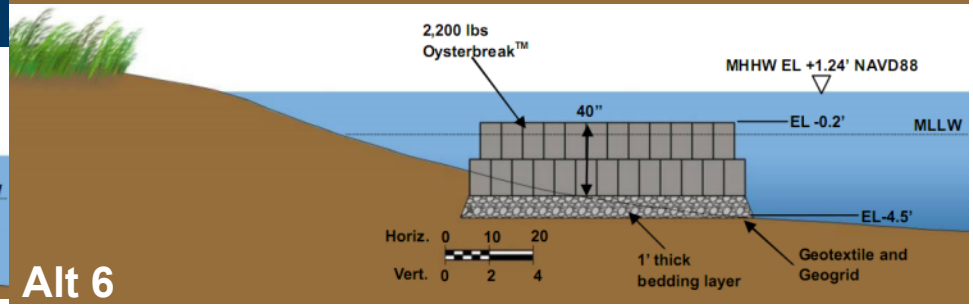




Offshore Alternatives







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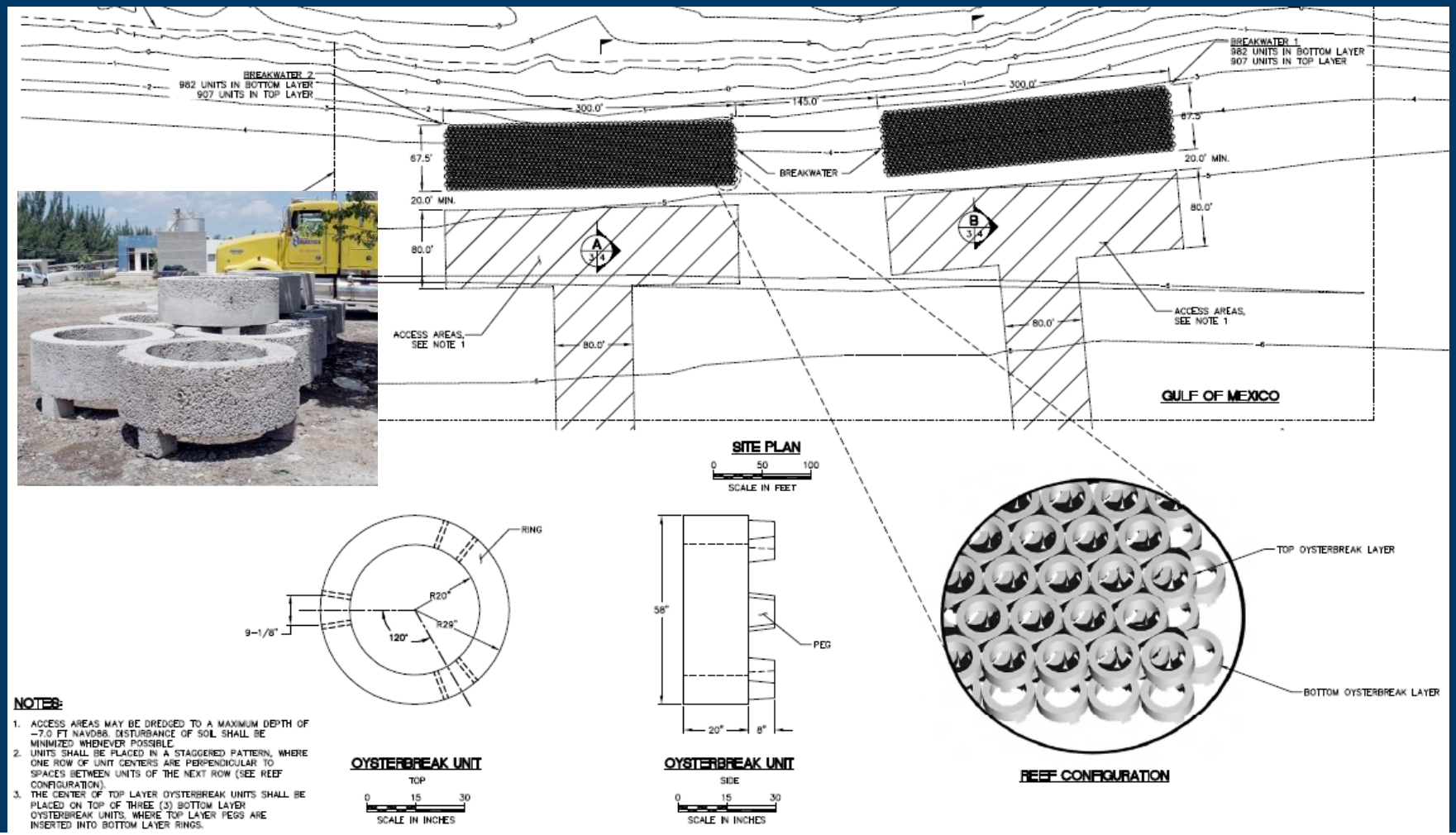
Recommended Alternative Preliminary Design



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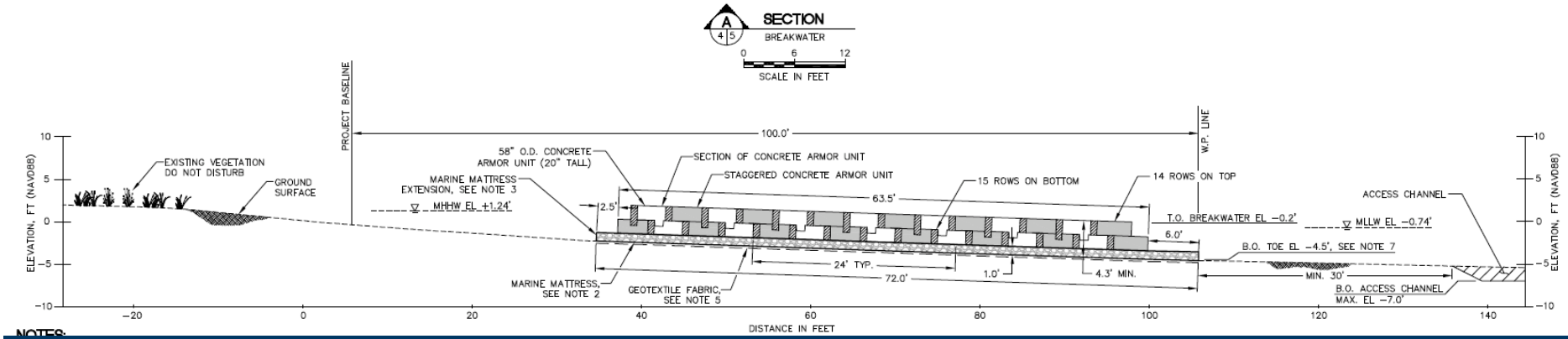
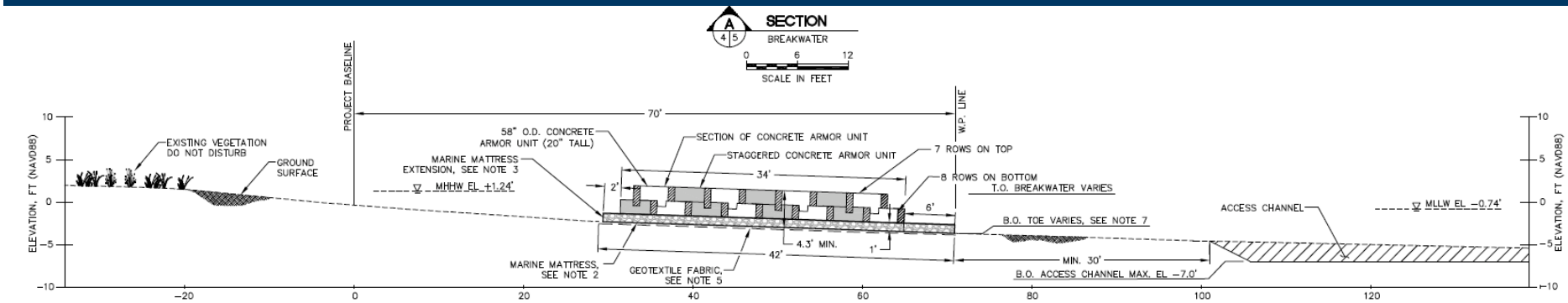
Design Template

October 2009



NOTES:

December 2009



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Monitoring Plan

- Objectives:
  - Quantify shoreline response
  - Observe structural survival
  - Quantify oyster growth
- Monitor over 5 year period
- Plan components:
  - Ground-level and Aerial Photography
  - Surveying
  - Biological Monitoring
  - Hydrodynamic Data (Wave) Collection
- Annual monitor reports will be produced
- Total cost of monitoring program estimated at $307,000 over 5 years

NOAA
FISHERIES
SERVICE

Modifications to Approved Phase 0 Project

- Approved January 2008, the Phase 0 project length was a continuous 1,000 ft long structure.
- Preferred alternative
  - 2 structures 300 ft long with 145 ft gap
  - Each structure is 34 ft wide with a crest elevation of -0.2 ft NAVD88
- Construction cost estimate is $1.5 M (approximately $0.25 M over current Phase 2 budget)
- Fully funded cost estimate is $2,325,535 (approximately $343,713 over approved project)
- Plan to proceed to TC/TF fax vote request following this meeting
  - To take advantage of early summer spat settlement
  - Timing of comparison with Rockefeller Refuge structures

Trackhoe on timber mats stuck in soft soil while attempting to mobilize for construction of East Terminal Groin for Rockefeller Refuge demo. (15 June 2009)

Trackhoe on timber mats stuck in soft soil while attempting to mobilize for construction of East Terminal Groin for Rockefeller Refuge demo.

Wandell, Scott F MVN

From: Goodman, Melanie L MVN
Sent: Wednesday, February 10, 2010 3:55 PM
To: (Cecelia.Linder@noaa.gov); britt.paul@la.usda.gov; Browning, Gay B MVN; Crawford.Brad@epamail.epa.gov; Creel, Travis J MVN; Darryl Clark; Goodman, Melanie L MVN; Holden, Thomas A MVN; Kaspar.Paul@epamail.epa.gov; Kinsey, Mary V MVN; kirk.rhinehart@la.gov; Lachin, Donna A MVN; Richard.Hartman@noaa.gov; Rodi, Rachel MVN; Teague.Kenneth@epamail.epa.gov; Wandell, Scott F MVN; Wingate, Mark R MVN; (Chris.Allen@LA.GOV); Angela Trahan (Angela_Trahan@fws.gov); Bren Haas (Bren.Haase@LA.GOV); Cynthia.duet@gov.state.la.us; Jerome Zeringue (jzee@tlcd.org); John Jurgensen; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; rachel.sweeney@noaa.gov; renee.sanders@la.gov
Subject: FW: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration

Follow Up Flag: Follow up
Flag Status: Red

Attachments: LA-08 Cost Increase Request_NMFS Letter.pdf; LA-08 Factsheet.pdf; Bio-engineered Oyster Reef DEMO (LA-08)--PPL 17 Phase II--Jan_13_10_CompiledPDF.pdf; Bio-engineered Oyster Reef DEMO (LA-08)--PPL 17 Phase II--Jan_13_10.xls; LA-08_TF_1_20_10.pdf; OCPR LA-08 Concurrance.pdf

LA-08 Cost crease Request_NM | LA-08 Factsheet.pdf | Bio-engineered Oyster Reef DEM... | Bio-engineered Oyster Reef DEM... | LA-08_TF_1_20_10 .pdf | OCPR LA-08 Concurrance.pdf

Technical Committee, please see the attached and below described request for Task Force fax vote approval to increase funding for the subject demonstration project. The State of Louisiana and NOAA Fisheries is requesting a budget and funding increase in the amount of $343,713. If approved, the revised fully funded project cost would be $2,325,535.

Please provide your respective agency's concurrence and/or comments on whether to approve the request by Thursday, February 18, 2010.

Thanks,

Melanie Goodman
CWPPRA Program Manager
US Army Corps of Engineers
New Orleans District
Restoration Branch

Office: 504-862-1940
FAX: 504-862-1892

http://www.lacoast.gov/cwppra/
http://www.mvn.usace.army.mil/pd/cwppra_mission.htm

-----Original Message-----
From: Cecelia.Linder [mailto:Cecelia.Linder@noaa.gov]
Sent: Wednesday, February 10, 2010 2:56 PM
To: Goodman, Melanie L MVN
Cc: Richard Hartman; Rachel Sweeney; John Foret; Kenneth Bahlinger
Subject: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration

Wandell, Scott F MVN

From: Darryl_Clark@fws.gov
Sent: Thursday, February 11, 2010 4:25 PM
To: Goodman, Melanie L MVN
Cc: Angela_Trahan@fws.gov; Bren.Haase@LA.GOV; britt.paul@la.usda.gov; Cecelia.Linder@noaa.gov; Chris.Allen@LA.GOV; Crawford.Brad@epamail.epa.gov; Cynthia.duet@gov.state.la.us; Lachin, Donna A MVN; Browning, Gay B MVN; John Jurgensen; Jerome Zeringue (jzee@tlcd.org); Kaspar.Paul@epamail.epa.gov; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; kirk.rhinehart@la.gov; Wingate, Mark R MVN; Kinsey, Mary V MVN; Goodman, Melanie L MVN; Rodi, Rachel MVN; rachel.sweeney@noaa.gov; renee.sanders@la.gov; Richard.Hartman@noaa.gov; Wandell, Scott F MVN; Teague.Kenneth@epamail.epa.gov; Holden, Thomas A MVN; Creel, Travis J MVN
Subject: Re: FW: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration

Follow Up Flag: Follow up
Flag Status: Red

Attachments: pic00481.gif; graycol.gif; ecblank.gif

pic00481.gif graycol.gif ecblank.gif

FWS concurs to recommend the LA-08 funding increase to the CWPPRA Task Force.

Darryl

Inactive hide details for "Goodman, Melanie L MVN" <Melanie.L.Goodman@usace.army.mil>"Goodman, Melanie L MVN" <Melanie.L.Goodman@usace.army.mil>

"Goodman, Melanie L MVN" <Melanie.L.Goodman@usace.army.mil>

02/10/2010 03:55 PM

To

<Cecelia.Linder@noaa.gov>, <britt.paul@la.usda.gov>, "Browning, Gay B MVN" <Gay.B.Browning@usace.army.mil>, <Crawford.Brad@epamail.epa.gov>, "Creel, Travis J MVN" <Travis.J.Creel@usace.army.mil>, "Darryl Clark" <darryl_clark@fws.gov>, "Goodman, Melanie L MVN" <Melanie.L.Goodman@usace.army.mil>, "Holden, Thomas A MVN" <Thomas.A.Holden@usace.army.mil>, <Kaspar.Paul@epamail.epa.gov>, "Kinsey, Mary V MVN" <Mary.V.Kinsey@usace.army.mil>, <kirk.rhinehart@la.gov>, "Lachin, Donna A MVN" <Donna.A.Lachin@usace.army.mil>, <Richard.Hartman@noaa.gov>, "Rodi, Rachel MVN" <Rachel.Rodi@usace.army.mil>, <Teague.Kenneth@epamail.epa.gov>, "Wandell, Scott F MVN" <Scott.F.Wandell@usace.army.mil>, "Wingate, Mark R MVN" <Mark.R.Wingate@usace.army.mil>, <Chris.Allen@LA.GOV>, <Angela_Trahan@fws.gov>, <Bren.Haase@LA.GOV>, <Cynthia.duet@gov.state.la.us>, "Jerome Zeringue (jzee@tlcd.org)" <jzee@la.gov>, "John Jurgensen" <john.jurgensen@la.usda.gov>, "Kelley.Templet@LA.GOV" <kelley.templet@la.gov>, <Kevin_Roy@fws.gov>, <rachel.sweeney@noaa.gov>, <renee.sanders@la.gov>

Wandell, Scott F MVN

From: Paul, Britt - Alexandria, LA [britt.paul@la.usda.gov]
Sent: Wednesday, February 17, 2010 10:02 AM
To: 'Darryl_Clark@fws.gov'; Goodman, Melanie L MVN
Cc: 'Angela_Trahan@fws.gov'; 'Bren.Haase@LA.GOV'; 'Cecelia.Linder@noaa.gov'; 'Chris.Allen@LA.GOV'; 'Crawford.Brad@epamail.epa.gov'; 'Cynthia.duet@gov.state.la.us'; Lachin, Donna A MVN; Browning, Gay B MVN; Jurgensen, John - Alexandria, LA; 'Jerome Zeringue (jzee@tlcd.org)'; 'Kaspar.Paul@epamail.epa.gov'; 'Kelley.Templet@LA.GOV'; 'Kevin_Roy@fws.gov'; 'kirk.rhinehart@LA.GOV'; Wingate, Mark R MVN; Kinsey, Mary V MVN; Goodman, Melanie L MVN; Rodi, Rachel MVN; 'rachel.sweeney@noaa.gov'; 'renee.sanders@LA.GOV'; 'Richard.Hartman@noaa.gov'; Wandell, Scott F MVN; 'Teague.Kenneth@epamail.epa.gov'; Holden, Thomas A MVN; Creel, Travis J MVN
Subject: RE: FW: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration

Follow Up Flag: Follow up
Flag Status: Red

Attachments: image001.gif; image003.png; image004.png

image001.gif image003.png image004.png

NRCS concurs with the request.

Britt

From: Darryl_Clark@fws.gov [mailto:Darryl_Clark@fws.gov]
Sent: Thursday, February 11, 2010 4:25 PM
To: Goodman, Melanie L MVN
Cc: Angela_Trahan@fws.gov; Bren.Haase@LA.GOV; Paul, Britt - Alexandria, LA; Cecelia.Linder@noaa.gov; Chris.Allen@LA.GOV; Crawford.Brad@epamail.epa.gov; Cynthia.duet@gov.state.la.us; Lachin, Donna A MVN; Browning, Gay B MVN; Jurgensen, John - Alexandria, LA; Jerome Zeringue (jzee@tlcd.org); Kaspar.Paul@epamail.epa.gov; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; kirk.rhinehart@LA.GOV; Wingate, Mark R MVN; Kinsey, Mary V MVN; Goodman, Melanie L MVN; Rodi, Rachel MVN; rachel.sweeney@noaa.gov; renee.sanders@LA.GOV; Richard.Hartman@noaa.gov; Wandell, Scott F MVN; Teague.Kenneth@epamail.epa.gov; Holden, Thomas A MVN; Creel, Travis J MVN
Subject: Re: FW: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration

FWS concurs to recommend the LA-08 funding increase to the CWPPRA Task Force.

Darryl

Inactive hide details for "Goodman, Melanie L MVN"
<Melanie.L.Goodman@usace.army.mil>"Goodman, Melanie L MVN"
<Melanie.L.Goodman@usace.army.mil>

"Goodman, Melanie L MVN" <Melanie.L.Goodman@usace.army.mil>

Wandell, Scott F MVN

From: Richard Hartman [Richard.Hartman@noaa.gov]
Sent: Thursday, February 11, 2010 7:02 AM
To: Goodman, Melanie L MVN
Cc: Cecelia.Linder@noaa.gov; britt.paul@la.usda.gov; Browning, Gay B MVN; Crawford.Brad@epamail.epa.gov; Creel, Travis J MVN; Darryl Clark; Holden, Thomas A MVN; Kaspar.Paul@epamail.epa.gov; Kinsey, Mary V MVN; kirk.rhinehart@la.gov; Lachin, Donna A MVN; Rodi, Rachel MVN; Teague.Kenneth@epamail.epa.gov; Wandell, Scott F MVN; Wingate, Mark R MVN; Chris.Allen@LA.GOV; Angela_Trahan@fws.gov; Bren.Haase@LA.GOV; Cynthia.duet@gov.state.la.us; Jerome Zeringue (jzee@tlcd.org); John Jurgensen; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; Rachel.Sweeney@noaa.gov; renee.sanders@la.gov
Subject: Re: FW: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration

Follow Up Flag: Follow up
Flag Status: Red

I concur.

Rick

Goodman, Melanie L MVN wrote:
> Technical Committee, please see the attached and below described
> request for Task Force fax vote approval to increase funding for the
> subject demonstration project. The State of Louisiana and NOAA
> Fisheries is requesting a budget and funding increase in the amount of
> $343,713. If approved, the revised fully funded project cost would be $2,325,535.
>
> Please provide your respective agency's concurrence and/or comments on
> whether to approve the request by Thursday, February 18, 2010.
>
> Thanks,
>
> Melanie Goodman
> CWPPRA Program Manager
> US Army Corps of Engineers
> New Orleans District
> Restoration Branch
>
> Office: 504-862-1940
> FAX: 504-862-1892
>
> http://www.lacoast.gov/cwppra/
> http://www.mvn.usace.army.mil/pd/cwppra_mission.htm
>
>
>
>
> -----Original Message-----
> From: Cecelia.Linder [mailto:Cecelia.Linder@noaa.gov]
> Sent: Wednesday, February 10, 2010 2:56 PM
> To: Goodman, Melanie L MVN
> Cc: Richard Hartman; Rachel Sweeney; John Foret; Kenneth Bahlinger
> Subject: request to initiate fax vote procedures for a cost increase
> for
> LA-08 Bioengineered Oyster Reef Demonstration
>
> As is described and supported in the attached documents, NOAA
> Fisheries Service is requesting initiation of fax vote procedures by
> both the Technical Committee and the Task Force to increase funds for

Wandell, Scott F MVN

From: Goodman, Melanie L MVN
Sent: Monday, February 22, 2010 4:42 PM
To: Goodman, Melanie L MVN; ' (Cecelia.Linder@noaa.gov)'; 'britt.paul@la.usda.gov'; Browning, Gay B MVN; 'Crawford.Brad@epamail.epa.gov'; Creel, Travis J MVN; 'Darryl Clark'; Holden, Thomas A MVN; 'Kaspar.Paul@epamail.epa.gov'; Kinsey, Mary V MVN; 'kirk.rhinehart@la.gov'; Lachin, Donna A MVN; 'Richard.Hartman@noaa.gov'; Rodi, Rachel MVN; 'Teague.Kenneth@epamail.epa.gov'; Wandell, Scott F MVN; Wingate, Mark R MVN; ' (Chris.Allen@LA.GOV)'; 'Angela Trahan (Angela_Trahan@fws.gov)'; 'Bren Haas (Bren.Haase@LA.GOV)'; 'Cynthia.duet@gov.state.la.us'; 'Jerome Zeringue (jzee@tlcd.org)'; 'John Jurgensen'; 'Kelley.Templet@LA.GOV'; 'Kevin_Roy@fws.gov'; 'rachel.sweeney@noaa.gov'; 'renee.sanders@la.gov'
Subject: CWPPRA request for fax vote for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration

Attachments: RE: FW: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration; Re: FW: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration; RE: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration; Re: FW: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration; FW: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration; Re: FW: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration

RE: FW: request to initiate fa... | Re: FW: request to initiate fa... | RE: request to initiate fax vo... | Re: FW: request to initiate fa... | FW: request to initiate fax vo... | Re: FW: request to initiate fa...

Technical Committee, we have received majority affirmative votes from NRCS, USFWS, NMFS and OCPR for the subject request to recommend Task Force fax vote approval for a funding increase in the amount of $343,713 for the LA-08 Bioengineered Oyster Reef Demonstration.

We will process the fax vote accordingly.

Thanks,

Melanie

-----Original Message-----
From: Goodman, Melanie L MVN
Sent: Wednesday, February 10, 2010 3:55 PM
To: (Cecelia.Linder@noaa.gov); britt.paul@la.usda.gov; Browning, Gay B MVN; Crawford.Brad@epamail.epa.gov; Creel, Travis J MVN; Darryl Clark; Goodman, Melanie L MVN; Holden, Thomas A MVN; Kaspar.Paul@epamail.epa.gov; Kinsey, Mary V MVN; kirk.rhinehart@la.gov; Lachin, Donna A MVN; Richard.Hartman@noaa.gov; Rodi, Rachel MVN; Teague.Kenneth@epamail.epa.gov; Wandell, Scott F MVN; Wingate, Mark R MVN; (Chris.Allen@LA.GOV); Angela Trahan (Angela_Trahan@fws.gov); Bren Haas (Bren.Haase@LA.GOV); Cynthia.duet@gov.state.la.us; Jerome Zeringue (jzee@tlcd.org); John Jurgensen; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; rachel.sweeney@noaa.gov; renee.sanders@la.gov
Subject: FW: request to initiate fax vote procedures for a cost increase for LA-08 Bioengineered Oyster Reef Demonstration

Technical Committee, please see the attached and below described request for Task Force fax vote approval to increase funding for the subject demonstration project. The State of Louisiana and NOAA Fisheries is requesting a budget and funding increase in the amount of $343,713. If approved, the revised fully funded project cost would be $2,325,535.

Please provide your respective agency's concurrence and/or comments on whether to approve the request by Thursday, February 18, 2010.

Wandell, Scott F MVN

From: Goodman, Melanie L MVN
Sent: Friday, March 05, 2010 5:43 PM
To: (Watson.Jane@epamail.epa.gov); 'bill honker'; Browning, Gay B MVN; 'Cece Linder'; 'Chris Doley'; 'garret graves'; 'garret graves'; Habbaz, Sandra P MVN; 'Harrel Hay'; Hawes, Suzanne R MVN; 'jim boggs'; 'kevin norton'; Kinsey, Mary V MVN; Lee, Alvin B COL MVN; 'Scott Wilson'; Wingate, Mark R MVN; (Chris.Allen@LA.GOV); Angela Trahan (Angela_Trahan@fws.gov); Bren Haas (Bren.Haase@LA.GOV); Crawford.Brad@epamail.epa.gov; Creel, Travis J MVN; Cynthia.duet@gov.state.la.us; Goodman, Melanie L MVN; Jerome Zeringue (jzee@tlcd.org); John Jurgensen; Kaspar.Paul@epamail.epa.gov; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; rachel.sweeney@noaa.gov; renee.sanders@la.gov; Rodi, Rachel MVN; Wandell, Scott F MVN; britt.paul@la.usda.gov; Darryl Clark; Holden, Thomas A MVN; kirk.rhinehart@la.gov; Lachin, Donna A MVN; Richard.Hartman@noaa.gov; Teague.Kenneth@epamail.epa.gov
Subject: CWPPRA Bio-engineered Oyster Reef Demo Task Force Fax Vote Request for Scope Change

Attachments: LA-08 Cost Increase Request_NMFS Letter.pdf; LA-08 Factsheet.pdf; Bio-engineered Oyster Reef DEMO (LA-08)--PPL 17 Phase II--Jan_13_10_CompiledPDF.pdf; Bio-engineered Oyster Reef DEMO (LA-08)--PPL 17 Phase II--Jan_13_10.xls; LA-08_TF_1_20_10.pdf; OCPR LA-08 Concurrance.pdf; Copy of ENCL 2 (LA-08)_funding increase.xls; LA-08_funding increase_scanned copy.pdf

LA-08 Cost crease Request_NM | LA-08 Factsheet.pdf | Bio-engineered Oyster Reef DEM... | Bio-engineered Oyster Reef DEM... | LA-08_TF_1_20_10 .pdf | OCPR LA-08 Concurrance.pdf | Copy of ENCL 2 (LA-08)_funding... | LA-08_funding increase_scanned...

Task Force Members,

Please see the attached memorandum from the Chairman of the Task Force requesting a fax vote for approval of the Technical Committee's recommendation to approve the National Oceanic and Atmospheric Administration (NOAA) and the Louisiana Office of Coastal Protection and Restoration (OCPR) request to increase the Phase 2 construction budget for the PPL 17 - Bio-Engineered Oyster Reef Demonstration Project (LA-08) by $343,713 due to a change in project design.

We have included a copy of correspondence and supporting information from NMFS and OCPR requesting the change in project scope.

Please fax your completed form to the US Army Corps of Engineers at (504) 862-1892 or email a scanned copy to Scott Wandell (Scott.F.Wandell@usace.army.mil) and (Melanie.L.Goodman@usace.army.mil) by COB Friday, March 12, 2010.

Thanks,

Melanie Goodman
CWPPRA Program Manager
US Army Corps of Engineers
New Orleans District
Restoration Branch

Office: 504-862-1940
FAX: 504-862-1892

http://www.lacoast.gov/cwppra/
http://www.mvn.usace.army.mil/pd/cwppra_mission.htm

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

5 MAR 2010

CEMVN-PM-OR

MEMORANDUM FOR Louisiana Coastal Wetlands Conservation and Restoration Task Force

SUBJECT: Recommendation to Increase the Phase 2 Construction Budget for the PPL 17-Bio-Engineered Oyster Reef Demonstration Project (LA-08)

1. The National Oceanic and Atmospheric Administration (NOAA) and the Louisiana Office of Coastal Protection and Restoration (OCPR) are requesting to increase the Phase 2 construction budget for the Bio-Engineered Oyster Reef Demonstration Project (LA-08) by $343,713 due to a change in project design. The project was authorized for design and construction by the CWPPRA Task Force in October 2007. If approved, the revised fully funded project cost would change from $1,981,822 to $2,325,535.

2. On behalf of NOAA and OCPR, I request a fax vote from the Task Force (in accordance with the Standard Operating Procedures, Revision 14, page 20) regarding the recommended increase in funds for the construction. Please consider the following motion:

- The CWPPRA Task Force approves the Technical Committee's recommendation to increase the Phase 2 construction budget for PPL 17-Bio-Engineered Oyster Reef Demonstration Project (LA-08) by $343,713 to ensure that project funds are sufficient to cover approved construction.

3. We have included a copy of correspondence from NOAA requesting to increase Phase 2 construction budget to insure that project funds are sufficient to cover approved construction (Encl 1).

4. Please use the enclosed facsimile transmittal form to submit your vote (Encl 2). Please fax your completed form to the US Army Corps of Engineers at (504) 862-1892 or email a scanned copy to Melanie.L.Goodman@usace.army.mil by COB Tuesday, March 9, 2010.

5. If you have any questions concerning this request, please feel free to contact Ms. Melanie L. Goodman, CWPPRA Program Manager, at (504) 862-1940.

2 Encls
as

ALVIN B. LEE
Colonel, EN
Commanding

Wandell, Scott F MVN

From: Goodman, Melanie L MVN
Sent: Tuesday, March 16, 2010 4:28 PM
To: Goodman, Melanie L MVN; ' (Watson.Jane@epamail.epa.gov)'; 'bill honker'; Browning, Gay B MVN; 'Cece Linder'; 'Chris Doley'; 'garret graves'; 'garret graves'; Habbaz, Sandra P MVN; 'Harrel Hay'; Hawes, Suzanne R MVN; 'jim boggs'; 'kevin norton'; Kinsey, Mary V MVN; Lee, Alvin B COL MVN; 'Scott Wilson'; Wingate, Mark R MVN; ' (Chris.Allen@LA.GOV)'; 'Angela Trahan (Angela_Trahan@fws.gov)'; 'Bren Haas (Bren.Haase@LA.GOV)'; 'Crawford.Brad@epamail.epa.gov'; Creel, Travis J MVN; 'Cynthia.duet@gov.state.la.us'; 'Jerome Zeringue (jzee@tlcd.org)'; 'John Jurgensen'; 'Kaspar.Paul@epamail.epa.gov'; 'Kelley.Templet@LA.GOV'; 'Kevin_Roy@fws.gov'; 'rachel.sweeney@noaa.gov'; Rodi, Rachel MVN; Wandell, Scott F MVN; 'britt.paul@la.usda.gov'; 'Darryl Clark'; Holden, Thomas A MVN; 'kirk.rhinehart@la.gov'; Lachin, Donna A MVN; 'Richard.Hartman@noaa.gov'; 'Teague.Kenneth@epamail.epa.gov'
Subject: RE: CWPPRA Bio-engineered Oyster Reef Demo Task Force Fax Vote Request for Scope Change

Attachments: Vote_Sheet_USFWS and NOAA Fisheries.pdf; Vote_Sheet_EPA.pdf

Vote_Sheet_USFWS and NOAA Fish... Vote_Sheet_EPA.pdf

Task Force members, we have received majority vote in the attached three fax votes from NOAA Fisheries, USFWS, and EPA, which is sufficient to approve the requested change in project scope as described in the below email. We expect to receive a reply from NRCS soon.

Thanks,

Melanie Goodman
CWPPRA Program Manager
US Army Corps of Engineers
New Orleans District
Restoration Branch

Office: 504-862-1940
FAX: 504-862-1892

http://www.lacoast.gov/cwppra/
http://www.mvn.usace.army.mil/pd/cwppra_mission.htm

-----Original Message-----
From: Goodman, Melanie L MVN
Sent: Friday, March 05, 2010 5:43 PM
To: (Watson.Jane@epamail.epa.gov); 'bill honker'; Browning, Gay B MVN; 'Cece Linder'; 'Chris Doley'; 'garret graves'; 'garret graves'; Habbaz, Sandra P MVN; 'Harrel Hay'; Hawes, Suzanne R MVN; 'jim boggs'; 'kevin norton'; Kinsey, Mary V MVN; Lee, Alvin B COL MVN; 'Scott Wilson'; Wingate, Mark R MVN; (Chris.Allen@LA.GOV); Angela Trahan (Angela_Trahan@fws.gov); Bren Haas (Bren.Haase@LA.GOV); Crawford.Brad@epamail.epa.gov; Creel, Travis J MVN; Cynthia.duet@gov.state.la.us; Goodman, Melanie L MVN; Jerome Zeringue (jzee@tlcd.org); John Jurgensen; Kaspar.Paul@epamail.epa.gov; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; rachel.sweeney@noaa.gov; renee.sanders@la.gov; Rodi, Rachel MVN; Wandell, Scott F MVN; britt.paul@la.usda.gov; Darryl Clark; Holden, Thomas A MVN; kirk.rhinehart@la.gov; Lachin, Donna A MVN; Richard.Hartman@noaa.gov; Teague.Kenneth@epamail.epa.gov
Subject: CWPPRA Bio-engineered Oyster Reef Demo Task Force Fax Vote Request for Scope Change

FACSIMILE TRANSMITTAL HEADER SHEET

Agency	NAME/OFFICE SYMBOL	OFFICE TELEPHONE NO.	OFFICE FAX NO.
FROM US EPA - R6	Bill Honker (6WQ)	214-665-3187	214-665-7373
TO USACE	Melanie L. Goodman CWPPRA Program Manager	(504) 862-1940	(504) 862-1892

Classification	Precedence	No. Pages *Including Header*	Date/time	Releaser's Signature
		1	3/11/2010	Melanie Goodman

REMARKS:

The Motion:

The National Oceanic and Atmospheric Administration (NOAA) and the Louisiana Office of Coastal Protection and Restoration (OCPR) are requesting to increase the Phase 2 construction budget for the PPL 17 - Bio-Engineered Oyster Reef Demonstration Project (LA-08) by $343,713 due to a change in project design. The CWPPRA Task Force approves the Technical Committee's recommendation to increase the construction budget for PPL17 - Bio-Engineered Oyster Reef Demonstration Project (LA-08) by $343,713.

Please check one of the following:

[X] I approve the motion as stated above.

[ ] I do NOT approve the motion as stated above.

Signed,

Task Force Member Name

3/11/10
Date

FACSIMILE TRANSMITTAL HEADER SHEET

Agency	NAME/OFFICE SYMBOL	OFFICE TELEPHONE NO.	OFFICE FAX NO.
FROM NOAA Fisheries	Chris Doley	(301) 713-0174	(301) 713-0184
TO USACE	Melanie L. Goodman CWPPRA Program Manager	(504) 862-1940	(504) 862-1892

Classification	Precedence	No. Pages *Including Header*	Date/time	Releaser's Signature
		1	3/8/10	Melanie Goodman

REMARKS:

The Motion:

The National Oceanic and Atmospheric Administration (NOAA) and the Louisiana Office of Coastal Protection and Restoration (OCPR) are requesting to increase the Phase 2 construction budget for the PPL 17 - Bio-Engineered Oyster Reef Demonstration Project (LA-08) by $343,713 due to a change in project design. The CWPPRA Task Force approves the Technical Committee's recommendation to increase the construction budget for PPL17 - Bio-Engineered Oyster Reef Demonstration Project (LA-08) by $343,713.

Please check one of the following:

[X] I approve the motion as stated above.

[ ] I do NOT approve the motion as stated above.

Signed,

Christopher D. Doley

3-8-2010
3/8/10

FACSIMILE TRANSMITTAL HEADER SHEET

Agency	NAME/OFFICE SYMBOL	OFFICE TELEPHONE NO.	OFFICE FAX NO.
FROM Fish and Wildlife Service	Jim Boggs	337/291-3115	337/291-3139
TO USACE	Melanie L. Goodman CWPPRA Program Manager	(504) 862-1940	(504) 862-1892

Classification	Precedence	No. Pages *Including Header*	Date/time	Releaser's Signature
		1	3/5/2010	Melanie Goodman

REMARKS:

The Motion:

The National Oceanic and Atmospheric Administration (NOAA) and the Louisiana Office of Coastal Protection and Restoration (OCPR) are requesting to increase the Phase 2 construction budget for the PPL 17 - Bio-Engineered Oyster Reef Demonstration Project (LA-08) by $343,713 due to a change in project design. The CWPPRA Task Force approves the Technical Committee's recommendation to increase the construction budget for PPL17 - Bio-Engineered Oyster Reef Demonstration Project (LA-08) by $343,713.

Please check one of the following:

[XXXXXXXX] I approve the motion as stated above.

[ ] I do NOT approve the motion as stated above.

Signed,

Jim Boggs, Field Supervisor, LFO

3/8/10
Date

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

TASK FORCE FAX VOTE APPROVING CONSTRUCTION OF THE CWPPRA ENHANCEMENT OF BARRIER ISLAND VEGETATION DEMONSTRATION PROJECT

For Report:

Ms. Melanie Goodman will report on a recent Task Force Fax Vote to approve construction of the CWPPRA PPL 16 Enhancement of Barrier Island Vegetation Demonstration Project (TE-53) as requested by the U.S. Environmental Protection Agency and the LAOCPR

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

March 19, 2010

Mr. Thomas Holden, Chairman
CWPPRA Technical Committee
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Holden:

By this letter, the Environmental Protection Agency and the Louisiana Office of Coastal Protection and Restoration request construction approval for the demonstration project, *Enhancement of Barrier Island Vegetation Demonstration* (TE-53). The information required by Section 6i of Revision 16 of the CWPPRA Standard Operating Procedures, is enclosed. If you or any other members of the Technical Committee, or of the Planning and Evaluation Subcommittee, or the Task Force have any questions about this, please call me at (214) 665-7255, or Ken Teague at (214) 665-6687.

Sincerely,

Brad Crawford
Environmental Engineer

Enclosure

Cc (via email only):

Kirk Rhinehart, OCPR Technical Committee Member
Darryl Clark, USFWS Technical Committee Member
Rick Hartman, NOAA Fisheries Technical Committee Member
Britt Paul, NRCS Technical Committee Member
Melanie Goodman, P&E Subcommittee Chair
Kelly Templet, OCPR P&E Subcommittee Chair
Angela Trahan, USFWS P&E Subcommittee Chair
Rachel Sweeney, NOAA Fisheries P&E Subcommittee Member
John Jurgensen, NRCS P&E Subcommittee Member
Brad Miller, OCPR Project Manager
Ken Teague, EPA Project Manager

Information Required for Construction Request
Enhancement of Barrier Island Vegetation Demonstration (TE-53)
March 18, 2010

Description of the Project

The goal of this demonstration project is to further develop innovative methods of enhancing the successful establishment and cover of vegetation plantings in dune, swale, and backbarrier marsh restoration/creation projects. Developing methodologies to enhance vegetation planting success in barrier island restoration projects is important because healthy vegetative cover traps, binds, and stabilizes sand and sediment, thereby improving island integrity during storm and overwash events. Barrier islands are very stressful environments, and there remains a critical need to develop cost-effective improvements to existing restoration methodologies that will enhance the successful establishment and spread of vegetation in these expensive and important restoration projects.

Humic acid application represents a potential restoration enhancement tool that may significantly accelerate the successful establishment and expansion of barrier island plantings. Humic substances are natural compounds that are categorized as one of three classes based upon characteristic solubility at different pH levels, with humic acids being that portion insoluble at a pH less than 2, but soluble at higher pH levels (Zhang et al. 2003). The capacity of humic acid to act as a natural soil conditioner and fertilizer, as well as plant growth stimulator in agricultural systems is well-documented and has received a great deal of attention in recent years (see Chen and Aviad 1990; Varanini and Pinton 1995; Atiyeh et al. 2002; Nardi et al. 2002; Sharif et al. 2002; Pilanah and Kaplan 2003). However, peer-reviewed literature on the benefits of humic acid in coastal restoration planting projects is currently limited (Willis and Hester 2008). Some of the reported benefits of humic acid application include enhanced plant resistance to environmental stressors, such as physiological drought, salinity, and heat stress. Therefore, we anticipate that the development of a humic acid amendment protocol has tremendous potential to be used in conjunction with current and proposed barrier island restoration techniques to yield beneficial and synergistic results that will enhance overall project success beyond current levels.

This project will be conducted in controlled settings at the University of Louisiana at Lafayette and also in field settings on Whiskey Island and New Cut restoration sites. The focus of this demonstration project includes both a biotic emphasis on evaluating novel establishment techniques of black mangrove (*Avicennia germinans*) and groundsel bush (*Baccharis halimifolia*) via propagules and seeds, respectively, as an alternative to planting container-grown seedlings, and also includes emphasis on properly amending the restored barrier island substrate with humic acid and/or a fertilization regime to minimize environmental stressors and encourage survival, spread, and expansion of the vegetation.

Therefore, the primary research components to be evaluated, optimized, and demonstrated in this project can be summarized by the following four demonstration statements:

1. Demonstrate the effective establishment of black mangrove (*Avicennia germinans*) via propagule dispersal in barrier island and high salt marsh restoration sites.
2. Demonstrate the effective establishment of groundsel bush (*Baccharis halimifolia*) via seed dispersal in the swale environment of barrier island restoration sites.
3. Demonstrate the range of effective use of humic acid amendment as a means of ameliorating the impact of environmental stressors associated with coastal restoration sites on dominant plant species of the following environments:
   - **a)** dune using sea oats (*Uniola paniculata*) and bitter panicum (*Panicum amarum*),
   - **b)** swale using marshhay cordgrass (*Spartina patens*), and the
   - **c)** marsh using smooth cordgrass (*Spartina alterniflora*) and black mangrove (*Avicennia germinans*.
4. Demonstrate the range of effective use of fertilization regime as a means of ameliorating the impact of environmental stressors associated with coastal restoration sites on dominant plant species of the dune environment (sea oats and bitter panicum) and swale environment (marshhay cordgrass).

Section 303(e) Certification from the Corps of Engineers

This project is to be implemented within the areas of two existing, approved, and constructed CWPPRA projects: Whiskey Island Back Barrier Marsh Creation (TE-50) and New Cut Dune and Marsh Restoration Project (TE-37). Both of these projects received Section 303(e) Certification from the Corps of Engineers. See the enclosed letters. Based on the existence of these certifications, the requirement for Section 303(e) Certification for this demonstration project is met.

Overgrazing Determination

Again, this project is to be implemented within the areas of two existing, approved, and constructed CWPPRA projects: Whiskey Island Back Barrier Marsh Creation (TE-50) and New Cut Dune and Marsh Restoration Project (TE-37). Both of these projects received Overgrazing Determinations from the NRCS. See the enclosed letters. Based on the existence of these determinations, the requirement for an Overgrazing Determination for this demonstration project is met.

Fully Funded Cost Estimate

The fully funded cost estimate of $919,599 has not changed since Task Force approval.

Wetland Value Assessment

As a demonstration project, a Wetland Value Assessment is not required.

Cost Share Agreement

A cost share agreement (Cooperative Agreement) was executed on July 16, 2007.

HTRW Assessment

Due to the nature of this project (experimental planting, experimental soil amendments), EPA has determined that an HTRW assessment is not required. The project involves only minimal disturbance of the top few inches of soil, using manual methods and simple hand tools (shovels). In addition, the top several feet of soil at these sites consist of sediment dredged from an offshore borrow site.

Whiskey Island Project Location

Fig. 1. Locations of proposed experimental blocks for dune grass plantings and back barrier marsh plantings on Whiskey Island (not drawn to scale).

New Cut Project Location

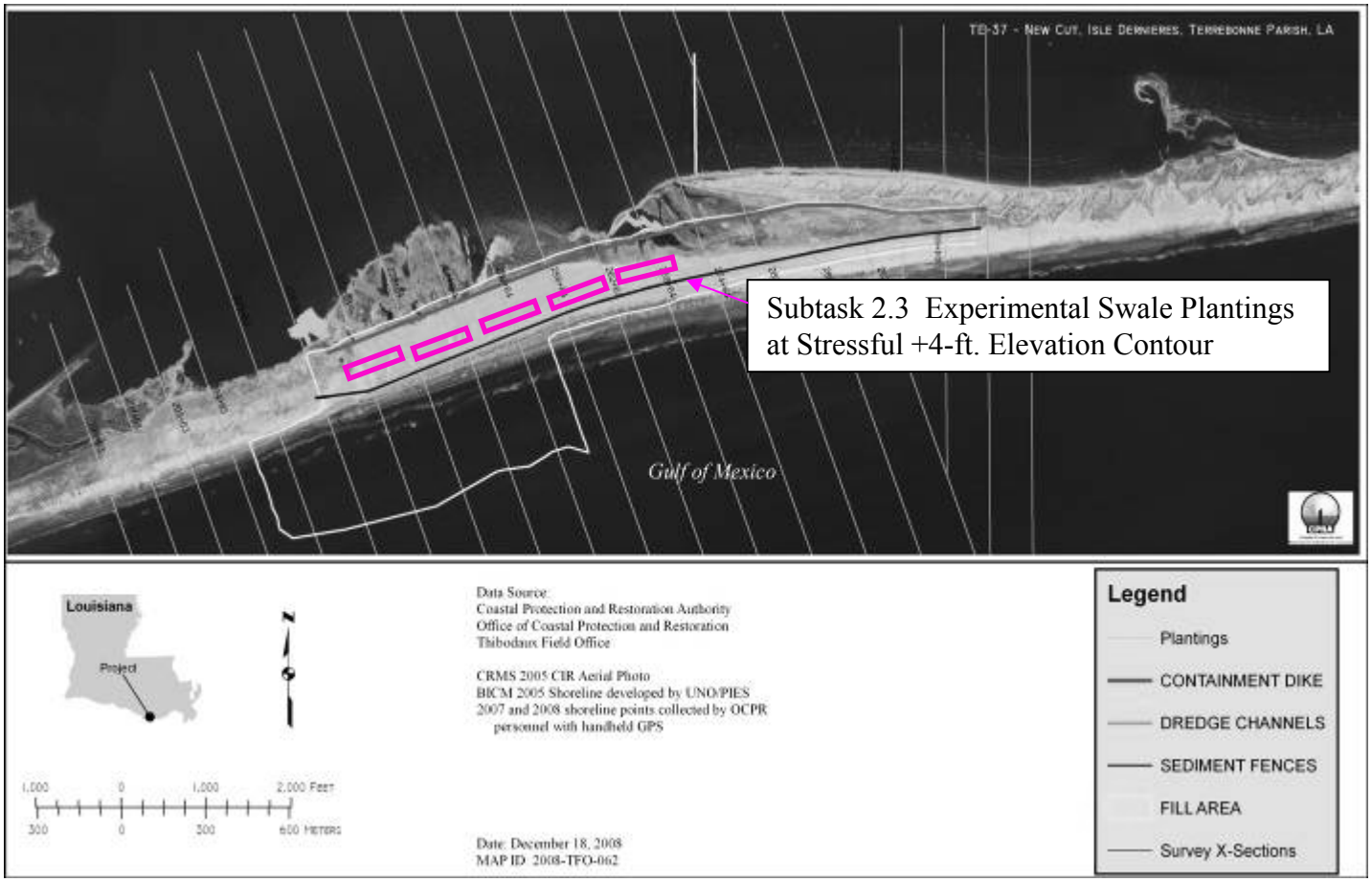


Fig. 2. Locations of proposed experimental blocks for dune grass plantings and back barrier marsh plantings on New Cut (not drawn to scale).

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

Office of Counsel

JUN 1 3 2008

Mr. William K. Honker, P.E.
Deputy Director, Water Quality Protection Division
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Dear Mr. Honker:

This is in reference to your request for Section 303(e) approval for Whiskey Island Back Barrier Marsh Creation Project (TE-50), Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA).

The request included a copy of the Letter Agreement that was signed by the Louisiana Department of Natural Resources (LDNR) and the Louisiana Department of Wildlife and Fisheries for the proposed project. We have also reviewed the information that LDNR subsequently provided regarding the Act of Donation of the Isles Dernieres Barrier Islands, including Whiskey Island, from Louisiana Land and Exploration Company, now Burlington Resources.

The request also included a project map that indicates that there are pipelines within the project boundary. If any existing pipelines or utilities will be adversely affected by the project, requiring any relocation, alteration, or lowering of the pipeline, and if the owners have compensable interest in such lines, then the appropriate land rights must be acquired from the owners of such facilities, including the subordination of their rights, title, and interests in their facilities to the interests necessary for the construction, operation and maintenance of the CWPPRA project.

Please be advised that prior to construction of the project, all appropriate real property rights must be acquired, subject to such terms and conditions as necessary to ensure that wetlands restored, enhanced or managed through this project will be administered for the long-term conservation of the lands and waters and the dependent fish and wildlife populations. This includes the acquisition of rights from not only the underlying landowners but also all other persons or entities with ownership or other property interests in the land that may be impacted by the project.

Additionally, we note that the Letter Agreement includes an indemnification clause. This indemnification responsibility cannot be passed on to the United States, including the Environmental Protection Agency or any other federal agency.

The request also includes a determination from the Natural Resources Conservation Service that overgrazing does not occur on the project lands or lands affected thereby. If overgrazing should occur in the future, then a grazing plan must be established for the project.

Accordingly, by the authority delegated to me by the Secretary of the Army, and given compliance with the provisions set forth above, I approve the project in accordance with Section 303(e) of CWPPRA.

If you have any other comments or questions, please contact Ms. Melanie Goodman, (504) 862-1940.

Sincerely,

Alvin B. Lee

Alvin B. Lee
Colonel, US Army
District Commander

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

Real Estate Division
Office of the Chief

Mr. Sam Becker
Acting Division Director
Water Quality Protection Division
U.S. Environmental Protection Agency Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Dear Mr. Becker:

We reviewed your New Cut Dune and Marsh Restoration Project (TE-37), Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA), Terrebonne Parish, Louisiana, for Section 303(e) approval purposes. Our Real Estate Division legal staff examined the sample instrument through which the State of Louisiana acquired its interest in the project property. The instrument contains such terms and conditions as are necessary to ensure that wetlands restored, enhanced or managed through this project will be administered for the long-term conservation of the lands and waters and the dependant fish and wildlife populations. We have also considered your determination overgrazing does not occur on project lands or lands affected thereby.

Accordingly, by the authority delegated to me by the Secretary of the Army, I approve the project in accordance with Section 303(e) of CWPPRA. However, if overgrazing should occur in the future, you must establish a grazing plan for the project.

Sincerely,

/S/
Thomas F. Julich
Colonel, U.S. Army
District Engineer

Copy Furnished:

Ms. Helen K. Hoffpauir
Coastal Restoration Division
Louisiana Department of Natural Resources
P.O. Box 94396
Baton Rouge, Louisiana 70804-9396

cc: Chris Williams
Todd Hubbell
7/19/01

M.J. "MIKE" FOSTER, JR.
GOVERNOR

State of Louisiana

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

October 16, 2000

Mr. Wes McQuiddy
Environmental Protection Agency
1445 Ross Ave.
Dallas, TX 75202-2733

RE: New Cut Dune and Marsh Restoration Project TE-37
CWPPRA Section 303(e) Approval

Dear Mr. McQuiddy:

The New Cut Dune and Marsh Restoration Project TE-37 is located on State owned land and water bottoms. The project area is on a portion of the Isles Dernieres Barrier Islands Refuge (IDBIR) managed by the Department of Wildlife and Fisheries (DWF). Therefore, there is no standard landrights document for the Environmental Protection Agency (EPA) to submit to the U.S. Army Corps of Engineers (Corps) in its application for 303(e) approval. Such documents contain the criteria required by the Corps to issue 303(e) compliance.

In lieu of sending a standard landrights document to the Corps as part of your 303(e) compliance documentation, we recommend that you include your Application for The Department of the Army Permit to the Department of Natural Resources Coastal Management Division. This will include design, engineering, and construction information pertinent to the project, as well as a map of the project including project boundary and project features.

Included here is a copy of the Letter of No Objection from the State Land Office of the Louisiana Division of Administration confirming knowledge and acceptance of the project. Also, the Department of Natural Resources (DNR) has executed a letter agreement with the DWF which sets forth certain stipulation as to access, construction and monitoring of the project on the IDBIR. A copy of the agreement is included herewith. These two items and your permit application, as well as an overgrazing determination from the U. S. D. A. Natural Resources Conservation Service (NRCS), may be forwarded under cover letter from EPA as part of your request for CWPPRA Section 303(e) compliance approval. You may forward all items to the Corps at the following address :

Coastal Restoration Division
P.O. Box 94396 . Baton Rouge, Louisiana 70804-9396 . Telephone (225) 342-7308 . Fax (225) 342-9417

An Equal Opportunity Employer

Mr. Clyde H. Sellers
Chief, Real Estate Division
U. S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

If you need further assistance or have any questions regarding this matter, please contact Mr. Jim Altman of the CRD Real Estate Section at (225) 342-1934. We at DNR look forward to completing the 303(e) approval process and proceeding with project construction.

Sincerely,

Bill Good

Bill Good, Ph.D
Administrator, CRD

BJG/JLA

Attachments

c(no attachment): Chris Williams, CRD Project Manager
CRD Project File New Cut Dune and Marsh Restoration Project TE-37

F:\USERS\RealEst\Projects\TE\TE37ncdune\Correspondence\te_Epa303elet.wpd

USDA United States Department of Agriculture

Natural Resources Conservation Service

3737 Government Street
Alexandria, Louisiana
71302

November 6, 2000

Mr. Troy Hill
U. S. Environmental Protection Agency
1445 Ross Ave., Suite 1200
Dallas, Texas 75202-2733

Dear Mr. Hill:

Re: CWPPRA Section 303(e) Overgrazing Determination for New Cut Dune and Marsh Restoration Project E-37

I am in receipt of your letter of October 21, 2000, requesting an overgrazing determination for the New Cut Dune and Marsh Restoration Project. I have consulted with our district conservationist for the project area and we have determined that overgrazing is not a problem in the project area; therefore, easements restricting grazing are not required.

If you have any questions or if I can be of further assistance, please call.

Sincerely,

W. Britt Paul
Water Resources Planning Specialist

cc: Bruce Lehto, ASTC/Water Resources/Rural Development, NRCS, Alexandria, LA
Tim Landreneau, District Conservationist, NRCS, Thibodaux, LA

RECEIVED
00 NOV -9 AM 7:57
PROTECTION DIV.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
3737 Government Street
Alexandria, Louisiana 71302

August 21, 2007

Mr. Tim Landers
Environmental Protection Agency
Region VI
Water Quality Protection Division (6WQ-EMC)
1445 Ross Avenue
Dallas, Texas 75202-2733

RECEIVED
EPA REGION 6
07 JUL 27 PM 5:05
ECOSYSTEMS PROTECTION & RESTORATION

Dear Mr. Landers:

RE: Whiskey Island Back Barrier Marsh Creation (TE-50)

I am in receipt of your request for an overgrazing determination for the Whiskey Island Back Barrier Marsh Creation (TE-50). I contacted our local district conservationist and our state resource conservationist to discuss the grazing in the project area. Currently, livestock are not grazing in the area, nor do we see a potential for grazing once the project is installed. Therefore, it is our opinion, overgrazing is not a problem in this project area. If you have any questions please let me know.

Sincerely,

W. Britt Paul
Assistant State Conservationist
for Water Resources and Rural Development

cc: Randolph Joseph, Area Conservationist, NRCS, Lafayette, Louisiana
Michael Trusclair, District Conservationist, NRCS, Boutte, Louisiana
Johanna Pate, State Grazing Lands Specialist, NRCS, Alexandria, Louisiana
John Jurgensen, Civil Engineer, NRCS, Alexandria, Louisiana

FINAL DESIGN REPORT

ENHANCEMENT OF BARRIER ISLAND VEGETATION DEMONSTRATION PROJECT

Principal Investigator: Mark W. Hester
Coastal Plant Ecology Laboratory
Department of Biology
University of Louisiana, Lafayette
Lafayette, LA 70504

Submitted by U.S. EPA

March 16, 2010

1) Recommended Project Features

This demonstration consists of two major components: Field Component and Greenhouse Component, each of which has multiple tasks as follows:

Field Component Tasks

2.1 – Dune grass enhanced establishment and spread
2.2 – Swale marshhay cordgrass enhanced establishment and spread
2.3 – Swale vegetation establishment at stressful +4-ft elevation contour
2.4 – Groundsel bush establishment via seed
2.5 – Black mangrove enhanced establishment via propagules

Greenhouse Component Tasks

2.6 – Effect of sand burial depth on groundsel bush seed germination success
2.7 – Evaluation of hydromulching
2.8 – Refinement of humic acid and fertilization dosage levels for optimum plant growth

2) Project Location

The project will be conducted at two field locations: Whiskey Island (TE-50) and New Cut (TE-37). Task 2.3 (Swale vegetation establishment at stressful +4-ft contour), will be conducted at New Cut. All other field tasks (Tasks 2.1, 2.2, 2.4, 2.5) will be conducted on Whiskey Island. See attached Figures 1-7 for locations and experimental plot schematics of field component tasks.

Field demonstration project components will be conducted in three barrier island habitat types defined by the following elevations: dune habitat elevation is equal to or greater than +5 feet, marsh habitat (backbarrier salt marsh) elevation is intertidal, and swale habitat elevation is between the marsh and dune habitat elevations.

Greenhouse studies (Tasks 2.6, 2.7, 2.8) will be conducted at the CEET (Center for Ecology and Environmental Technology) facility greenhouses, University of Louisiana, Lafayette.

3) Engineering & Design Surveys

Not applicable – project is within footprint of existing projects and no engineering or construction is involved in the project. However, elevations are relevant to the project, so existing survey data will be provided in the final report. Further, some limited additional site-specific surveys, for selected, representative habitat types, will be completed and the results included in the final report.

4) Engineering & Design Geotechnical Investigation

Not applicable – project is within footprint of existing projects and no engineering or construction is involved in the project.

5) Land Ownership Investigation

The local sponsor, OCPR, is completing formal landrights agreements with the Louisiana Department of Wildlife and Fisheries. These agreements will be completed prior to initiation of field work in early April, 2010.

6) Preliminary Cultural Resource Assessment

The Federal Sponsor, the U.S. Environmental Protection Agency, has determined that this project is a type of activity that has no potential to cause effects to historic properties, as discussed in 36 CFR Part 800, § 800.3(a)(1).

7) Revised Project Construction Costs

There are no revisions to the approved project construction costs. The total approved, fully-funded cost of this project is $919,599.

8) Description of Changes since Funding Approval

There have been no significant changes since funding approval except for modification to the timeline (see attached Table 2)

9) Detailed Monitoring Plan

See attached Monitoring Plan.

10) Responses to Comments

Comments Brought Up At the Design Review Conference

Comment 1 (NRCS): How is marsh, swale, and dune habitat classified for this project? Please provide a description within the project description or location.

Response to Comment 1: We have added information to Section 2 above, addressing this comment. Field demonstration project components will be conducted in three barrier island habitat types defined by the following elevations: dune habitat elevation is equal to or greater than +5 feet, marsh habitat (backbarrier salt marsh) elevation is intertidal, and swale habitat elevation is between the marsh and dune habitat elevations.

Comment 2 (NRCS): Could you include elevation data in the Design Report, for your experimental sites? If not, could these be provided as part of the Final Report?

Response to Comment 2: Some elevation data exist for these areas, generated under the previous CWPPRA projects here. However, most of it is somewhat dated, and since the islands are so dynamic, these data may not be representative of current elevations. In addition, obtaining these data and incorporating them into this report are not trivial undertakings, and we hope to begin field work in the first week of April. We will provide any representative elevation data for these sites that we can find, in the final report. In addition, the Principle Investigator has agreed to a few elevation measurements of selected representative sites. These will be provided in the final report as well. Each of the demonstration habitat types (i.e., dune, swale, and marsh) will be characterized in terms of a standard vertical datum (NAVD88). The salt marsh demonstration site will have additional hydroperiod characterization via a continuously recording water-level gage located at the site.

Comment 3 (NRCS): Have you received the ok from the SHPO concerning impacts to cultural resources for this project?

Response to Comment 3: EPA has determined that this project is a type of activity that has no potential to cause effects to historic properties, as discussed in 36 CFR Part 800, § 800.3(a)(1).

Comment 4 (NRCS): What soil analyses will be conducted while monitoring the project and what is the frequency of monitoring?

Response to Comment 4: Soil analyses to be conducted at the field sites include soil moisture, organic matter content, and nitrate-nitrite, ammonium, salinity/conductivity, and pH in the upper 15 cm of soil collected at each vegetation sampling time (spring, summer, and fall 2010 and spring and summer 2011).

Comments Submitted in Writing

Corps of Engineers Comments

Comment 1: Page 5, **Project Description,** add period to end of sentence.

Response to Comment 1: Thank you for the suggestion. We have made the correction.

Comment 2: Page 5, section 2.1, 3rd sentence, define DNR acronym.

Response to Comment 2: Thank you. We have made the correction.

Comment 3. Page 5, section 2.1, 5th sentence, define DGPS acronym.

Response to Comment 3: We have made the suggested definition.

Comment 4. Page 5, section 2.1, 6th sentence, define FGDC acronym.

Response to Comment 4: We have added the recommended definition.

Comment 5. Page 12, **Subtask 2.2**, *Specific Main Effect Hypotheses* part: It appears that the alphabetic listing on the left margin skips "f. and g.".

Response to Comment 5: You are correct. Thank you for pointing out this error. We have made the correction.

Comment 6. Page 22, Table 1. Timeline of major project tasks and subtasks: On row denoting **Task 4.4**, under columns **2** and **3** for year **2010**, please identify significance of lower case "x" in comparison with upper case "X" elsewhere in the table or if no difference intended, label all consistently to match (either all upper case or lower case).

Response to Comment 6: We have added an explanation of the small "x"s as a footnote

Comment 7. Page 23, Fig. 1., add a north arrow, add period at end of caption.

Response to Comment 7: We have made the suggested changes.

Comment 8. Page 24, Fig. 2 caption: last sentence in caption is repeated.

Response to Comment 8: Thank you for identifying this. We have corrected the problem.

Comment 9. Page 28, Fig. 6., add period at end of caption.

Response to Comment 9: We have made the correction.

FWS Comments

Comment 1 , Page 6, Paragraph 1, first full sentence (and throughout the document where densities are mentioned) - The planting densities in terms of plants per area should be mentioned instead of stating that the density will be, "DNR contracted density", or high density.

Response to Comment 1: Thank you for the suggestion; the recommended changes have been incorporated.

Comment 2, Page 7, First full Paragraph, Section 2.5 Black Mangrove enhanced establishment via propagules (and other similar sections) - The size and number of plants/propagules per area/plot and treatment should be described.

Response to Comment 2: Response to Comment 2 Thank you for the suggestion; the recommended changes have been incorporated.

Comment 3, Page 11, Table at top of page, Treatment Levels (and other parts of document where fertilizer concentrations are mentioned) - The Broome et al (1982) fertilizer concentrations could be listed at least the first time it is referred to.

Response to Comment 3: Thank you for the suggestion; the suggested change has been incorporated.

Comment 4, Page 11, Section "h" at bottom - The alternate hypothesis (Ha) should probably be "time of planting" vs. "planting density."

Response to Comment 4: Thank you. We have made the correction.

Comment 5, Page 22, Table 1, Timeline of major project tasks and subtasks - Some dates listed are for 2008 and 2009. It is unclear if the items have been completed or the dates need to be changed to 2010. For example, has the first year greenhouse monitoring been completed?

Response to Comment 5: An updated timeline has been generated to clarify which tasks are completed, ongoing, and to be shortly initiated

Comment 6, Page 24, Figure 2, Treatment matrix for subtask 2.1 - The number of plants per treatment would be helpful to understand this table.

Response to Comment 6: An explanation of plant numbers has been added to the figure legend

PRELIMINARY DESIGN REPORT
MONITORING PLAN

ENHANCEMENT OF BARRIER ISLAND AND SALT MARSH VEGETATION DEMONSTRATION PROJECT

Principal Investigator: Mark W. Hester, University of Louisiana at Lafayette
Start Date: November 1, 2008
End Date: October 31, 2011

Project Description

The goal of this demonstration project is to further develop innovative methods of enhancing the successful establishment and cover of vegetation plantings in dune, swale, and backbarrier marsh restoration/creation projects. Developing methodologies to enhance vegetation planting success in barrier island restoration projects is important because healthy vegetative cover traps, binds, and stabilizes sand and sediment, thereby improving island integrity during storm and overwash events. Barrier islands are very stressful environments, and there remains a critical need to develop cost-effective improvements to existing restoration methodologies that will enhance the successful establishment and spread of vegetation in these expensive and important restoration projects.

Humic acid application represents a potential restoration enhancement tool that may significantly accelerate the successful establishment and expansion of barrier island plantings. Humic substances are natural compounds that are categorized as one of three classes based upon characteristic solubility at different pH levels, with humic acids being that portion insoluble at a pH less than 2, but soluble at higher pH levels (Zhang et al. 2003). The capacity of humic acid to act as a natural soil conditioner and fertilizer, as well as plant growth stimulator in agricultural systems is well-documented and has received a great deal of attention in recent years (see Chen and Aviad 1990; Varanini and Pinton 1995; Atiyeh et al. 2002; Nardi et al. 2002; Sharif et al. 2002; Pilanah and Kaplan 2003). However, peer-reviewed literature on the benefits of humic acid in coastal restoration planting projects is currently limited (Willis and Hester 2008). Some of the reported benefits of humic acid application include enhanced plant resistance to environmental stressors, such as physiological drought, salinity, and heat stress. Therefore, we anticipate that the development of a humic acid amendment protocol has tremendous potential to be used in conjunction with current and proposed barrier island restoration techniques to yield beneficial and synergistic results that will enhance overall project success beyond current levels.

This project will be conducted in controlled settings at the University of Louisiana at Lafayette and also in field settings on Whiskey Island and New Cut restoration sites. The focus of this demonstration project includes both a biotic emphasis on evaluating novel establishment techniques of black mangrove (*Avicennia germinans*) and groundsel bush (*Baccharis halimifolia*) via propagules and seeds, respectively, as an alternative to planting container-grown seedlings, and also includes emphasis on properly amending the restored barrier island substrate with humic acid and/or a fertilization regime to minimize environmental stressors and encourage survival, spread, and expansion of the vegetation. Therefore, the primary research components to be evaluated, optimized, and demonstrated in this project

can be summarized by the following four demonstration statements:

1. Demonstrate the effective establishment of black mangrove (*Avicennia germinans*) via propagule dispersal in barrier island and high salt marsh restoration sites.
2. Demonstrate the effective establishment of groundsel bush (*Baccharis halimifolia*) via seed dispersal in the swale environment of barrier island restoration sites.
3. Demonstrate the range of effective use of humic acid amendment as a means of ameliorating the impact of environmental stressors associated with coastal restoration sites on dominant plant species of the following environments:
   - **a)** dune using sea oats (*Uniola paniculata*) and bitter panicum (*Panicum amarum*),
   - **b)** swale using marshhay cordgrass (*Spartina patens*), and the
   - **c)** marsh using smooth cordgrass (*Spartina alterniflora*) and black mangrove (*Avicennia germinans*.
4. Demonstrate the range of effective use of fertilization regime as a means of ameliorating the impact of environmental stressors associated with coastal restoration sites on dominant plant species of the dune environment (sea oats and bitter panicum) and swale environment (marshhay cordgrass).

The following represents the major **Project Implementation subtasks** and includes a brief description of the proposed basic experimental approaches to be utilized. Null and alternative hypotheses specific to each task are detailed in a subsequent section.

Field Component Implementation Subtasks

Each of the demonstration habitat types (i.e., dune, swale, and marsh) will be characterized in terms of a standard vertical datum (NAVD88). The salt marsh demonstration site will have additional hydroperiod characterization via a continuously recording water-level gage located at the site.

2.1 Dune grass enhanced establishment and spread

This subtask will demonstrate benefits to dune grass plant production and soil condition of planting density, fertilization addition, and humic acid amendment. Vegetative cover, average plant height, aboveground plant tissue nutrient status, soil nutrient status (hereafter defined as soil moisture, organic matter content, and nitrate-nitrite, ammonium, salinity/conductivity, and pH in the upper 15 cm of soil collected at each vegetation sampling time). The experimental design will consist of a 2 species (sea oats, bitter panicum) x 2 planting densities (Louisiana Department of Natural Resources (DNR)) contracted density: 5 ft centers, demonstration double density: 2.5 ft centers) x 2 fertilization levels (fertilized, none) x 3 humic acid levels (none, two levels as determined from greenhouse studies detailed below) randomized block design with 5 blocks yielding 120 permanent plots. All monitoring will follow Folse and West (2004) as appropriate. Field plot locations will be indicated on a site map and DGPS (differential global positioning system) coordinates will be provided. Data will be collected to be provided as FGDC (Federal Geographic Data Committee)

compliant metadata as deliverables. Fertilizer (15 pounds of 10-10-10 per 1,000 ft^{-2} following Broome et al. 1982) will be spread by hand into appropriate plots. Optimal levels of humic acid amendments (as determined from greenhouse studies detailed below) will be applied by directly spraying plots with either humic acid amendments or tap water for control plots.

2.2 Swale marshhay cordgrass (*S. patens*) enhanced establishment and spread

This subtask will demonstrate benefits to swale plant production and soil condition of planting density, fertilization addition, and humic acid amendment. Vegetative cover, average plant height, aboveground plant tissue nutrient status, soil nutrient status, and soil organic matter will be determined seasonally. The experimental design will consist of a 2 planting densities (DNR contracted density: 5 ft centers , demonstration high density: 1.6 ft centers) x 2 fertilization levels (none, fertilized) x 3 humic acid levels (none, two levels as determined from greenhouse studies detailed below) randomized block design with 5 blocks yielding 60 permanent plots. All monitoring will follow Folse and West (2004) as appropriate. Field plot locations will be indicated on a site map and DGPS coordinates will be provided. Data will be collected to be provided as FGDC compliant metadata as deliverables. Fertilizer (15 pounds of 10-10-10 per 1,000 ft^{-2} following Broome et al. 1982) will be spread by hand into appropriate plots. Optimal levels of humic acid amendments (as determined from greenhouse studies detailed below) will be applied by directly spraying plots with either humic acid amendments for experimental plots or tap water for control plots.

2.3 Swale vegetation establishment at stressful +4-ft. elevation contour

This subtask will demonstrate benefits to swale plant production and soil condition of planting density, fertilization addition, and humic acid amendment. Vegetative cover, average plant height, aboveground plant tissue nutrient status, soil pH, soil salinity, soil nutrient status, and soil organic matter will be determined seasonally. The experimental design will consist of a 5 species-density treatment (bitter panicum-high density: 1.6 ft centers, marshhay cordgrass-high density: 1.6 ft centers, saltgrass-high density: 1.6 ft centers (*Distichlis spicata*), marshhay cordgrass-DNR contracted density: 5 ft centers, species mixture-high density: 1.6 ft centers), x 2 fertilization levels (none, fertilized), x 2 humic acid levels (none, one level as determined from greenhouse studies detailed below), randomized block design with 5 blocks yielding 100 permanent plots. Fertilizer (15 pounds of 10-10-10 per 1,000 ft^{-2} following Broome et al. 1982) will be spread by hand into appropriate plots. Optimal levels of humic acid amendments (as determined from greenhouse studies detailed below) will be applied by directly spraying plots with either humic acid amendments or tap water for control plots. All monitoring will follow Folse and West (2004) as appropriate. Field plot locations will be indicated on a site map and DGPS coordinates will be provided. Data will be collected to be provided as FGDC compliant metadata as deliverables. Note that this subtask differs from subtask 2.2 because a) it will be conducted in the +4 ft. elevation platform of New Cut that is displaying sand deflation resulting in a more inhospitable substrate (more shell fragments at substrate surface), b) it will incorporate bitter panicum and saltgrass in addition to the marshhay cordgrass of subtask 2.2 on Whiskey Island, and c) higher density plantings will be utilized in an attempt to minimize the environmental stressors in this zone.

2.4 Groundsel bush (*Baccharis halimifolia*) establishment via seed (within *S. patens* planting)

This subtask will demonstrate benefits to groundsel bush establishment and soil condition of planting density, fertilization addition, and humic acid amendment. Seed establishment, vegetative cover (subsequent to establishment), average plant height (subsequent to establishment), aboveground plant tissue nutrient status (subsequent to establishment), soil pH, soil salinity, soil nutrient status, and soil organic matter will be determined seasonally. The experimental design will consist of a 2 *S. patens* planting densities (DNR contracted density: 5 ft density, demonstration high density: 1.6 ft density), 2 fertilization levels (none, fertilized), 3 humic acid levels (none, two levels as determined from greenhouse studies detailed below), randomized block design with 5 blocks yielding 60 permanent plots. Groundsel bush seeds will be collected from adult trees in coastal Louisiana and spread by hand into plots. Subsequently, fertilizer (15 pounds of 10-10-10 per 1,000 ft^{-2} following Broome et al. 1982) will be spread by hand into appropriate plots. Optimal levels of humic acid amendments (as determined from greenhouse studies detailed below) will be applied by directly spraying plots with either humic acid amendments or tap water for control plots. All monitoring will follow Folse and West (2004) as appropriate. Field plot locations will be indicated on a site map and DGPS coordinates will be provided. Data will be collected to be provided as FGDC compliant metadata as deliverables.

2.5 Black mangrove (*Avicennia germinans*) enhanced establishment via propagules

This subtask will demonstrate benefits to black mangrove establishment and soil condition of planting density, fertilization addition, and humic acid amendment. Propagule establishment, average plant height (subsequent to establishment), aboveground plant tissue nutrient status (subsequent to establishment), soil pH, soil salinity, soil nutrient status, and soil organic matter will be determined seasonally. The experimental design will consist of a 3 establishment (none, hand dispersal of propagules, hand dispersal of propagules with *S. alterniflora*-enhanced chevron-fencing (biodegradable fence material)) and 3 humic acid levels (none, two levels as determined from greenhouse studies detailed below), randomized block design with 5 blocks yielding 45 permanent plots. Black mangrove propagules will be collected from adult trees in coastal Louisiana and spread by hand into plots. Optimal levels of humic acid amendments (as determined from greenhouse studies detailed below) will be applied by directly spraying plots with either humic acid amendments or tap water for control plots. All monitoring will follow Folse and West (2004) as appropriate. Field plot locations will be indicated on a site map and DGPS coordinates will be provided. Data will be collected to be provided as FGDC compliant metadata as deliverables.

Greenhouse Component Implementation Subtasks

Greenhouse studies are an important component of both developing and fine-tuning novel restoration techniques for the field and also for serving as controls on establishment studies. Greenhouse studies are necessary complements to field implementations of novel technologies to ascertain proper dosages and plant responses so that they can be properly scaled and optimized in the field. Further, the field components of the demonstration project that involve establishment by seed (groundsel bush) or propagule (black mangrove) absolutely require a set of greenhouse "controls" that are established at the same time as field

deployment so that it is possible to determine whether a failure to successfully establish in the field is the result of establishment protocol, physical disturbance (i.e., stochasticity) in the field which is controlled for in the greenhouse, or variation in planting material (interannual variation in cohort viability or susceptibility to pathogens). An additional and important benefit of these greenhouse studies is that they are relatively protected from major physical disturbances (i.e., hurricanes) that can severely and negatively impact the field demonstration site(s). In this sense, the greenhouse studies provide much additional benefit and insurance of generating the best possible recommendations at the end of this study, particularly in regard to the optimizing of plant responses to humic acid.

Greenhouse experiments will be conducted intensively during the first two years of this demonstration project to assess novel techniques and approaches and will continue less intensively throughout the project period as needed to fine tune approaches and application rates that optimize plant response to various amendments. Experimental designs for these greenhouse studies will be further refined after continued evaluation of both our previous research and peer-reviewed literature during the development of the Monitoring Plan. Greenhouse studies will address the following restoration needs relevant to this demonstration project:

2.6 Effect of sand burial depth on groundsel bush seed germination success

This subtask will assess the tolerance of groundsel bush seeds to sand burial. To accomplish this, a one-way ANOVA experimental design with 5 burial depths (0, 0.5, 1.0, 2.0, and 3.0 cm) with 5 replicates will be implemented. Groundsel bush seeds will be placed in standard nursery pots and monitored for seedling emergence on a biweekly basis.

2.7 Evaluation of hydromulching formulation

Hydromulching shows promise as a mechanism for both a) holding small seeds in place at the desired planting location and b) potentially assisting in germination and early survivorship via enhanced surface moisture retention. This series of experiments will investigate plant establishment response of both groundsel bush and black mangrove in hydromulch. The last experiment will assess the relative ability of hydromulch to persist and provide benefits in different elevation environments (e.g., swale vs. high marsh).

2.7.1 *Groundsel bush seed germination success and seedling survivorship*

This subtask will determine the benefit versus the potential negative impact of hydromulch to groundsel bush seed germination. Groundsel bush seeds will be placed in standard nursery pots and subjected to the following assessment The experimental design will consist of a 3 organic matter treatment (0%, 5%, 30%), x 2 water availability (drought condition, normal) x 2 hydromulch treatment (present, not present) x 2 humic acid treatments (amended, not amended) completely randomized design with 5 replicates.

2.7.2 *Black mangrove propagule establishment*

This subtask will determine the benefit versus the potential negative impact of hydromulch to black mangrove propagule establishment. Black mangrove propagules will be placed in standard nursery pots and be subjected to a 2 hydromulch treatment (present, not present) completely randomized design with 5 replicates.

2.7.3 *Relative performance assessment of hydromulching in supratidal environments versus intertidal environments subjected to periodic inundation*

To ensure compatibility of hydromulch with restoration efforts in tidal environments, a greenhouse study will be conducted to assess potential loss of hydromulch during tidal action. Specifically, a 3 hydromulch quantity (low, moderate, high) x 2 tidal environments (supra-tidal, intertidal) completely randomized factorial design with 5 replicates will be implemented. The simulated intertidal environment will be accomplished by moving pots up and down 15 cm using constructed scaffolding within a reservoir.

2.8 Refinement of humic acid and fertilization amendment dosage levels for optimum plant growth responses in key environments

Our previous research has provided us with some preliminary plant responses to humic acid amendment. It appears that species differ considerably in their response to a given amendment concentration, and that higher humic acid levels than previously assessed may still result in a greater benefits in very poor, sandy soil. Therefore, humic acid dosage refinement in sandy substrates is still required to achieve optimal plant growth responses in dune, swale, and salt marsh environments. Humic acid research will be coupled with plant performance under ambient and augmented nutrient regimes (i.e., fertilization regimes). In the following environments:

2.8.1 *Dune (sea oats, bitter panicum) humic acid dosing response*

Goal: Determine optimal, asymptotic, and deleterious levels of humic acid amendment for primary Louisiana dune species

The experimental design will consist of a 2 species (*sea oats, bitter panicum*) x 6 humic acid amendment (0 ml m^{-2}, 100 ml m^{-2}, 500 ml m^{-2}, 1,000 ml m^{-2}, 5,000 ml m^{-2}, 10,000 ml m^{-2}), completely randomized design with 5 replicates yielding 60 experimental units.

2.8.2 *Swale (marshhay cordgrass, groundsel bush) humic acid dosing response*

Goal: Determine optimal, asymptotic, and deleterious levels of humic acid amendment for primary Louisiana swale species

The experimental design will consist of a 2 species (*marshhay cordgrass, groundsel bush*) x 6 humic acid amendment (0 ml m^{-2}, 100 ml m^{-2}, 500 ml m^{-2}, 1,000 ml m^{-2}, 5,000 ml m^{-2}, 10,000 ml m^{-2}), completely randomized design with 5 replicates yielding 60 experimental units.

2.8.3 *Salt marsh (smooth cordgrass, and black mangrove) humic acid dosing response*

Goal: Determine optimal, asymptotic, and deleterious levels of humic acid amendment for primary Louisiana salt marsh species

The experimental design will consist of a 2 species (*smooth cordgrass, and black mangrove*) x 6 humic acid amendment (0 ml m^{-2}, 100 ml m^{-2}, 500 ml m^{-2}, 1,000 ml m^{-2}, 5,000 ml m^{-2}, 10,000 ml m^{-2}), completely randomized design with 5 replicates yielding 60 experimental units.

2.8.4 *Dune (sea oats, bitter panicum) humic acid and fertilizer response*

Goal: Determine optimal levels of humic acid amendment and equivalence/synergy with standard inorganic fertilizer for primary Louisiana dune species

The experimental design will consist of a 2 species (*sea oats, bitter panicum*) x 3 humic acid amendment (0 ml m^{-2}, 2 levels of humic acid informed from above studies) x 2 fertilizer level (none, fertilized), completely randomized design with 5 replicates yielding 60 experimental units.

2.8.5 *Swale (marshhay cordgrass, groundsel bush) humic acid and fertilizer response*

Goal: Determine optimal levels of humic acid amendment and equivalence/synergy with standard inorganic fertilizer for primary Louisiana swale species

The experimental design will consist of a 2 species (*marshhay cordgrass, groundsel bush*) x 3 humic acid amendment (0 ml m^{-2}, 2 levels of humic acid informed from above studies) x 2 fertilizer level (none, fertilized), completely randomized design with 5 replicates yielding 60 experimental units.

2.8.6 *Salt marsh (smooth cordgrass and black mangrove) humic acid and fertilizer response*

Goal: Determine optimal levels of humic acid amendment and equivalence/synergy with standard inorganic fertilizer for primary Louisiana salt marsh species

The experimental design will consist of a 2 species (*smooth cordgrass, and black mangrove*) x 3 humic acid amendment (0 ml m^{-2}, 2 levels of humic acid informed from above studies) x 2 fertilizer level (none, fertilized), completely randomized design with 5 replicates yielding 60 experimental units.

Anticipated Hypotheses and Statistical Analyses

Subtask 2.1 Determine the relative benefits of humic acid amendment, planting density, and fertilization addition on dune grass species (sea oats, bitter panicum) in a field setting

Factors to be assessed:	Treatment Levels:
species	sea oats, bitter panicum
humic acid amendment	control, two applications to be determined from greenhouse studies
planting density	DNR planting density: 5 ft centers, double DNR
planting	density: 2.5 ft centers
fertilizer addition	none, Broome et al. 1982

H_o: All factors do not have any main or interactive effects on plant productivity, plant nutrient status, soil nutrient status

H_a: Some of the factors have main or interactive effects on plant productivity, plant nutrient status, and/or soil nutrient status

Specific Main Effect Hypotheses

a. H_o: For both dune species, all levels of humic acid will have no effect on plant productivity
   H_a: For both dune species, some level of humic acid will increase plant productivity
b. H_o: For both dune species, planting density will have no effect on plant productivity
   H_a: For both dune species, increased planting density will increase plant productivity
c. H_o: For both dune species, fertilizer application will have no effect on plant productivity
   H_a: For both dune species, fertilizer application will increase plant productivity
d. H_o: For both dune species, all levels of humic acid will have no effect on plant nutrient status
   H_a: For both dune species, some level of humic acid will increase plant nutrient status
e. H_o: For both dune species, planting density will have no effect on plant nutrient status
   H_a: For both dune species, increased planting density will increase plant nutrient status
f. H_o: For both dune species, fertilizer application will have no effect on plant nutrient status
   H_a: For both dune species, fertilizer application will increase plant nutrient status
g. H_o: For both dune species, all levels of humic acid will have no effect on soil nutrient status
   H_a: For both dune species, some level of humic acid will increase soil nutrient status
h. H_o: For both dune species, planting density will have no effect on soil nutrient status
   H_a: For both dune species, planting density will increase soil nutrient status

i. H_o: For both dune species, fertilizer application will have no effect on soil nutrient status
   H_a: For both dune species, fertilizer application will increase soil nutrient status

Subtask 2.2 Determine the relative benefits of humic acid amendment, planting density, and fertilization addition on *Spartina patens* in a field setting

Factors to be assessed:	Treatment Levels:
humic acid amendment	control, two applications to be determined from greenhouse studies
planting density	DNR density planting: 5 ft centers, demonstration-high density: 1.6 ft centers
fertilizer addition	none, Broome et al. 1982

H_o: All factors do not have any main or interactive effects on plant productivity, plant nutrient status, soil nutrient status
H_a: Some of the factors have main or interactive effects on plant productivity, plant nutrient status, and/or soil nutrient status

Specific Main Effect Hypotheses

a. H_o: All levels of humic acid will have no effect on *S. patens* productivity
   H_a: Some level of humic acid will increase *S. patens* productivity
b. H_o: Planting density will have no effect on *S. patens* productivity
   H_a: High planting density will increase *S. patens* productivity
c. H_o: Fertilizer application will have no effect on *S. patens* productivity
   H_a: Fertilizer application will increase *S. patens* productivity
d. H_o: All levels of humic acid will have no effect on *S. patens* nutrient status
   H_a: Some level of humic acid will increase *S. patens* nutrient status
e. H_o: Planting density will have no effect on *S. patens* nutrient status
   H_a: High planting density will increase *S. patens* nutrient status
f. H_o: Fertilizer application will have no effect on *S. patens* nutrient status
   H_a: Fertilizer application will increase *S. patens* nutrient status
g. H_o: All levels of humic acid will have no effect on soil nutrient status
   H_a: Some level of humic acid will increase soil nutrient status
h. H_o: Planting density will have no effect on soil nutrient status
   H_a: High planting density will increase soil nutrient status
i. H_o: Fertilizer application will have no effect on soil nutrient status
   H_a: Fertilizer application will increase soil nutrient status

Subtask 2.3 Determine the relative benefits of humic acid amendment, and fertilization addition on swale vegetation in a field setting

Factors to be assessed:	Treatment Levels:
Vegetative species-density	bitter panicum-high density: 1.6 ft centers, marshhay cordgrass-high density: 1.6 ft centers, saltgrass-high density: 1.6 ft centers (*Distichlis spicata*), marshhay cordgrass-DNR density: 5 ft centers, species mixture-high density: 1.6 ft centers
humic acid amendment	control, one application to be determined from greenhouse studies
fertilizer addition	none, Broome et al. 1982

H_o: All factors do not have any main or interactive effects on plant productivity, plant nutrient status, soil nutrient status

H_a: Some of the factors have main or interactive effects on plant productivity, plant nutrient status, and/or soil nutrient status

Specific Main Effect Hypotheses

a. H_o: For swale species, all levels of humic acid will have no effect on plant productivity
   H_a: For swale species, some level of humic acid will increase plant productivity
b. H_o: For swale species, fertilizer application will have no effect on plant productivity
   H_a: For swale species, fertilizer application will increase plant productivity
c. H_o: For swale species, all levels of humic acid will have no effect on plant nutrient status
   H_a: For swale species, some level of humic acid will increase plant nutrient status
d. H_o: For swale species, fertilizer application will have no effect on plant nutrient status
   H_a: For swale species, fertilizer application will increase plant nutrient status
e. H_o: For swale species, all levels of humic acid will have no effect on soil nutrient status
   H_a: For swale species, some level of humic acid will increase soil nutrient status
f. H_o: For swale species, fertilizer application will have no effect on soil nutrient status
   H_a: For swale species, fertilizer application will increase soil nutrient status

Subtask 2.4 Determine the relative benefits of *S. patens* presence, humic acid amendment, and fertilization addition on groundsel bush establishment in a field setting

Factors to be assessed:	Treatment Levels:
S. patens density	DNR density planting: 5 ft centers, demonstration-high density: 2.5 ft centers
humic acid amendment	control, two applications to be determined from greenhouse studies
fertilizer addition	none, Broome et al. 1982

H_o: All factors do not have any main or interactive effects on groundsel bush establishment, groundsel bush productivity, groundsel bush nutrient status, soil nutrient status

H_a: Some of the factors have main or interactive effects on groundsel bush establishment, groundsel bush productivity, groundsel bush nutrient status, and/or soil nutrient status

Specific Main Effect Hypotheses

a. H_o: Density of *S. patens* will have no effect on groundsel bush establishment
   H_a: High density of *S. patens* will increase groundsel bush establishment
b. H_o: All levels of humic acid will have no effect on groundsel bush establishment
   H_a: Some level of humic acid will increase groundsel bush establishment
c. H_o: Fertilizer application will have no effect on groundsel bush establishment
   H_a: Fertilizer application will increase groundsel bush establishment
d. H_o: Density of *S. patens* will have no effect on groundsel nutrient status
   H_a: High density of *S. patens* will decrease groundsel bush nutrient status
e. H_o: All levels of humic acid will have no effect on groundsel bush nutrient status
   H_a: Some level of humic acid will increase groundsel bush nutrient status
f. H_o: Density of *S. patens* will have no effect on soil nutrient status
   H_a: High density of *S. patens* will decrease soil nutrient status
g. H_o: Fertilizer application will have no effect on groundsel bush nutrient status
   H_a: Fertilizer application will increase groundsel bush nutrient status
h. H_o: All levels of humic acid will have no effect on soil nutrient status
   H_a: Some level of humic acid will increase soil nutrient status
i. H_o: Fertilizer application will have no effect on soil nutrient status
   H_a: Fertilizer application will increase soil nutrient status

Subtask 2.5 Determine the relative benefits of fencing, *S. alterniflora* presence, and humic acid amendment on black mangrove propagule establishment in a field setting

Factors to be assessed:	Treatment Levels:
humic acid amendment	control, two applications to be determined from greenhouse studies
Propagule establishment	no propagules, propagules alone, propagules with *S. alterniflora*-enhanced chevron-fencing

H_o: All factors do not have any main or interactive effects on plant productivity, plant nutrient status, soil nutrient status

H_a: Some of the factors have main or interactive effects on plant productivity, plant nutrient status, and/or soil nutrient status

Specific Main Effect Hypotheses

a. H_o: All levels of humic acid will have no effect on black mangrove propagule establishment
   H_a: Some level of humic acid will increase black mangrove propagule establishment
b. H_o: *S. alterniflora*-enhanced chevron-fencing will have no effect on black mangrove propagule establishment
   H_a: *S. alterniflora*-enhanced chevron-fencing will increase black mangrove propagule establishment
c. H_o: All levels of humic acid will have no effect on black mangrove propagule nutrient status
   H_a: Some level of humic acid will increase black mangrove propagule nutrient status
d. H_o: *S. alterniflora*-enhanced chevron-fencing will have no effect on black mangrove propagule nutrient status
   H_a: *S. alterniflora*-enhanced chevron-fencing will have an effect on black mangrove propagule nutrient status
e. H_o: All levels of humic acid will have no effect on soil nutrient status
   H_a: Some level of humic acid will increase soil nutrient status
f. H_o: *S. alterniflora*-enhanced chevron-fencing will have no effect on soil nutrient status
   H_a: *S. alterniflora*-enhanced chevron-fencing will increase soil nutrient status

Subtask 2.6 Evaluate the effect of sand burial depth on groundsel bush seed germination success

Factors to be assessed:	Treatment Levels:
sand burial depth	0, 0.5, 1.0, 2.0, 3.0 cm

H_o: All levels of sand burial depth will have no effect on groundsel bush seed germination success
H_a: Increasing levels of sand burial depth will decrease groundsel bush seed germination success

Subtask 2.7.1 Evaluate the effect of hydromulching application on groundsel bush seed germination success

Factors to be assessed:	Treatment Levels:
Hydromulch	absent, present
water availability	drought, normal
soil organic matter	0%, 5%, 30%

a. H_o: Hydromulch will have no effect on groundsel bush seed germination success
   H_a: Hydromulch will increase groundsel bush seed germination success
b. H_o: Water availability will have no effect on groundsel bush seed germination success
   H_a: Drought levels of water availability will decrease groundsel bush seed germination success
c. H_o: Soil organic matter will have no effect on groundsel bush seed germination success
   H_a: Soil organic matter will increase groundsel bush seed germination success

Subtask 2.7.2 Evaluate the effect of hydromulching application on black mangrove propagule seed germination success

Factors to be assessed:	Treatment Levels:
Hydromulch	absent, present

a. H_o: Hydromulch will have no effect on black mangrove propagule success
   H_a: Hydromulch will increase black mangrove propagule success

Subtask 2.7.3 Evaluate retention of hydromulch in simulated intertidal and supratidal environments

Factors to be assessed:	Treatment Levels:
tidal environment	intertidal, supratidal

Hydromulching: Retention in simulated intertidal vs supratidal environments
H_o: All levels of hydromulching application will be retained in simulated intertidal environments
H_a: Some levels of hydromulching application will not be retained in simulated intertidal environments

Subtask 2.8.1 Determination of optimal range of humic acid application for dune grass species (sea oats and bitter panicum)

Factors to be assessed:	Treatment Levels:
vegetative species	sea oats, bitter panicum
humic acid amendment	0 ml m^{-2}, 100 ml m^{-2}, 500 ml m^{-2}, 1,000 ml m^{-2}, 5,000 ml m^{-2}, 10,000 ml m^{-2}

H_o: All factors do not have any main or interactive effects on plant productivity, plant nutrient status, soil nutrient status
H_a: Some of the factors have main or interactive effects on plant productivity, plant nutrient status, and/or soil nutrient status

Specific Main Effect Hypotheses

a. H_o: For dune species, all levels of humic acid will have no effect on plant productivity
   H_a: For dune species, some level of humic acid will increase plant productivity
b. H_o: For dune species, all levels of humic acid will have no effect on plant tissue nutrient content
   H_a: For dune species, some level of humic acid will increase plant tissue nutrient content
c. H_o: For dune species, all levels of humic acid will have no effect on soil organic matter content
   H_a: For dune species, some level of humic acid will increase soil organic matter content
d. H_o: For dune species, all levels of humic acid will have no effect on soil nutrient content
   H_a: For dune species, some level of humic acid will increase soil nutrient content

Subtask 2.8.2 Determination of optimal range of humic acid application for swale species (marshhay cordgrass, groundsel bush)

Factors to be assessed:	Treatment Levels:
vegetative species	marshhay cordgrass, groundsel bush
humic acid amendment	0 ml m^{-2}, 100 ml m^{-2}, 500 ml m^{-2}, 1,000 ml m^{-2}, 5,000 ml m^{-2}, 10,000 ml m^{-2}

H_o: All factors do not have any main or interactive effects on plant productivity, plant nutrient status, soil nutrient status

H_a: Some of the factors have main or interactive effects on plant productivity, plant nutrient status, and/or soil nutrient status

Specific Main Effect Hypotheses

a. H_o: For swale species, all levels of humic acid will have no effect on plant productivity
   H_a: For swale species, some level of humic acid will increase plant productivity
b. H_o: For swale species, all levels of humic acid will have no effect on plant tissue nutrient content
   H_a: For swale species, some level of humic acid will increase plant tissue nutrient content
c. H_o: For swale species, all levels of humic acid will have no effect on soil organic matter content
   H_a: For swale species, some level of humic acid will increase soil organic matter content
d. H_o: For swale species, all levels of humic acid will have no effect on soil nutrient content
   H_a: For swale species, some level of humic acid will increase soil nutrient content

Subtask 2.8.3 Determination of optimal range of humic acid application for salt marsh species (smooth cordgrass, and black mangrove)

Factors to be assessed:	Treatment Levels:
vegetative species	smooth cordgrass, black mangrove
humic acid amendment	0 ml m^{-2}, 100 ml m^{-2}, 500 ml m^{-2}, 1,000 ml m^{-2}, 5,000 ml m^{-2}, 10,000 ml m^{-2}

H_o: All factors do not have any main or interactive effects on plant productivity, plant nutrient status, soil nutrient status

H_a: Some of the factors have main or interactive effects on plant productivity, plant nutrient status, and/or soil nutrient status

Specific Main Effect Hypotheses

a. H_o: For salt marsh species, all levels of humic acid will have no effect on plant productivity
   H_a: For salt marsh species, some level of humic acid will increase plant productivity
b. H_o: For salt marsh species, all levels of humic acid will have no effect on plant tissue nutrient content
   H_a: For salt marsh species, some level of humic acid will increase plant tissue nutrient content
c. H_o: For salt marsh species, all levels of humic acid will have no effect on soil organic matter content
   H_a: For salt marsh species, some level of humic acid will increase soil organic matter content
d. H_o: For salt marsh species, all levels of humic acid will have no effect on soil nutrient content
   H_a: For salt marsh species, some level of humic acid will increase soil nutrient content

Subtask 2.8.4 Determination of humic acid and fertilizer response: dune grass species (sea oats and bitter panicum)

Factors to be assessed:	Treatment Levels:
vegetative species	sea oats, bitter panicum
humic acid amendment	0, 2 levels informed from above study
fertilizer addition	none, Broome et al. 1982

H_o: All factors do not have any main or interactive effects on plant productivity, plant nutrient status, soil nutrient status

H_a: Some of the factors have main or interactive effects on plant productivity, plant nutrient status, and/or soil nutrient status

Specific Main Effect Hypotheses

a. H_o: For dune species, all levels of humic acid will have no effect on plant productivity
   H_a: For dune species, some level of humic acid will increase plant productivity
b. H_o: For dune species, all levels of humic acid will have no effect on plant tissue nutrient content
   H_a: For dune species, some level of humic acid will increase plant tissue nutrient content
c. H_o: For dune species, all levels of humic acid will have no effect on soil organic matter content
   H_a: For dune species, some level of humic acid will increase soil organic matter content
d. H_o: For dune species, all levels of humic acid will have no effect on soil nutrient content
   H_a: For dune species, some level of humic acid will increase soil nutrient content
e. H_o: For salt marsh species, fertilizer addition will have no effect on plant productivity
   H_a: For salt marsh species, fertilizer addition will increase plant productivity
f. H_o: For salt marsh species, fertilizer addition will have no effect on plant tissue nutrient content
   H_a: For salt marsh species, fertilizer addition will increase plant tissue nutrient content
g. H_o: For salt marsh species, fertilizer addition will have no effect on soil organic matter content
   H_a: For salt marsh species, fertilizer addition will increase soil organic matter content
h. H_o: For salt marsh species, fertilizer addition will have no effect on soil nutrient content
   H_a: For salt marsh species, fertilizer addition will increase soil nutrient content

Subtask 2.8.5 Determination of humic acid and fertilizer response: swale species (marshhay cordgrass, groundsel bush)

Factors to be assessed:	Treatment Levels:
vegetative species	marshhay cordgrass, groundsel bush
humic acid amendment	0, 2 levels informed from above study
fertilizer addition	none, Broome et al. 1982

H_o: All factors do not have any main or interactive effects on plant productivity, plant nutrient status, soil nutrient status

H_a: Some of the factors have main or interactive effects on plant productivity, plant nutrient status, and/or soil nutrient status

Specific Main Effect Hypotheses

a. H_o: For swale species, all levels of humic acid will have no effect on plant productivity
   H_a: For swale species, some level of humic acid will increase plant productivity
b. H_o: For swale species, all levels of humic acid will have no effect on plant tissue nutrient content
   H_a: For swale species, some level of humic acid will increase plant tissue nutrient content
c. H_o: For swale species, all levels of humic acid will have no effect on soil organic matter content
   H_a: For swale species, some level of humic acid will increase soil organic matter content
d. H_o: For swale species, all levels of humic acid will have no effect on soil nutrient content
   H_a: For swale species, some level of humic acid will increase soil nutrient content
e. H_o: For salt marsh species, fertilizer addition will have no effect on plant productivity
   H_a: For salt marsh species, fertilizer addition will increase plant productivity
f. H_o: For salt marsh species, fertilizer addition will have no effect on plant tissue nutrient content
   H_a: For salt marsh species, fertilizer addition will increase plant tissue nutrient content
g. H_o: For salt marsh species, fertilizer addition will have no effect on soil organic matter content
   H_a: For salt marsh species, fertilizer addition will increase soil organic matter content
h. H_o: For salt marsh species, fertilizer addition will have no effect on soil nutrient content
   H_a: For salt marsh species, fertilizer addition will increase soil nutrient content

Subtask 2.8.6 Determination of humic acid and fertilizer response: salt marsh species (smooth cordgrass, and black mangrove)

Factors to be assessed:	Treatment Levels:
vegetative species	smooth cordgrass, black mangrove
humic acid amendment	0, 2 levels informed from above study
fertilizer addition	none, Broome et al. 1982

H_o: All factors do not have any main or interactive effects on plant productivity, plant nutrient status, soil nutrient status

H_a: Some of the factors have main or interactive effects on plant productivity, plant nutrient status, and/or soil nutrient status

Specific Main Effect Hypotheses

a. H_o: For salt marsh species, all levels of humic acid will have no effect on plant productivity
   H_a: For salt marsh species, some level of humic acid will increase plant productivity
b. H_o: For salt marsh species, all levels of humic acid will have no effect on plant tissue nutrient content
   H_a: For salt marsh species, some level of humic acid will increase plant tissue nutrient content
c. H_o: For salt marsh species, all levels of humic acid will have no effect on soil organic matter content
   H_a: For salt marsh species, some level of humic acid will increase soil organic matter content
d. H_o: For salt marsh species, all levels of humic acid will have no effect on soil nutrient content
   H_a: For salt marsh species, some level of humic acid will increase soil nutrient content
e. H_o: For salt marsh species, fertilizer addition will have no effect on plant productivity
   H_a: For salt marsh species, fertilizer addition will increase plant productivity
f. H_o: For salt marsh species, fertilizer addition will have no effect on plant tissue nutrient content
   H_a: For salt marsh species, fertilizer addition will increase plant tissue nutrient content
g. H_o: For salt marsh species, fertilizer addition will have no effect on soil organic matter content
   H_a: For salt marsh species, fertilizer addition will increase soil organic matter content
h. H_o: For salt marsh species, fertilizer addition will have no effect on soil nutrient content
   H_a: For salt marsh species, fertilizer addition will increase soil nutrient content

Literature Cited

Atiyeh, R.M., S. Lee, C.A. Edwards, N.Q. Arancon, and J.D. Metzger. 2002. The influence of humic acids derived from earthworm-processed organic wastes on plant growth. Bioresource Technology 84:7-14.

Folse, T. M. and J. L. West. 2004. A Standard Operating Procedures Manual for the Louisiana Department of Natural Resource's Coastal Restoration Division: Methods for Data Collection, Quality Assurance / Quality Control, Storage, and Products. Louisiana Department of Natural Resources, Baton Rouge, LA. 158 pp.

Chen, Y. and T. Aviad. 1990. Effects of humic substances on plant growth. *In:* MacCarthy, P., C.E. Clapp, R.L. Malcom, and P.R. Bloom (eds). Humic substances in soils and crop species: selected readings. Soil Science Society of America, Madison, WI. pp 161-186.

Nardi, S., D. Pizzeghello, A. Muscolo, and A. Vianello. 2002. Physiological effects of humic substances on higher plants. Soil Biology and Biochemistry 11:1527-1536.

Pilanah, N. and M. Kaplan. 2003. Investigations of effects on nutrient uptake of humic acid to applications of different forms to strawberry plant. Journal of Plant Nutrition 26: 835-843.

Sharif, M. R.A. Khattak, and M.S. Sarir. 2002. Effect of different levels of lignitic coal derived humic acid on growth of maize plants. Communications in Soil Science and Plant Analysis. 33:3567-3580.

Varanni, Z. and R. A. Pinton. 1995. Humic substances and plant nutrition. *In:* Luttge, U. (ed.), Progress in Botany, Volume 56. Berlin, Springer, pp 97-117.

Willis, J. M., and M. W. Hester. 2008. Evaluation of enhanced *Panicum amarum* establishment through fragment plantings and humic acid amendment. Journal of Coastal Research 24:263-268.

Zhang, X., E.H. Ervin, and R.E. Schmidt. 2003. Plant growth regulators can enhance the recovery of Kentucky bluegrass sod from heat injury. Crop Science 43:952-956.

Table 1. Timeline of major project tasks and subtasks. Species abbreviations as follows: A.g., *Avicennia germinans*; B.h., *Baccharis halimifolia*; P.a., *Panicum amarum*.

	Year	**2008**	**2009**				**2010**				**2011**		
	Quarter	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**
Task	**Brief Description**												
	Planning and Development												
1.1	Finalize Site Selection		**X**				**X**						
1.2	Finalize Experimental Designs	**X**	**X**										
1.3	Write and Submit Monitoring Plan	**X**	**X**				**X**						
	Project Implementation (Field)												
2.1	Dune grass (U.p., P.a.)							**X**					
2.2	Swale (S.p.)							**X**					
2.3	+4 ft contour (S.p., D.s., P.a.)							**X**					
2.4	B.h. establishment via seed									**X***			
2.5	A.g. establishment via propagules							**X****	**X**				
	Project Implementation (Greenhouse)												
2.6	B.h. sand burial experiment	**X**	**X**										
2.7	Hydromulching evaluation experiments		**X**	**X**					**X**	**X**			
2.8	Humic acid optimization experiments			**X**	**X**	**X**	**X**						
2.9	Adaptive Management		**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
	First Year Monitoring												
3.1	Spring												
3.2	Summer												
3.3	Fall												
3.4	Greenhouse	**X**	**X**	**X**	**X**	**X**							
	Second Year Monitoring & Final Report												
4.1	Spring							**X**				**X**	
4.2	Summer								**X**				
4.3	Fall									**X**			
4.4	Greenhouse						**X**	**X**	**x**	**x**			
4.5	Final Report Writing										**X**	**X**	**X**

*Pending suitable *S. patens* site cover for *Baccharis* seeding; ** *S. alterniflora* plantings in preparation for propagules

Table 2. Changes to timeline of major project tasks and subtasks. Species abbreviations as follows: A.g., *Avicennia germinans*; B.h., *Baccharis halimifolia*; D.s., *Distichilus spicata*; P.a., *Panicum amarum*; S.p., *Spartina patens*; U.p., *Uniola paniculata*.

	Year	**2008**		**2009**				**2010**				**2011**		
	Quarter	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**
Task	**Brief Description**													
	Planning and Development													
1.1	Finalize Site Selection			X				X						
1.2	Finalize Experimental Designs		X	X										
1.3	Write and Submit Monitoring Plan		X	X				X						
	Project Implementation (Field)													
2.1	Dune grass (U.p., P.a.)								X					
2.2	Swale (S.p.)								X					
2.3	+4 ft contour (S.p., D.s., P.a.)								X					
2.4	B.h. establishment via seed		X								X*			
2.5	A.g. establishment via propagules		X						X**	X				
	Project Implementation (Greenhouse)													
2.6	B.h. sand burial experiment		X	X										
2.7	Hydromulching evaluation experiments.			X	X					X	X			
2.8	Humic acid optimization experiments				X	X	X	X						
2.9	Adaptive Management			X	X	X	X	X	X	X	X	X	X	X
	First Year Monitoring													
3.1	Spring													
3.2	Summer													
3.3	Fall													
3.4	Greenhouse		X	X	X	X	X							
	Second Year Monitoring & Final Report													
4.1	Spring								X				X	
4.2	Summer									X				
4.3	Fall										X			
4.4	Greenhouse							X	X	x	x			
4.5	Final Report Writing											X	X	X

Tasks Removed X Tasks Added/Moved

*Pending suitable *S. patens* site cover for *Baccharis* seeding; ***S. alterniflora* plantings in preparation for propagules; note: small "x" in greenhouse studies represent sample processing and analyses performed subsequent to harvest.

Whiskey Island Project Location

Fig. 1. Locations of proposed experimental blocks for dune grass plantings and back barrier marsh plantings on Whiskey Island (not drawn to scale). Please see following pages for detailed diagrams of the layout of experimental blocks.

Fig. 2. Treatment matrix for subtask 2.1: dune grass enhanced establishment and spread. Each treatment combination will be randomly assigned to a plot within a block. 24 treatment combinations are included below and will be replicated in 5 blocks for a total of 120 experimental units. HA refers to the dose of humic acid added per m^{-2} (e.g., 250 HA = 250 ml m^{-2}). Plant densities are as follows: DNR density: 5 ft centers, double density: 2.5 ft centers, Each block includes 450 sea oats and 555 bitter panicum (humic acid and fertilizer treatments are extended into the additional 3 rows of bitter panicum planted by the contractor; 5 total blocks).

Bitter panicum Fertilized 0 HA DNR-density	Bitter panicum Fertilized 250 HA DNR-density	Bitter panicum Fertilized 500 HA DNR-density	Bitter panicum Fertilized 0 HA Double-density	Bitter panicum Fertilized 250 HA Double-density	Bitter panicum Fertilized 500 HA Double-density
Bitter panicum Not Fertilized 0 HA DNR-density	Bitter panicum Not Fertilized 250 HA DNR-density	Bitter panicum Not Fertilized 500 HA DNR-density	Bitter panicum Not Fertilized 0 HA Double-density	Bitter panicum Not Fertilized 250 HA Double-density	Bitter panicum Not Fertilized 500 HA Double-density
Sea oats Fertilized 0 HA DNR-density	Sea oats Fertilized 250 HA DNR-density	Sea oats Fertilized 500 HA DNR-density	Sea oats Fertilized 0 HA Double-density	Sea oats Fertilized 250 HA Double-density	Sea oats Fertilized 500 HA Double-density
Sea oats Not Fertilized 0 HA DNR-density	Sea oats Not Fertilized 250 HA DNR-density	Sea oats Not Fertilized 500 HA DNR-density	Sea oats Not Fertilized 0 HA Double-density	Sea oats Not Fertilized 250 HA Double-density	Sea oats Not Fertilized 500 HA Double-density

Fig. 3. Treatment matrix for subtask 2.2: swale marshhay cordgrass (*S. patens*) enhanced establishment and spread. Each treatment combination will be randomly assigned to a plot within a block. 12 treatment combinations are included below and will be replicated in 5 blocks for a total of 60 experimental units. HA refers to the dose of humic acid added per m^{-2} (e.g., 250 HA = 250 ml m^{-2}). Plant densities are as follows: DNR density: 5 ft centers, CPEL high density: 1.6 ft centers. Each block includes 830 marshhay cordgrass plants (5 total blocks).

Fertilized, 0 HA DNR density	Fertilized 250 HA DNR density	Fertilized 500 HA DNR density	Fertilized 0 HA CPEL high density	Fertilized 250 HA CPEL high density	Fertilized 500 HA CPEL high density
Not fertilized 0 HA DNR density	Not fertilized 250 HA DNR density	Not fertilized 500 HA DNR density	Not fertilized 0 HA CPEL high density	Not fertilized 250 HA CPEL high density	Not fertilized 500 HA CPEL high density

Fig. 4. Treatment matrix for subtask 2.4: groundsel bush (*Baccharis halimifolia*) establishment via seed (within *S. patens* planting). Each treatment combination will be randomly assigned to a plot within a block. 12 treatment combinations are included below and will be replicated in 5 blocks for a total of 60 experimental units. HA refers to the dose of humic acid added per m^{-2} (e.g., 250 HA = 250 ml m^{-2}). Plant densities are as follows: DNR density: 5 ft centers, CPEL high density: 1.6 ft centers.

Fertilized, 0 HA DNR low density	Fertilized 250 HA DNR low density	Fertilized 500 HA DNR low density	Fertilized 0 HA CPEL high density	Fertilized 250 HA CPEL high density	Fertilized 500 HA CPEL high density
Not fertilized 0 HA DNR low density	Not fertilized 250 HA DNR low density	Not fertilized 500 HA DNR low density	Not fertilized 0 HA CPEL high density	Not fertilized 250 HA CPEL high density	Not fertilized 500 HA CPEL high density

Fig. 5. Treatment matrix for subtask 2.5: black mangrove (*Avicennia germinans*) enhanced establishment via propagules. Each treatment combination will be randomly assigned to a plot within a block. Nine (9) treatment combinations are included below and will be replicated in 5 blocks for a total of 45 experimental units. HA refers to the dose of humic acid added per m^{-2} (e.g., 250 HA = 250 ml m^{-2}). Each block includes 1500 black mangrove propagules and 150 smooth cordgrass plants (5 total blocks).

Black mangrove propagules hand dispersed 0 HA	No black mangrove propagules 0 HA	Black mangrove propagules hand dispersed into chevron fencing with Smooth Cordgrass 0 HA
Black mangrove propagules hand dispersed 250 HA	No black mangrove propagules 250 HA	Black mangrove propagules hand dispersed into chevron fencing with Smooth Cordgrass 250 HA
Black mangrove propagule hand dispersed 500 HA	No black mangrove propagules 500 HA	Black mangrove propagules hand dispersed into chevron fencing with Smooth Cordgrass 500 HA

New Cut Project Location

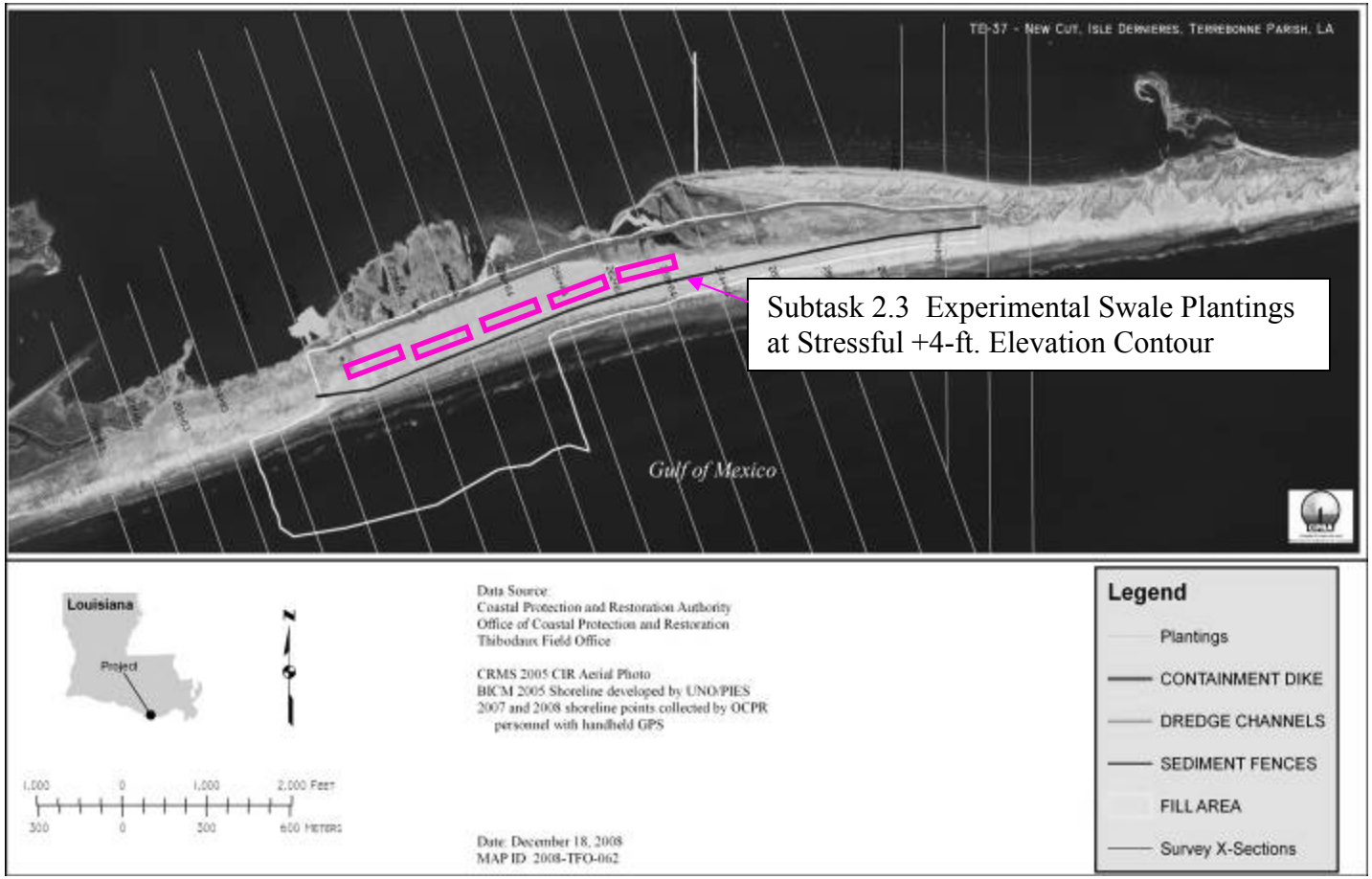


Fig. 6. Locations of proposed experimental blocks for dune grass plantings and back barrier marsh plantings on New Cut (not drawn to scale). Please see following page for a detailed diagram of the layout of experimental blocks.

Fig. 7. Treatment matrix for subtask 2.3: swale vegetation establishment at stressful +4-ft elevation contour. Each treatment combination will be randomly assigned to a plot within a block. 20 treatment combinations are included below and will be replicated in 5 blocks for a total of 100 experimental units. HA refers to the dose of humic acid added per m^{-2} (e.g., 250 HA = 250 ml m^{-2}). Plant densities are as follows: DNR density: 5 ft centers, high density 1.6 centers. Each block includes 1040 marshhay cordgrass plants, as well as 832 bitter panicum and saltgrass plants (5 total blocks).

Fertilized 0 HA Bitter panicum-high density	Fertilized 500 HA Bitter panicum-high density	Not fertilized 0 HA Bitter panicum-high density	Not fertilized 500 HA Bitter panicum-high density
Fertilized 0 HA Marshhay cordgrass-high density	Fertilized 500 HA Marshhay cordgrass-high density	Not fertilized 0 HA Marshhay cordgrass-high density	Not fertilized 500 HA Marshhay cordgrass-high density
Fertilized 0 HA Saltgrass-high density	Fertilized 500 HA Saltgrass-high density	Not fertilized 0 HA Saltgrass-high density	Not fertilized 500 HA Saltgrass-high density
Fertilized 0 HA Marshhay cordgrass-DNR density	Fertilized 500 HA Marshhay Cordgrass-DNR Density	Not fertilized 0 HA Marshhay cordgrass-DNR density	Not fertilized 500 HA Marshhay cordgrass-DNR density
Fertilized 0 HA Species mixture-high density	Fertilized 500 HA Species mixture-high density	Not fertilized 0 HA Species mixture-high density	Not fertilized 500 HA Species mixture-high density

Wandell, Scott F MVN

From: Goodman, Melanie L MVN
Sent: Wednesday, March 17, 2010 12:24 PM
To: (Cecelia.Linder@noaa.gov); britt.paul@la.usda.gov; Browning, Gay B MVN; Crawford.Brad@epamail.epa.gov; Creel, Travis J MVN; Darryl Clark; Goodman, Melanie L MVN; Holden, Thomas A MVN; jacqueline.guillory@la.usda.gov; Kaspar.Paul@epamail.epa.gov; Kinsey, Mary V MVN; kirk.rhinehart@la.gov; Lachin, Donna A MVN; Richard.Hartman@noaa.gov; Rodi, Rachel MVN; Teague.Kenneth@epamail.epa.gov; Wandell, Scott F MVN; Wingate, Mark R MVN; Wittkamp, Carol MVN; (Chris.Allen@LA.GOV); Angela Trahan (Angela_Trahan@fws.gov); Bren Haas (Bren.Haase@LA.GOV); Cynthia.duet@gov.state.la.us; Jerome Zeringue (jzee@tlcd.org); John Jurgensen; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; rachel.sweeney@noaa.gov
Cc: 'Teague.Kenneth@epamail.epa.gov'; 'Brad Miller'; 'Cynthia Duet'
Subject: RE: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request

Attachments: TE53 Final Design Report031610.pdf

TE53 Final Design Report031610...

Technical Committee, please reference below request for Technical Committee recommendation for Task Force Fax Vote approval to begin construction of the Enhancement of Barrier Island Vegetation Demonstration Project.

If you haven't already, please provide concurrence and/or comments on the request for a Technical Committee recommendation to the Task Force for a fax vote to approve construction of the Enhancement of Barrier Island Vegetation Demonstration Project. Response requested by Friday, March 19, 2010.

Thanks,

Melanie Goodman
CWPPRA Program Manager
US Army Corps of Engineers
New Orleans District
Restoration Branch

Office: 504-862-1940
FAX: 504-862-1892

http://www.lacoast.gov/cwppra/
http://www.mvn.usace.army.mil/pd/cwppra_mission.htm

-----Original Message-----
From: Crawford.Brad@epamail.epa.gov [mailto:Crawford.Brad@epamail.epa.gov]
Sent: Tuesday, March 16, 2010 3:49 PM
To: Goodman, Melanie L MVN; Holden, Thomas A MVN; britt.paul@la.usda.gov; john.jurgensen@la.usda.gov; Darryl_Clark@fws.gov; Kevin_Roy@fws.gov; Angela_Trahan@fws.gov; Richard.Hartman@noaa.gov; Rachel Sweeney; kirk.rhinehart@la.gov; Kelley Templet; Kaspar.Paul@epamail.epa.gov; crawford.brad@epa.gov
Cc: Teague.Kenneth@epamail.epa.gov; Brad Miller; Cynthia Duet
Subject: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request

Melanie, Technical Committee, and P&E....

Wandell, Scott F MVN

From: Richard Hartman [Richard.Hartman@noaa.gov]
Sent: Wednesday, March 17, 2010 12:37 PM
To: Goodman, Melanie L MVN
Cc: Cecelia.Linder@noaa.gov; britt.paul@la.usda.gov; Browning, Gay B MVN; Crawford.Brad@epamail.epa.gov; Creel, Travis J MVN; Darryl Clark; Holden, Thomas A MVN; jacqueline.guillory@la.usda.gov; Kaspar.Paul@epamail.epa.gov; Kinsey, Mary V MVN; kirk.rhinehart@la.gov; Lachin, Donna A MVN; Rodi, Rachel MVN; Teague.Kenneth@epamail.epa.gov; Wandell, Scott F MVN; Wingate, Mark R MVN; Wittkamp, Carol MVN; Chris.Allen@LA.GOV; Angela_Trahan@fws.gov; Bren.Haase@LA.GOV; Cynthia.duet@gov.state.la.us; Jerome Zeringue (jzee@tlcd.org); John Jurgensen; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; Rachel.Sweeney@noaa.gov; Brad Miller
Subject: Re: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request

concur...

rh

Goodman, Melanie L MVN wrote:
> Technical Committee, please reference below request for Technical
> Committee recommendation for Task Force Fax Vote approval to begin
> construction of the Enhancement of Barrier Island Vegetation Demonstration Project.
>
> If you haven't already, please provide concurrence and/or comments on
> the request for a Technical Committee recommendation to the Task Force
> for a fax vote to approve construction of the Enhancement of Barrier
> Island Vegetation Demonstration Project. Response requested by Friday, March 19, 2010.
>
> Thanks,
>
> Melanie Goodman
> CWPPRA Program Manager
> US Army Corps of Engineers
> New Orleans District
> Restoration Branch
>
> Office: 504-862-1940
> FAX: 504-862-1892
>
> http://www.lacoast.gov/cwppra/
> http://www.mvn.usace.army.mil/pd/cwppra_mission.htm
>
>
>
>
> -----Original Message-----
> From: Crawford.Brad@epamail.epa.gov
> [mailto:Crawford.Brad@epamail.epa.gov]
> Sent: Tuesday, March 16, 2010 3:49 PM
> To: Goodman, Melanie L MVN; Holden, Thomas A MVN;
> britt.paul@la.usda.gov; john.jurgensen@la.usda.gov;
> Darryl_Clark@fws.gov; Kevin_Roy@fws.gov; Angela_Trahan@fws.gov;
> Richard.Hartman@noaa.gov; Rachel Sweeney; kirk.rhinehart@la.gov;
> Kelley Templet; Kaspar.Paul@epamail.epa.gov; crawford.brad@epa.gov
> Cc: Teague.Kenneth@epamail.epa.gov; Brad Miller; Cynthia Duet
> Subject: Enhancement of Barrier Island Vegetation Demonstration
> Project - FINAL DESIGN REPORT - TC approval Request
>
> Melanie, Technical Committee, and P&E....

Wandell, Scott F MVN

From: Darryl_Clark@fws.gov
Sent: Thursday, March 18, 2010 9:36 AM
To: Paul, Britt - Alexandria, LA
Cc: 'Angela_Trahan@fws.gov'; 'Brad Miller'; 'Bren.Haase@la.gov'; Wittkamp, Carol MVN; 'Cecelia.Linder@noaa.gov'; 'Chris.Allen@la.gov'; 'Crawford.Brad@epamail.epa.gov'; 'Cynthia.duet@gov.state.la.us'; Lachin, Donna A MVN; Browning, Gay B MVN; Guillory, Jacqueline - Alexandria, LA; Jurgensen, John - Alexandria, LA; 'Jerome Zeringue (jzee@tlcd.org)'; 'Kaspar.Paul@epamail.epa.gov'; 'Kelley.Templet@LA.GOV'; 'Kevin_Roy@fws.gov'; 'kirk.rhinehart@la.gov'; Wingate, Mark R MVN; Kinsey, Mary V MVN; Goodman, Melanie L MVN; Rodi, Rachel MVN; 'rachel.sweeney@noaa.gov'; 'Richard.Hartman@noaa.gov'; Wandell, Scott F MVN; 'Teague.Kenneth@epamail.epa.gov'; Holden, Thomas A MVN; Creel, Travis J MVN
Subject: RE: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request

Follow Up Flag: Follow up
Flag Status: Red

Attachments: pic30303.gif; graycol.gif; ecblank.gif

pic30303.gif graycol.gif ecblank.gif

FWS concurs again just to make sure. My initial concurrence was in response to Brad's request.

Darryl

Inactive hide details for "Paul, Britt - Alexandria, LA" <britt.paul@la.usda.gov>"Paul, Britt - Alexandria, LA" <britt.paul@la.usda.gov>

"Paul, Britt - Alexandria, LA" <britt.paul@la.usda.gov>

03/18/2010 08:38 AM

To

"'Goodman, Melanie L MVN'" <Melanie.L.Goodman@usace.army.mil>, "'Cecelia.Linder@noaa.gov'" <Cecelia.Linder@noaa.gov>, "'Browning, Gay B MVN'" <Gay.B.Browning@usace.army.mil>, "'Crawford.Brad@epamail.epa.gov'" <Crawford.Brad@epamail.epa.gov>, "'Creel, Travis J MVN'" <Travis.J.Creel@usace.army.mil>, "'Darryl Clark'" <darryl_clark@fws.gov>, "'Holden, Thomas A MVN'" <Thomas.A.Holden@usace.army.mil>, "Guillory, Jacqueline - Alexandria, LA" <jacqueline.guillory@la.usda.gov>, "'Kaspar.Paul@epamail.epa.gov'" <Kaspar.Paul@epamail.epa.gov>, "'Kinsey, Mary V MVN'" <Mary.V.Kinsey@usace.army.mil>, "'kirk.rhinehart@la.gov'" <kirk.rhinehart@la.gov>, "'Lachin, Donna A MVN'" <Donna.A.Lachin@usace.army.mil>, "'Richard.Hartman@noaa.gov'" <Richard.Hartman@noaa.gov>, "'Rodi, Rachel MVN'" <Rachel.Rodi@usace.army.mil>, "'Teague.Kenneth@epamail.epa.gov'" <Teague.Kenneth@epamail.epa.gov>, "'Wandell, Scott F MVN'" <Scott.F.Wandell@usace.army.mil>, "'Wingate, Mark R MVN'" <Mark.R.Wingate@usace.army.mil>, "'Wittkamp, Carol MVN'" <Carol.Wittkamp@usace.army.mil>, "'Chris.Allen@la.gov'" <Chris.Allen@la.gov>, "'Angela_Trahan@fws.gov'" <Angela_Trahan@fws.gov>, "'Bren.Haase@la.gov'" <Bren.Haase@la.gov>, "'Cynthia.duet@gov.state.la.us'"

Wandell, Scott F MVN

From: Paul, Britt - Alexandria, LA [britt.paul@la.usda.gov]
Sent: Thursday, March 18, 2010 8:38 AM
To: Goodman, Melanie L MVN; 'Cecelia.Linder@noaa.gov'; Browning, Gay B MVN; 'Crawford.Brad@epamail.epa.gov'; Creel, Travis J MVN; 'Darryl Clark'; Holden, Thomas A MVN; Guillory, Jacqueline - Alexandria, LA; 'Kaspar.Paul@epamail.epa.gov'; Kinsey, Mary V MVN; 'kirk.rhinehart@la.gov'; Lachin, Donna A MVN; 'Richard.Hartman@noaa.gov'; Rodi, Rachel MVN; 'Teague.Kenneth@epamail.epa.gov'; Wandell, Scott F MVN; Wingate, Mark R MVN; Wittkamp, Carol MVN; 'Chris.Allen@la.gov'; 'Angela_Trahan@fws.gov'; 'Bren.Haase@la.gov'; 'Cynthia.duet@gov.state.la.us'; 'Jerome Zeringue (jzee@tlcd.org)'; Jurgensen, John - Alexandria, LA; 'Kelley.Templet@LA.GOV'; 'Kevin_Roy@fws.gov'; 'rachel.sweeney@noaa.gov'
Cc: 'Teague.Kenneth@epamail.epa.gov'; 'Brad Miller'; 'Cynthia Duet'
Subject: RE: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request

Follow Up Flag: Follow up
Flag Status: Red

NRCS Concurs.

-----Original Message-----
From: Goodman, Melanie L MVN [mailto:Melanie.L.Goodman@usace.army.mil]
Sent: Wednesday, March 17, 2010 12:24 PM
To: Cecelia.Linder@noaa.gov; Paul, Britt - Alexandria, LA; Browning, Gay B MVN; Crawford.Brad@epamail.epa.gov; Creel, Travis J MVN; Darryl Clark; Goodman, Melanie L MVN; Holden, Thomas A MVN; Guillory, Jacqueline - Alexandria, LA; Kaspar.Paul@epamail.epa.gov; Kinsey, Mary V MVN; kirk.rhinehart@la.gov; Lachin, Donna A MVN; Richard.Hartman@noaa.gov; Rodi, Rachel MVN; Teague.Kenneth@epamail.epa.gov; Wandell, Scott F MVN; Wingate, Mark R MVN; Wittkamp, Carol MVN; Chris.Allen@la.gov; Angela_Trahan@fws.gov; Bren.Haase@la.gov; Cynthia.duet@gov.state.la.us; Jerome Zeringue (jzee@tlcd.org); Jurgensen, John - Alexandria, LA; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; rachel.sweeney@noaa.gov
Cc: Teague.Kenneth@epamail.epa.gov; Brad Miller; Cynthia Duet
Subject: RE: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request

Technical Committee, please reference below request for Technical Committee recommendation for Task Force Fax Vote approval to begin construction of the Enhancement of Barrier Island Vegetation Demonstration Project.

If you haven't already, please provide concurrence and/or comments on the request for a Technical Committee recommendation to the Task Force for a fax vote to approve construction of the Enhancement of Barrier Island Vegetation Demonstration Project. Response requested by Friday, March 19, 2010.

Thanks,

Melanie Goodman
CWPPRA Program Manager
US Army Corps of Engineers
New Orleans District
Restoration Branch

Office: 504-862-1940
FAX: 504-862-1892

http://www.lacoast.gov/cwppra/
http://www.mvn.usace.army.mil/pd/cwppra_mission.htm

Wandell, Scott F MVN

From: Goodman, Melanie L MVN
Sent: Friday, March 19, 2010 3:36 PM
To: Goodman, Melanie L MVN; ' (Cecelia.Linder@noaa.gov)'; 'britt.paul@la.usda.gov'; Browning, Gay B MVN; 'Crawford.Brad@epamail.epa.gov'; Creel, Travis J MVN; 'Darryl Clark'; Holden, Thomas A MVN; 'jacqueline.guillory@la.usda.gov'; 'Kaspar.Paul@epamail.epa.gov'; Kinsey, Mary V MVN; 'kirk.rhinehart@la.gov'; Lachin, Donna A MVN; 'Richard.Hartman@noaa.gov'; Rodi, Rachel MVN; 'Teague.Kenneth@epamail.epa.gov'; Wandell, Scott F MVN; Wingate, Mark R MVN; Wittkamp, Carol MVN; ' (Chris.Allen@LA.GOV)'; 'Angela Trahan (Angela_Trahan@fws.gov)'; 'Bren Haas (Bren.Haase@LA.GOV)'; 'Cynthia.duet@gov.state.la.us'; 'Jerome Zeringue (jzee@tlcd.org)'; 'John Jurgensen'; 'Kelley.Templet@LA.GOV'; 'Kevin_Roy@fws.gov'; 'rachel.sweeney@noaa.gov'
Cc: 'Teague.Kenneth@epamail.epa.gov'; 'Brad Miller'; 'Cynthia Duet'
Subject: RE: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval request for Task Force Fax Vote

Attachments: Re: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request; Re: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request; RE: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request; RE: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request; RE: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request

Re: Enhancement of Barrier Isl... | Re: Enhancement of Barrier Isl... | RE: Enhancement of Barrier Isl... | RE: Enhancement of Barrier Isl... | RE: Enhancement of Barrier Isl...

Technical Committee, we have received concurrence from all agencies on the request for a Task Force Fax Vote to approve construction for the Enhancement of Barrier Island Vegetation Demonstration Project. We as such, we are processing the fax vote.

Thanks everyone for your rapid responses.

Melanie Goodman
CWPPRA Program Manager
US Army Corps of Engineers
New Orleans District
Restoration Branch

Office: 504-862-1940
FAX: 504-862-1892

-----Original Message-----
From: Goodman, Melanie L MVN
Sent: Wednesday, March 17, 2010 12:24 PM
To: (Cecelia.Linder@noaa.gov); britt.paul@la.usda.gov; Browning, Gay B MVN; Crawford.Brad@epamail.epa.gov; Creel, Travis J MVN; Darryl Clark; Goodman, Melanie L MVN; Holden, Thomas A MVN; jacqueline.guillory@la.usda.gov; Kaspar.Paul@epamail.epa.gov; Kinsey, Mary V MVN; kirk.rhinehart@la.gov; Lachin, Donna A MVN; Richard.Hartman@noaa.gov; Rodi, Rachel MVN; Teague.Kenneth@epamail.epa.gov; Wandell, Scott F MVN; Wingate, Mark R MVN; Wittkamp, Carol MVN; (Chris.Allen@LA.GOV); Angela Trahan (Angela_Trahan@fws.gov); Bren Haas (Bren.Haase@LA.GOV); Cynthia.duet@gov.state.la.us; Jerome Zeringue (jzee@tlcd.org); John Jurgensen; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; rachel.sweeney@noaa.gov
Cc: 'Teague.Kenneth@epamail.epa.gov'; 'Brad Miller'; 'Cynthia Duet'
Subject: RE: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval Request

Wandell, Scott F MVN

From: Goodman, Melanie L MVN
Sent: Friday, March 19, 2010 4:51 PM
To: Goodman, Melanie L MVN; ' (Watson.Jane@epamail.epa.gov)'; 'bill honker'; Browning, Gay B MVN; 'Cece Linder'; 'Chris Doley'; 'garret graves'; 'garret graves'; Habbaz, Sandra P MVN; 'Harrel Hay'; Hawes, Suzanne R MVN; 'jim boggs'; 'kevin norton'; Kinsey, Mary V MVN; Lee, Alvin B COL MVN; 'Scott Wilson'; Wingate, Mark R MVN; ' (Chris.Allen@LA.GOV)'; 'Angela Trahan (Angela_Trahan@fws.gov)'; 'Bren Haas (Bren.Haase@LA.GOV)'; 'Crawford.Brad@epamail.epa.gov'; Creel, Travis J MVN; 'Cynthia.duet@gov.state.la.us'; 'Jerome Zeringue (jzee@tlcd.org)'; 'John Jurgensen'; 'Kaspar.Paul@epamail.epa.gov'; 'Kelley.Templet@LA.GOV'; 'Kevin_Roy@fws.gov'; 'rachel.sweeney@noaa.gov'; Rodi, Rachel MVN; Wandell, Scott F MVN; 'britt.paul@la.usda.gov'; 'Darryl Clark'; Holden, Thomas A MVN; 'kirk.rhinehart@la.gov'; Lachin, Donna A MVN; 'Richard.Hartman@noaa.gov'; 'Teague.Kenneth@epamail.epa.gov'
Subject: CWPPRA Task Force Fax Vote Request for construction approval for the Enhancement of Barrier Island Vegetation Demonstration Project

Attachments: RE: Enhancement of Barrier Island Vegetation Demonstration Project - FINAL DESIGN REPORT - TC approval request for Task Force Fax Vote; Copy of ENCL 2 (TE-53).xls; scanned_signed memo TE-53.pdf; TE53 Construction Approval Request w Attachments.pdf; TE53 Final Design Report031610.pdf

RE: Enhancement of Barrier Isl... | Copy of ENCL 2 (TE-53).xls | scanned_signed memo TE-53.pdf | TE53 Construction Approval Req... | TE53 Final Design Report031610...

Task Force Members,

Please see the attached memorandum from the Chairman of the Task Force requesting a fax vote on the Technical Committee's recommendation for construction approval of the Enhancement of Barrier Island Vegetation Demonstration Project, as requested by the Environmental Protection Agency (EPA) and the Louisiana Office of Coastal Protection and Restoration (OCPR). We have included a copy of correspondence and information from EPA and OCPR to support that requirements for requesting construction approval have been met.

Please fax your completed form to the US Army Corps of Engineers at (504) 862-1259 or preferably email a scanned copy to Scott Wandell (Scott.F.Wandell@usace.army.mil) and (Melanie.L.Goodman@usace.army.mil) by COB Wednesday, March 24, 2010.

Thanks,

Melanie Goodman
CWPPRA Program Manager
US Army Corps of Engineers
New Orleans District
Restoration Branch

Office: 504-862-1940
FAX: 504-862-1892

http://www.lacoast.gov/cwppra/
http://www.mvn.usace.army.mil/pd/cwppra_mission.htm

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

CEMVN-PM-W

19 MAR 2010

MEMORANDUM FOR Louisiana Coastal Wetlands Conservation and Restoration Task Force

SUBJECT: Recommendation to approve construction of the PPL 16-Enhancement of Barrier Island Vegetation Demonstration Project (TE-53)

1. The Environmental Protection Agency (EPA) and the Louisiana Office of Coastal Protection and Restoration (OCPR) are requesting approval to begin construction of the PPL 16-Enhancement of Barrier Island Vegetation Demonstration Project (TE-53) due to time restrictions for implementation and to avoid delaying the current construction schedule.

2. On behalf of the National Oceanic and Atmosphere Administration and OCPR, I request a fax vote from the Task Force (in accordance with the Standard Operating Procedures, Revision 14, page 20) regarding the recommended construction approval. Please consider the following motion:

- The CWPPRA Task Force approves the Technical Committee's recommendation for construction approval of the Enhancement of Barrier Island Vegetation Demonstration Project (TE-53) to avoid delaying the current construction schedule.

3. We have included a copy of the Final Design Report for the PPL 16-Enhancement of Barrier Island Vegetation Demonstration Project (TE-53) (enclosure 1).

4. Please use the enclosed facsimile transmittal form (enclosure 2) to submit your vote. Please fax your completed form to the US Army Corps of Engineers at (504) 862-1892 or email a scanned copy to Melanie.L.Goodman@usace.army.mil by COB Friday, 19 March 2010.

5. If you have any questions concerning this request, please contact Ms. Melanie L. Goodman, CWPPRA Program Manager, at (504) 862-1940.

Alvin B. Lee

2 Encls
as

ALVIN B. LEE
Colonel, EN
Commanding

CF via email (w/encl):
Mr. Garret Graves, LA Office of the Governor
Mr. William Honker, Environmental Protection Agency
Mr. Jim Boggs, US Fish and Wildlife Service
Mr. Kevin Norton, Natural Resource Conservation Service
Mr. Chris Doley, National Oceanic and Atmosphere Administration
Mr. Darryl Clark, US Fish and Wildlife Service
Mr. Kirk Rhinehart, LA Office of Coastal Protection and Restoration
Mr. Rick Hartman, National Marine and Fisheries Service
Mr. Brad Crawford, Environmental Protection Agency
Mr. Britt Paul, Natural Resource Conservation Service

Wandell, Scott F MVN

From: Goodman, Melanie L MVN
Sent: Thursday, March 25, 2010 12:46 PM
To: Goodman, Melanie L MVN; ' (Watson.Jane@epamail.epa.gov)'; 'bill honker'; Browning, Gay B MVN; 'Cece Linder'; 'Chris Doley'; 'garret graves'; 'garret graves'; Habbaz, Sandra P MVN; 'Harrel Hay'; Hawes, Suzanne R MVN; 'jim boggs'; 'kevin norton'; Kinsey, Mary V MVN; Lee, Alvin B COL MVN; 'Scott Wilson'; Wingate, Mark R MVN; ' (Chris.Allen@LA.GOV)'; 'Angela Trahan (Angela_Trahan@fws.gov)'; 'Bren Haas (Bren.Haase@LA.GOV)'; 'Crawford.Brad@epamail.epa.gov'; Creel, Travis J MVN; 'Cynthia.duet@gov.state.la.us'; 'Jerome Zeringue (jzee@tlcd.org)'; 'John Jurgensen'; 'Kaspar.Paul@epamail.epa.gov'; 'Kelley.Templet@LA.GOV'; 'Kevin_Roy@fws.gov'; 'rachel.sweeney@noaa.gov'; Rodi, Rachel MVN; Wandell, Scott F MVN; 'britt.paul@la.usda.gov'; 'Darryl Clark'; Holden, Thomas A MVN; 'kirk.rhinehart@la.gov'; Lachin, Donna A MVN; 'Richard.Hartman@noaa.gov'; 'Teague.Kenneth@epamail.epa.gov'
Subject: RE: CWPPRA Task Force Fax Vote Request for construction approval for the Enhancement of Barrier Island Vegetation Demonstration Project

Attachments: NMFS approval for construction of TE-%#.pdf; TE53 Agency votes_EPA_USFWS_NRCS.pdf

NMFS approval for construction... TE53 Agency tes_EPA_USFWS_NF

Task Force, we have received fax vote concurrence from all agencies approving construction for the Enhancement of Barrier Island Vegetation Demonstration Project.

Thanks everyone for rapid replies.

Melanie Goodman
CWPPRA Program Manager
US Army Corps of Engineers
New Orleans District
Restoration Branch

Office: 504-862-1940
FAX: 504-862-1892

http://www.lacoast.gov/cwppra/
http://www.mvn.usace.army.mil/pd/cwppra_mission.htm

-----Original Message-----
From: Goodman, Melanie L MVN
Sent: Friday, March 19, 2010 4:51 PM
To: Goodman, Melanie L MVN; ' (Watson.Jane@epamail.epa.gov)'; 'bill honker'; Browning, Gay B MVN; 'Cece Linder'; 'Chris Doley'; 'garret graves'; 'garret graves'; Habbaz, Sandra P MVN; 'Harrel Hay'; Hawes, Suzanne R MVN; 'jim boggs'; 'kevin norton'; Kinsey, Mary V MVN; Lee, Alvin B COL MVN; 'Scott Wilson'; Wingate, Mark R MVN; ' (Chris.Allen@LA.GOV)'; 'Angela Trahan (Angela_Trahan@fws.gov)'; 'Bren Haas (Bren.Haase@LA.GOV)'; 'Crawford.Brad@epamail.epa.gov'; Creel, Travis J MVN; 'Cynthia.duet@gov.state.la.us'; 'Jerome Zeringue (jzee@tlcd.org)'; 'John Jurgensen'; 'Kaspar.Paul@epamail.epa.gov'; 'Kelley.Templet@LA.GOV'; 'Kevin_Roy@fws.gov'; 'rachel.sweeney@noaa.gov'; Rodi, Rachel MVN; Wandell, Scott F MVN; 'britt.paul@la.usda.gov'; 'Darryl Clark'; Holden, Thomas A MVN; 'kirk.rhinehart@la.gov'; Lachin, Donna A MVN; 'Richard.Hartman@noaa.gov'; 'Teague.Kenneth@epamail.epa.gov'
Subject: CWPPRA Task Force Fax Vote Request for construction approval for the Enhancement of Barrier Island Vegetation Demonstration Project

FACSIMILE TRANSMITTAL HEADER SHEET

Agency	NAME/OFFICE SYMBOL	OFFICE TELEPHONE NO.	OFFICE FAX NO.
FROM US Fish and Wildlife Service	Jim Boggs	337-291-3115	291-3139
TO USACE	Melanie L. Goodman CWPPRA Program Manager	(504) 862-1940	(504) 862-1892

Classification	Precedence	No. Pages *Including Header*	Date/time	Releaser's Signature
		1	3/18/2010	Melanie Goodman

REMARKS:

The Motion:

The US Environmental Protection Agency and the Louisiana Office of Coastal Protection and Restoration (OCPR) are requesting construction approval for the PPL 16 - Enhancement of Barrier Island Vegetation Demonstration Project (TE-53) to keep the current construction schedule. The CWPPRA Task Force approves the Technical Committee's recommendation to approve construction of the PPL 16 - Enhancement of Barrier Island Vegetation Demonstration Project (TE-53).

Please check one of the following:

[XXXXXXX] I approve the motion as stated above.

[ ] I do NOT approve the motion as stated above.

Signed,

Jim Boggs

3/22/10

22-Mar-10

FACSIMILE TRANSMITTAL HEADER SHEET

Agency	NAME/OFFICE SYMBOL	OFFICE TELEPHONE NO.	OFFICE FAX NO.
FROM USDA-NRCS	Kevin D. Norton	(318) 473-7751	(318) 473-7626
TO USACE	Melanie L. Goodman CWPPRA Program Manager	(504) 862-1940	(504) 862-1892

Classification	Precedence	No. Pages *Including Header*	Date/time	Releaser's Signature
		1	3/18/2010	Melanie Goodman

REMARKS:

The Motion:

The US Environmental Protection Agency and the Louisiana Office of Coastal Protection and Restoration (OCPR) are requesting construction approval for the PPL 16 - Enhancement of Barrier Island Vegetation Demonstration Project (TE-53) to keep the current construction schedule. The CWPPRA Task Force approves the Technical Committee's recommendation to approve construction of the PPL 16 - Enhancement of Barrier Island Vegetation Demonstration Project (TE-53).

Please check one of the following:

[✓] I approve the motion as stated above.

[ ] I do NOT approve the motion as stated above.

Signed,

W. Britt Paul, Acting State Conservationist
for Kevin D. Norton

3-23-10
Date

FACSIMILE TRANSMITTAL HEADER SHEET

Agency	NAME/OFFICE SYMBOL	OFFICE TELEPHONE NO.	OFFICE FAX NO.
FROM US EPA	William K. Honker (6WQ)	(214)665-3187	(214)665-7373
TO USACE	Melanie L. Goodman CWPPRA Program Manager	(504) 862-1940	(504) 862-1892

Classification	Precedence	No. Pages *Including Header*	Date/time	Releaser's Signature
		1	3/18/2010	Melanie Goodman

REMARKS:

The Motion:

The US Environmental Protection Agency and the Louisiana Office of Coastal Protection and Restoration (OCPR) are requesting construction approval for the PPL 16 - Enhancement of Barrier Island Vegetation Demonstration Project (TE-53) to keep the current construction schedule. The CWPPRA Task Force approves the Technical Committee's recommendation to approve construction of the PPL 16 - Enhancement of Barrier Island Vegetation Demonstration Project (TE-53).

Please check one of the following:

[✓] I approve the motion as stated above.

[ ] I do NOT approve the motion as stated above.

Signed,

WK Honker

William K. Honker

3/24/10

Date

FACSIMILE TRANSMITTAL HEADER SHEET

Agency	NAME/OFFICE SYMBOL	OFFICE TELEPHONE NO.	OFFICE FAX NO.
FROM NOAA Fisheries	Christopher Doley	(301) 713-0174	(301) 713-0174
TO USACE	Melanie L. Goodman CWPPRA Program Manager	(504) 862-1940	(504) 862-1892

Classification	Precedence	No. Pages *Including Header*	Date/time	Releaser's Signature
		1	3/18/2010	Melanie Goodman

REMARKS:

The Motion:

The US Environmental Protection Agency and the Louisiana Office of Coastal Protection and Restoration (OCPR) are requesting construction approval for the PPL 16 - Enhancement of Barrier Island Vegetation Demonstration Project (TE-53) to keep the current construction schedule. The CWPPRA Task Force approves the Technical Committee's recommendation to approve construction of the PPL 16 - Enhancement of Barrier Island Vegetation Demonstration Project (TE-53).

Please check one of the following:

[X] I approve the motion as stated above.

[ ] I do NOT approve the motion as stated above.

Signed,

Christopher D. Doley

3-24-2010
3/24/2010

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

STATUS LAKE PORTAGE EVALUATION

For Report/Discussion:

Mr. Britt Paul of NRCS will provide a status update on the Lake Portage Land Bridge (TV-17)

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

PROJECT UPDATE FOR PPL 11- RIVER REINTRODUCTION INTO MAUREPAS SWAMP PROJECT (PO-29)

For Report:

The Environmental Protection Agency (EPA), in coordination with the State of Louisiana will provide a status on the River Reintroduction into Maurepas Swamp project design and gap analysis efforts.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

STATUS OF THE PPL 1 - WEST BAY SEDIMENT DIVERSION PROJECT (MR-03)

For Discussion:

The Corps of Engineers will provide a status on the West Bay Project, including development of project closure plans and the on going modeling work plan effort.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

STATUS ON CORPS OF ENGINEERS AND STATE OF LOUISIANA COST SHARING AGREEMENT NEGOTIATIONS.

For Report/Discussion:

Mr. Holden will provide a status on negotiations between the Corps of Engineers and the State of Louisiana to resolve issues that have delayed completion of model Cost Sharing Agreements for Corps sponsored CWPPRA Cash Flow Projects.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

INITIAL DISCUSSION OF FY11 PLANNING BUDGET DEVELOPMENT

For Report/Discussion:

The FY11 Planning Program Budget development, including the PPL 21 Process, will be initiated.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

SELECTION OF TEN CANDIDATE PROJECTS AND UP TO THREE DEMONSTRATION PROJECTS TO EVALUATE FOR PPL 20

For Discussion/Decision:

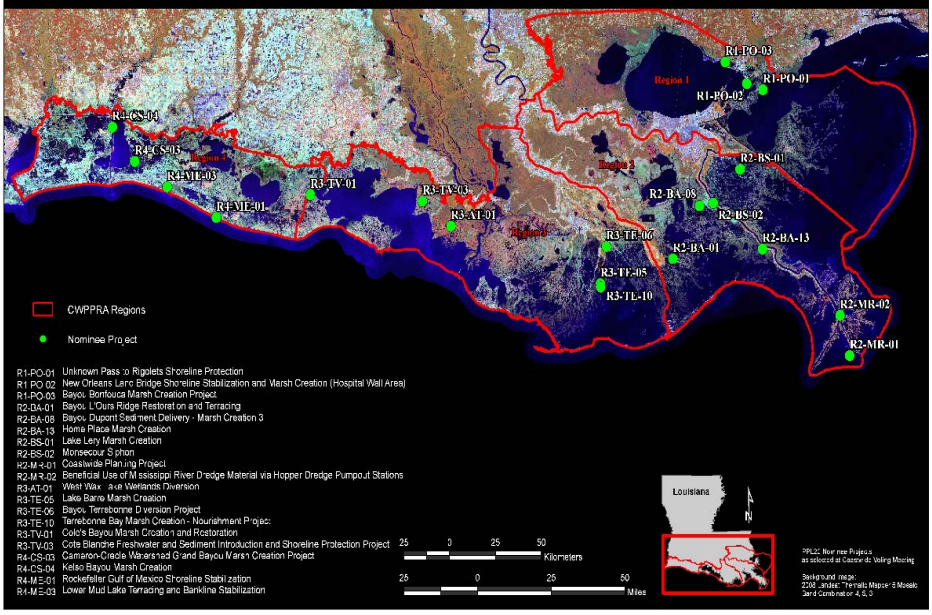
The Technical Committee will consider preliminary costs & benefits of the Priority Project List 20 (PPL 20) Project Nominees and Demonstration Project Nominees listed below. The Technical Committee will select 10 projects and up to 3 demonstration projects as PPL 20 candidates to be evaluated for Phase 0 analysis, and which will be considered later for final selection of projects that will be approved for Phase I (Planning and Engineering and Design).

Region	Basin	PPL 20 Nominees
1	Pontchartrain	Bayou Bonfouca Marsh Creation Project
1	Pontchartrain	Unknown Pass to Rigolets Shoreline Protection
1	Pontchartrain	New Orleans Land Bridge Shoreline Stabilization and Marsh Creation Project
2	Mississippi River Delta	Coastwide Planting Project
2	Mississippi River Delta	Beneficial Use of MS River Dredge Material via Hopper Dredge Pumpout Stations
2	Breton Sound	Lake Lery Shoreline Marsh Creation
2	Breton Sound	Monsecour Siphon
2	Barataria	Bayou L'Ours Ridge Restoration and Terracing
2	Barataria	Bayou Dupont Sediment Delivery – Marsh Creation 3
2	Barataria	Home Place Marsh Creation
3	Terrebonne	Lake Barre Marsh Creation
3	Terrebonne	Terrebonne Bay Marsh Creation-Nourishment Project
3	Terrebonne	Bayou Terrebonne Diversion Project
3	Atchafalaya	West Wax Lake Wetlands Diversion
3	Teche-Vermilion	Cole's Bayou Marsh Creation and Restoration
3	Teche-Vermilion	Cote Blanche Freshwater and Sediment Introduction and Shoreline Protection Project
4	Mermentau	Lower Mud Lake Terracing and Bankline Stabilization
4	Mermentau	Rockefeller Gulf of Mexico Shoreline Stabilization, Joseph's Harbor East
4	Calcasieu-Sabine	Cameron-Creole Watershed Grand Bayou Marsh Creation
4	Calcasieu-Sabine	Kelso Bayou Marsh Creation and Hydrologic Restoration

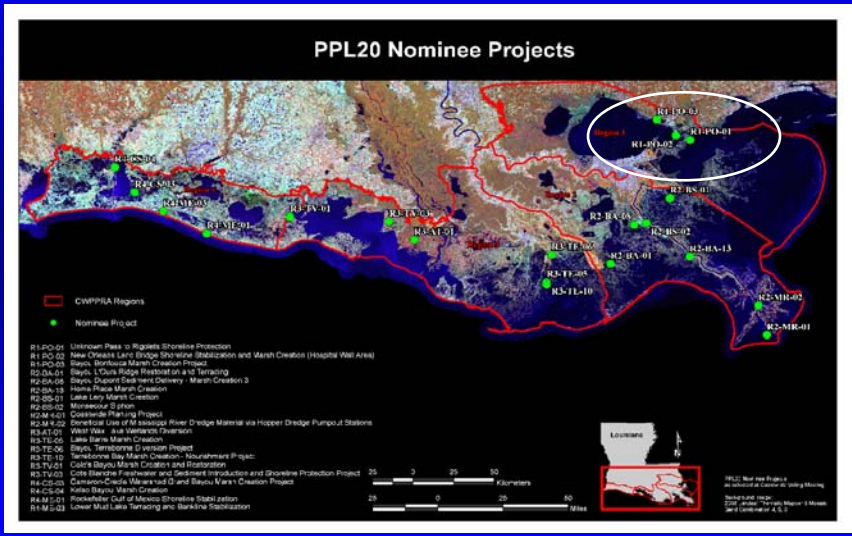
		PPL 20 Demonstration Project Nominees
Coastwide	DEMO	Floating Island Environmental Solutions Biohaven©
Coastwide	DEMO	Ecosystems Wave Attenuator
Coastwide	DEMO	The Wave Robber Wave Suppressor Sediment Collection System
Coastwide	DEMO	Use of Sand Derived from Pulverized Glass As Beach Nourishment on Barrier Island Restoration Projects

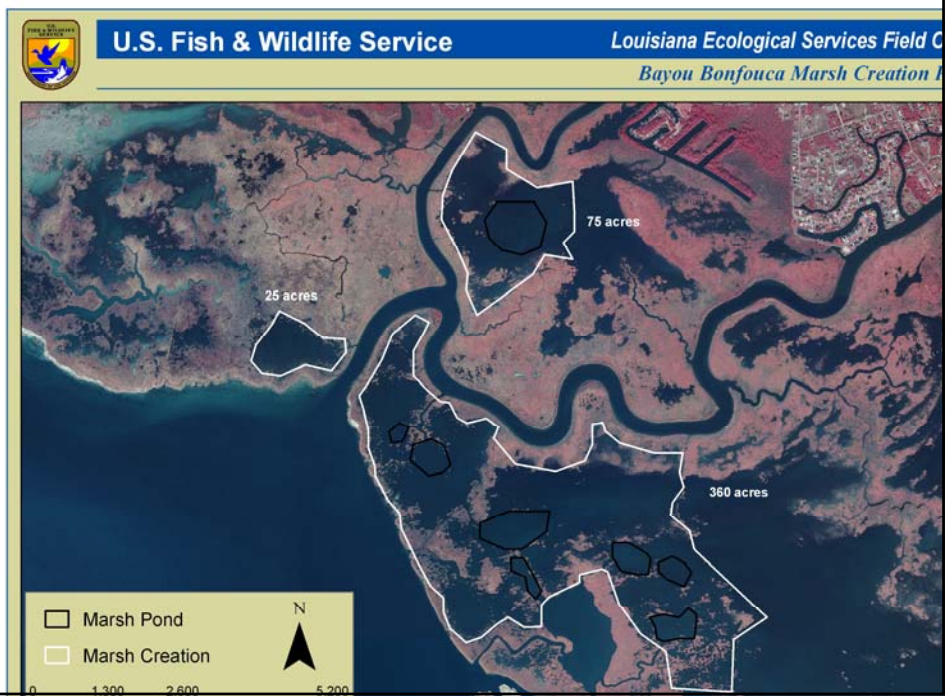
CWPPRA PPL20 Nominees
Technical Committee Meeting
New Orleans, LA
April 20, 2010

PPL20 Nominee Projects



Region 1
Pontchartrain Basin

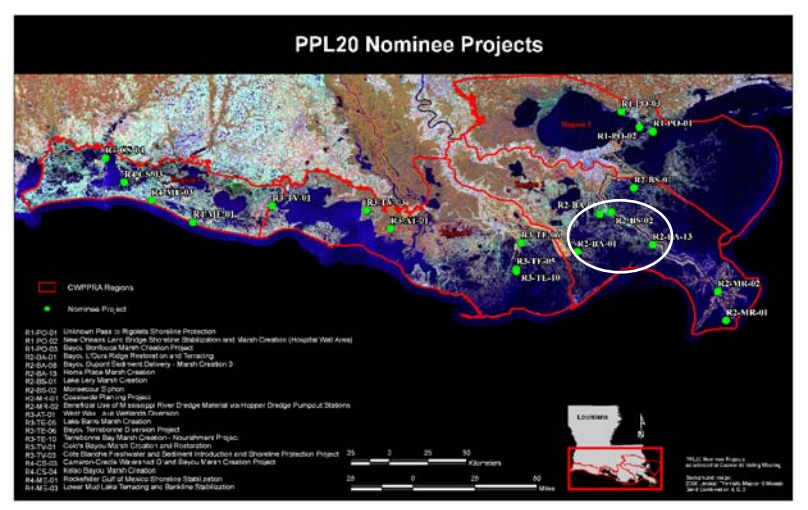




The Rigolets
Lake St. Catherine
GIWW
Unknown Pass
Lake Borgne
Unknown Pass to Rigolets
Shoreline Protection
Orleans Parish
PPL 20 Nominee
0 1,600 3,200 6,400
Feet

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

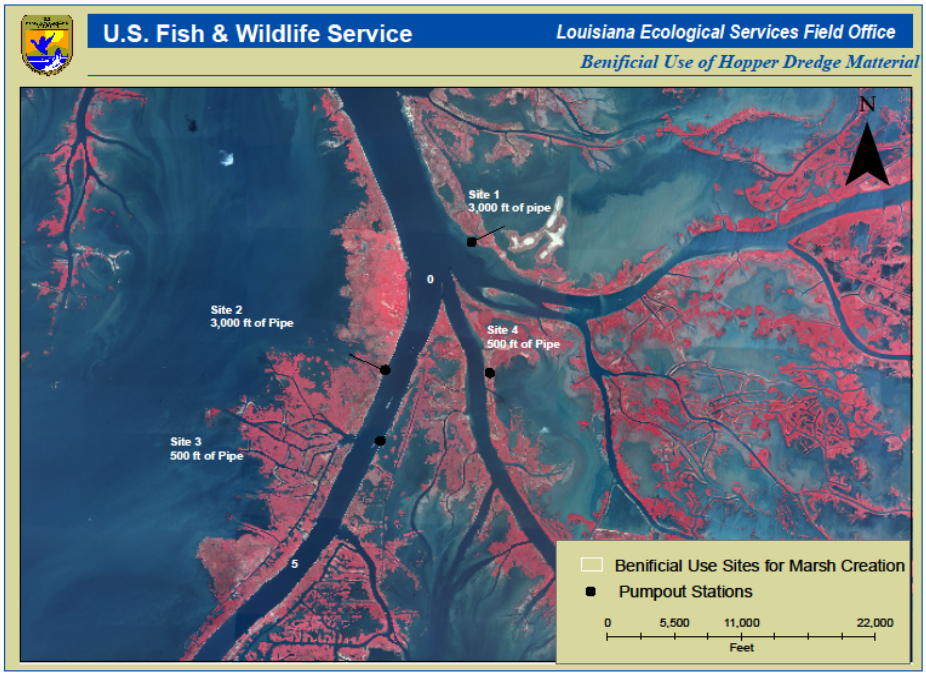
Region 2
Mississippi River Delta Basin



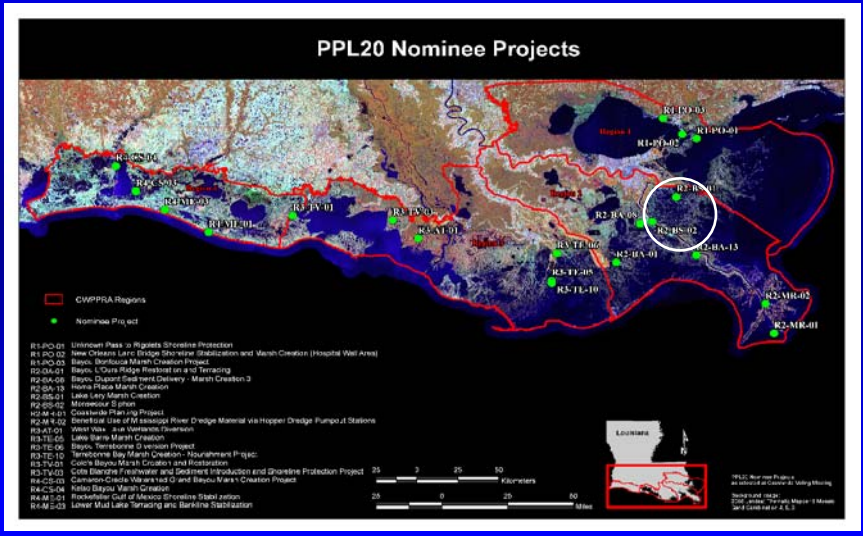
Coastwide Planting Project
PPL-20

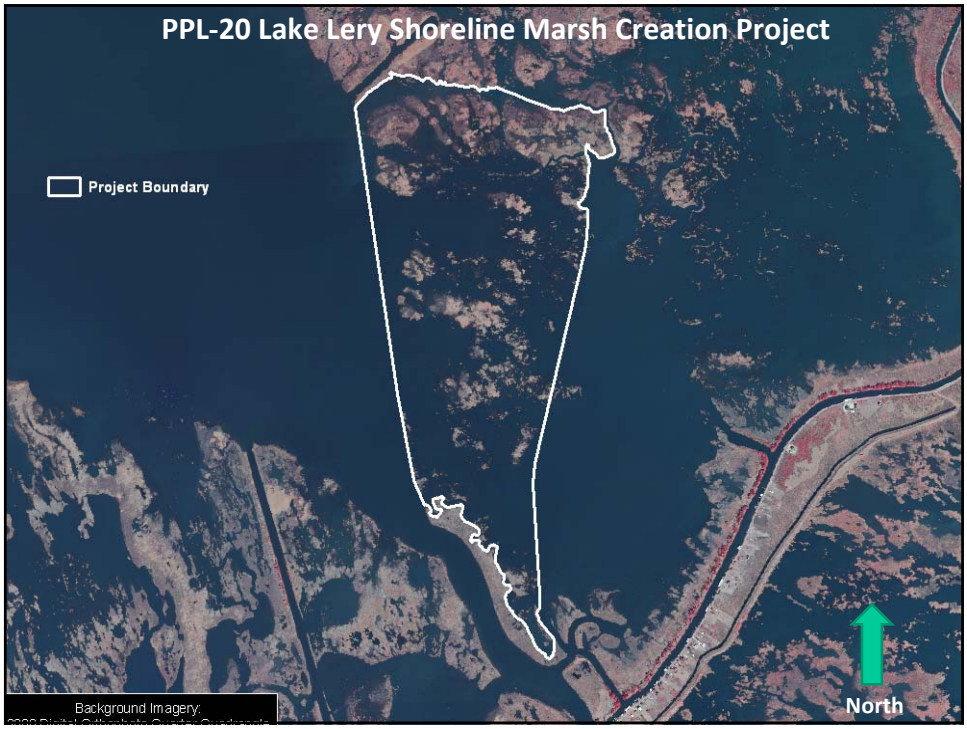
Potential Vegetative Planting Projects:

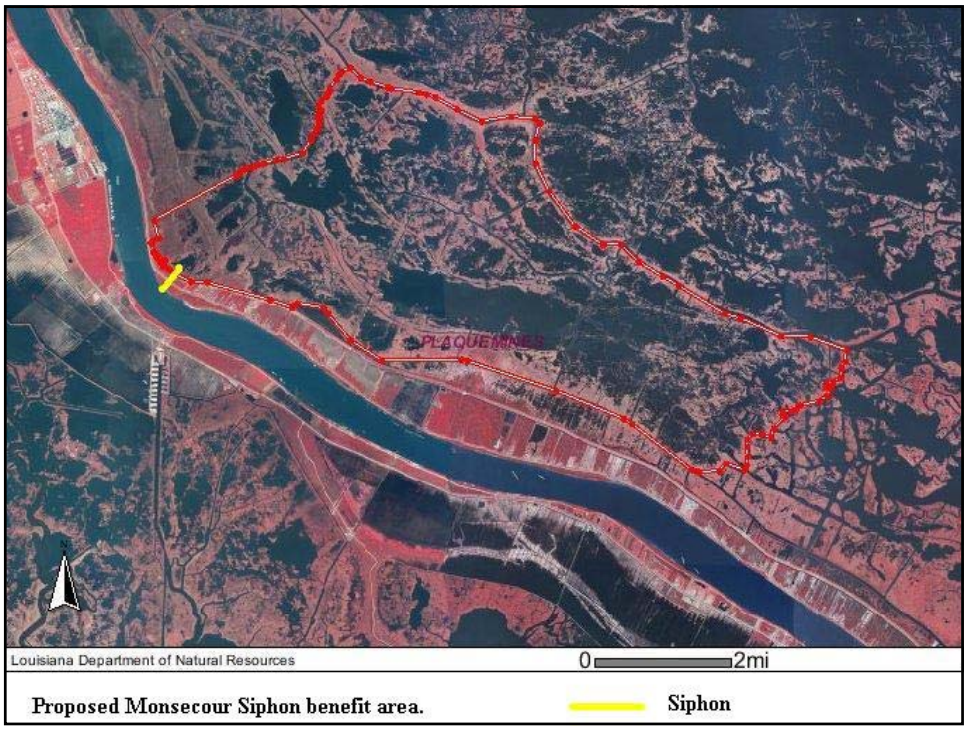
- Shoreline stabilization
- Shallow mud flats
- Storm-damaged marshes
- Bankline stabilization
- Barrier Islands



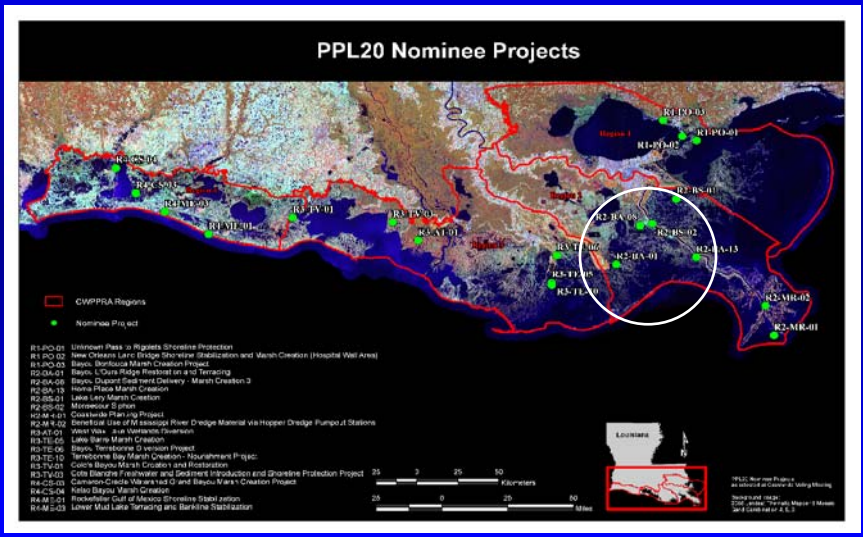
Region 2
Breton Sound Basin

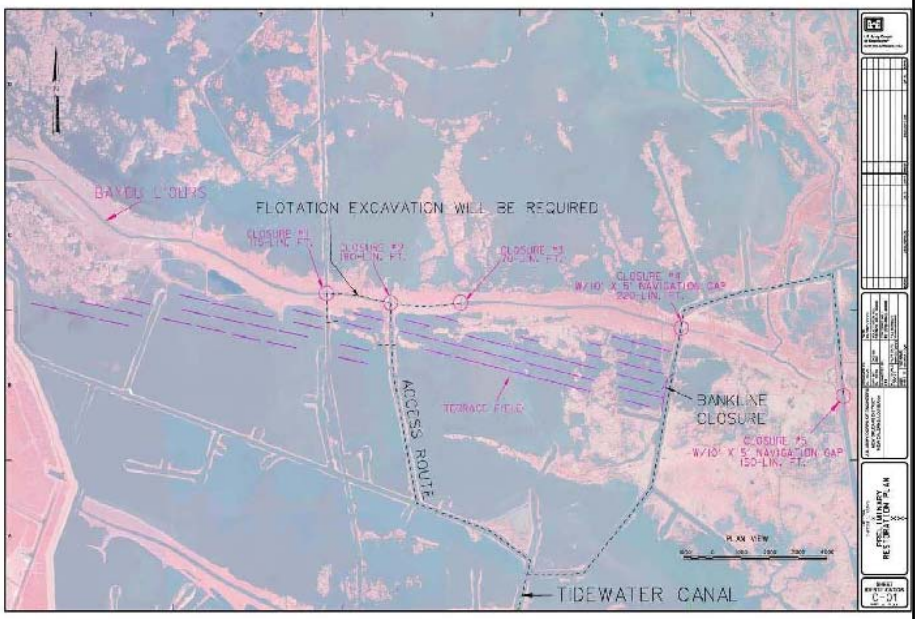


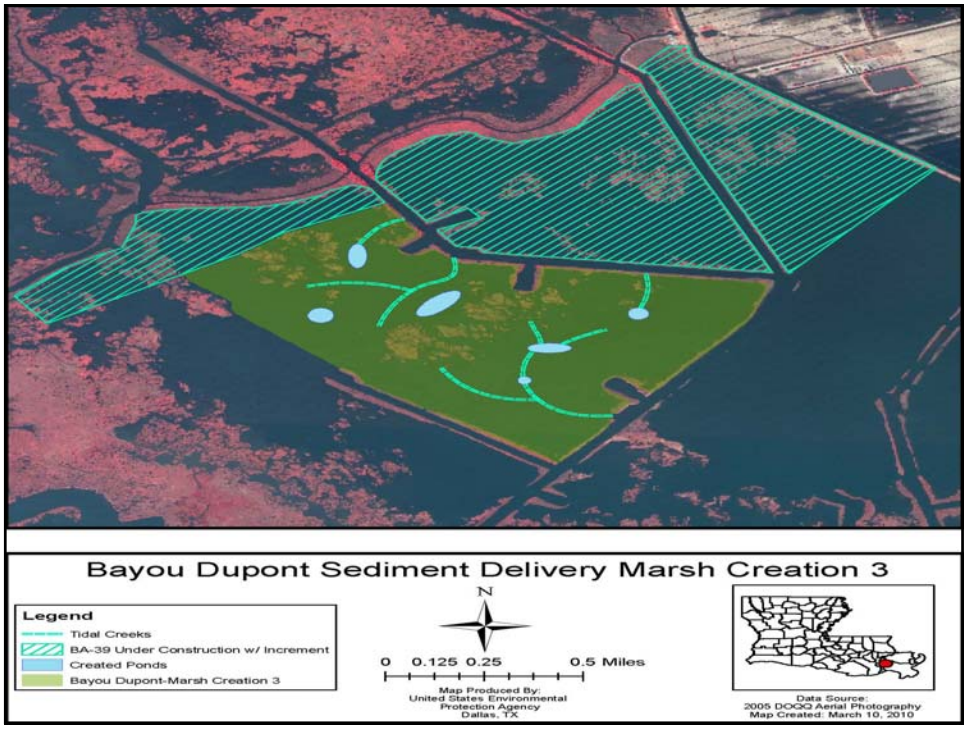

PPL-20 Lake Lery Shoreline Marsh Creation Project
Project Boundary
Background Imagery:
North

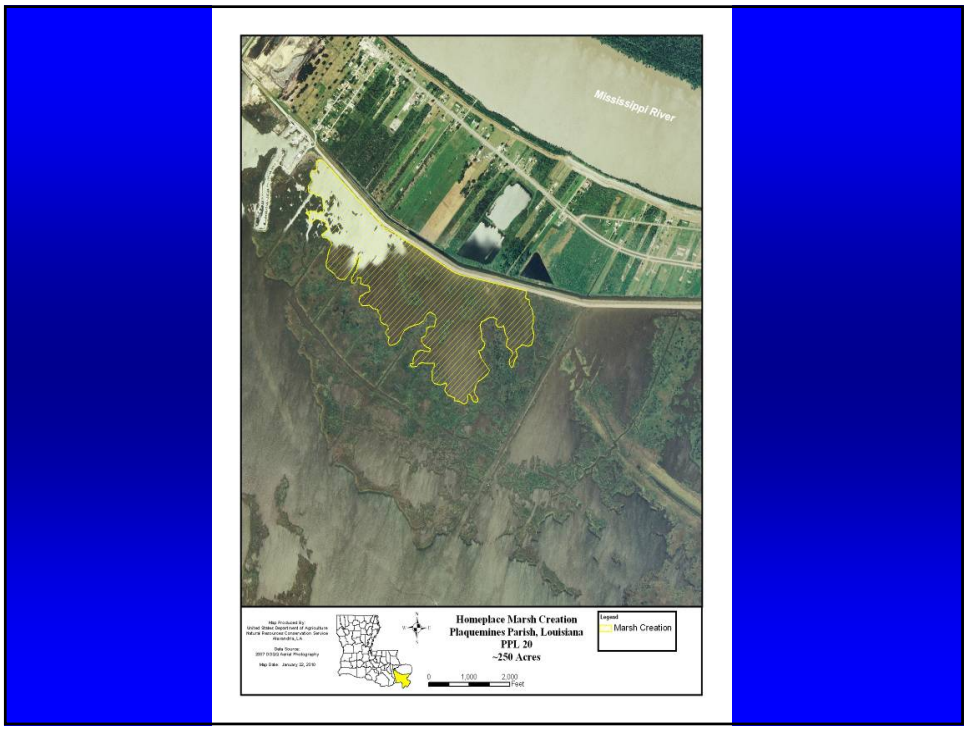

PLAQUEMINES
Louisiana Department of Natural Resources
0
2mi
Proposed Monsecour Siphon benefit area.
Siphon

Region 2
Barataria Basin

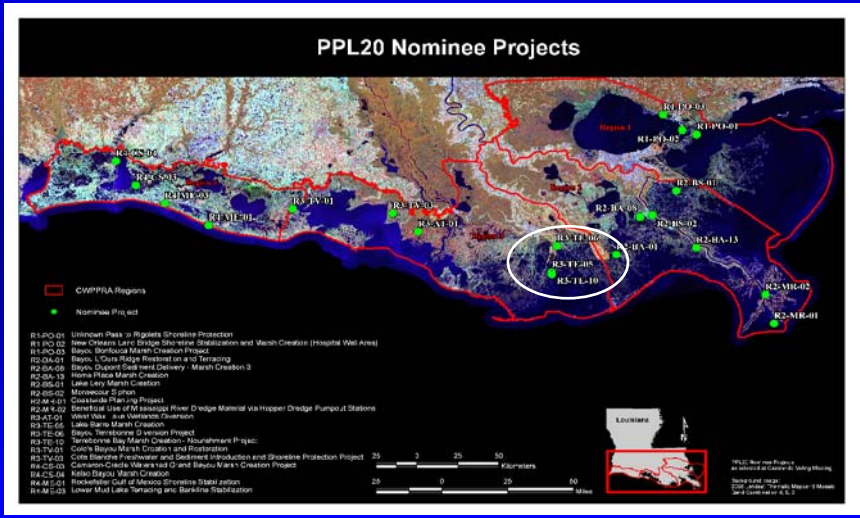





Bayou Dupont Sediment Delivery Marsh Creation 3
Legend
Tidal Creeks
BA-39 Under Construction w/ Increment
Created Ponds
Bayou Dupont-Marsh Creation 3
N
0 0.125 0.25 0.5 Miles
Map Produced By:
United States Environmental
Protection Agency
Dallas, TX
Data Source:
2005 DOQQ Aerial Photography
Map Created: March 10, 2010

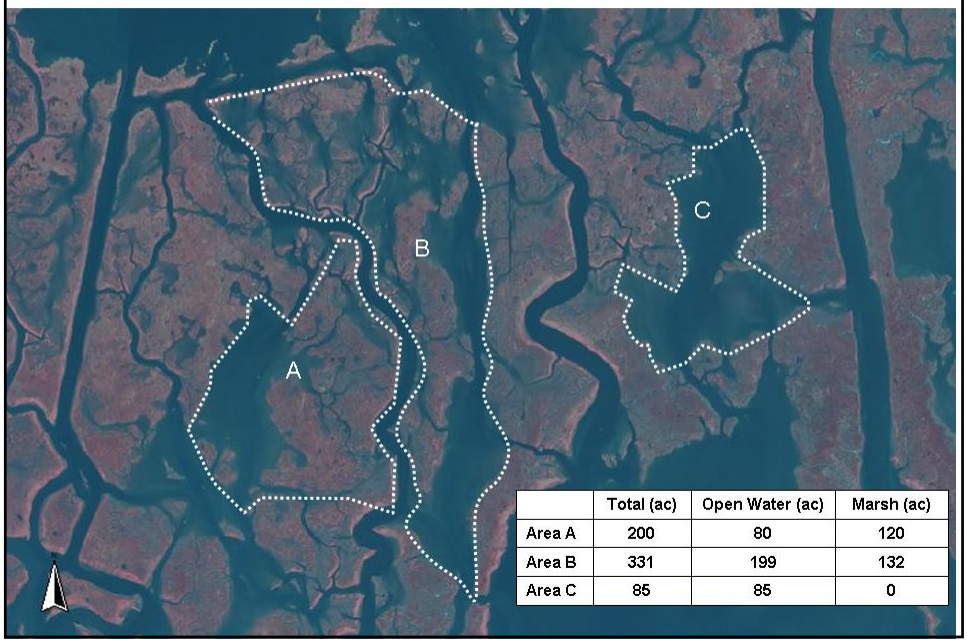

Mississippi River
Homeplace Marsh Creation
Plaquemines Parish, Louisiana
PPL 20
~250 Acres
Legend
Marsh Creation
0 1,000 2,000
Feet

Region 3
Terrebonne Basin

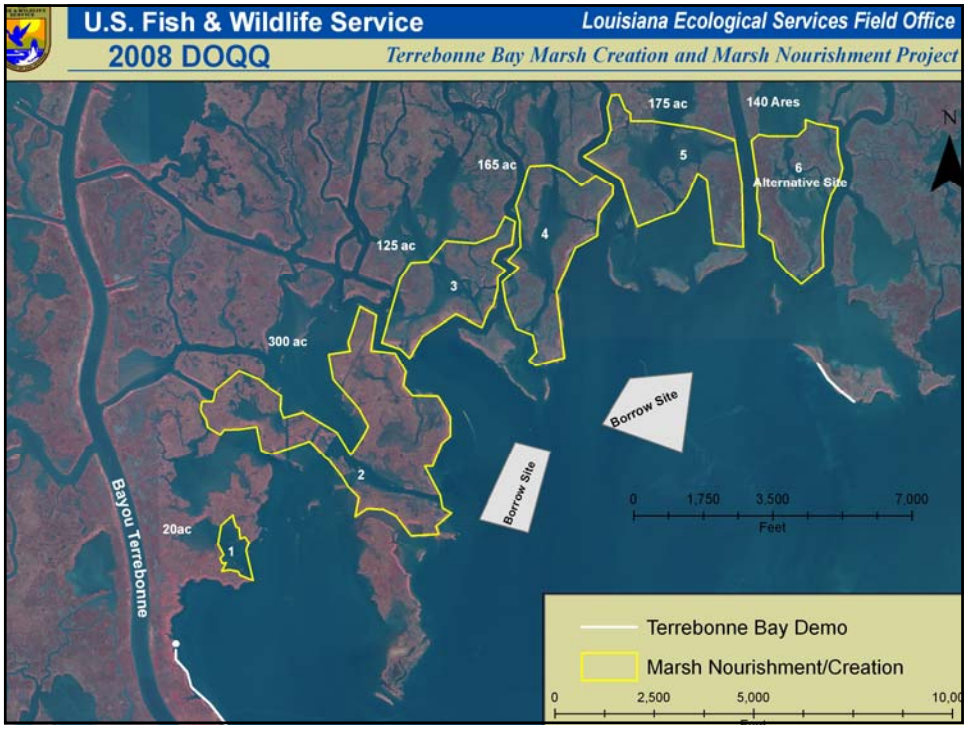


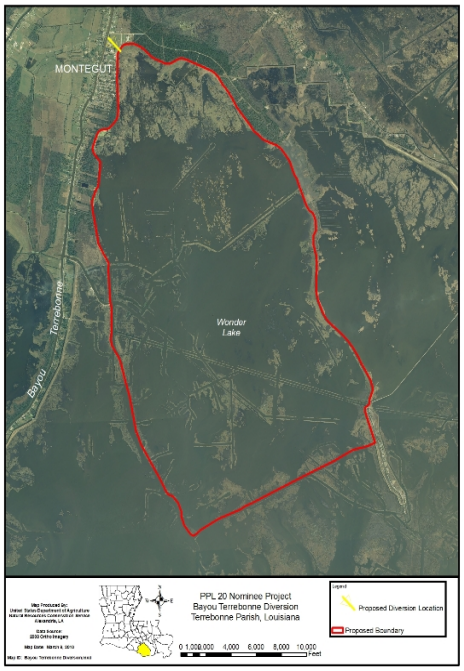
Lake Barre Marsh Creation

364 acres creation; 252 nourishment

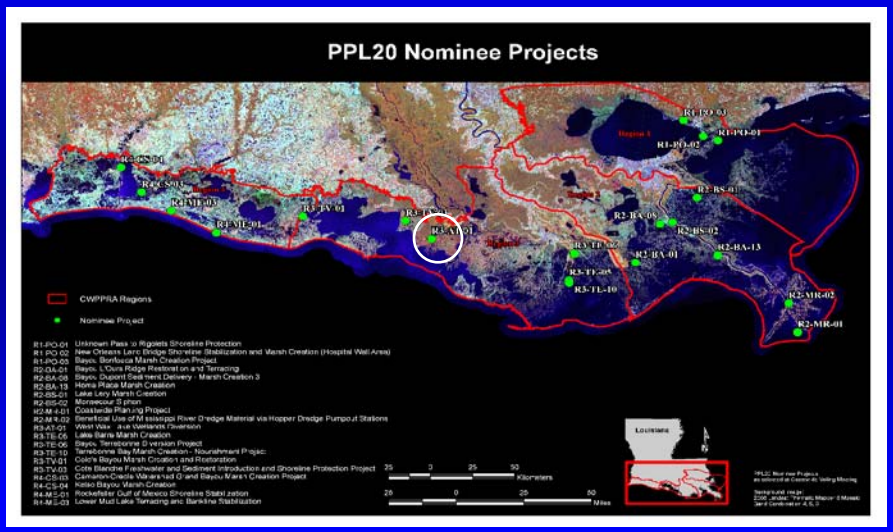


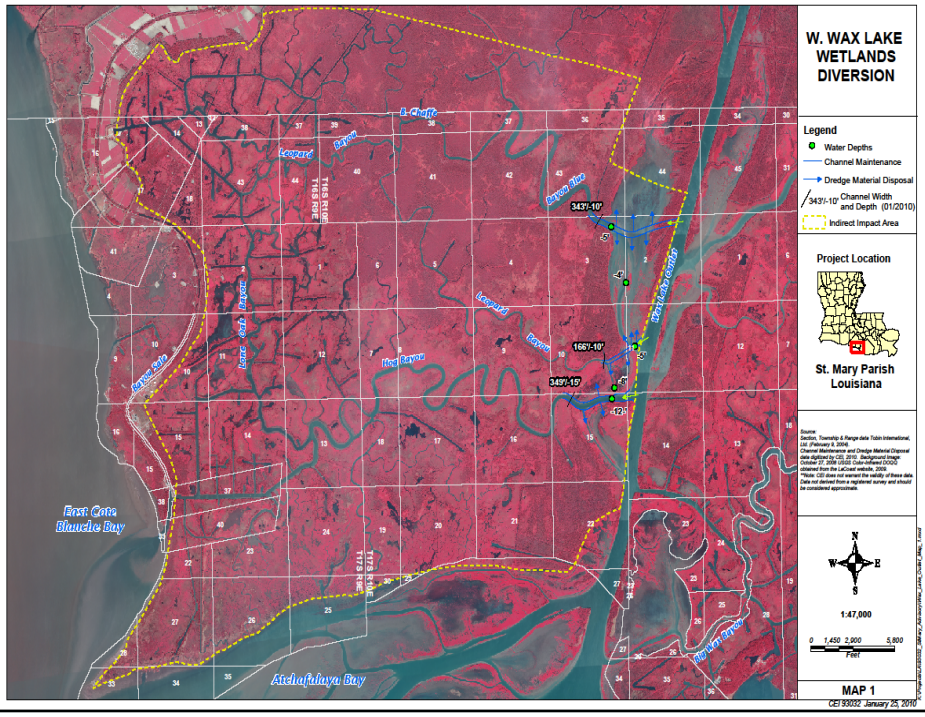
	Total (ac)	Open Water (ac)	Marsh (ac)
Area A	200	80	120
Area B	331	199	132
Area C	85	85	0


U.S. Fish & Wildlife Service
Louisiana Ecological Services Field Office
2008 DOQQ
Terrebonne Bay Marsh Creation and Marsh Nourishment Project
175 ac
140 Ares
165 ac
125 ac
300 ac
20ac
1
2
3
4
5
6
Alternative Site
Borrow Site
Borrow Site
Bayou Terrebonne
N
0
1,750
3,500
7,000
Feet
Terrebonne Bay Demo
Marsh Nourishment/Creation
0
2,500
5,000

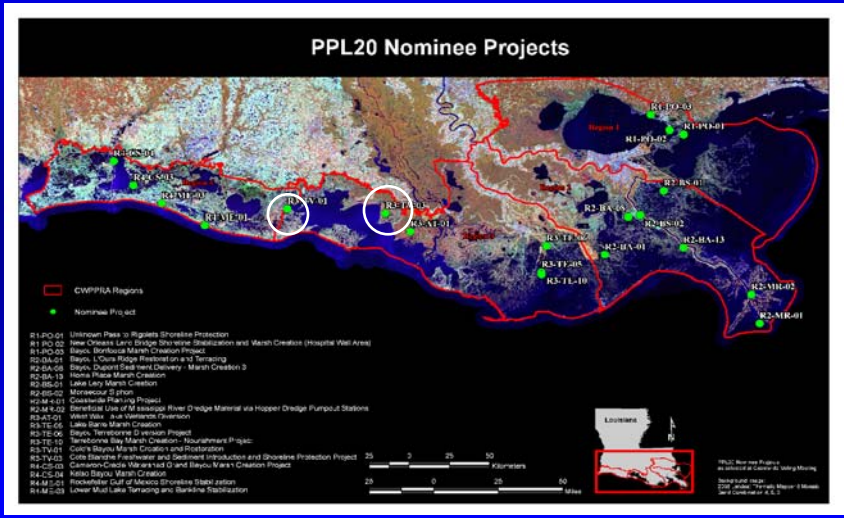

MONTEGUT
Wonder Lake
Bayou Terrebonne
PPL 20 Nominee Project
Bayou Terrebonne Diversion
Terrebonne Parish, Louisiana
Legend
Proposed Diversion Location
Proposed Boundary
0 1,000 2,000 4,000 6,000 8,000 10,000
Feet

Region 3
Atchafalaya Basin





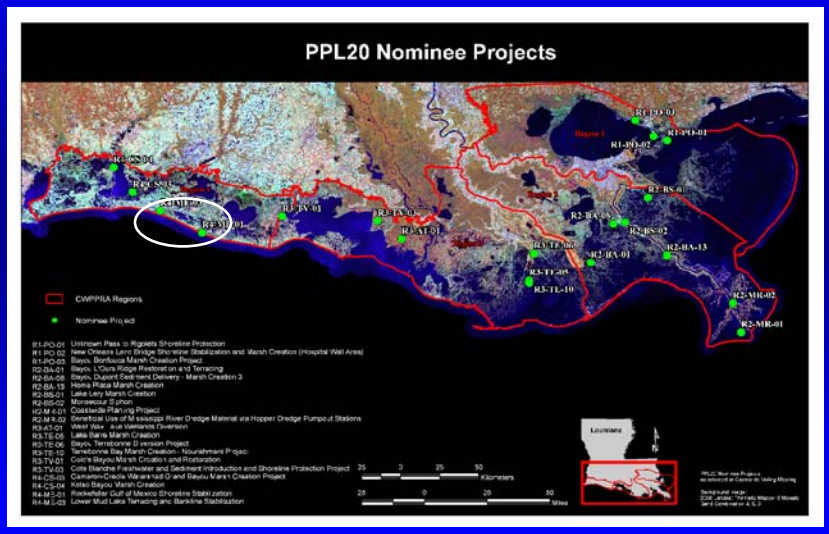
Region 3
Teche-Vermilion Basin



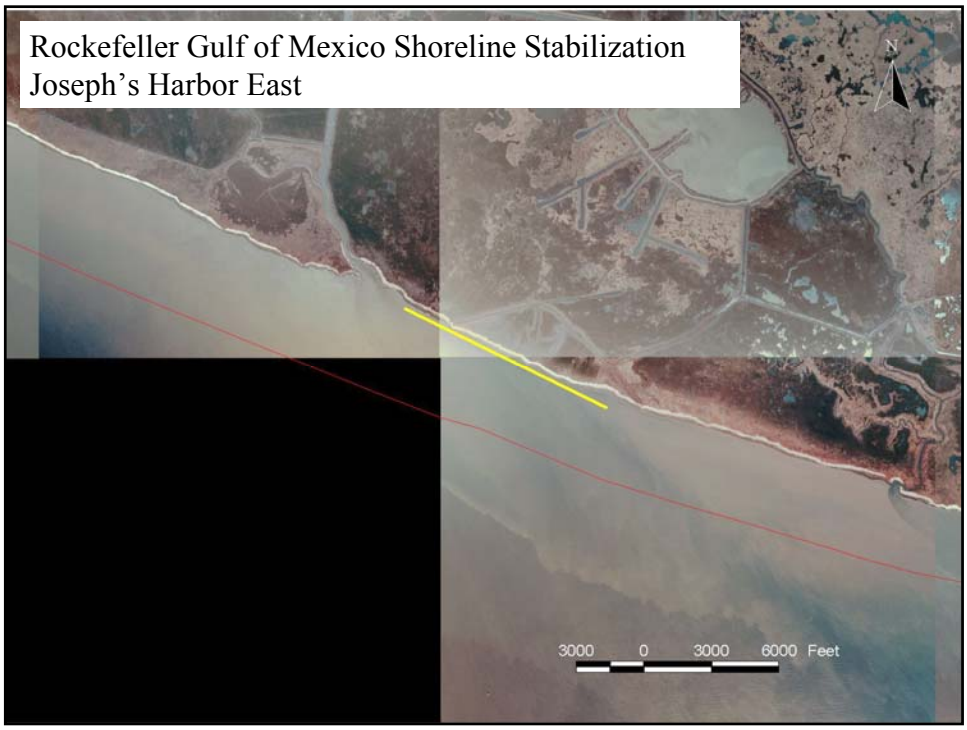
COLE'S BAYOU MARSH CREATION AND RESTORATION

- Bank line protection (10,600 ft)
- Excavation to improve water & sediment inflow
- Terrace (± 30,000 ft)
- Replace/install flap-gated culvert/gap spoil bank
- Marsh creation (335 acres)

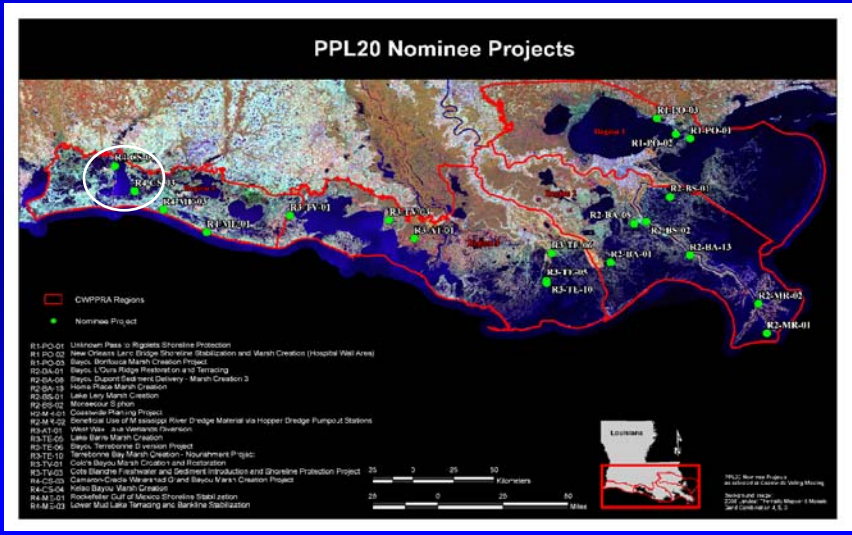
Region 4
Mermentau Basin

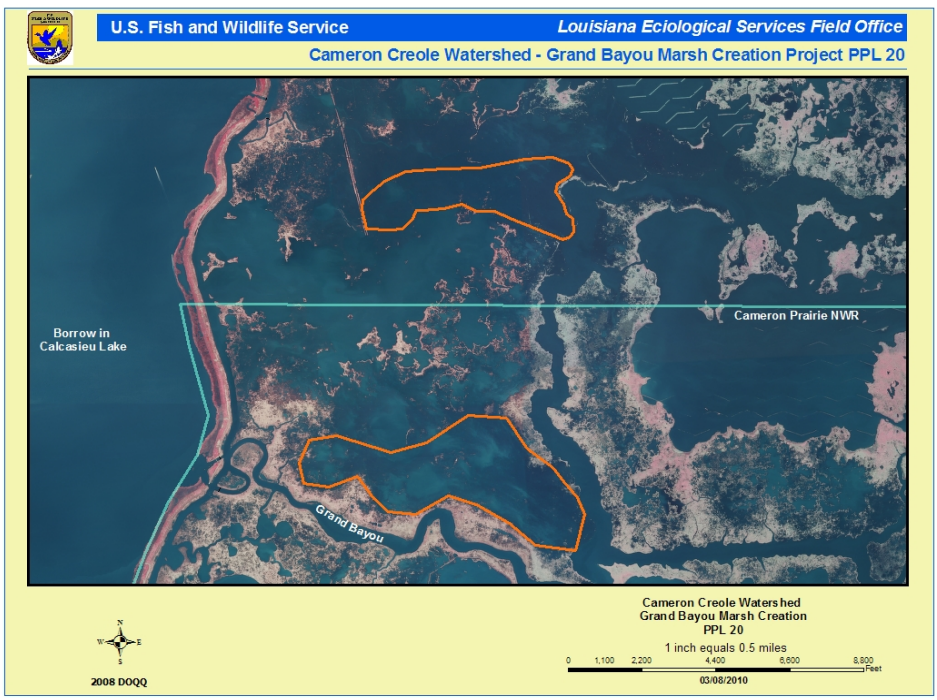


Mermentau River
Lower Mud Lake
Gulf of Mexico
Legend
Terraces
Shoreline Protection
Lower Mud Lake Terracing
and Bank Stabilization
Cameron Parish, Louisiana
PPL 20
0 750 1,500 3,000 4,500 6,000
Feet


Rockefeller Gulf of Mexico Shoreline Stabilization
Joseph's Harbor East
N
3000 0 3000 6000 Feet

Region 4
Calcasieu-Sabine Basin





CWPPRA PPL19 Demonstration Project Nominees

Floating Island Environmental Solutions BioHaven

- Soil conditions and water depths sometimes limit the construction of terraces.

- Floating marshes are often susceptible to breakup and loss after extreme flooding events, especially in areas with altered hydrologic conditions.

- Evaluate the effectiveness of Floating Island BioHavens to function as earthen terraces – provide marsh habitat, reduce wave fetch, trap sediment, etc.

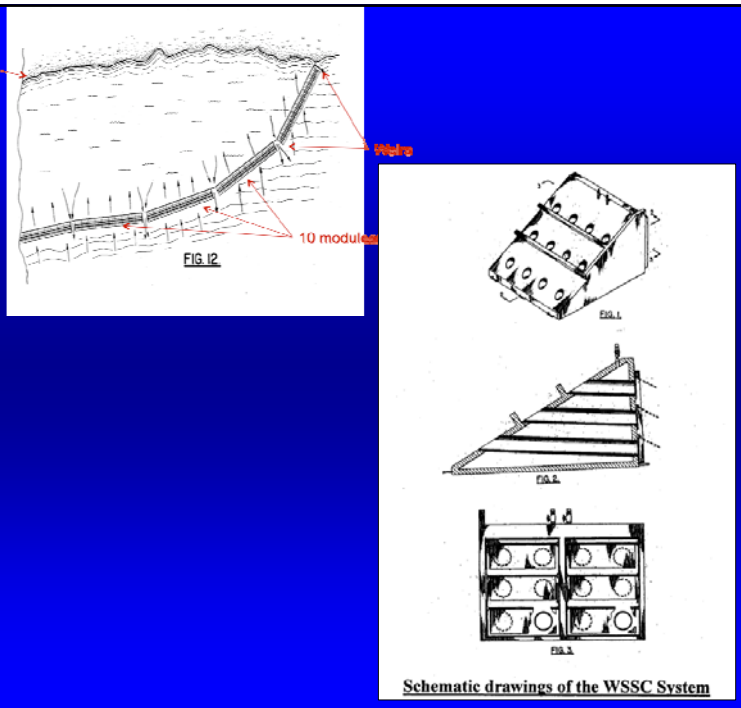
- Evaluate their effectiveness to contain floating marshes in areas where they are susceptible to altered hydrologic conditions.

The Wave Robber Wave Suppressor Sediment Collection System

- potential demo location at Southwestern Shore of Little Lake
  - experiencing a high shoreline erosion rate of between 20' and 40' a year.

- Evaluate an alternative method of shoreline protection equivalent to traditional methods, while trapping ambient sediments to facilitate expansion of emergent marsh

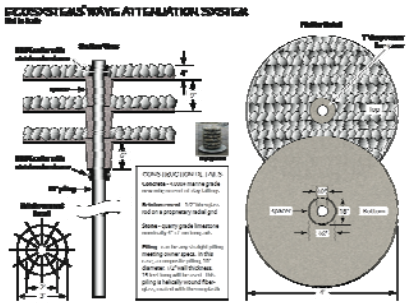
- System serves as a barrier to disrupt the tidal wave flow into the shorelines and wetlands while at the same time allowing sediment to be carried through the system by the wave action and water currents

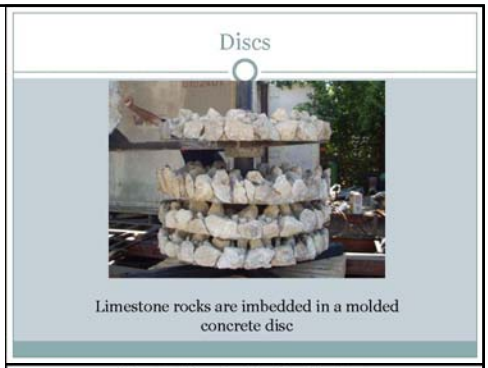


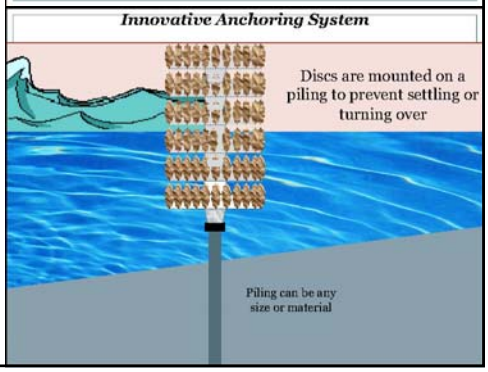
Ecosystems Wave Attenuator for Shoreline Protection

- Soil conditions, accessibility, and other issues sometimes limit traditional shoreline protection techniques.
- Evaluate an alternative shoreline protection method where site conditions limit or preclude traditional techniques (i.e., rock structures).
- The Ecosystems Wave Attenuator consists of concrete discs mounted on a piling and anchored in rows to dissipate wave energy.

Ecosystems Wave Attenuator System



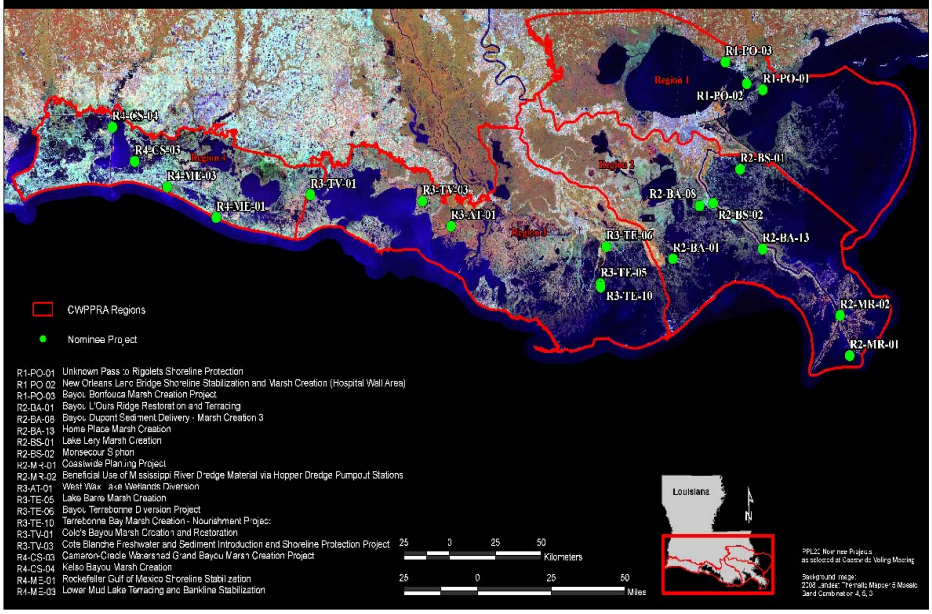




Use of Sand Derived from Pulverized Glass as Beach Nourishment on Barrier Island Restoration Projects

- lack of suitable or affordable sand sources have focused the need to develop an alternative sand substitute/additive
- test the feasibility of using glass cullet in the same way that sand use occurs traditionally in coastal restoration
- project would evaluate the effectiveness of withstanding wave energy and shoreline erosion and the cost compared to strictly sand use.

PPL20 Nominee Projects



R1-PO-01 Unknown Pass to Rigolets Shoreline Protection
R1-PO-02 New Orleans Lake Bridge Shoreline Stabilization and Marsh Creation (Hospital Well Area)
R1-PO-03 Bayou Bonfouca Marsh Creation Project
R2-BA-01 Bayou L'Ours Ridge Restoration and Terracing
R2-BA-08 Bayou Dupont Sediment Delivery - Marsh Creation 3
R2-BA-13 Home Place Marsh Creation
R2-BS-01 Lake Lery Marsh Creation
R2-BS-02 Monsecour Siphon
R2-M-01 Coastwide Planning Project
R2-MR-02 Beneficial Use of Mississippi River Dredge Material via Hopper Dredge Pumpout Stations
R3-AT-01 West Wax...ave Wetlands Diversion
R3-TE-05 Lake Barre Marsh Creation
R3-TE-06 Bayou Terrebonne Diversion Project
R3-TE-10 Terrebonne Bay Marsh Creation - Nourishment Project
R3-TV-01 Cole's Bayou Marsh Creation and Restoration
R3-TV-03 Cote Blanche Freshwater and Sediment Introduction and Shoreline Protection Project
R4-CS-03 Cameron-Creole Watershed Grand Bayou Marsh Creation Project
R4-CS-04 Kelso Bayou Marsh Creation
R4-ME-01 Rockefeller Gulf of Mexico Shoreline Stabilization
R4-ME-03 Lower Mud Lake Terracing and Bankline Stabilization

PPL20 Nominee Projects as selected at Coastwide Voting Meeting

Background image: ZDM_Landsat Thematic Mapper 5 Mosaic Band Combination 4,5,3

CWPPRA PPL 20 Nominees

Region	Basin	Project Nominees
1	Pontchartrain	Bayou Bonfouca Marsh Creation Project
1	Pontchartrain	Unknown Pass to Rigolets Shoreline Protection
1	Pontchartrain	New Orleans Land Bridge Shoreline Stabilization and Marsh Creation Project
2	Mississippi River Delta	Coastwide Planting Project
2	Mississippi River Delta	Beneficial Use of MS River Dredge Material via Hopper Dredge Pumpout Stations
2	Breton Sound	Lake Lery Shoreline Marsh Creation
2	Breton Sound	Monsecour Siphon
2	Barataria	Bayou L'Ours Ridge Restoration and Terracing
2	Barataria	Bayou Dupont Sediment Delivery – Marsh Creation 3
2	Barataria	Home Place Marsh Creation
3	Terrebonne	Lake Barre Marsh Creation
3	Terrebonne	Terrebonne Bay Marsh Creation – Nourishment Project
3	Terrebonne	Bayou Terrebonne Diversion Project
3	Atchafalaya	West Wax Lake Wetlands Diversion
3	Teche-Vermilion	Cole's Bayou Marsh Creation and Restoration
3	Teche-Vermilion	Cote Blanche Freshwater/Sediment Introduction and Shoreline Protection Project
4	Calcasieu-Sabine	Cameron-Creole Watershed Grand Bayou Marsh Creation Project
4	Calcasieu-Sabine	Kelso Bayou Marsh Creation and Hydrologic Restoration
4	Mermentau	Lower Mud Lake Terracing and Bankline Stabilization
4	Mermentau	Rockefeller Gulf of Mexico Shoreline Stabilization, Joseph's Harbor East

CWPPRA PPL20 Nominees - SUMMARY MATRIX

6-Apr-10

Region	Basin	Type	Project	Preliminary Fully Funded Cost Range	Preliminary Benefits (Net Acres Range)	Potential Issues: Oysters	Land Rights	Pipelines/Utilities	O&M	Other Issues	Comments on Other Issues
1	Pontchartrain	MC	Bayou Bonfouca Marsh Creation Project	$30M - $35M	300-350		x			x	gulf sturgeon
1	Pontchartrain	SP	Unknown Pass to Rigolets Shoreline Protection	$25M - $30M	100-150	x		x	x	x	gulf sturgeon
1	Pontchartrain	SP/MC	New Orleans Land Bridge Shoreline Stabilization and Marsh Creation Project	$10M - $15M	50-100				x	x	gulf sturgeon
2	MR Delta	VP	Coastwide Planting Project	$15M - $20M	500-550		x				
2	MR Delta	MC	Beneficial Use of MS River Dredge Material via Hopper Dredge Pumpout Stations	$25M - $30M	750-800						
2	Breton Sound	MC	Lake Lery Shoreline Marsh Creation	$20M - $25M	350-400			x			
2	Breton Sound	FD	Monsecour Siphon	$10M - $15M	950-1000	x		x	x		
2	Barataria	HR/TR	Bayou L'Ours Ridge Restoration and Terracing	$10M - $15M	0-50		x		x		
2	Barataria	MC	Bayou Dupont Sediment Delivery – Marsh Creation 3	$40M - $50M	300-350						
2	Barataria	MC	Home Place Marsh Creation	$30M - $35M	200-250						
3	Terrebonne	MC	Lake Barre Marsh Creation	$30M - $35M	300-350	x		x			
3	Terrebonne	MC	Terrebonne Bay Marsh Creation-Nourishment Project	$25M - $30M	300-350	x		x			
3	Terrebonne	FD	Bayou Terrebonne Diversion Project	$10M - $15M	250-300		x	x	x		
3	Atchafalaya	FD	West Wax Lake Wetlands Diversion	$10M - $15M	100-150				x		
3	Teche-Vermilion	MC	Cole's Bayou Marsh Creation and Restoration	$40M - $50M	300-350	x	x	x	x		
3	Teche-Vermilion	SP/FD	Cote Blanche Freshwater and Sediment Introduction and Shoreline Protection Project	$20M - $25M	600-650			x	x		
4	Mermentau	TR/SP	Lower Mud Lake Terracing and Bankline Stabilization	$10M - $15M	50-100		x	x	x	x	Corps Disposal area
4	Mermentau	SP	Rockefeller Gulf of Mexico Shoreline Stabilization, Joseph's Harbor East	$40M - $50M	100-150			x	x		
4	Calcasieu-Sabine	MC	Cameron-Creole Watershed Grand Bayou Marsh Creation	$20M - $25M	500-550	x					
4	Calcasieu-Sabine	MC/SP	Kelso Bayou Marsh Creation and Hydrologic Restoration	$20M - $25M	250-300		x	x	x	x	Corps Disposal area for borrow

CWPPRA PPL 20 Nominee Demonstration Projects

Demonstration Project Name	Meets Demonstration Project Criteria?	Lead Agency	Estimated Cost plus 25% contingency **	Technique Demonstrated
The Wave Robber Wave Suppressor Sediment Collection System	Yes	NMFS	$967,113	Evaluate the effectiveness of the Wave Robber system as an alternative method of shoreline protection equivalent to traditional methods, while trapping ambient sediments to facilitate expansion of emergent marsh.
EcoSystems Wave Attenuator for Shoreline Protection Demo	Yes	NMFS	$1,495,750	Evaluate the effectiveness of the EcoSystems Wave Attenuator as an alternative method of shoreline protection in areas where site conditions limit or preclude traditional methods.
Floating Island Environmental Solutions BioHaven©	Yes	NRCS	$1,255,875	Evaluate the effectiveness of floating marsh islands to reduce wave fetch, trap sediment, and establish floating marsh. In addition, evaluate their effectiveness as an alternative to earthern terraces in areas of poor soils.
Use of Sand Derived from Pulverized Glass As Beach Nourishment on Barrier Island Restoration Projects	Yes	COE	$1,397,000	Evaluate the effectiveness of cullet compared to sand in erosion control/prevention.

04/02/10

** Costs do NOT include a monitoring program and are NOT fully funded.

PPL20 PROJECT NOMINEE FACT SHEET
March 30, 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 large breach and several smaller ones. Many more are imminent. These breaches provide direct connection between the fresher interior marshes and higher saline waters of Lake Pontchartrain. The breaches in the bankline should be filled before they grow to become a major exchange point causing an increase in interior loss rates.

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 NAVD 88 to create approximately 418 acres of emergent marsh and nourish an additional 42 acres. Several larger historic marsh ponds have been identified and containment dikes would be proposed to re-create these historic ponds. Tidal creeks are also proposed to connect these ponds to facilitate water and fisheries exchange. 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. Many acres of interior open water would be indirectly benefited by reduction of wind induced fetch.

2) *How many acres of wetlands will be protected/created over the project life*?
Approximately 322 acres of marsh would remain 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%.

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 a net positive impact on critical infrastructure through the protection of numerous homes north of the project area.

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 newly constructed Goose Point project (PO-33) and continuing maintaining the Lake Pontchartrain shoreline.

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

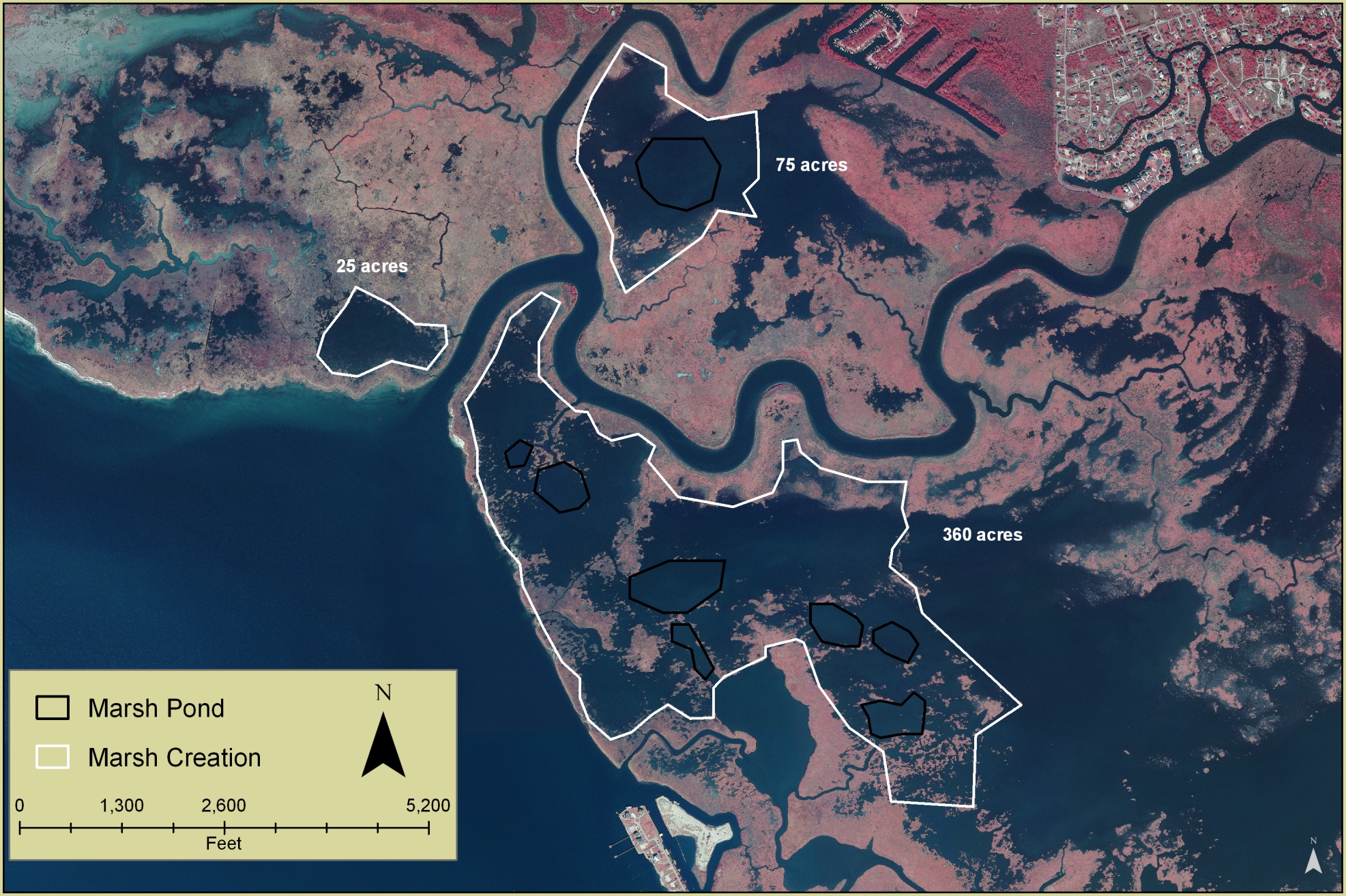
Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $22,008,486. The fully-funded cost range is $30M - $35M.

Preparer(s) of Fact Sheet:
Robert Dubois, U.S. Fish and Wildlife Service, 337-291-3127 Robert_Dubois@fws.gov

U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

Bayou Bonfouca Marsh Creation Project



PPL20 PROJECT NOMINEE FACT SHEET
April 2, 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.

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

Proposed Solutions:
The proposed features will consist of the construction of a foreshore rock dike (21,085 feet) along the shoreline of Lake Borgne. The rock dike will have a top elevation of +2.5', 4ft crest, and 2:1 side slopes. Material dredged for access to the shoreline will be beneficially used to create approximately 65 acres of marsh. This created marsh will be planted with vegetation appropriate for a brackish marsh.

Preliminary Project Benefits:

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

   The shoreline protection will benefit a total of 68 acres (21,085ft at 7ft of shoreline loss per year for 20 years). Marsh creation from material dredged for access will benefit 68 acres of marsh, however after applying a background loss rate of 1.63% and a reduction of 50% of this loss rate due to the shoreline protection measures, the net result after 20 years is 58 acres. Total acreage benefited will be 126 acres.

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

About 126 total net acres of wetland to be protected/created over the project life.

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

The marsh loss rate will be reduced by 50% and the shoreline erosion rate will be reduced by 100%.

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 the integrity of the Lake Borgne shoreline and the East Orleans Landbridge.

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

The project is anticipated to have marginal net positive impact on critical infrastructure (i.e., GIWW).

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

The project could have positive synergistic effects with the Alligator Bend project.

Identification of Potential Issues:
The proposed project has the following potential issues: shoreline protection design requiring operation and maintenance over a 20 year project life.

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $12,026,080. The fully-funded cost range is $25M - $30M.

Preparer(s) of Fact Sheet:
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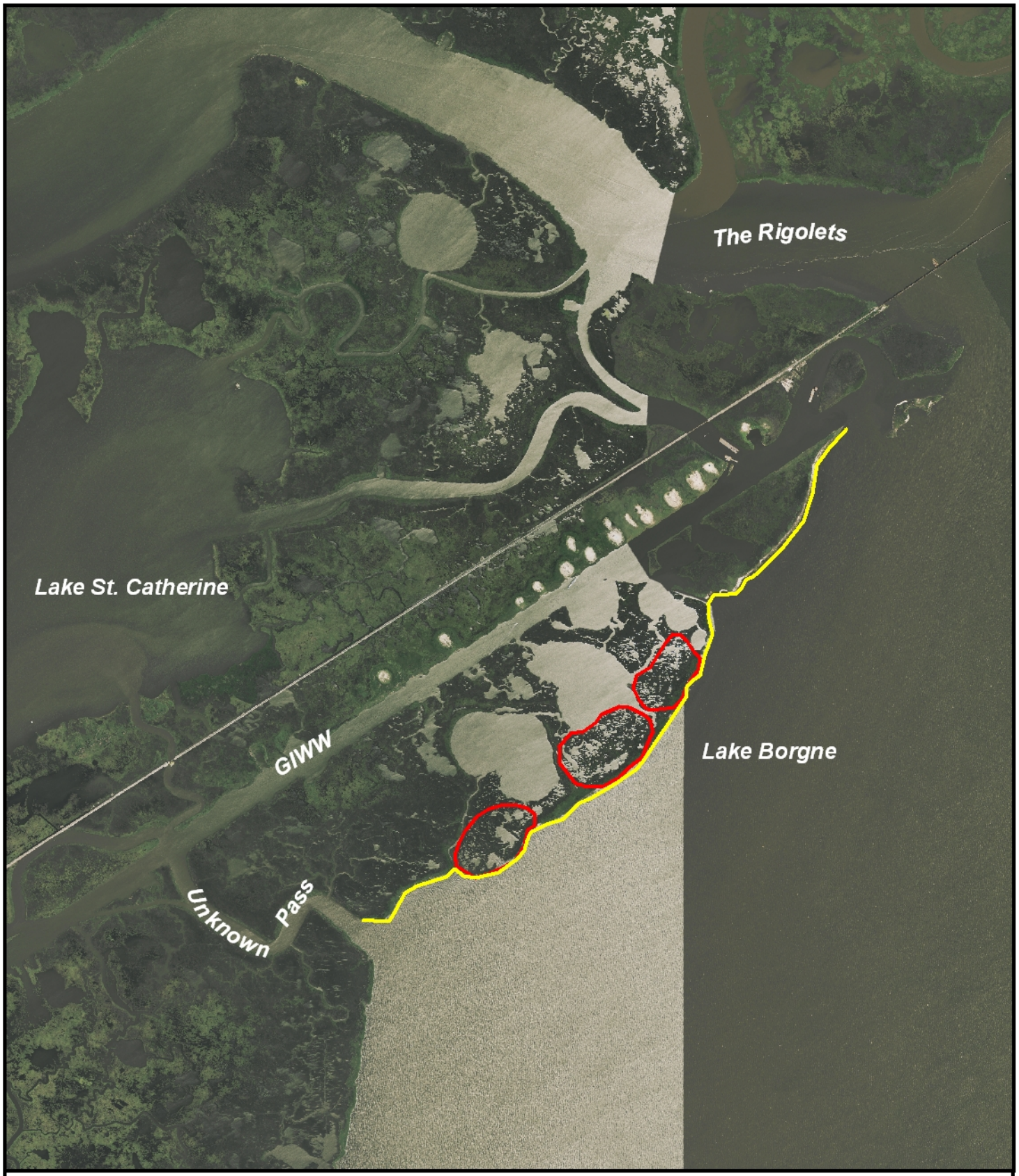

Map Produced By:
United States Department of Agriculture
Natural Resources Conservation Service
Alexandria, LA

Data Source:
2009 DOQQ Aerial Photography

Map Date: March 24, 2010

Map ID: Unknown_Pass_PPL20_nominee

N

Unknown Pass to Rigolets
Shoreline Protection
Orleans Parish
PPL 20 Nominee

0 1,600 3,200 6,400
Feet

Legend
Shoreline_Protection
Dredged_Material_Placement_Areas

PPL 20 PROJECT NOMINEE FACT SHEET
FINAL, revised March 26, 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 8 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 ~ 63 acres of wetlands.
3. Protect the New Orleans Landbridge

Preliminary Project Benefits:
The following questions should be addressed:
1) What is the total acreage benefitted both directly and indirectly?
Directly benefitted: Approximately 26 acres of marsh will be protected via the shoreline protection feature(7,183 ft x 8 ft x 20 yrs/43,560 = 26 ac.) Approximately 46 acres of marsh will be restored via the marsh creation/nourishment 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 26 acres of marsh should remain due to the shoreline protection feature. The marsh creation/nourishment feature would result in an estimated 37 net acres at end of 20 years. The net acres benefited would be 63 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%)?

The anticipated loss rate reduction throughout the area of direct benefits over the project life would be 100% for the shoreline protection and 50% for marsh creation/nourishment. 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.

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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. Consideration of possible impacts to gulf sturgeon at certain times of the year would be required.

Preliminary Construction Costs:

The construction cost including 25% contingency is approximately $6,976,072. The fully-funded cost range is $10M - $15M

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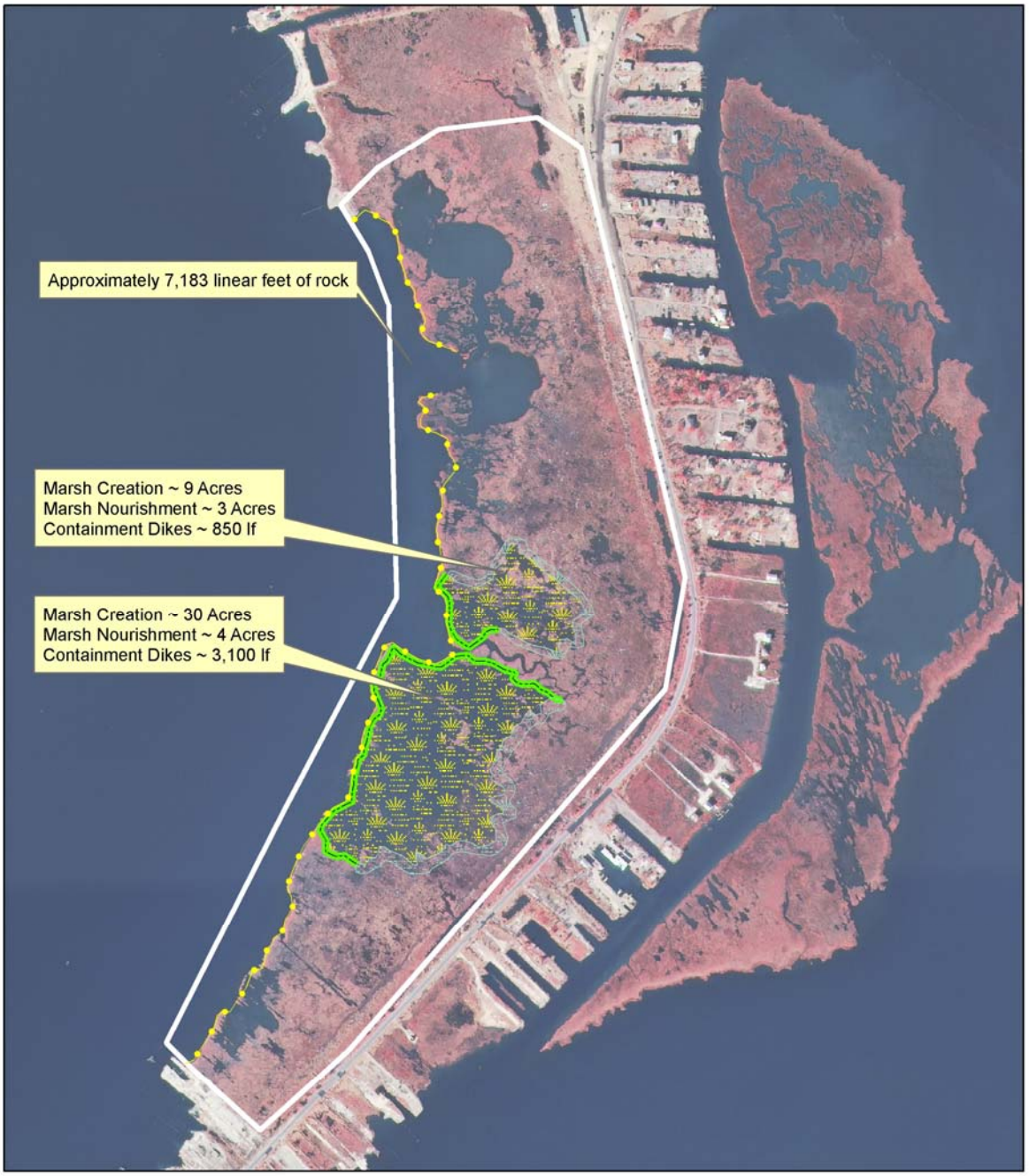

Legend

- 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

PPL20 FINAL PROJECT NOMINEE FACT SHEET
3/30/2010

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 projects require planting to insure success. Coastal shoreline plantings 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 where large-scale planting efforts can be deployed in a timely manner to specifically target areas of need anywhere coastwide. Although the CWPPRA program can fund specific large-scale planting projects, the normal program cycle for individual projects can delay needed restoration plantings for a number of years.

Goals :
The goals of this project are to facilitate a consistent and responsive planting effort in coastal Louisiana that is flexible enough to routinely plant on a large scale and be able to rapidly respond to "hot spots" following storm or other damaging events.

Proposed Solutions:
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 an advisory panel consisting of representatives from various state and federal agencies who would assist in the selection of projects for funding. The project would also set up a mechanism by which project nominations would be submitted for consideration. The panel would provide an annual report on project activities.

Preliminary Project Benefits:
1) What is the total acreage benefited both directly and indirectly? This project is expected to directly benefit those areas of planting by creating/protecting up to 1,200 acres of marsh as well as provide some additional stability to those areas adjacent to planting projects.

2) How many acres of wetlands will be protected/created over the project life? It is estimated that 30% of planting will go to shorelines losing on average 8 ft per year. Using a 25% loss reduction to shorelines planted would yield 18 acres. 70% of plantings would be in interior marsh losing on average 0.5%/y. Using a 50% of area of planting vegetation becoming functional marsh would yield 25 acres of marsh per year or 502 acres over the life of the project. Therefore, the total project benefits would yield **520** acres over 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%). 30% would reduce losses by 25% and 70%

would result in net gain; therefore, the net loss rate reduction (0.3*0.25)+(0.7*1.00) = 77.5% (>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. None identified

5) What is the net impact of the project on critical and non-critical infrastructure? None identified.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? None identified.

Identification of Potential Issues:
The proposed project has the following potential issues: None identified

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $10,000,000 ($500,000/year for 20 years). The fully-funded cost range is $15M - $20M.

Preparer(s) of Fact Sheet:
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Coastwide Planting Project
PPL-20

Potential Vegetative Planting Projects:

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

PPL20 PROJECT NOMINEE FACT SHEET
March 31 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 mooring/pumpout sites along either side of the Mississippi River and Main Pass in the vicinity of Heads of Passes, West Bay and East Bay. These pumpout stations would be a mooring anchor with a pipe floating in the water that would be hoisted up to the ship for pumpout. CWPPRA would pay for the incremental portion of the pumpout cost for a set amount of sediment.

Preliminary Project Benefits:
1) Create 4 permanent mooring sites and dispose of material at these sites creating 100 acres for each of 2 years at each of the 4 mooring sites. (800 acres or 756 net acres at TY20)

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 not protect any critical or non critical infrastructure.

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:
The estimated construction cost including 25% contingency is $21,364,384. The fully-funded cost range is $25M - $30M.

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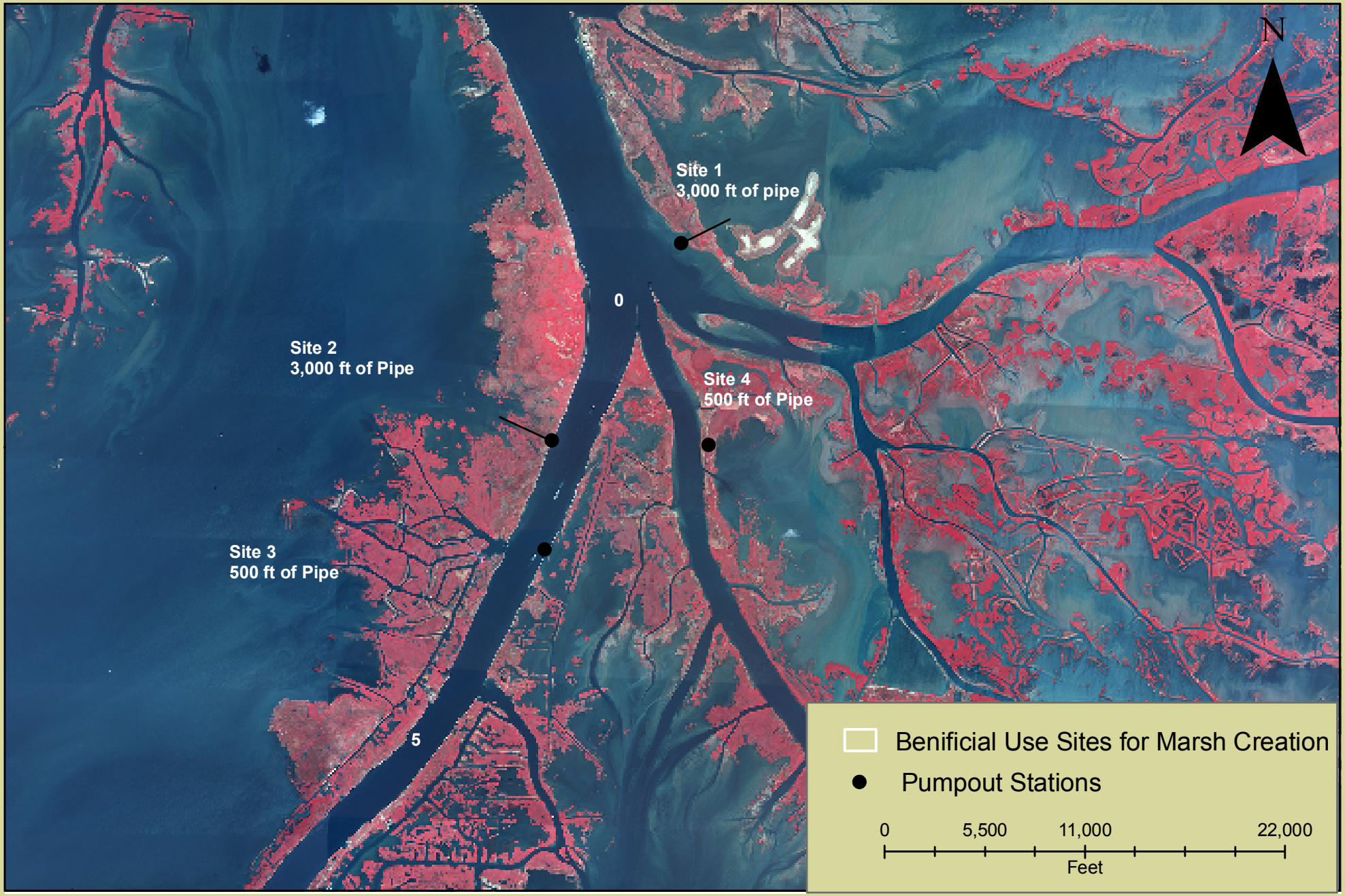
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

Benificial Use of Hopper Dredge Matterial



PPL 20 PROJECT NOMINEE FACT SHEET

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 493 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 493 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:
1) What is the total acreage benefited both directly and indirectly? **493 acres**
2) How many acres of wetlands will be protected/created over the project life? **363 acres**
3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life? **50-74%** per convention of the EnvWG for interior marsh creation projects
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 reestablish the eastern rim of Lake Lery. This area was significantly damaged during H. Katrina and is the only portion of Lake Lery that is not being addressed under any restoration funding vehicle. Completion of this project, as well as the other projected projects, will restore the full integrity of the Lake Lery watershed.

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

This project will have a moderate impact on non-critical infrastructure; however, reestablishing wetlands in this area can serve as a buffer to the hurricane protection levee just to the north.

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

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 4th 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.

Identification of Potential Issues:

There are no known potential issues to this project. The major landowner, Delacroix Corp., is fully aware of the project concept and has voiced their support. There are a few listed well heads or pipelines in the area which should be avoidable with no issue. There are no oyster leases.

Preliminary Construction Costs:

The estimated construction cost including 25% contingency is $16,114,614. The fully-funded cost range is $20M - $25M.

Preparer(s) of Fact Sheet:

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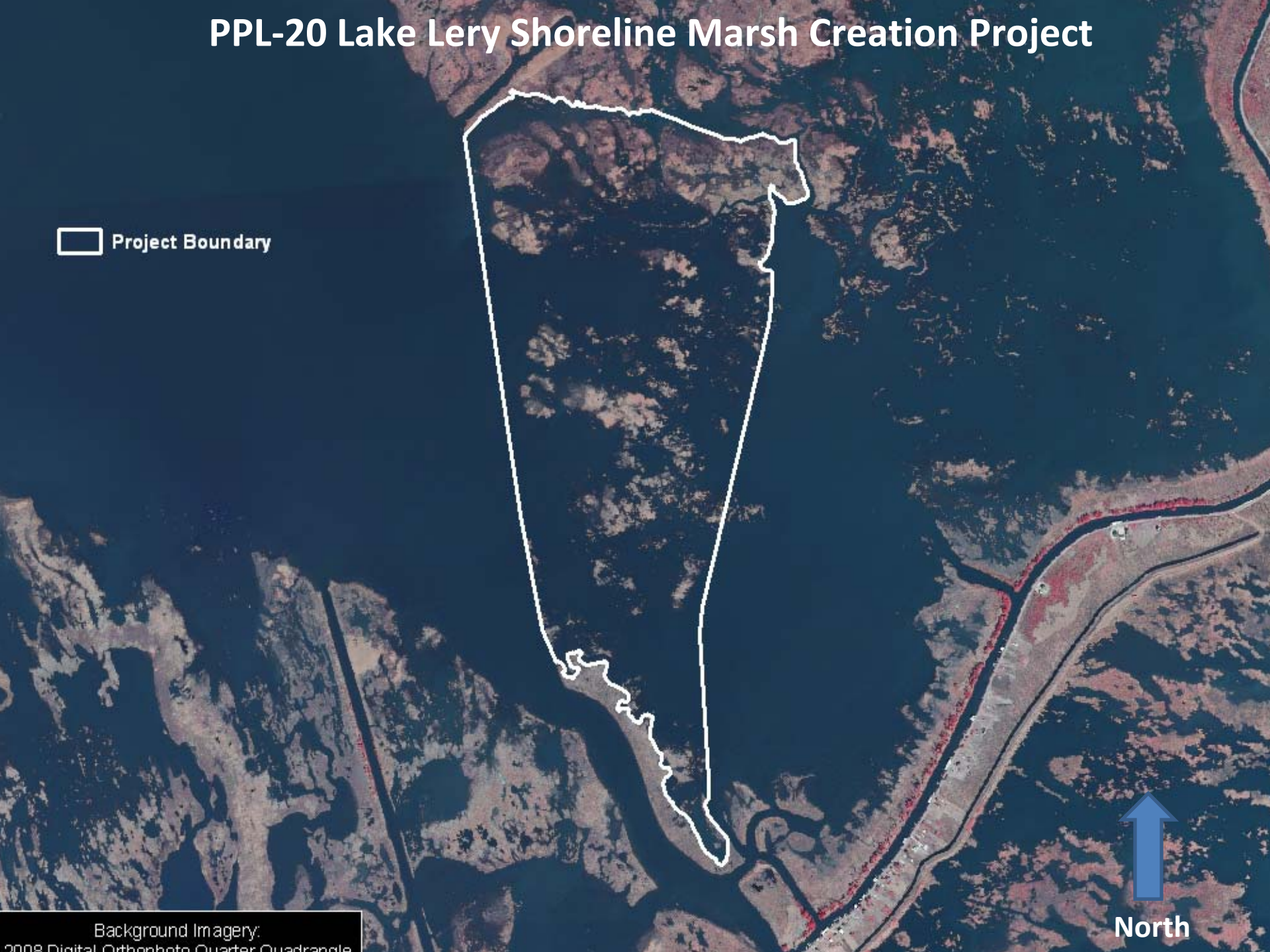
PPL-20 Lake Lery Shoreline Marsh Creation Project



PPL20 Project Nominee Fact Sheet
April 1, 2010

Project Name
Monsecour Siphon

Coast 2050 Strategy
Coastwide Common Strategies:
11.) Diversions and river discharge
12.) 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, 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 20th 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.

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.

Proposed Solution:
The proposed project features include a 2000 cfs maximum capacity siphon (estimated average flow=1145 cfs) from the Mississippi River that empties into the marsh. A conveyance channel will be constructed at the siphon outflow to aid in delivery of Mississippi River water. Additional features may be required to aid in the delivery and management of siphon discharge throughout the outfall area.

Based on current information that was run through the Boustany model, this project will introduce, on average, 1145 cfs of water per day from the Mississippi River carrying 120 mg/L of Total Suspended Solids (TSS) and approximately 1.5 mg/L of nitrogen and phosphorus. Together, this should provide a 68% reduction in the landloss rate.

Preliminary Project Benefits
1) *What is the total acreage benefited both directly and indirectly?*
The project will benefit a total of 12,255 acres of intermediate marsh.

2) *How many acres of wetlands will be protected/created over the project life?*
990 net acres of intermediate and/or fresh marsh will be protected/created over the project life.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*
The project will provide a 50-74% reduction in the anticipated land loss rate over the project life.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
The project will not maintain or restore any structural components of the coastal ecosystem.

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

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project provides a synergistic effect with other CWPPRA projects that have been approved and/or previously constructed. These projects include the Caernarvon Freshwater Diversion (BS-08), White Ditch Diversion Restoration and Outfall Management (BS-12) and Bertrandville Siphon (BS-14). Of these projects, only the Caernarvon Freshwater Diversion has been constructed.

Identification of Potential Issues
According to OCPR, the proposed project has potential oyster lease issues. OCPR has also identified pipelines in the project area, and while most of these are not relevant to the project, it is possible that one pipeline may pose some problems. The project would require O&M.

Project Costs
The estimated construction cost with a 25% contingency is $ 5,617,019. The full-funded cost range is $10-15M.

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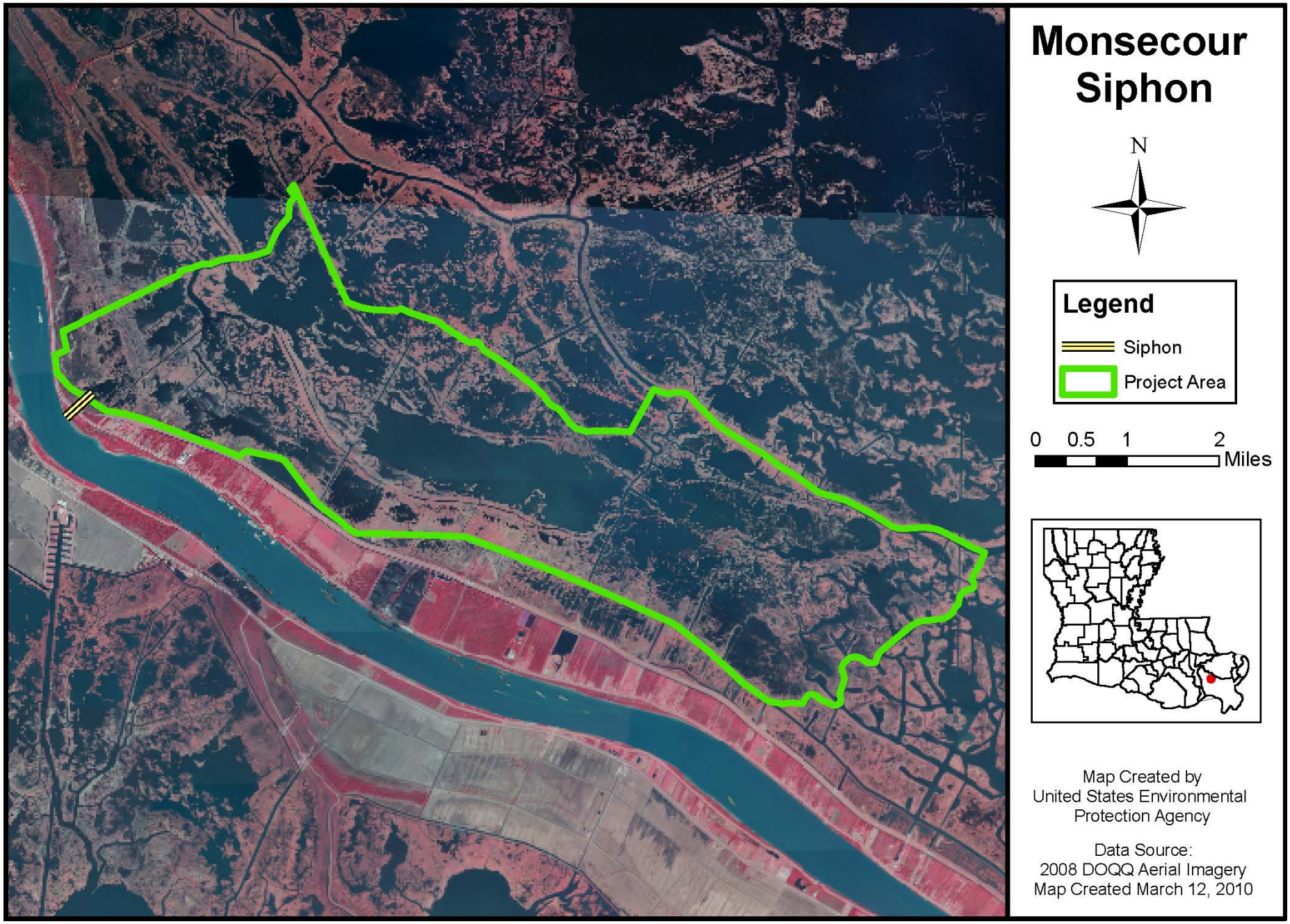
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Siphon
Project Area
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Miles
Map Created by
United States Environmental Protection Agency
Data Source:
2008 DOQQ Aerial Imagery
Map Created March 12, 2010

PPL 20 PROJECT NOMINEE FACT SHEET
FINAL – revised March 26, 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 462-acre terracing field, consisting of approximately 42,500 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 benefitted both directly and indirectly? The terraces will create 19 acres which will be directly benefitted. The project area of approximately 5,000 acres, of which approximately 1,625 acres are land, will be benefitted 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, 15 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 5% reduction in the loss rate in a 5,000-acre area north of the ridge due to salinity reduction, 23 acres would be preserved over 20 years. (The 5,000-acre area north of the ridge could not be "cookie cut" in time for this WVA. By eyeballing, it was assumed that the proportion of marsh/water was the same in the new 5,000-acre area as in last year's 8,000-acre area. The loss rate for last year's area was used.)

TY20	
Terraces-	15 ac
Prevention of erosional loss to Ridge-	7 ac
Salinity reduction-	23 ac

Thus, the net acres benefitted would be 45.

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.* Project features restore one 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?* The net impact 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?* Project implementaion would reduce 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 by helping keep the fresher water north of the ridge longer.

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 $6,615,043. The fully-funded cost range is $10M - 15 M.

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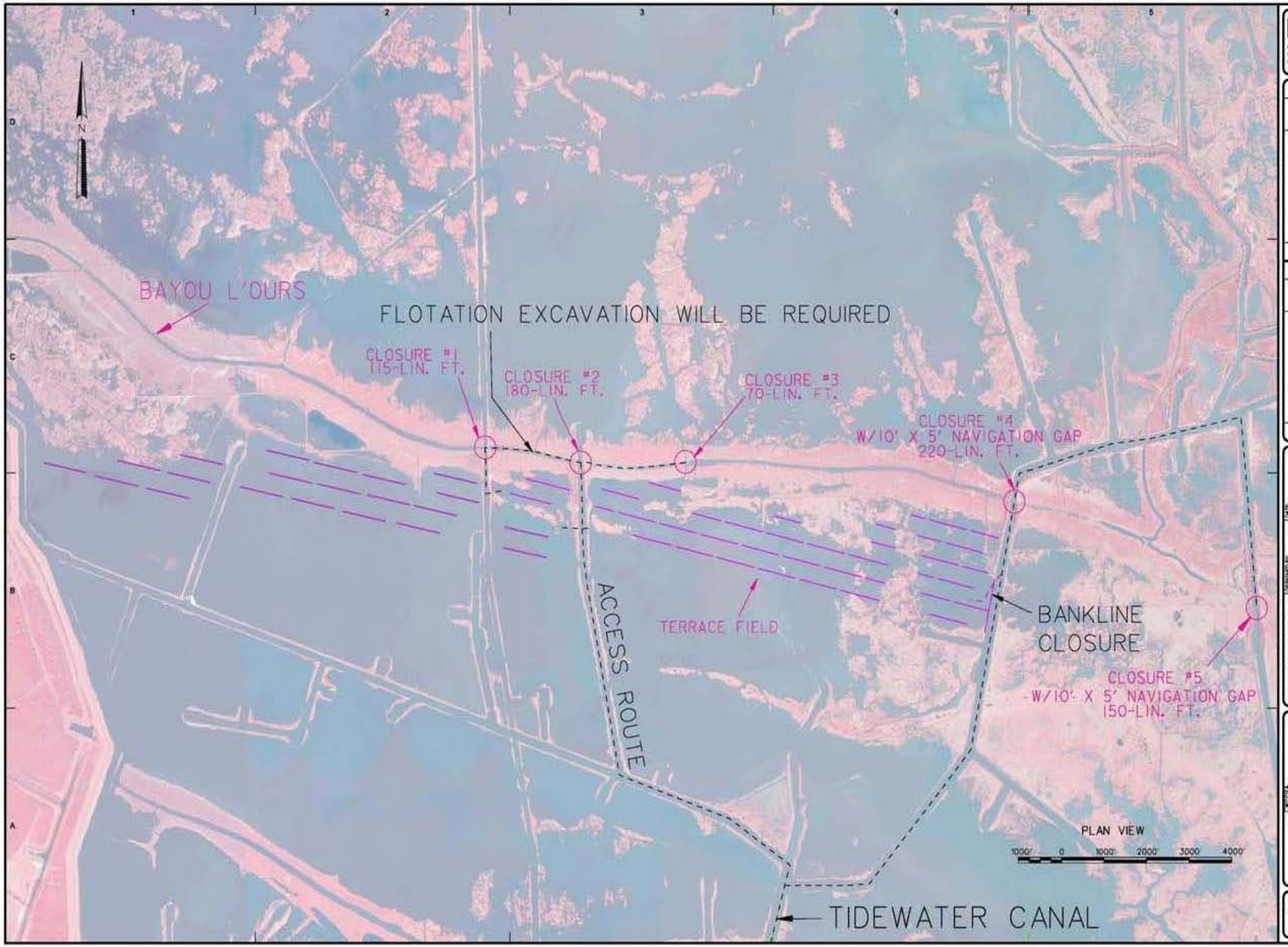

US Army Corps of Engineers
NEW ORLEANS DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: D. W.C.K.
DWN BY: D.W.C.K.
CKD BY: J.K.S.
SUBMITTED BY: W.T.
DATE: 03/NOV/YYYY
CONTRACT NO.: DACW29-YY-D-XXXX
CONTRACT NO.: W912P8-YY-D-XXXX
PLOT SCALE: 1:0001 ft
PLOT DATE: Mar/DD/YYYY
FILE NAME: C-01-BANKLINE.dgn

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X
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PRELIMINARY RESTORATION PLAN
X
X
X

SHEET IDENTIFICATION
C-01
SHEET X OF XX

PPL20 PROJECT NOMINEE FACT SHEET
March 25, 2010

Project Name
Bayou Dupont Sediment Delivery – Marsh Creation 3

Coast 2050 Strategy
Coastwide Strategy:
2.) Dedicated dredging to create, restore, or protect wetlands
10.) 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 Solution
The proposed project's primary feature is to create and/or nourish approximately 501 ac (402 ac created, 99 ac nourished) of marsh, approximately 10 ac of tidal ponds, and approximately 10,000 linear ft of tidal creeks. In order to achieve this, sediment will be hydraulically pumped from the Mississippi River into the shallow water marsh creation area. The project will utilize the existing pipeline crossing that was constructed for an adjacent project (Mississippi River Sediment Delivery System (BA-39)). Containment dikes will be constructed around the marsh creation area to keep material on site during pumping and the tidal creeks and ponds will be constructed. Once pumping has been completed, the containment dikes will be degraded to the current platform elevation and gaps will be made in the containment dike, hydraulically connecting the constructed tidal creeks to the adjacent water. Additionally, the newly constructed marsh will be assessed to determine if vegetative plantings will be necessary. Funds are budgeted to plant 50% of the created marsh acres (201 ac).

Goals
The project goal is to create and/or nourish approximately 501 ac (402 ac created, 99 ac nourished) of emergent brackish marsh using sediment from the Mississippi River and protect 344 ac of emergent brackish marsh over the project's life.

Preliminary Project Benefits
1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 522 ac.

2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 344 ac of brackish marsh will be protected/created over the project life.

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

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

5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project will have a net positive effect on critical flood protection levees.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project will have a synergistic effect with several approved and/or constructed restoration projects. Constructed projects that this project is expected to have a synergistic effect with include the Davis Pond Freshwater Diversion (BA-01), Naomi Freshwater Diversion (BA-03) and Mississippi River Sediment Delivery System (BA-39). This project is expected to have a synergistic effect with several approved projects including the Myrtle Grove Delta Building Diversion (BA-33) and the Bayou Dupont Marsh and Ridge Creation (BA-48).

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 $34,161,207. The fully funded cost estimate ranges between $40-50M.

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Bayou Dupont Sediment Delivery Marsh Creation 3

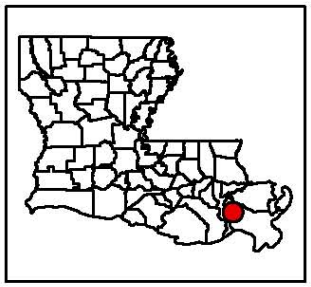
Legend

- Tidal Creeks
- BA-39 Under Construction w/ Increment
- Created Ponds
- Bayou Dupont-Marsh Creation 3

N

0 0.125 0.25 0.5 Miles

Map Produced By:
United States Environmental
Protection Agency
Dallas, TX



Data Source:
2005 DOQQ Aerial Photography
Map Created: March 10, 2010

PPL20 PROJECT NOMINEE FACT SHEET
March 30, 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 215 acres and nourish 35 acres of marsh between the hurricane protection levee and Bay Lanaux / Bay de la Cheniere. The proposed marsh creation and nourishment will help protect the levee.

Proposed Solution

215 acres of marsh creation and 35 acres of marsh nourishment. Material for marsh creation and nourishmenet will be excavated from the Mississippi River.

Preliminary Project Benefits

1) What is the total acreage benefited both directly and indirectly? 250 acres

2) How many acres of wetlands will be protected/created over the project life? Estimated 203 net acres at 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%). 50% reduction in land loss rate (marsh creation/nourishment).

4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc. The created and nourished marsh will help 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, West Point ala Hache Marsh Creation..

Identification of Potential Issues
The proposed project has the following potential issues: no issues presently identified.

Preliminary Construction Cost
The estimated construction cost including 25% contingency is $22,786,140. The fully-funded cost range is $30M - $35M.

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

Data Source:
2007 DOQQ Aerial Photography

Map Date: January 22, 2010

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

0 1,000 2,000 Feet

Legend
Marsh Creation

PPL20 PROJECT NOMINEE FACT SHEET
2 April 2010

Project Name:
Lake Barre Marsh Creation

Coast 2050 Strategy:
Regional Ecosystem Strategy 8 (dedicated delivery and/or beneficial use of sediments for marsh building); Terrebonne Marshes Mapping Unit Strategies 15 (protect bay/lake shorelines) and 16 (beneficial use of dredged material)

Project Location:
Region 3, Terrebonne Parish, east of Bayou Terrebonne, approximately 10 miles southeast of Montegut.

Problem:
The remaining land mass between Madison and Terrebonne Bays is deteriorating due to interior wetlands loss and shoreline erosion. This land mass is the last barrier between Terrebonne Bay and interior bays, marshes and infrastructure along lower Bayou Terrebonne. As this area erodes/subsides, interior bays and marshes, hurricane protection levees and developed areas may be subject to increased erosion.

Recent aerial photography suggests that although some areas of robust marsh still exist in the proposed project area, much of the remaining marsh is highly fragmented. Interior wetlands loss rates in the vicinity were recently calculated to be -2.0%/year (PPL19 Terrebonne Bay Shoreline Protection/Marsh Creation Project, 1988 – 2008 interior loss rate).

Water depths and bay processes on the northern edge of Terrebonne Bay may make restoration south of the proposed project technically challenging and costly. Marsh creation/nourishment along the southern edge of Madison Bay would act to maintain an interior line of defense and stabilize the land mass between Madison and Terrebonne Bays.

Goals:
Create and nourish 616 acres of saline marsh through dedicated dredging.

Proposed Solutions:
Dedicated dredging from either Lake Barre or Madison Bay to create 364 acres and nourish 252 acres saline marsh in three subareas. Fill areas were selected to maintain a continuous landform between Madison and Terrebonne Bays, create marsh in open water areas, and nourish fragmenting marsh. Cell configuration is also based on historic conditions (per topographic maps).

Based on 2008 aerial photography, open water and existing marsh areas are estimated as:

	Total (ac)	Open Water (ac)	Marsh (ac)
Area A	200	80	120
Area B	331	199	132
Area C	85	85	0
Total	616	364	252

About 3.2 Mcy of material, in place (or 4.1 M cy excavated) will be required based on a target settled elevation of +1.5' NAVD and assuming existing open water depths ranging from -1.25' NAVD to -2.5' and existing marsh elevations of 0.0' (water depth information from 3/17/2010 site recon corrected for real-time stage data at Bayou Terrebonne floodgate).

Borrow would be obtained from Madison Bay (north) or Terrebonne Bay (south). No "external" sources are available. Review of Morganza to the Gulf plans (including mitigation) and existing infrastructure data, suggest that ample borrow area appears to be available. Borrow areas would be designed to avoid shoreline impacts or degrading dissolved oxegen. Containment dikes will be constructed to manage fill deposition as needed although full containment is included in the current cost estimate. As conceptualized, due to differential settlement deeper waterways, bayous and canals, it is anticipated that dedicated construction of tidal features may not be required, however, tidal features and containment dike gapping would be considered for post-construction event (using O&M funding). Vegetative plantings will be used over 50% of the created marsh acres.

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

About 616 acres will be directly benefited from marsh creation/nourishment.

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

Assuming a background loss rate of -2.0%/year, and FWP loss rate reduction of 50%, it is anticipated that approximately 501 created/nourished acres would remain after 20 years. Total net acres are projected to be 334.

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%).

Anticipated loss rate reduction is 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.

No.

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

The project will have a moderate net positive impact on critical infrastructure (flood control/hurricane protection projects) and a net positive impact on non-critical (oil and gas facilities, minor navigation channels, secondary/minor roads) infrastructure.

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

The project could provide limited synergistic benefits with Madison Bay Marsh Creation and Terracing (TE-51).

Identification of Potential Issues

Potential oyster lease and pipeline issues.

Preliminary Construction Costs:

The estimated construction cost including 25% contingency is $23,307,743. The fully-funded cost range is $30M - $35M.

Preparer(s) of Fact Sheet:

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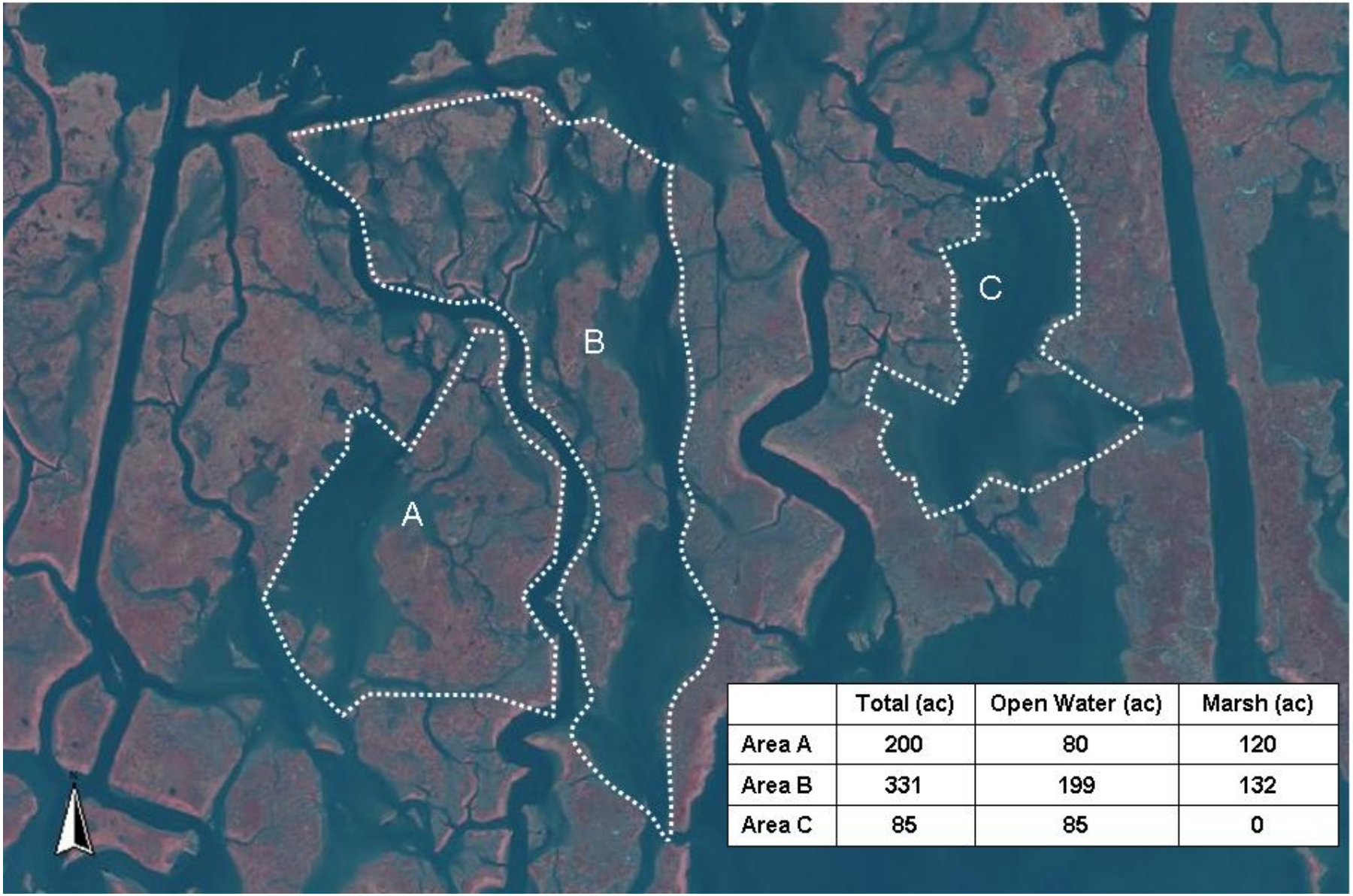
Lake Barre Marsh Creation

364 acres creation; 252 nourishment



	Total (ac)	Open Water (ac)	Marsh (ac)
Area A	200	80	120
Area B	331	199	132
Area C	85	85	0

PPL20 PROJECT NOMINEE FACT SHEET
April 2, 2010

Project Name:
Terrebonne Bay Marsh Creation-Nourishment Project

Coast 2050 Strategy:
Coastwide Strategy: Maintenance of Bay and Lake Shoreline Integrity
Region 3 Strategy #8; Dedicated Dredging for Wetland Creation, #11- Maintain shoreline integrity of marshes adjacent to Caillou, Terrebonne, and Timbalier Bays

Project Location:
Region 3, Terrebonne Basin, Terrebonne Parish. Beginning on the southernmost contiguous point along the east bank of Bayou Terrebonne, continuing east along the northern shoreline of Terrebonne Bay and ending at Bayou Chitique.

Problem:
Emergent marshes north of Terrebonne Bay have been eroding as fast or faster than almost any other marshes along coastal Louisiana with high interior landloss rates calculated to be 2% per year and moderate shoreline erosion rates calculated to be 5.9 ft per year. Reasons for this include a lack of sediment input and a limited supply of freshwater coupled with past dredging of oil and gas canals. This rapid loss of land has dramatically increased the tidal prism north of Terrebonne Bay and directly contributes to the ongoing flooding problems of many communities along Bayou Terrebonne including the town of Montegut. This rapidly increasing tidal prism is likely accelerating the interior marsh loss rates for those marshes directly north of Terrebonne Bay. These marshes also serve to slow the progress of high saline waters that threaten the lower saline marshes north and west of Madison Bay and even in Lake Boudreaux.

Goals:
The goal of this project would be to start reducing the tidal prism that has been increasing for many years. This overall goal would be realized by strengthening the northern shoreline of Terrebonne Bay, creating and nourishing the emergent marshes just north of Terrebonne Bay. All these components of the project would work synergistically to reduce water exchange between Terrebonne Bay and interior lakes during normal tidal events and small storm events
Specific goals: 1) Reduce shoreline erosion along 35,000 ft of the northern shoreline of Terrebonne Bay. 2) Create 235 ac of emergent marsh in shallow open waters and nourish an additional 550 ac of emergent marsh.

Proposed Solutions:
This project would propose to strengthen approximately 35,000 ft of shoreline along the northern bank of Terrebonne Bay by creating a higher marsh along the shoreline. North of the shoreline, 235 acres of emergent marsh would be created in shallow open water and 550 acres of emergent marsh would be nourished by hydraulic dredge. Dredge material would be placed on interior marshes to a target height of +1.5 NAVD 88. All constructed containment dikes would be sufficiently gapped or degraded no later than 3 years post construction to allow for fisheries access. This could be one part of a phased comprehensive plan to protect the northern shoreline

of Terrebonne Bay from further erosion. The project would also work synergistically with the previously constructed CWPPRA Terrebonne Bay Demonstration Project (TE-45) which is adjacent to this proposed project allowing that project to be expanded. If the TE-45 project was expanded without this project first being built, there is a reasonable chance that the marshes could separate from the shoreline protection component and become isolated.

Preliminary Project Benefits:

1) *What is the total acreage benefited both directly and indirectly*? Acres directly benefited by this project would be 785 acres of marsh. This would include the nourishment of approximately 35,000 ft. of project area shoreline, reducing the shoreline erosion rates by 33% from an average of 5.91 ft/yr (3 to 8 feet per year USGS - PPL 18) to 3.1 ft/yr. This project would also create 235 acres of marsh and nourish 550 acres of emergent marsh, reducing interior land loss rates 50% from 2.05% to 1.02% per year and reducing interior landloss rates to marshes near the shoreline by 33%. Additional indirect benefits would be realized through the reduction of wind induced waves in the interior marsh ponds. Also, the filling in of the open water areas along the shoreline would not only reduce the tidal prism, but also reduce the amount of water entering the mashes during the daily tidal cycle thereby reducing the pumping action which should further reduce interior loss rates.

2) *How many acres of wetlands will be protected/created over the project life*? This project would create/nourish approximately 615 ac of emergent marsh over the 20 year project life. The total net acres for this project is 311 acres.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life*? This project would initially create/nourish 785 acres of marsh and the interior loss rate of 2.05% per year would be reduced by 50% to 33% per year. This project would also see a 33% reduction in the shoreline erosion rate along approximately 35,000 ft. of shoreline from 5.91 ft/yr to 3.1 ft/yr. If the proposed project were to be constructed marsh loss rates would be expected to be reduced by 25-49% throughout the area of direct benefits over the project life.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rime, Cheniers, etc*? This project would restore and help maintain the Terrebonne Bay shoreline as well as many other small lakes, marsh ponds, and bayous which their banks make-up many of the ridges.

5) *What is the net impact of the project on critical and non-critical infrastructure*? This project would help protect several camps and some oil and gas infrastructure.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration project*? This project would work with the recently constructed CWPPRA Terrebonne Bay Demonstration Project TE-45.

Identification of Potential Issues:

There are two pipelines and one inactive well within the footprint of the potential marsh creation sites. There are also numerous oyster leases within the project area.

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $20,771,906. The fully-funded cost range is $25M - $30M.

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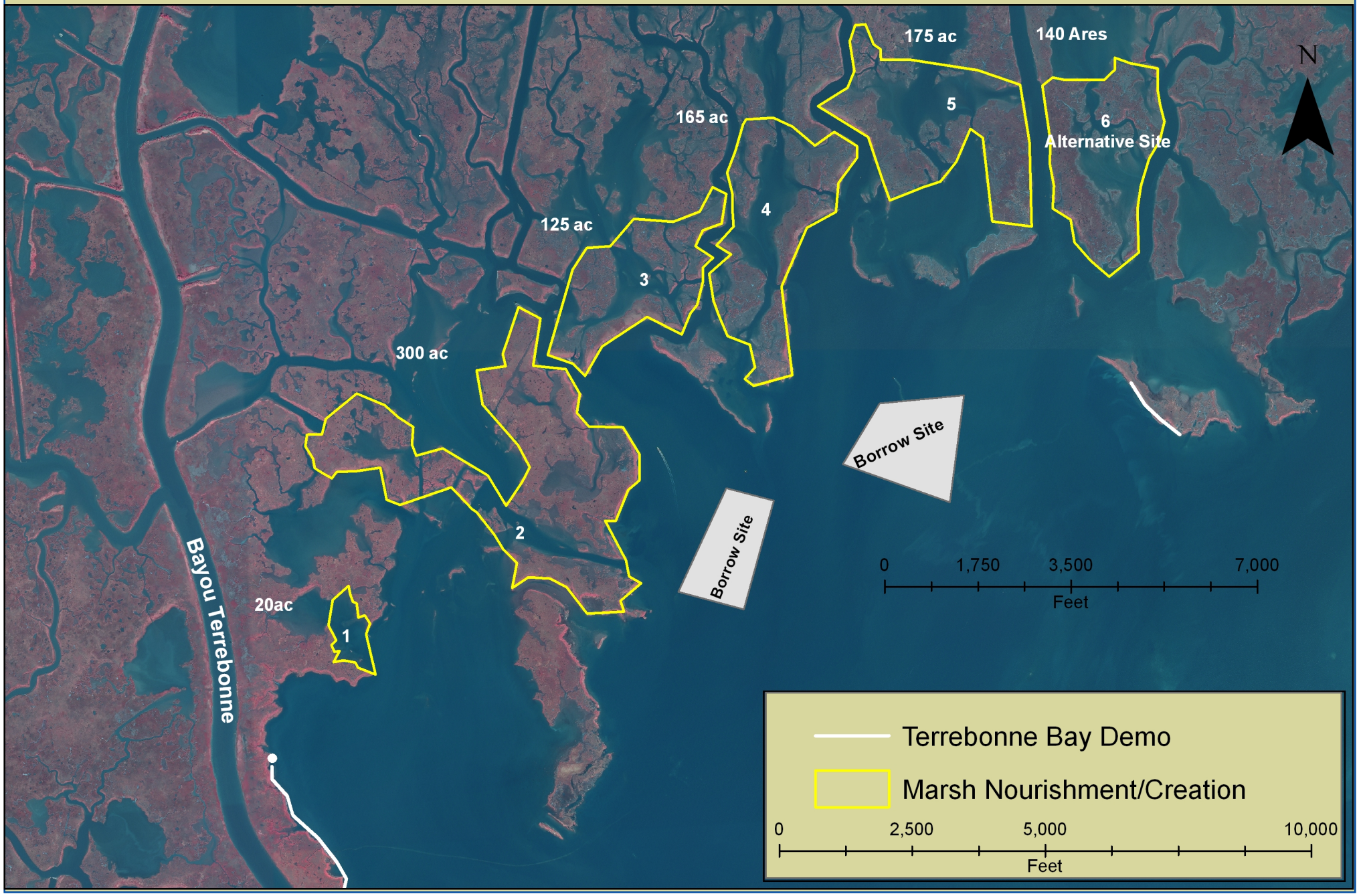
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

2008 DOQQ

Terrebonne Bay Marsh Creation and Marsh Nourishment Project



PPL20 FINAL PROJECT NOMINEE FACT SHEET
4/2/2010

Project Name:
Bayou Terrebonne Diversion Project

Coast 2050 Strategy:
Enhance Atchafalaya River influence to Terrebonne Basin marshes

Project Location:
Region 3, Terrebonne Basin, Terrebonne Parish, Bayou Terrebonne at Montegut

Problem:
The Central and Eastern Terrebonne marshes are greatly deprived of freshwater, nutrients and sediments from riverine sources. Consequently, subsidence and saltwater intrusion have resulted in high rates of land loss. More recently, efforts have been underway to try to optimize freshwater flows to some of these areas where possible; however, the sources of freshwater are greatly limited. The Gulf Intracoastal Waterway (GIWW) has been recognized as a lateral source of freshwater from the Atchafalaya River extending from west to east across the entire Terrebonne Basin. This resource provides the potential to reroute freshwater to the Central and East Terrebonne marshes.

Goals :
To convey freshwater, nutrients and sediments from the Atchafalaya River east via the GIWW and Bayou Terrebonne into the Central Terrebonne marshes.

Proposed Solutions:
The project will construct a freshwater diversion to move freshwater, nutrients and sediments originating largely from the Atchafalaya River via the GIWW and Bayou Terrebonne into the Montegut Unit marshes in Central Terrebonne. The project will include construction of a diversion structure to manage an average of 250 cubic feet per second freshwater flow through an underground conduit a distance of approximately 1200 ft from the bayou to the northern extent of the marsh.

Preliminary Project Benefits:
1) What is the total acreage benefited both directly and indirectly? The benefits from this project will be generated from the positive effects of additional nutrients and sediment introduced to a highly deprived marsh area and concurrently reduce salinities to promote more vigorous plant production. Preliminary estimates are that the project would directly benefit 3900 acres of marsh directly and an additional 5000 acres indirectly.

2) How many acres of wetlands will be protected/created over the project life? At an estimated average annual flow of 250 cfs, it is estimated that the project protect/create 254 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%). Preliminary model estimates are that the project would reduce land loss by approximately 34% (25-49% category).

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. None identified.

5) What is the net impact of the project on critical and non-critical infrastructure? The target restoration area is adjacent to a protection levy system.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? None identified

Identification of Potential Issues:
The proposed project has the following potential issues: land rights, O&M, utilities/pipeline

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $7,259,763. The fully-funded cost range is $10M - $15M.

Preparer(s) of Fact Sheet:
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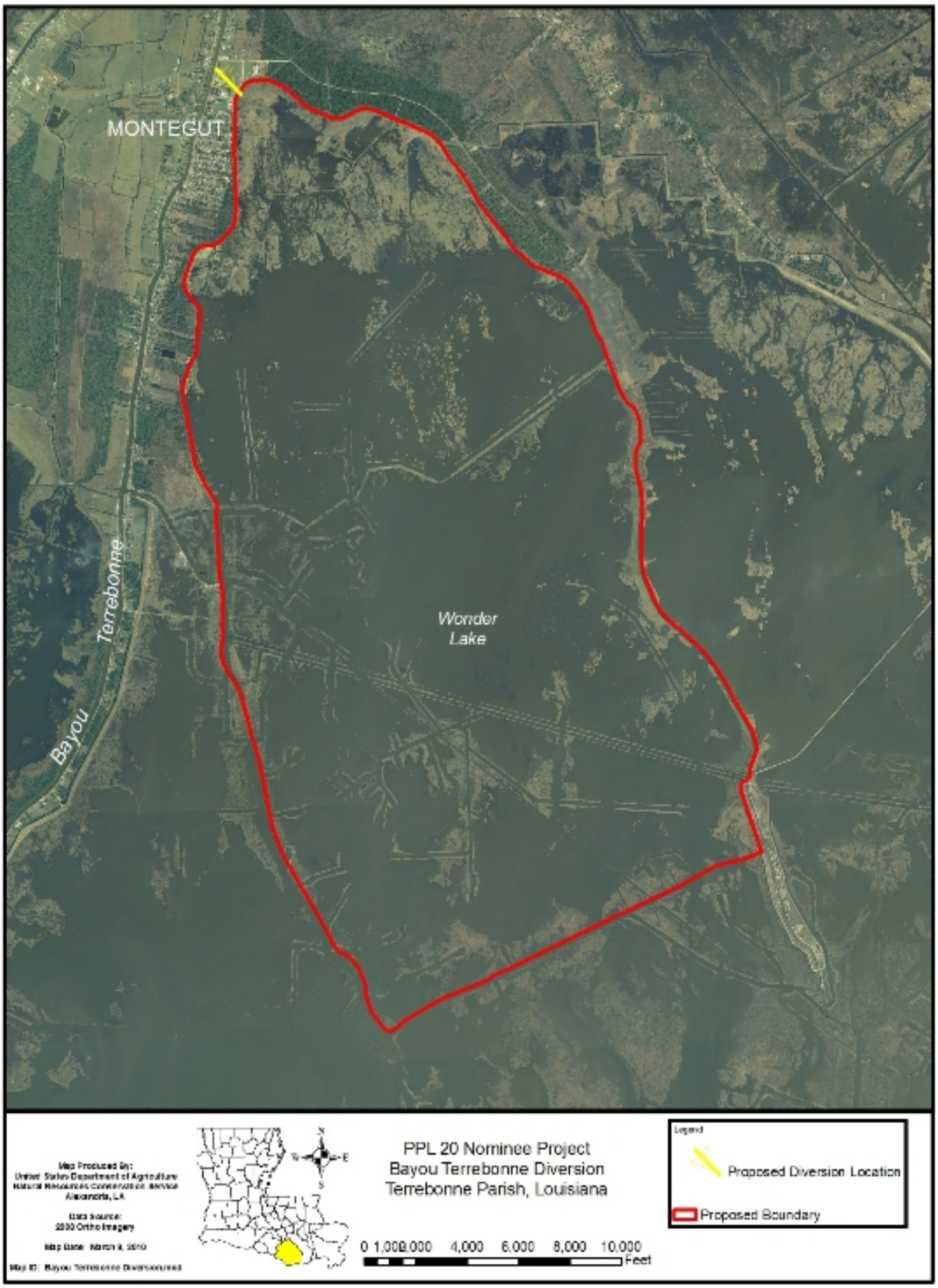
MONTEGUT
Bayou Terrebonne
Wonder Lake
Map Produced By:
United States Department of Agriculture
Natural Resources Conservation Service
Alexandria, LA
Data source:
2009 Ortho Imagery
Map Date: March 8, 2010
Map ID: Bayou Terrebonne Diversionmxd
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PPL 20 Nominee Project
Bayou Terrebonne Diversion
Terrebonne Parish, Louisiana
0 1,000 2,000 4,000 6,000 8,000 10,000
Feet
Legend
Proposed Diversion Location
Proposed Boundary

PPL20 PROJECT NOMINEE FACT SHEET

April 2, 2010

Project Name: West Wax Lake Outlet Wetlands Diversion

Coastwide 2050 Strategy:

- Coastwide Strategy: Dedicated Dredging for Wetland Creation
- Regional Strategies: Restore and Sustain Marshes - Maximize Atchafalaya Land Building
- Mapping Unit Strategies (Wax Lake Wetlands Unit):
  - #61 Beneficial use of dredged material
  - #62 Maintain distributaries (e.g., Hog Bayou, *Leopard Bayou and Bayou Blue*)

State Master Plan:

- Planning Unit 3b: Atchafalaya and Teche-Vermilion Basins
- Atchafalaya River Diversion - Freshwater (*nutrients & sediments*) Conveyance
  - D3b-9 Increase Sediment Transport Down Wax Lake Outlet (*and distributaries*)
  - D3b-14 Convey Atchafalaya River Water Westward via GIWW (*and distributaries*)

Project Location: Region 3 - Atchafalaya Basin, Wax Lake Wetlands mapping unit (western subunit between Wax Lake Outlet and Bayou Sale), St. Mary Parish. The West Wax Lake Wetlands subunit is bordered on the north by the Gulf Intracoastal Waterway (GIWW), on the east by the Wax Lake Outlet, on the south by the Atchafalaya Bay and emerging Wax Lake Delta and on the west by the Bayou Sale east bank natural levee and flood protection levee which extends from Gordy to the GIWW. This environmental unit contains approximately 34,466 acres, predominantly in fresh marsh and swamp, with numerous bayous and small open water areas, a narrow strip of natural levee hardwoods and petroleum related development, oil and gas pipeline canals and access canals and associated spoil banks and spoil retention areas along the west bank of historic Wax Lake from dredging of the Outlet in 1941.

Problem: Three bayous (Hog, Leopard and Blue) that have functioned as distributary channels of the Wax Lake Outlet since its construction in the early 1940s are becoming blocked by natural development of the Outlet's west bank natural levee (evidenced through aerial-photo analysis and depth measurements) and are reducing diversion of fresh water, nutrients and sediment to the West Wax Lake Wetlands east of Bayou Sale.

Goals: The goal of this project is to help restore and maintain sediment and nutrient-laden freshwater distribution from the Wax Lake Outlet throughout the West Wax Lake Wetlands subunit by: 1) dredging a new, direct channel from Wax Lake Outlet to the original mouth of Bayou Blue, 2) dredging a new direct channel from Wax Lake Outlet to the original mouth of Leopard Bayou and 3) performing maintenance dredging of the existing Hog Bayou channel to Wax Lake Outlet. Dredged material cast onto the shallow bottom of the historic Wax Lake north and south of the newly dredged and/or maintained channels would create marsh. High water overbank flooding would continue development of natural levees along the three major bayous as well as firm up the banks of smaller, interior bayous and fill in abandoned access canals off of major bayous with distributary channel sediments. Through-flow would enhance water quality and also offset tidal influence and substrate erosion associated with access canals in the western portion of the subunit by maintaining a westward moving head of fresh water and introduction of sediments and nutrients that promote vigorous plant growth and sustain wetlands.

Proposed Solutions: Restore and maintain hydrologic connection between Wax Lake Outlet (Atchafalaya River water) and distributary channels to sustain hydrologic processes and wetlands.

Preliminary Project Benefits:

1) *What is the total acreage benefited both directly and indirectly?*
   Approximately 25,360 ac of wetlands between the Bayou Sale natural levee / flood protection levee and the Wax Lake Outlet west bank, influenced by these three major distributary channels, would be benefited.

2) *How many acres of wetlands will be protected/created over the project life?*
   The proposed project would immediately create 125 ac of wetlands through beneficial use of dredged material from Bayou Blue, Leopard Bayou and Hog Bayou. Additional acreage is expected to accrue throughout the life of the project by virtue of sediment accumulation in abandoned oil field canals. Assuming a 25% reduction in the background loss rate of -0.2%/yr through distributary channel improvements, approximately 126 net acres would be protected within the 20 year project life.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%)?*
   The Coast 2050 report indicates a potential loss of 5860 acres within 60 years (57 ac /yr [0.2%]) for the West Wax Lake Sub-basin. The 20-yr reduction in loss rate attributable to this project is estimated to be 25-49%.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.*
   This project would help sustain existing wetlands, especially those located near the east Bayou Sale natural levee and flood protection levee, and north of the north-central and north-west Atchafalaya Bay shoreline, through delivery of fresh water, sediment and nutrient input via natural hydrologic processes. Maintenance of these wetlands would help protect the eastern flood protection levee and development infrastructure along the eastern natural levee of Bayou Sale and along interior water bodies. Overbank flow, especially during high water periods, would deposit mineral sediments and continue promotion of natural levee development along distributary channels, thus helping to protect interior wetlands from tidal and boat-generated wave action. Continuance of sediment input would facilitate repair of marsh impacted by natural and human-induced activities. Through-flow via channel and overland movement from Wax Lake Outlet to East Cote Blanche Bay and Atchafalaya Bay would promote water quality enhancement in the project area as well as facilitate entrainment and southward movement of GIWW flow from the north.

5) *What is the net impact of the project on critical and non-critical infrastructure?*
   The net impact of the project is that it will help sustain the natural environment that supports both critical and non-critical infrastructure such as development along Bayou Sale and interior water bodies, LA 317 to Burns and the Bayou Sale Flood Protection Levee.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
   This project will function synergistically with other restoration projects in this area: 1) the active natural Wax Lake Outlet Delta formation, 2) CWPPRA TV-20: Bayou Sale Shoreline Protection Project, $32.1 million, 35,776 ft of foreshore rock dike along eastern side of East Cote Blanche Bay north of Burns Point, 3) CIAP Point Chevreuil Shoreline Protection Project: $1.9 million, covering 4,250 ft of coastline around the point at the southern most tip of East Cote Blanche Bay, and 4) CIAP Burns Point Shoreline: $1.01 million for protection of the 8.5 ac recreational vehicle park and campground at Bayou Sale Bay (e.g., East Cote Blanche Bay). While these three proposed actions are designed to prevent future shoreline erosion and protect existing infrastructure, the PPL-20 project

nominee is designed to sustain the interior wetlands, water quality and infrastructure using natural hydrologic processes to deliver fresh water, sediments and nutrients.

Identification of Potential Issues: There do not appear to be any potential issues at this time. The Wax Lake Outlet connections of Blue Bayou, Leopard Bayou and Hog Bayou, as well as the majority of the project impact area, are located on property owned by St. Mary Land and Exploration Company, which supports the project. A portion of the property along Bayou Blue north of St. Mary Land & Exploration Company property is owned by Miami Corp. Their land manager has been provided information on the proposed project and has expressed no objections to the project.

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $5,641,645. The fully-funded cost range is $10M - $15M.

Preparer of Fact Sheet:

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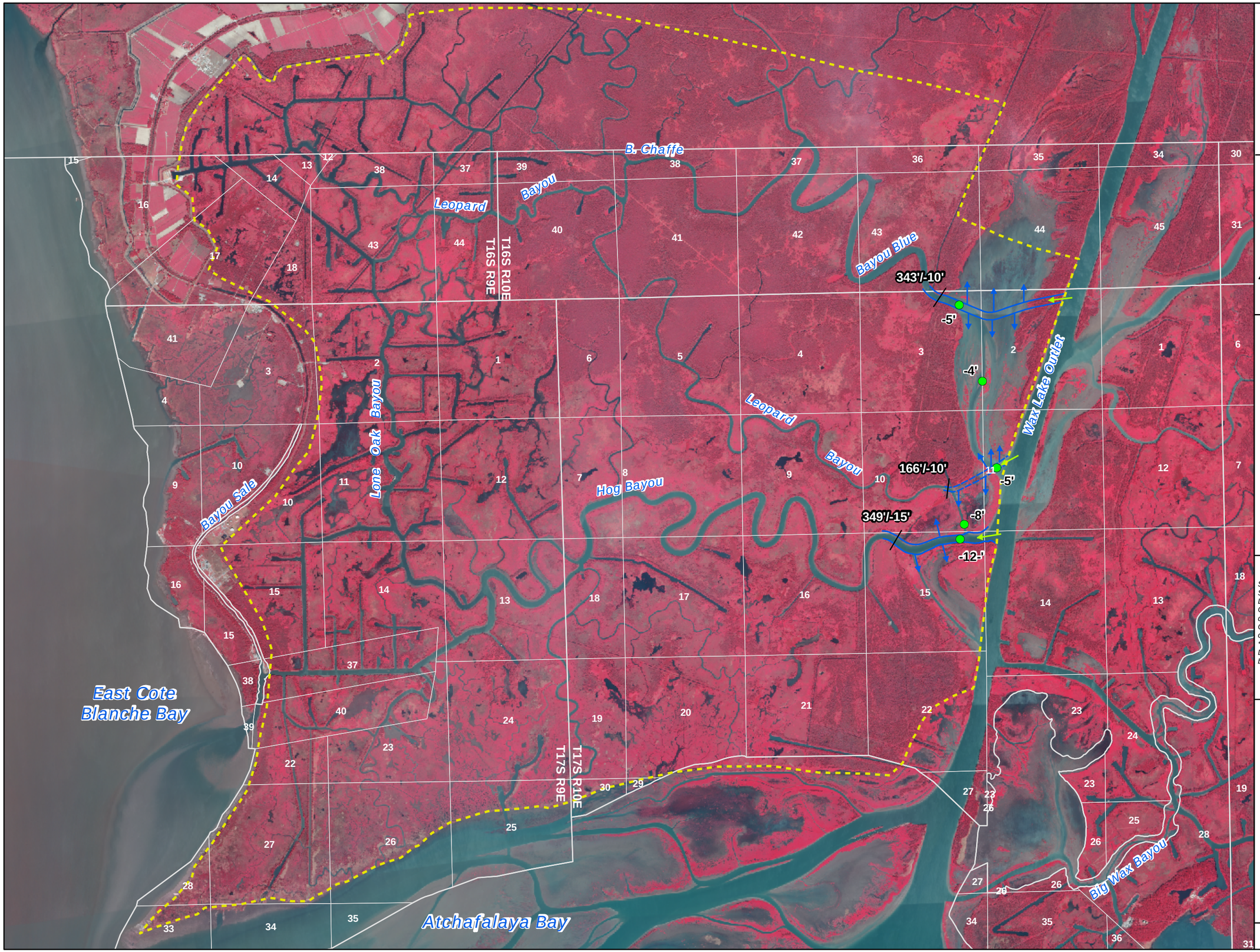
W. WAX LAKE WETLANDS DIVERSION



Legend

- Water Depths
- Channel Maintenance
- Dredge Material Disposal
- 343'/-10' Channel Width and Depth (01/2010)
- Indirect Impact Area

Project Location

St. Mary Parish Louisiana

Source:
Section, Township & Range data Tobin International, Ltd. (February 9, 2004).
Channel Maintenance and Dredge Material Disposal data digitized by CEI, 2010. Background Image: October 27, 2008 USGS Color-Infrared DOQQ obtained from the LaCoast website, 2009.
***Note: CEI does not warrant the validity of these data. Data not derived from a registered survey and should be considered approximate.*

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0 1,450 2,900 5,800
Feet

MAP 1

CEI 93032 January 25, 2010

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Region 3-RPT
PPL20 PROJECT NOMINEE FACT SHEET
April 2, 2010

Project Name:
Cole's Bayou Marsh Creation and Restoration

Coast 2050 Strategy:
Restore and Sustain Wetlands *(Regional Ecosystem Strategy)*
Dedicated Dredging, to Create, Restore, or Protect Wetlands *(Coastwide Common Strategy)*
Stabilization of the Width and Depth of Major Navigation Channels *(Coastwide Common Strategy)*
Terracing *(Coastwide Common Strategy)*
Vegetative Plantings *(Coastwide Common Strategy)*

Project Location:
Region 3, Teche/Vermilion Basin, Vermilion Parish, Eastern Bank of Freshwater Bayou, Schooner Bayou South approximately 3.85 miles

Problem:
Project area wetlands are undergoing losses at rates between -0.2 and -0.5 %/year based on analyses conducted through 2006; these loss rates do not reflect the effects of 2008 storms and may be lower than updated analyses would reveal. Marshes in this area are subject to losses from shoreline erosion, subsidence/sediment deficit, and interior ponding. Shoreline erosion along the Freshwater Bayou Canal has resulted in direct wetland loss as the canal has widened from an authorized width of less than 200 feet to 800 feet. In addition to these direct losses, significant interior marsh loss has resulted from salt water intrusion and hydrologic changes associated increasing tidal influence. As hydrology within this area has been modified, habitats have shifted to more of a floatant marsh type, resulting in increased susceptibility to tidal energy and storm damages. Habitat shifts and hydrologic stress reduce marsh productivity, a critical component of vertical accretion in intermediate wetlands. Disturbances to the landscape from hurricanes and herbivory have resulted in the breakup and export of large sections of interior marsh. The ensuing erosion creates water turbidity within the interior ponds, this coupled with increased pond depth, decreases the coverage of submerged aquatic vegetation. Additionally, recent hurricanes have resulted in large and wide-spread losses. It is unlikely that many of these areas will recover unaided.

As evidenced from aerial photography the project area is part of a larger feature of weakened interior marsh from the project area south and west to include those marshes south of Pecan Island. If left to deteriorate, the project area would eventually open Vermilion Bay into Freshwater Bayou. This would then threaten the integrity of Freshwater Bayou, exposing a larger interior marsh area to conversion to open water.

In the specific project area, erosion of the eastern bankline of Freshwater Bayou has resulted in formation of three breaches, allowing boat wakes and hydrologic action to adversely affect the interior marsh east of the canal. The wakes from passing vessels and tidal action are causing the export of organic material from the project area. Large areas of interior marsh in the western and central part of the project area are breaking apart and turning into open water.

Goals:

(1) Halt bank erosion,
(2) Maintain limited hydrologic connection between Freshwater Bayou Canal and interior marshes,
(3) Improve freshwater and sediment inflow into interior wetlands,
(4) Create approximately 365 acres of intermediate emergent marsh by creation and terraces and
(5) Protect interior marshes from erosion.

Proposed Solutions:
Create 335 acres intermediate marsh in existing open water areas via dedicated dredging. Target marsh elevation is +1.4' NAVD. Borrow is proposed from Vermillion Bay; although not considered "external" source of material, significant sediment inflows into this area may result in re-filling of the borrow area. Approximately 30,000 feet of terraces are proposed in shallow open water areas to reduce pond enlargement. Terraces would be constructed with +3', 20' crown width and planted. Terrace construction is estimated to create about 30 acres of wetland. Project features would also include a 10,600 foot-long rock dike with a top height of +3.5' NAVD beginning at an oil field canal in Schooner Bayou west to Freshwater Bayou, then south along the eastern shore of Fresh Water Bayou. As proposed, the dike would be constructed along the -2' contour with 5' wide crown and 3:1 side slopes. Conceptual dike design based on Belle Isle Bayou to the Lock (TV-11b).

Additionally, sediment-laden freshwater is often available at the northern reaches of the project area. It is proposed that flap-gated culverts be installed at locations along Freshwater Bayou Canal and through spoil banks in the northwestern portion of the project area to provide conduits for freshwater and sediment introduction. It may be necessary to conduct limited excavation of Coles Bayou and access canals to optimize sediment and freshwater introduction. It is anticipated that flapgated structures would also be replaced/installed in the southern portion of the area to provide drainage and encourage water intake from the north. It is expected that all structures will remain fully open except during extreme events.

Preliminary Project Benefits:

1) *What is the total acreage benefited both directly and indirectly?* Throughout the area of direct benefits, approximately 365 acres of marsh would be created from initial dredged material placement and terrace construction. In addition, over the 20-year project life, approximately 45 acres would be protected by the 10,600 LF of shoreline protection (assuming 9.3 ft/year loss rate). Indirect benefits may occur over some portions of the 4,400 project area as a result of freshwater and sediment introduction.
2) *How many acres of wetlands will be protected/created over the project life?* Assuming a 50% reduction in the background loss rate of -0.528%/year (Port Of Iberia) terracing and marsh creation would result in 314 net acres after 20 years. However, as evidenced in the photography pre- and post- 2008, project specific loss rates may be much higher; i.e. similar to the trend observed with the PPL 19 Freshwater Bayou Marsh Creation Project, extended boundary. A 100% loss rate reduction is assumed for the shoreline protection. Approximately 45 acres would be protected from the 10,600 LF of shoreline protection (9.3 ft/year loss rate). The total net acres estimated are 335 acres at TY20. In the event that benefits associated with the freshwater and sediment introduction are calculated, there could be a minor increase in anticipated net acres.
3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life?* A 50% loss rate reduction is assumed for the terraces and marsh creation (from -0.528%/year to -0.264%/year). A 100% loss rate reduction is assumed for the shoreline protection. In the event that benefits associated with the freshwater and sediment introduction

are calculated, there could be a minor decrease in anticipated loss rates for some portion of the 4,400 acre project area.

4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.? No.
5) What is the net impact of the project on critical and non-critical infrastructure? The project would provide positive impacts to both critical (i.e., Freshwater Bayou Canal) and non-critical (i.e., minor oil and gas facilities) infrastructure. As evidenced from aerial photography the project area is part of a larger feature of weakened interior marsh from the project area south and west to include those marshes south of Pecan Island. If left to deteriorate, the project area would eventually open Vermilion Bay into the Freshwater Bayou Canal, posing a moderate threat to critical infrastructure. This would then threaten the integrity of Freshwater Bayou Canal banks, exposing a larger interior marsh area to conversion to open water.
   Oil and gas companies have facilities and pipelines in this area, which would benefit from an increase in marsh acreage. The loss of wetlands in this area exposes those facilities to open water wave energies resulting in expensive damages and oil spills. Protecting/creating wetlands in this area would also assist in reducing storm damages to oil and gas infrastructure. In addition, Audubon Society, Rainey Refuge boarders the project area to the south, and it would benefit from an increase in marsh acreage.
6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* This project would provide a synergistic effect with the Little Vermilion Bay Sediment Trapping Project (TV-12), which constructed approximately 110 acres of earthen terraces. The project would also provide a synergistic effect with the Freshwater Bayou Bank Stabilization Project (TV-11), by increasing marsh acreage East of the TV-11 project.

Identification of Potential Issues:
Oil and gas infrastructure is within the project area and would need to be avoided by dredge/fill activities. Operations and maintenance could also be an issue for this project, however, previous shoreline projects along the Freshwater Bayou Canal has resulted in the adaptation of larger stone classes to reduce such events.

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $27,213,225. The fully-funded cost range is $40M - $50M.

Preparer of Fact Sheet:
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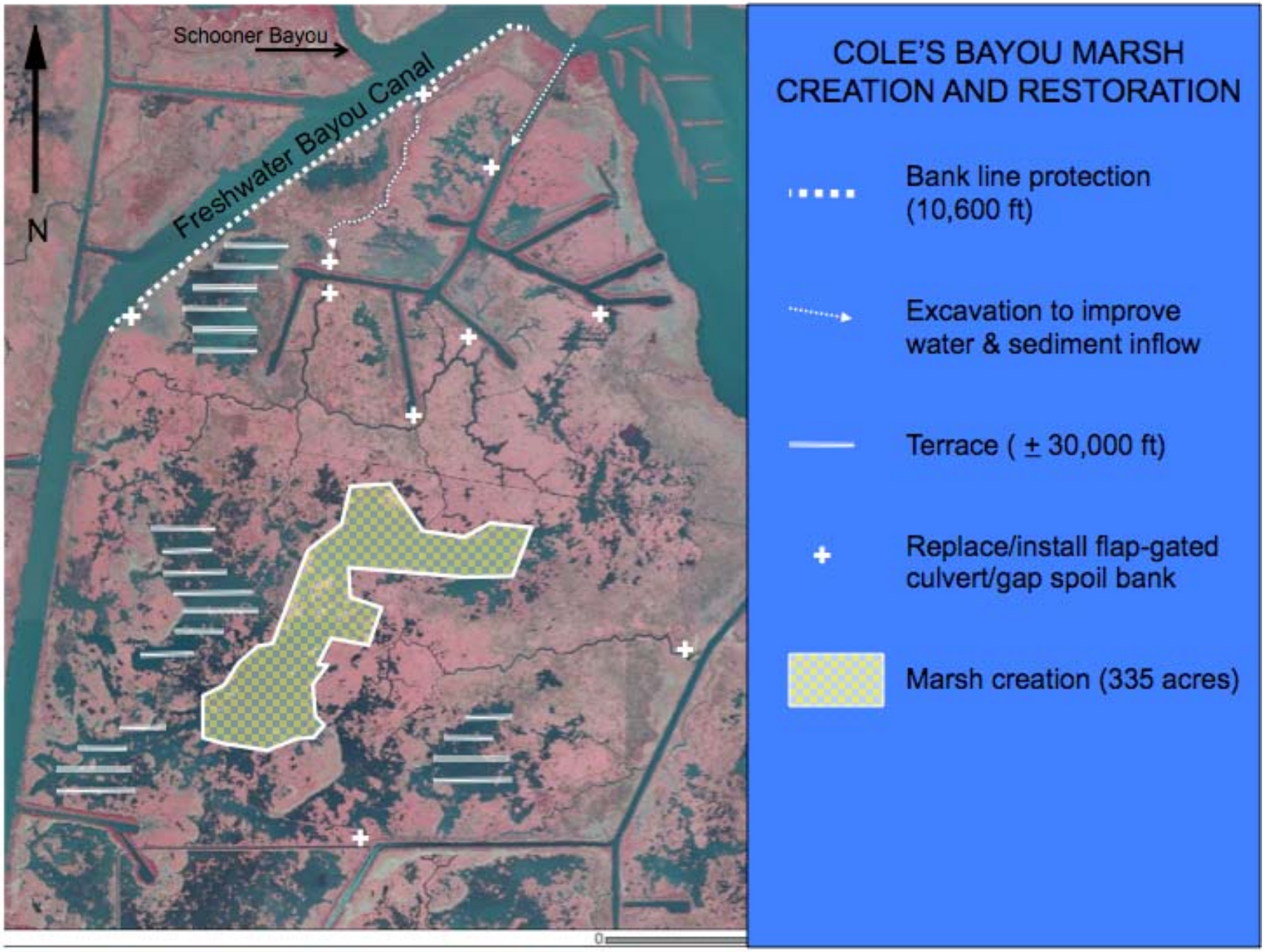
Schooner Bayou
Freshwater Bayou Canal
N
COLE'S BAYOU MARSH
CREATION AND RESTORATION
Bank line protection
(10,600 ft)
Excavation to improve
water & sediment inflow
Terrace (± 30,000 ft)
Replace/install flap-gated
culvert/gap spoil bank
Marsh creation (335 acres)

PPL 20 Project Nominee Fact Sheet
April 2, 2010

Project Name:
Cote Blanche Freshwater & Sediment Introduction & Shoreline Protection Project

Coast 2050 Strategy:
Coast wide: Goal 1 – Assure Vertical Accumulation to Achieve Sustainability
Strategy 5 – Maintenance of Gulf, Bay and Lake Shoreline Integrity
Strategy 11 – Diversion & Riverine Discharge

Regional: 12. Maintain shoreline integrity and stabilize critical shoreline areas of the Teche-Vermilion system
15. Optimize Atchafalaya River flow in Gulf Intracoastal Waterway into marshes and minimize direct flow into bays & Gulf of Mexico
17. Reduce sedimentation into bays

Mapping Units - Cote Blanche Wetlands, East Cote Blanche Bay, West Cote Blanche Bay:
80. Protect Bay/Lake Shorelines

Louisiana State Master Plan:
Atchafalaya River Delta & Chenier Plain:
Managing Water & Sediment - Opportunistic use of GIWW to distribute existing Atchafalaya freshwater & sediment flows to interior marshes
Bay/Lake Shoreline Stabilization – Prevent expansion of Vermilion, East and West Cote Blanche Bays and prevent wave erosion impacts to surrounding marsh.

Project Location:
The project is located in Region 3, Teche/Vermilion Basin, St. Mary Parish, within the TV-4 Cote Blanche Hydrologic Restoration Project interior, and along portions of the northern shoreline of East Cote Blanche Bay and eastern shoreline of West Cote Blanche Bay.

Problem:
Substantial loss of emergent wetlands, up to .45% per year, was occurring in the project interior prior to TV-4 Project construction. The TV-4 Project has reduced water level variability, thereby facilitating accretion of the sediment entering from the adjacent bays and achieving the project objective of reducing the rate of interior marsh loss. Unfortunately, in 2002 Hurricane Lili caused direct removal of approximately 1,750 acres of emergent marsh within the project area (Barras 2004), which was followed by additional loss from Hurricane Rita in 2005 (Barras 2005).

Significant quantities of freshwater and sediment are available to be tapped from the GIWW, but only a small portion is currently reaching the adjacent interior marshes for a number of reasons. Continuous stretches of spoil banks bordering some canals prevent the nourishing flows to the wetlands. Additionally, the storms blocked some avenues that previously allowed some low-level freshwater and sediment flows to interior marsh areas. In other areas, some flows that should be circulating through interior areas have been short-circuited back into the canal systems. The TV-4 project structures have continued to function as intended; however, increasing sediment inputs through new, more direct paths would accelerate accretion and restoration of damaged interior marsh areas adjacent to the GIWW.

The targeted Marone Point shoreline area has historic and predicted shoreline erosion rates of 15-20 ft/year. If left unchecked, the rapidly eroding shoreline along East Cote Blanche Bay will lead to a conversion of interior wetlands to open bay. Installing shoreline protection would also preserve the hydrologic integrity of water control structures installed under the TV-04 Project.

Goals:
Reduce and/or reverse shoreline erosion rates, reduce interior land loss and promote land building, protect critical marsh habitat and maintain lower energy hydrology of the East Cote Blanche Bay wetlands established through the TV-04 project. The marsh habitat provides important habitat for wintering migratory waterfowl, alligator, bald eagles, black bear, and other furbearers. These wetlands also provide vital protection to inland areas of St. Mary Parish from storm surges associated with hurricanes.

Proposed Solution:
Project features will include channel enlargement, spoilbank gapping, and/or structural measures where necessary to increase freshwater & sediment input from the GIWW into interior Cote Blanche marshes and optimize distribution through multiple avenues to further reduce emergent marsh loss and accelerate sediment accretion to promote land building in isolated areas.

Project features also include construction of approximately 26,400 linear feet of armored protection parallel to the northern shoreline of East Cote Blanche Bay. The proposed location of the shoreline protection feature is approximately 23,000 linear feet, starting from 3300 feet west of Humble Canal and extending around Marone Point, and approximately 3,400 feet to the east of the Humble Canal between existing shoreline protection segments.

Preliminary Project Benefits:
1) What is the total acreage benefited both directly and indirectly?
The proposed shoreline protection feature would directly benefit approximately 209 acres by eliminating the annual shoreline loss of 17.5 ft/yr. Approximately 375 acres of intermediate marshes would benefit indirectly by preventing the breaching of, and tidal exchange through, several natural bayous and open water ponds lying adjacent to the E Cote Blanche Bay shoreline. Therefore the total acreage potentially benefitted by the shoreline protection would be 584 acres.

With the estimated additional flows and improved distribution, the freshwater and sediment introduction component is expected to beneficially influence an approximate total of 11,020 wetland acres, of which approximately 9,500 acres is emergent marsh.
Therefore, for both project components, the total acreage benefitted would be approximately 11,604 acres.

2) How many acres of wetlands will be protected/created over the project life?
Approximately 209 acres would be protected at the end of the project life due to the shoreline protection component.

For the freshwater & sediment introduction component, a total of 406 acres of emergent wetlands is estimated to be protected/created over the project life. In addition, approximately 12 acres of emergent marsh would be created with the dredged material from channel enlargement.
Therefore, for both project components, a total of 627 acres would be protected/created over the project life.

3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life?
Shoreline protection will be provided by some form of armored structure which, when properly designed and installed, should reduce the shoreline erosion rates by 100% over the project's life.

The anticipated loss rate reduction over the project life due to the freshwater and sediment introduction component throughout the areas of direct benefit is estimated to range from 26% to 36%.

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?
Shoreline protection feature will provide protection and serve to maintain a significant critical section of the East & West Cote Blanche Bays' shoreline, as well as Marone Point which is a key feature influencing the bays current circulatory patterns.

5) What is the net impact of the project on critical and non-critical infrastructure?
The project would serve to protect inland oilfield well locations and the GIWW transportation corridor from exposure to open bay conditions, and from increased wave energy generated by marsh fragmentation and expansion of interior open water areas.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?
The project features will provide a synergistic effect with the TV-04 Cote Blanche Hydrologic Restoration Project, TV-20 Bayou Sale Shoreline Protection Project, and TV-15 Sediment Trapping at the Jaws by extending shoreline protection around the entire northern shore of East Cote Blanche Bay, and ultimately providing contiguous protection and promoting sustainable restoration to thousands of acres of deteriorating marsh in St. Mary parish.

Identification of Potential Issues:
No significant potential issues are expected from the project implementation. St. Mary Parish and major landowners are in full support of the project.

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $12,756,113. The fully funded cost range is $20M - $25M.

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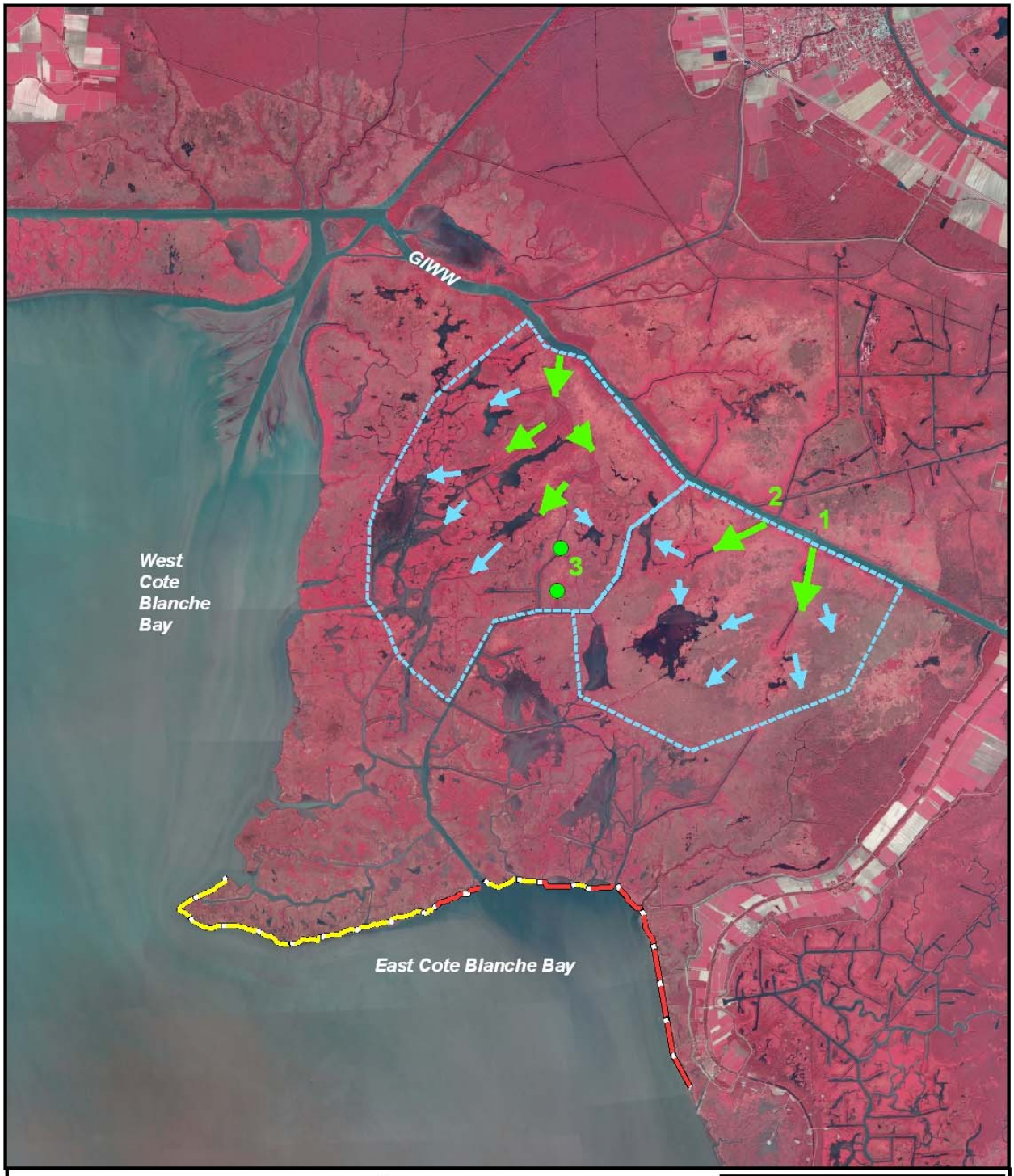

Map Produced By:
United States Department of Agriculture
Natural Resources Conservation Service
Alexandria, LA

Data Source:
2008 Aerial Photography

Map Date: March 24, 2010

Map ID: Cote_Blanche_PPL20_Nominee

N

Cote Blanche
Freshwater/Sediment Introduction
and Shoreline Protection
St. Mary Parish, Louisiana
PPL-20 Nominee

0 3,800 7,600 15,200
Feet

Legend
- Plug
- Freshwater Introduction
- Distributary Flows
- Proposed Shoreline Protection
- Existing and/or Authorized Shoreline Protection
- Freshwater Influence Area

PPL20 Candidate Project Fact Sheet
April 2, 2010

Cameron-Creole Watershed Grand Bayou Marsh Creation Project

Coast 2050 Strategy:

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

Project Location: Region 4, Calcasieu-Sabine Basin, Cameron Parish, 6 miles northeast from Cameron, LA, on the Cameron Prairie NWR and Miami Corporation north of Grand Bayou.

Problem: Approximately 14,390 acres (32%) of the Cameron-Creole Watershed project (CCMP) marshes were lost to open water from 1932 to 1990 at an average loss rate of 248 ac/year (0.55%/year) due to subsidence and saltwater intrusion from the Calcasieu Ship Channel. The CCWP was implemented by the NRCS in 1989 to reduce saltwater intrusion and stimulate restoration through revegetation. Hurricanes Rita and Ike in 2005 and 2008 breached the watershed levee scouring the marsh and allowing higher Calcasieu Lake salinities to enter the watershed causing more land loss. The Calcasieu-Sabine Basin lost 28 mi^2 (17,920 acres) (4.4%) as a result of H. Rita (Barras et al. 2006).

Goals: Project goals include restoring and nourishing marsh with dedicated dredged material from Calcasieu Lake to benefit fish and wildlife resources within the Cameron Prairie NWR and adjacent brackish marshes. Specific phase 0 goals include creating 580 acres of brackish marsh and nourishing 13 acres of brackish marsh.

Proposed Solution: Place approximately 3 million cubic yards of material dredged from a Calcasieu Lake borrow site, avoiding existing oyster reefs, into two marsh creation areas north of Grand Bayou to restore 580 acres and nourish 13 acres of brackish marsh. The feasibility and benefits of using material from the Calcasieu Ship Channel is also being investigated. The hurricane-scoured marsh, within the project area, is very shallow (averaging 1.2 feet deep) making it ideal for marsh restoration with sediment because more marsh per volume of dredged material could be restored. Tidal creeks will be constructed prior to placement of dredge material and retention levees would be gapped for estuarine fisheries access and to achieve a functional marsh.

Preliminary Project Benefits:

<u>1) What is the total acreage benefited both directly and indirectly?</u> The project would restore 580 acres and nourish 13 acres of brackish marsh in the 593-acre project area.

<u>2) How many acres of wetlands will be protected/created over the project life?</u> 528 (91%) net acres of marsh would result from this project over the 20-year project life (@ 50% of the 0.9% loss rate).

<u>3) What is the anticipated loss rate reduction throughout the area of direct benefits over the</u>

project life (<25%, 25-49%, 50-74% and >75%)? The anticipated loss rate reduction would be approximately 50-74%. Interior shoreline erosion rates would be stopped and restored marsh would assume a 50% reduction in loss rate.

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 not directly restore any of the above structural components, but it could help maintain the Cameron-Creole watershed levee by reducing wave energy from the east. Although the Cameron-Creole watershed levee could be maintained by the Cameron Creole Maintenance project (CS-04a), protection provided by this marsh creation project could reduce those maintenance costs.

5) What is the net impact of the project on critical and non-critical infrastructure? The marsh creation project will help maintain the north-south portion of the Cameron-Creole Watershed levee near Grand Bayou by reducing wave energy and hurricane scour from the east.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? The project is synergistic with the NRCS-constructed Cameron-Creole Watershed Management Project, and the CWPPRA Cameron-Creole Plugs (CS -17), Cameron-Creole Maintenance (CS-04a), and Cameron-Creole Freshwater Introduction projects. These projects were implemented to reduce saltwater intrusion caused by the Calcasieu Ship Channel. Marsh would be reestablished in open water areas that have not revegetated since the implementation of the Cameron-Creole watershed project and have been further eroded by hurricanes Rita and Ike.

Identification of Potential Issues:
Project managers have and will continue coordinate with LDWF biologists to ensure impacts to aquatic resources, if any, are minimized and temporary in duration in regards to the borrow area design and location. A bottom assessment will be necessary to avoid and minimize impacts to oyster reefs when locating the borrow site.

Project Costs:
The estimated construction cost including 25% contingency is $17,837,139. The fully-funded cost range is $20M - $25M.

Preparers of Fact Sheet:
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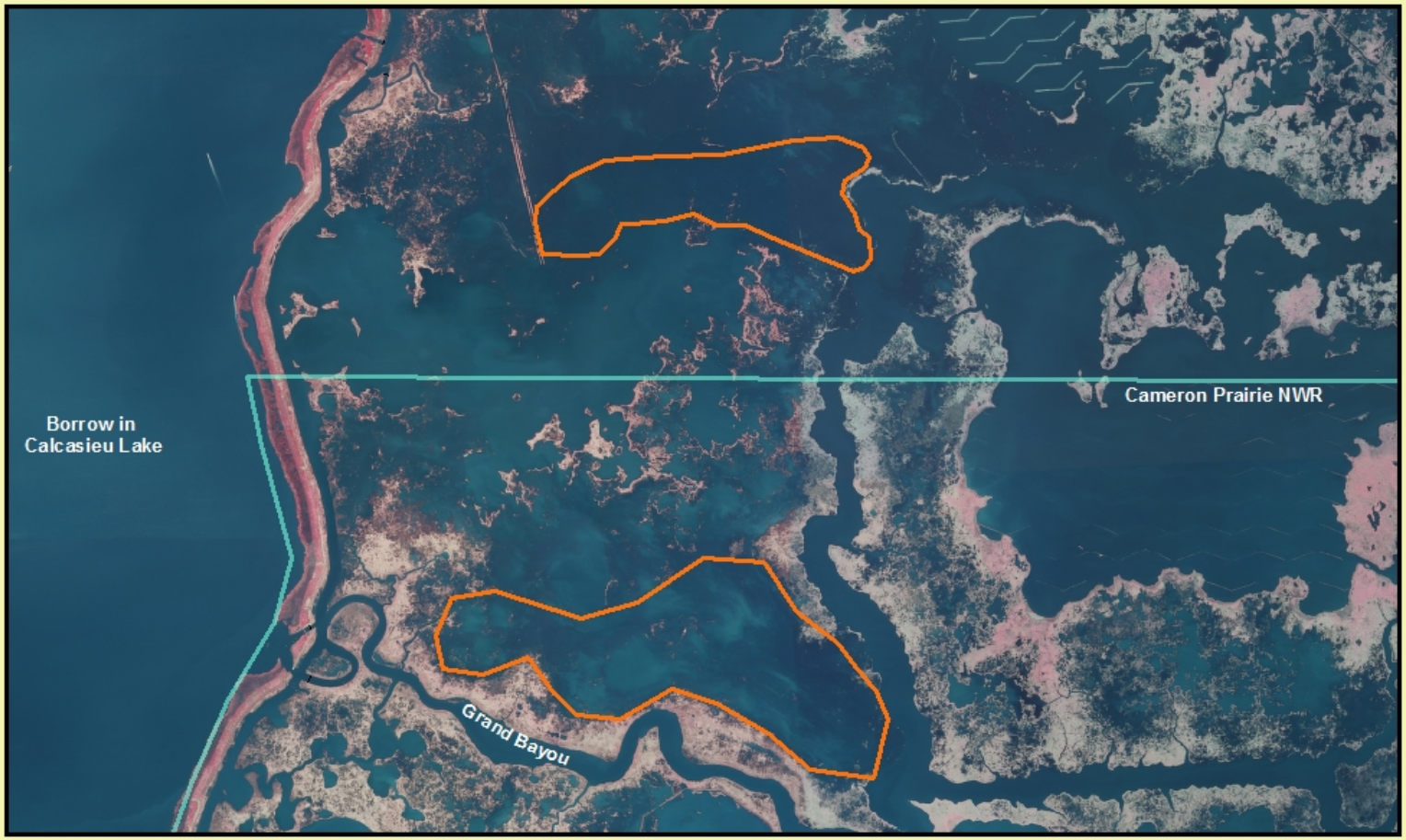
U.S. Fish and Wildlife Service *Louisiana Eciological Services Field Office*

Cameron Creole Watershed - Grand Bayou Marsh Creation Project PPL 20



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2008 DOQQ

Cameron Creole Watershed
Grand Bayou Marsh Creation
PPL 20

1 inch equals 0.5 miles

0 1,100 2,200 4,400 6,600 8,800 Feet

03/08/2010

PPL20 PROJECT NOMINEE FACT SHEET
April 2, 2010

Kelso Bayou Hydrologic Restoration and Marsh Creation

Coast 2050 Strategy
Use of sediment for wetland creation and restore historic hydrologic and salinity conditions throughout Region 4 to protect wetlands from hydrologic modification.

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

Problem
The most significant environmental problem affecting the marshes in this area is deterioration and conversion to open water. Marsh loss has and continues to occur as a result of salt water intrusion and sediment export (erosion). The construction of the Calcasieu Ship Channel and the Gulf Intracoastal Waterway greatly increased the efficiency of water exchange through Calcasieu Pass. Freshwater retention was consequently reduced and saline water is able to enter interior marshes and penetrate ever further north and west. Project-area marshes are connected to the navigation channels through a network of canals and bayous including Kelso Bayou and Alkali Ditch. Unvegetated substrate is vulnerable to increased tidal exchange and immense quantities of organic substrate are being washed away.

Additionally, the Calcasieu Ship Channel acts as a conduit during storm events. Recent marsh loss and scouring at the mouth of Kelso Bayou from impacts related to Hurricanes Rita and Ike allow increased salt water intrusion, tidal exchange, and storm surge impacts. The proposed project will be designed to increase freshwater retention and reduce tidal exchange and storm surge by repairing and armoring the mouth of Kelso Bayou and restricting exchange through Alkali Ditch.

Goals
The goal of this project is to restore and protect approximately **316 acres** of critically important marsh and the numerous functions they provide. The proposed project will also reduce the artificial intrusion of Gulf marine waters into the Black Lake and Brown Lake area marshes and provide direct protection to Louisiana State Highway 27, the region's only northward hurricane evacuation route.

Proposed Solutions
1) Approximately 262 acres of marsh will be created/nourished and planted to reestablish the natural meandering banks of Kelso Bayou. Over 100 of those acres would be located between the Calcasieu Ship Channel and State Highway 27.
2) Approximately 3,200 linear feet of rock will be used to protect the marsh creation area and the existing shoreline along the Calcasieu Ship Channel.
3) Construct a barge bay at Alkali Ditch to reduce tidal erosion.
4) Rock armor at the mouth of Kelso Bayou.

Preliminary Project Benefits
The project goal is to increase brackish marsh and SAV productivity by creating approximately 262 acres of marsh and by reducing tidal fluctuations and salinity within the project area.
The proposed project would utilize marsh creation techniques to create approximately 262 acres of marsh. That created marsh and a portion of the Calcasieu Ship Channel would be protected against erosion with rock. In addition, a barge bay would reduce the cross section at Alkali Ditch to improve SAV habitat and reduce marsh loss resulting from high salinity and tidal scour. Initial estimates (using a 10% salinity reduction and the NRCS SProd 2 salinity model) indicate an additional 54 net acres of benefit from salinity reduction. Salinity reduction would also benefit existing and future restoration efforts.

1) What is the total acreage benefited both directly and indirectly? Approximately **316 acres** of marsh would be directly benefited. Indirect benefits would occur over approximately 16,767 acres of marsh and open water habitats as a result of reduced salinity and tidal exchange.

2) How many acres of wetlands will be protected/created over the project life? Based on preliminary estimates, 269 net acres of marsh would result from this project. Approximately 215 net acres from marsh creation and 54 net acres from salinity reduction.

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 would be approximately 50-74%. Shoreline erosion rates would be stopped and restored marsh would assume a 50% reduction in loss rate.

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 proposed project would repair a breach in the bankline along the west side of the Calcasieu Ship Channel.

5) What is the net impact of the project on critical and non-critical infrastructure? Recent wetland loss in this area resulting from Hurricane Rita has left State Highway 27 and Hackberry, Louisiana vulnerable to storm events. Currently, there is no barrier between those areas and the Calcasieu Ship Channel. State Highway 27 and Hackberry, Louisiana both received record flooding from Hurricane Ike. The proposed project would protect and provide a wetland buffer to Hackberry and Highway 27, which is the region's only northward hurricane evacuation route.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? The project would provide a synergistic effect with several thousand acres of recently completed and/or approved coastal restoration projects including: 1) numerous North American Wetland Conservation Agreement (NAWCA) terracing projects totaling approximately 200,000 linear feet; and 2) the largest state-local beneficial use of dredge material project to rebuild approximately 440 acres in the Black Lake Marsh.

Identification of Potential Issues
Project managers have and will coordinate with the USACE to locate upland disposal sites or areas of the Ship Channel to be mined as a sediment source.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is $16,123,556. The fully-funded cost range is $20 to $25 million.

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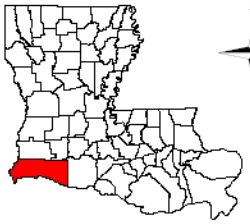
Map Produced By:
United States Department of Agriculture
Natural Resources Conservation Service
Alexandria, LA

Data Source:
2009 DOQQ Aerial Photography

Map Date: March 26, 2010

Map ID: Kelso_Bayou_PPL20_Nominee



N

Kelso Bayou Hydrologic Restoration and Marsh Creation
Cameron Parish, Louisiana
PPL 20 Nominee

0 1,500 3,000 6,000
Feet

Legend
- Barge_Bay
- Shoreline_Protection
- Marsh_Creation

PPL20 PROJECT NOMINEE FACT SHEET
March 30, 2010

Lower Mud Lake Terracing and Bank Stabilization Project

Coast 2050 Strategy:
Use of sediment for wetland creation.

Project Location:
Region 4, Mermentau Basin, Cameron Parish, Lower Mud Lake Mapping Unit, area just northwest of the Mermentau Ship Channel.

Problem:
The large area of fetch and associated wave energies prevent sediments from the Mermentau River from being deposited. Therefore, much of that sediment is being exported into the Gulf of Mexico via the Mermentau Ship Channel. SAV habitat is also limited by the sediment load and energy associated with the large open water fetch.

Additionally, the west bank of the Mermentau Ship Channel is eroding at approximately 5 feet/year (Sonris). That erosion continues to expose interior marsh to energy associated with the ship channel including boat traffic.

Goals:
The goal of this project is to create and protect approximately **62 acres** of marsh and induce additional acreage through sedimentation. Approximately 50 acres of marsh would be constructed sediment trapping terraces similar to those used at Little Vermilion Bay (TV-12) and the Jaws (TV-15) projects. Those terraces would dissipate wave energy and allow sediment to drop out of the water column and increase accretion, which would permit emergent vegetation to establish.

Shoreline protection along the west bank of the Mermentau Ship Channel is expected to completely halt shoreline erosion.

Proposed Solutions:
The project components include: dredging distributary channels and constructing 36,000 linear feet of terraces approximately 60 feet wide at an elevation of 2.5 feet NAVD88. The proposed 36,000 linear ft. of terracing will establish approximately 50 acres of emergent marsh and maximize sedimentation within the project area.

Approximately 5,500 linear feet of shoreline protection would be constructed along the west bank of the Mermentau Ship Channel. That shoreline is eroding at approximately 5 ft/yr. (5,500)(5)(20)/43560 = 12.6 acres.

Preliminary Project Benefits:
The proposed project would utilize terracing techniques to create approximately 50 acres of marsh. Those terraces would induce sedimentation and results from NMFS' Sediment Trapping at the Jaws (TV-15) indicate that additional acreage would be created from terrace expansion. Shoreline protection would protect approximately 12 acres of shoreline.

1) What is the total acreage benefited both directly and indirectly? Approximately 62 acres would be benefitted directly and approximately 550 acres would be benefited indirectly from protection provided by the proposed terraces and shoreline protection features.

2) How many acres of wetlands will be protected/created over the project life? Approximately 62 acres plus any additional acreage created by terrace expansion. Estimates of expansion would be calculated using information from TV-15 and TV-12.

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%)? 50-74%. Shoreline protection would completely halt loss along the Mermentau Ship Channel and some of the sediment trapping terraces at TV-12 and TV-15 are expanding.

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 proposed project would protect interior marsh west of the Mermentau Ship Channel.

5) What is the net impact of the project on critical and non-critical infrastructure? None identified.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? None Identified.

Identification of Potential Issues:
Unknown at this time.

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $4,861,819. The fully-funded cost range is $10 - $15 million.

Preparer(s) of Fact Sheet:
Troy Mallach, NRCS troy.mallach@la.usda.gov

Legend

- Terraces
- Shoreline Protection

N

0 750 1,500 3,000 4,500 6,000 Feet

Lower Mud Lake Terracing
and Bank Stabilization
Cameron Parish, Louisiana
PPL 20

Region 4-RPT
PPL20 PROJECT NOMINEE FACT SHEET
April 2, 2010

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

Coast 2050 Strategy:
Regional: Dedicated dredging or beneficial use of sediment for wetland creation or protection (6) and Stabilize Gulf of Mexico Shoreline from Old Mermentau River to Dewitt Canal (16). Coast-wide Common: Maintenance of Gulf, Bay and Lake shoreline Integrity, and Maintain, Protect or Restore Ridge Functions.

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

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

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

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

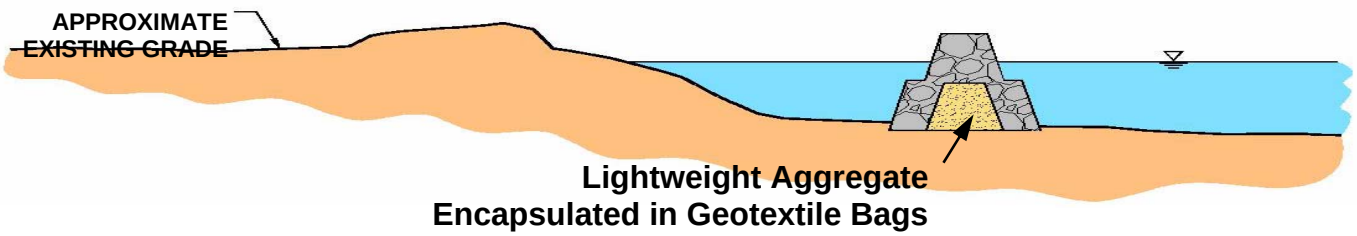
Preliminary Project Benefits:
1) The project is expected to influence approximately 125 acres directly.
2) 120 protected, 5 created, and a portion of 4,900 acres indirectly (Rockefeller Refuge Unit 5). This project is anticipated to benefit 125 acres (10K ln ft X 35 ft/yr X 20 yrs) X 0.75. The reduction efficiency was estimated by using 90% of the average wave transmission rates listed in the Rockefeller Refuge gulf Shoreline Stabilization Feasibility Study produced by Shiner Mosely and Associates (Table 6, page 4-19, methodology of Seabrook and Hall, 1998). Estimates for excavation are as follows; at the –5' contour, an additional 4' of material will be moved at a width of 80', for the 10,000 linear feet of the project or 118,500 cubic yards will be placed behind the rock structure.
3) Anticipated loss rate reduction for the segmented breakwater is 75%.
4) The project would protect and maintain chenier and beach function.

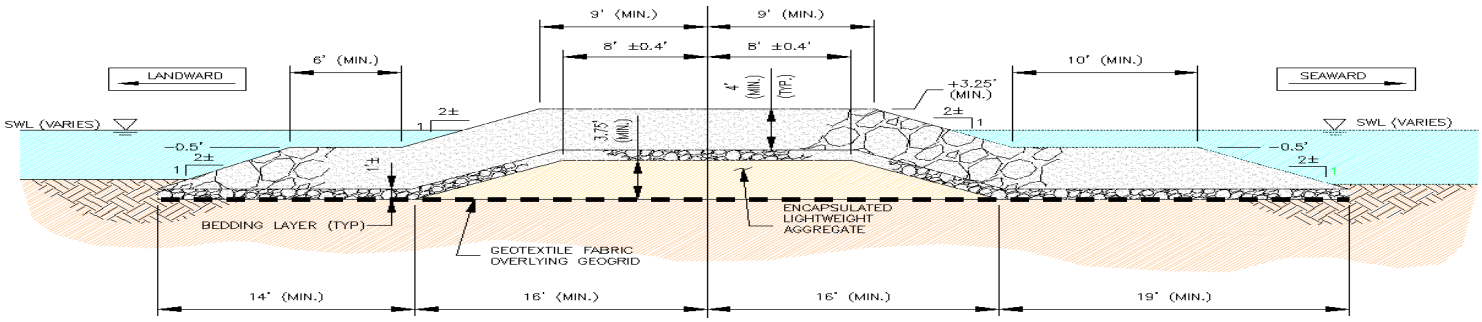
5) The project would have a net positive impact on non-critical infrastructure. This project would protect five existing pipelines that come ashore within the project area from continued erosion of the cover, which when uncovered, become a public and environmental hazard. This project would also protect properly plugged, land-based wellheads from erosion of the cover, thus becoming a public and environmental hazard.
6) The proposed project is designed as an eastward extension of the ME-18 (Rockefeller Refuge Gulf Stabilization Project).

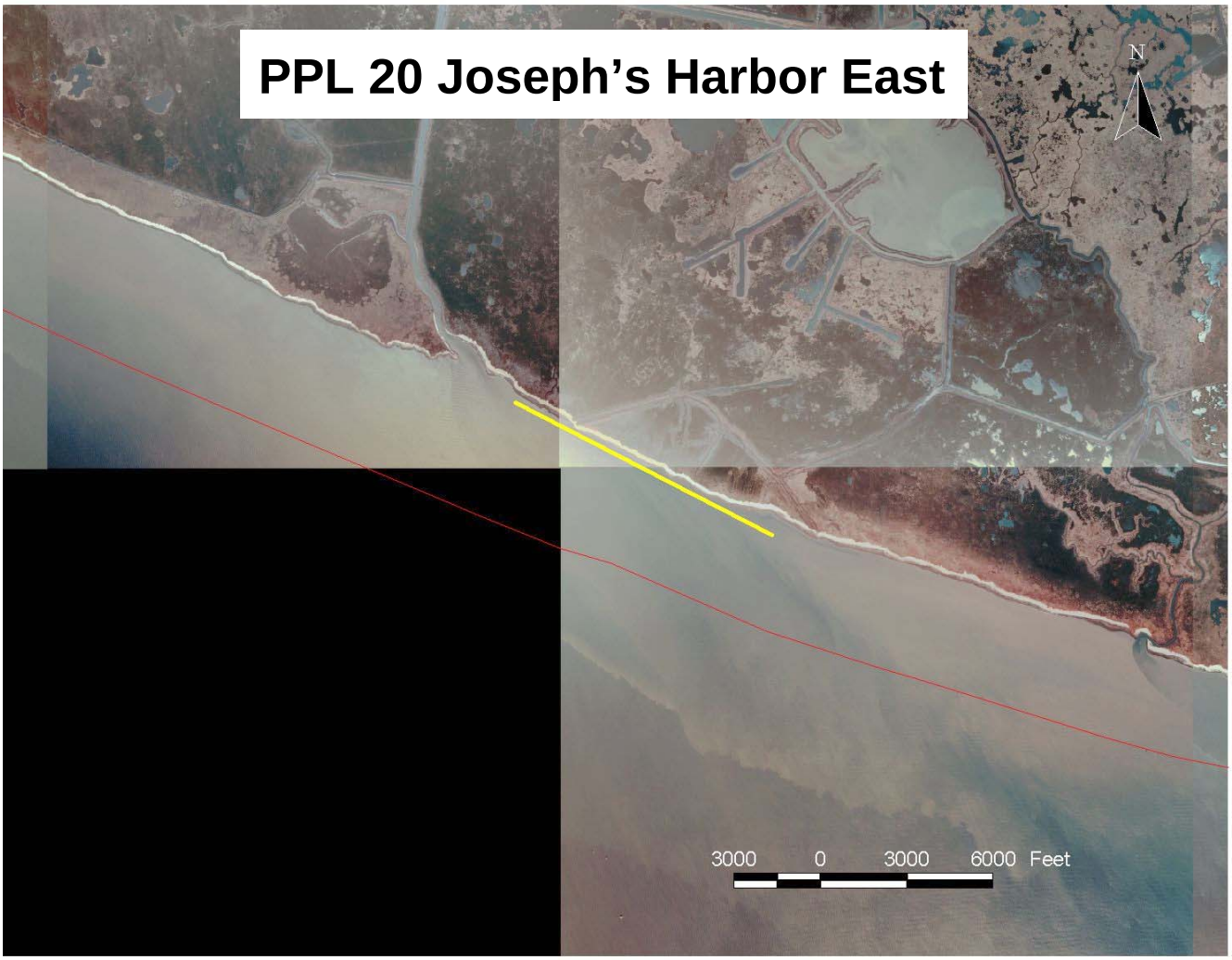
Identification of Potential Issues:
There are potential issues with pipelines. There are 5 pipelines in the area

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $20,511,669. The fully-funded cost range is $40M - $50M.

Preparer of Fact Sheet:
John D. Foret, NOAA Fisheries Service, 337/291-2107; john.foret@noaa.gov






PPL 20 Joseph's Harbor East
N
3000 0 3000 6000 Feet

Demonstration Project Nominees

Coast-wide	DEMO	Marsh Restoration and Enhancement Utilizing Floating Islands
Coast-wide	DEMO	The Wave Robber Wave Suppressor Sediment Collection System
Coast-wide	DEMO	Ecosystems Wave Attenuator for Shoreline Protection
Coast-wide	DEMO	Use of Sand Derived from Pulverized Glass as Beach Nourishment on Barrier Island Restoration Projects

PPL20 DEMONSTRATION PROJECT NOMINEE FACT SHEET
March 26, 2010

Demonstration Project Name: Marsh Restoration and Enhancement Utilizing Floating Islands

Coast 2050 Strategy(ies):
Maintain bay and lake shorelines. Terracing and Plantings.

Potential Demonstration Project Location(s):
Coastwide

Problem:
What problem will the demonstration project try to solve?
Excessive erosion of bay and lake rims expose thousands of acres of interior marshes to increased erosion rates and severe hydrologic change. In addition, the loss of wetlands resulting from the direct effects of wave action is exacerbated over large open bodies of water where fetch distances are great. Highly organic interior marshes have limited options for restoration because of poor soil conditions.

What evidence is there for the nature and scope of the problem in the project area?
Shoreline erosion rates have been measured in excess of 30 feet per year in areas across the Louisiana coast. The need for stabilization in critical areas was noted in all four Coast 2050 regions.

Goals:
What does the demonstration project hope to accomplish?
The proposed demonstration project would restore and enhance interior marsh shorelines and maintain exchange and interface with estuarine systems. Additionally, some accretion may occur and build emergent marsh.

Proposed Solution:
Describe demonstration project features in as much detail as possible.
The Floating Island is a multi-faceted marsh restoration and enhancement system that would absorb and deflect wave energy, protect and enhance vegetation, protect and create emergent marsh, trap sediment and provide nursery habitat. The islands are made from recycled PET plastic and adhered together with polyurethane marine foam. They are connected to each other and anchored into the soil with marine/earth anchor systems.

1. The interconnected islands can be oriented in numerous ways to restore and enhance marshes in many different types of environments coastwide.
2. The islands can be planted at various densities.
3. When used as a method of shoreline enhancement; it is cheaper than rock and could be considered a compromise between “hard” and “soft” shoreline protection methods.

4. A staggered terrace-like orientation can break up wave action, reducing turbidity and allow sediment time to settle, potentially accreting and creating emergent marsh.
5. When used in the outfall of sediment laden diversions, it is reasonably expected that the islands will collect sediment behind and inside the island.

Project effectiveness would be monitored and evaluated after construction according to the CWPPRA workgroups' recommended treatments established for this product in Phase 0. The conceptual treatments are shown in Figure 1.

Project Benefits:
Describe demonstration project benefits in as much detail as possible.
The proposed project would:

1. Absorb and deflect wave energy;
2. Protect and enhance existing or planted shoreline vegetation;
3. Allow ingress and egress of aquatic species;
4. Collect sediment by reducing wave energy.
5. Reduce interior marsh loss

Project Costs:
For 6,900 feet of 8 inch thick by 5 feet deep islands, the estimated construction cost including 25% contingency is $1,255,875.

Preparer(s) of Fact Sheet:
Jason Kroll, NRCS, 225-389-0347 jason.kroll@la.usda.gov
Nicole Waguespack, 225-923-2194 nicole@floatingislandES.com

PPL20 DEMONSTRATION PROJECT NOMINEE FACT SHEET
March 29, 2010

Demonstration Project Name: **The Wave Robber (Wave Suppressor Sediment Collection System)**

Coast 2050 Strategy(ies):
Maintenance of Bay and lake Shoreline Integrity.

Potential Demonstration Project Location(s):
Region 2, Barataria Basin, Lafourche Parish, southwestern shore of Little Lake

Problem:
What problem will the demonstration project try to solve? The Wave Suppressor Sediment Collection System addresses two critical areas of need in Coastal Louisiana. First, the WSSC is a system designed to protect the shorelines and wetlands from erosion caused by wave action or tidal surge. Second, the WSSC system can assist in the rebuilding of shorelines and restoration of wetlands loss from wave action and tidal surge.
What evidence is there for the nature and scope of the problem in the project area? The southwestern portion of Little Lake is currently experiencing a high shoreline erosion rate of between 20' and 40' per year. The WSSC system serves as a barrier to disrupt the tidal wave flow into the shorelines and wetlands while at the same time allowing sediment to be carried through the system by the wave action and water currents. The sediment is trapped and deposited between the system and the shorelines and wetlands. Trapped sediment would then consolidate to form a solid base for the establishment of emergent marsh.

Goals:
What does the demonstration project hope to accomplish? The primary goal of this demonstration is to manufacture, deploy and test an alternative method of shoreline protection equivalent to traditional methods, while trapping ambient sediments to facilitate expansion of emergent marsh.

Proposed Solution:
Describe demonstration project features in as much detail as possible. The WSSC system serves as a barrier to disrupt the tidal wave flow into the shorelines and wetlands while at the same time allowing sediment to be carried through the system by the wave action and water currents. The sediment is trapped and deposited between the system and the shorelines and wetlands.

Install 45 WSSC units along three different shorelines (500LF each shoreline), with two different spacing patterns at each site. The first spacing would be installing a 10' gap every 50 LF (5 WSSC units) for 3 50' segments, then increase the number of WSSC units to 10 units (100 LF) between 10' gaps, for a total of 45 WSSC units per shoreline

location. All gaps would be made using the same material as the WSSC units. The spacing is as follows:

Shoreline

5 WSSC / 10' / 5 WSSC / 10' / 5 WSSC / 10' / 10 WSSC / 10' / 10 WSSC / 10' / 10 WSSC

Bay

Project Benefits:

Describe demonstration project benefits in as much detail as possible. Trapped sediment would then consolidate to form a solid base for the establishment of emergent marsh. The WSSC system has several distinct advantages over other wave suppression and sediment retention structures that makes it ideal for the rebuilding and restoring of the degraded wetlands of south Louisiana as well as other areas in the United States and throughout the world. One major advantage is that the WSSC system is transportable and can be easily installed along shorelines and wetlands. Additionally, the WSSC units are reusable and designed to be removed from one location and easily moved to another. The WSSC system is also less expensive than fixed dike structures, a distinct advantage in managing project cost. Lastly, the WSSC system allows a continuous water exchange for ecological support rather than isolating areas behind the structure.

If successful the product could be a low cost option in shoreline protection, dredge spoil containment, barrier island protection and island creation, direct creation of habitat in shallow waters where turbidity could be decreased, and used as an addition to both interior lake and exposed coastal bay shorelines and open bay waters.

Project Costs:

The estimated cost to implement the demonstration project including 25% contingency is $967,113.

Preparer(s) of Fact Sheet:

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

Project:	Project Name:EcoSystems Wave Attenuator Demonstration Proj	Date:3/22/10	Date	Revised:	26-Mar-10
Computed by:	John D. Foret	*Project Priority List 20* (ver.082408)			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	$200,000.00	$200,000
2	WSSC Units	135	EA	$3,190.00	$430,650
3	Anchors	810	EA	$84.00	$68,040
4	Installation	15	DAYS	$5,000.00	$75,000
5					$0
6					
7					$0
	ESTIMATED CONSTRUCTION COST				$773,690
	ESTIMATED CONSTRUCTION + 25% CONTINGENCY				$967,113

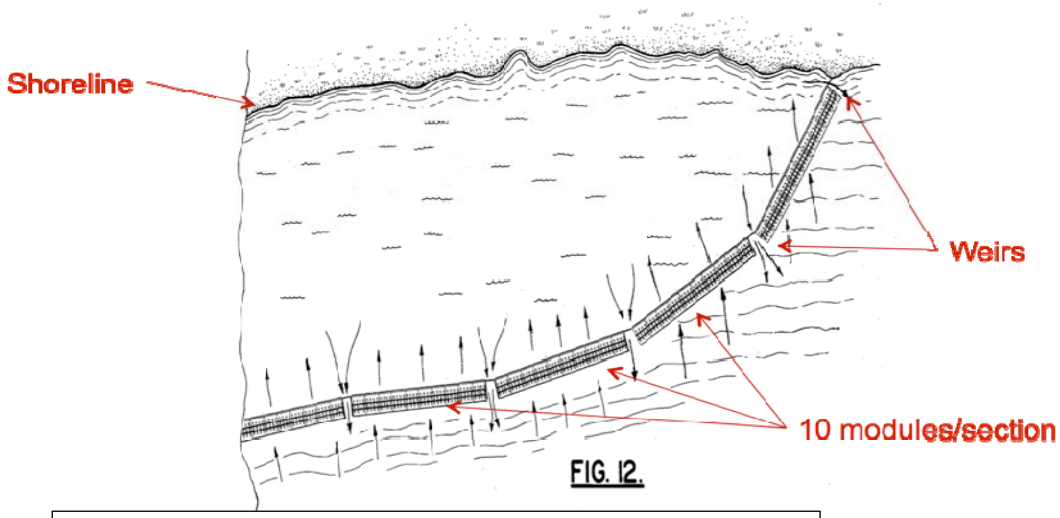


FIG. 12.

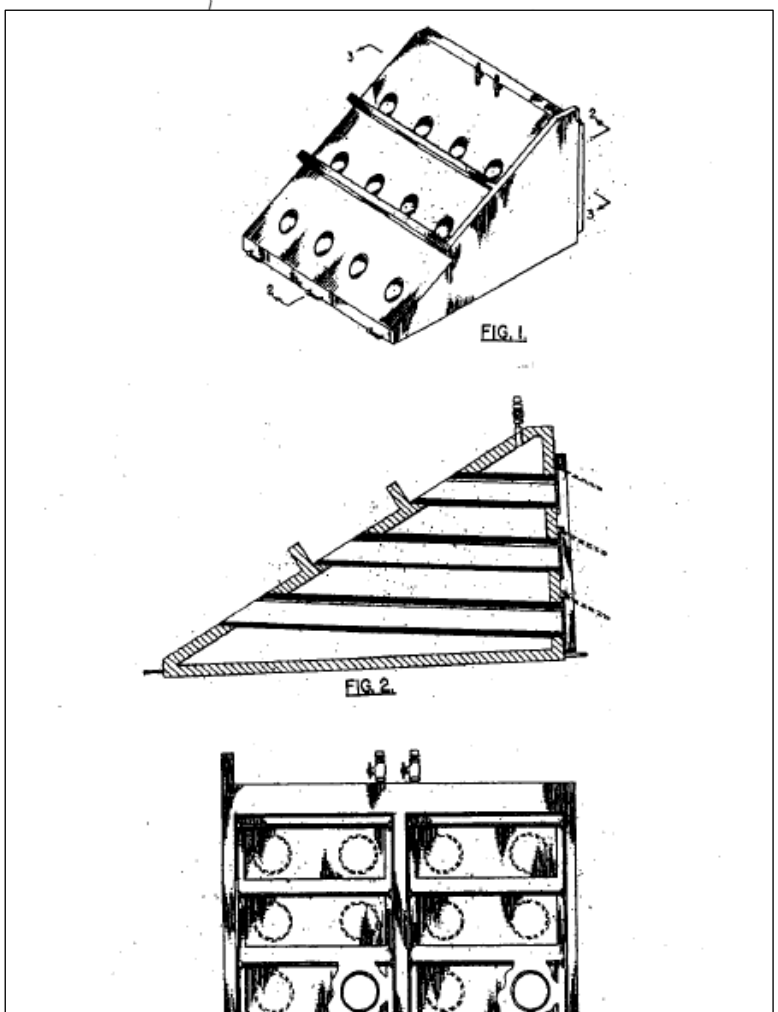


FIG. 1.

FIG. 2.

PPL20 DEMONSTRATION NOMINEE FACT SHEET
April 2, 2010

Demonstration Project Name:
EcoSystems Wave Attenuator for Shoreline Protection Demo Project

Coast 2050 Strategy(ies):
Maintenance of Bay and lake Shoreline Integrity

Potential Demonstration Project Location(s):
Gulf, bay, or lake shorelines; specific site to be determined later. Applicable Statewide

Problem:
Coastal Louisiana consists of areas with unstable soil conditions, subsurface obstructions, accessibility limitations, etc. which limit the types of shoreline protection suitable to provide adequate relief of shoreline erosion. Traditional methods that have shown the most success are though the use of rock riprap. The major advantages of rock are the effectiveness and durability of protection that is provided. The disadvantages are the cost, supply, and site specific problems with placement and handling of material. However, the same problems are also associated with other "non-rock" alternatives that have been tried as substitutes to provide equivalent protection against shoreline erosion.

Goals:
The primary goal of this demonstration is to manufacture, deploy and test an alternative method of shoreline protection equivalent to traditional methods in areas where site conditions limit or preclude traditional methods.

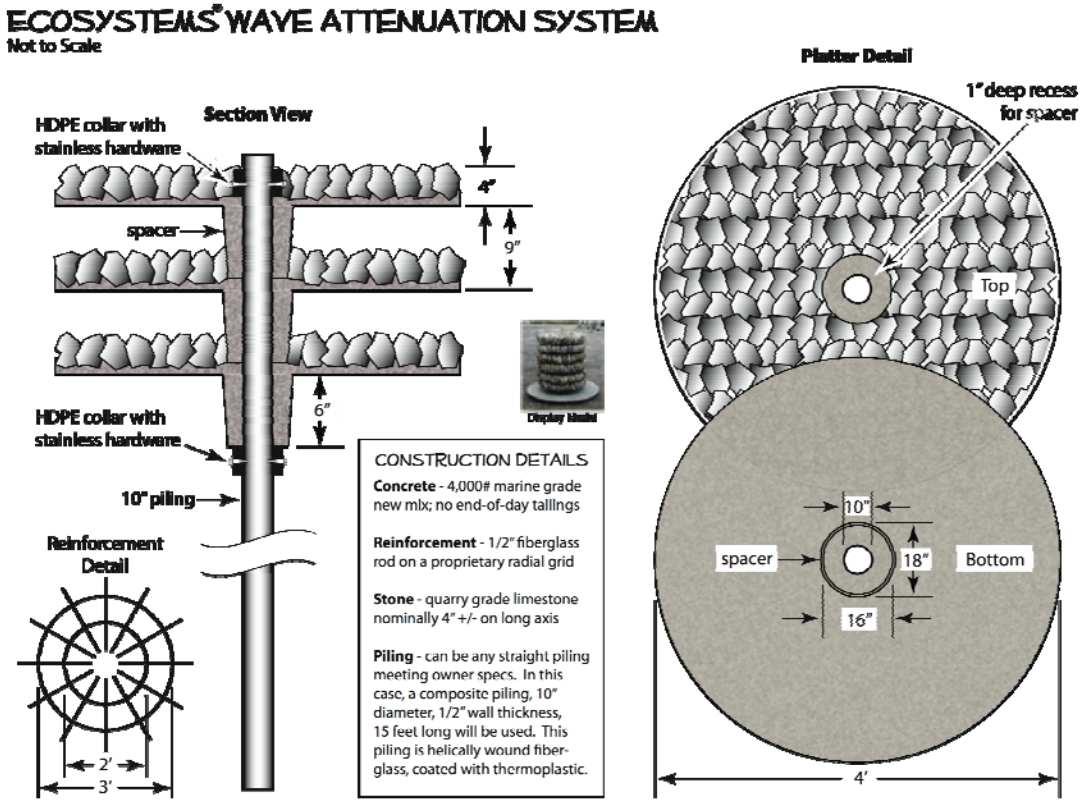
Proposed Solution:
Walter Marine has developed a method of protection against shoreline erosion using the EcoSystems Wave Attenuator. This product is a unit of EcoSystems discs mounted on piling with an innovative anchoring system, which dissipates wave action. The EcoSystems Wave Attenuator could be applicable for use as a shoreline protection or in place of a channel plug. The intent of this demonstration project is to place the EcoSystems Wave Attenuator in an area where traditional restoration strategies would have used a cock plug or sheetpile for a channel closure. The project will evaluate the effectiveness of reducing wave energy and shoreline erosion. As a shoreline protection feature, a double row of pilings (5' OC) would be driven and 4 foot diameter disks mounted on each piling along approximately 600 LF of shoreline. A second treatment will have a double row of pilings (7' OC) driven and disks mounted on each piling along an adjacent 730 LF of shoreline. The project will evaluate the effectiveness of reducing wave energy and shoreline erosion at the two prescribed spacing between disks.

Project Benefits:
If successful the project benefits include: 1) reduction in shoreline erosion associated with wave energy; 2) information regarding deployment and installation of EcoSystems Wave Attenuator; 3) information obtained would allow a comparison with riprap structures; 4) identification of other applications of EcoSystems Wave Attenuators.

Total Project Costs +25%: $1.5M

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

Project:	Project Name:EcoSystems Wave Attenuator Demonstration Proj	Date:3/24/09	Date	Revised:	26-Mar-09
Computed by:	John D. Foret	*Project Priority List 20* (ver.082408)			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$200,000.00	$200,000
2	40' fiberglass piling w/stop	400	EA	$1,029.00	$411,600
3	Ecosystem Discs (4' DIA) Precast concrete Units	2,400	EA	$150.00	$360,000
4	Installation	45	DAYS	$5,000.00	$225,000
5					$0
6					
7					$0
	ESTIMATED CONSTRUCTION COST				**$1,196,600**
	ESTIMATED CONSTRUCTION + 25% CONTINGENCY				**$1,495,750**



PPL20 DEMONSTRATION NOMINEE FACT SHEET
March 26, 2010

Demonstration Project Name:
Beach Glass Demo Project

Coast 2050 Strategy(ies):
Maintenance of Gulf, Bay, and Lake Shoreline Integrity

Potential Demonstration Project Location(s):
Applicable Statewide.

Problem:
Lack of suitable or affordable sand sources to combat various problems experienced throughout coastal Louisiana, such as shoreline retreat or island breach formation – all have focused the need to develop an alternative sand substitute or even a sand additive to help address these types of problems. The major advantages of using suitable sands to address these problems are the effectiveness and durability of protection that is provided. Maybe there is another material that would provide equal, if not superior, results as suitable sands- glass cullet (pulverized glass).

Goals:
The primary goal of this demonstration is to test the feasibility of using glass cullet in the same way that sand use occurs traditionally in coastal restoration projects. There is a wide range of sand usage, from beach refurbishment, shoreline erosion prevention, island breach repair, as capping material at specific fill sites, as an additive to local soils or dredged material to improve soil "stackability"- this is by no means an exhaustive listing of all possible sand use. This demonstration project proposes narrow the focus and use glass cullet to rebuild the shoreline of a barrier island.

Proposed Solution:
Glass cullet has been used in Florida as beach topping to prevent erosion. Information pertaining to this application is available through this website: http://www.broward.org/waste/awards.htm. Glass cullet may be applicable for use as a sand alternative in replacing beach lost due to erosion. The intent of this demonstration project is to place glass cullet in an area where traditionally sand would have been used and compare its performance to sand and/or different combinations of sand and glass cullet along a stretch of shoreline. The project would evaluate the effectiveness of withstanding wave energy and shoreline erosion and the cost compared to strictly sand use. Glass cullet could be placed within a footprint having a total length of 1000 feet, with a 200-foot width at a 2-foot depth, along a suitable shoreline experiencing erosion. The site could be broken into 3 equal-sized segments of different combinations of sand versus cullet, and compared to sand reaches outside of the demo site footprint (demo project dimensions and design would be adjusted to fit cost constraints and parameters that would provide statistically meaningful results as project development continues). The main objective would be to compare the performance of the glass cullet to that of sand.

Current Assumptions: The current proposal assumes that the cullet will be provided at no charge and delivered to a dock in the New Orleans area. It is also assumed that the cullet supplier will stockpile enough quantity for the Demo at no charge.

Project Benefits:
If successful, the project benefits include: 1) reduction in shoreline erosion; 2) information regarding glass cullet's performance in wave energy dissapation and erosion prevention in comparison with sand performance; 3) information regarding deployment, installation, and cost of using glass cullet; and 4) indication of other possible applications of pulverized glass in coastal restoration projects.

Total Project Costs +25%: $1,397,000

Preparer of Fact Sheet:
Susan M.Hennington, 504-862-2504, Susan.M.Hennington@usace.army.mil
Travis J. Creel, 504-862-1071, Travis.J.Creel@usace.army.mil
Kristin M. Johnson, 504-862-2267, Kristin.M.Johnson@usace.army.mil
John B. Petitbon, 504-862-2732, John.B.Petitbon@usace.army.mil
Suzanne R.Hawes, 504-862-2518, Suzanne.R.Hawes@usace.army.mil
Scott F.Wandell, 504-862-1878, Scott.F.Wandell@usace.army.mil
Steven O'Connor, 504-914-0739, nolaglass@gmail.com

LOUISIANA HOUSE OF REPRESENTATIVES

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Fax: 504.436.8994

House Executive Committee
Joint Legislative Committee on
Capital Outlay
Municipal, Parochial, and
Cultural Affairs, Vice Chairman
Natural Resources and Environment
Transportation, Highways, and
Public Works

ROBERT E. BILLIOT
State Representative ~ District 83

April 2, 2010

Colonel Alvin B. Lee
District Engineer, New Orleans
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

Attention: CWPPRA Task Force Members through Scott Wandell

Reference: CWPPRA PPL-20
Bayou Dupont Sediment Delivery Marsh Creation 3 Project

Dear Colonel Lee:

This letter is to express my support for the *Bayou Dupont Sediment Delivery Marsh Creation 3 Project* proposed for PPL-20. This project would use sediment delivery via pipeline from the Mississippi River to create and nourish 501 acres of marsh on the Barataria landbridge. Restoration of the Barataria landbridge is an essential component of the long-term restoration goals for the Barataria Basin. Additionally, the landbridge helps to provide coastal protection to the residents of District 83 and the rest of metropolitan New Orleans, west of the Mississippi River.

The Barataria Basin, which is experience the highest rate of land loss in Louisiana, needs sediment input to sustain the wetlands that are vital to the ecology and economy of the State. Dedicated delivery of sediments from the river provides immediate benefits and every opportunity to advance this type of project should be taken. Therefore, I strongly support the *Bayou Dupont Sediment Delivery Marsh Creation 3 Project* and respectfully request you assistance in moving this project forward.

Thank you for this opportunity to comment on this important coastal restoration effort.

Sincerely,

Representative Robert Billiot
Louisiana District 83

Bayou Segnette Community and Boaters Association, Inc.
760 Oak Avenue ■ Westwego, LA 70094 ■ (504) 236-4811

March 28, 2010

Colonel Alvin B. Lee
District Engineer, New Orleans
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Attention: Scott Wandell, CWPPRA Program

Subject: PPL-20 Candidate Projects
Support for Bayou Dupont Sediment Delivery – Marsh Creation 3

Dear Colonel Lee:

This letter is to express our support for the Bayou Dupont Marsh Creation 3 project in Region 2. CWPPRA has clearly demonstrated the success of dedicated deliver of Mississippi River sediment as a restoration tool with the construction of BA-39, and the State of Louisiana was able to secure additional stimulus funding to expand that project. Let's continue that success by utilizing the known sediment source and pipeline infrastructure that remains in place to create and nourish another 501 acres of marsh in the Bayou Dupont area of the Barataria Landbridge.

We respectfully request that the members of the CWWPRA Technical Committee and Task Force lend their support to the Bayou Dupont Marsh Creation 3 project.

Sincerely,

Vickie Duffourc
President

JEFFERSON PARISH
LOUISIANA
OFFICE OF PARISH PRESIDENT

Our Mission Is:
"Provide the services, leadership, and vision to improve the quality of life in Jefferson Parish."

STEVE J. THERIOT
PARISH PRESIDENT

April 5, 2010

Colonel Alvin B. Lee
District Engineer, New Orleans
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

Attention: CWPPRA Task Force Members through Scott Wandell

Reference: CWPPRA PPL-20
Bayou Dupont Sediment Delivery Marsh Creation 3 Project

Dear Colonel Lee:

The *Bayou Dupont Sediment Delivery Marsh Creation 3 Project* proposed for PPL-20 would greatly benefit the Barataria Basin, which is experiencing the highest rate of land loss in Louisiana. This project would use sediment delivery via pipeline from the Mississippi River to rebuild 402 acres of marsh in a critical area of the Barataria Land Bridge, and would nourish an additional 99 acres of tattered marsh on a land mass that is immensely important to the natural and built environment of Jefferson Parish. Due to its close proximity to the nearly completed BA-39, Bayou Dupont Marsh Creation Project, this project will provide immediate benefits and continue the progress being made toward restoration of the land bridge. As you know, $3 million dollars of federal stimulus funds and $1.5 million of surplus CWPPRA project funds were used to construct an additional 110 acres, as the infrastructure was already in place, making the additional marsh creation shovel-ready. This same infrastructure would be used for the proposed *Bayou Dupont Sediment Delivery Marsh Creation 3 Project.*

Jefferson Parish has long supported use of river sediments to restore marsh and would like to see the entire land bridge restored using this technique. Accordingly, we strongly support the *Bayou Dupont Sediment Delivery Marsh Creation 3 Project* and respectfully request you support in moving this project forward.

Thank you for this opportunity to comment on this important coastal restoration effort.

Sincerely,

Steve J. Theriot
Jefferson Parish President

SUITE 1002 - 1221 ELMWOOD PARK BOULEVARD - JEFFERSON, LOUISIANA 70123
P.O. BOX 10242 - JEFFERSON, LOUISIANA 70181-0242 – (504) 736-6400

JEFFERSON PARISH
LOUISIANA
MARINE FISHERIES ADVISORY BOARD

April 5, 2010

Colonel Alvin B. Lee
District Engineer, New Orleans
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

Attention: Scott Wandell

RE: CWPPRA PPL-20 Project Recommendation

Dear Colonel Lee:

The Jefferson Parish Marine Fisheries Advisory Board fully supports the ***Bayou Dupont Sediment Delivery – Marsh Creation 3*** project in Region 2. The Board has long been a proponent of utilizing sediments pumped from the Mississippi River to create and restore critical marsh habitat. This year saw construction of BA-39, the first CWPPRA project to transport sediments from the Mississippi River through a pipeline to build wetlands outside the river's levees. The currently proposed project would expand on the success of that project and continue the restoration of the Barataria Landbridge.

Thank you for your continued contribution to coastal restoration in Louisiana and for the opportunity to comment on this important coastal restoration effort.

Sincerely,

Jason Smith

Jason Smith, Board Coordinator
Jefferson Parish Marine Fisheries Advisory Board

cc: Board Members
Marnie Winter

4901 JEFFERSON HIGHWAY - SUITE E - JEFFERSON. LOUISIANA 70121 - (504) 731-4612

Pm-OR

CITY OF LAKE CHARLES

RANDY ROACH
MAYOR

326 Pujo St. • P.O. Box 900
Lake Charles, LA 70602-0900
(337)-491-1201 • FAX (337)-491-1206

OFFICE OF THE MAYOR

February 17, 2010

Mr. Thomas A. Holden, Chairman
U.S. Army Engineer District, New Orleans
Office of the Chief
7400 Leake Avenue
New Orleans, LA 70160-0267

Dear Mr. Holden:

I am writing to express my support for the Cameron Meadows Marsh Creation and Wetland Restoration Project that was nominated at the Coastal Wetlands, Planning, Protection, and Restoration Act (CWPPRA) Project Priority List 20. The project area is located in Cameron Parish, approximately 18 miles west of Cameron, 5 miles north of the Gulf of Mexico shoreline, northeast of Johnson's Bayou, immediately south of Cameron Meadows Gas Field.

During the hurricanes of 2005 and 2008, the physical removal of the marsh coupled with low rainfall after Hurricane Ike has resulted in the conversion of intermediate to brackish emergent marsh to approximately 7,000 acres of shallow open water. In addition to these direct losses, significant interior marsh loss has resulted from saltwater intrusion and hydrologic changes associated with storm damage and blocked drainages. Habitat shifts and hydrologic stress reduce marsh productivity, a critical component of vertical accretion in intermediate wetlands. It is unlikely that many of these areas will recover without some type of direct intervention.

The project goals are to create approximately 610 acres of marsh with dredge material and terraces, restore coastal marsh habitat, and reverse the conversion of wetlands to shallow open water in the project area through reestablishment of hydrologic connectivity. The estimated cost to construct this project is $27.2 million.

It is my understanding that if this project is approved for construction, Dore Energy Corporation has pledged to contribute an additional $1,000,000 toward the construction of this project.

Thank you for your consideration,

With best regards,

RANDY ROACH
Mayor, City of Lake Charles

WILLIE L. MOUNT
State Senator

Health & Welfare
Chairwoman

SENATE
STATE OF LOUISIANA

February 25, 2010

Mr. Thomas A. Holden, Chairman
U.S. Army Corps of Engineers
Office of the Chief
P.O. Box 60267
New Orleans, LA 70160-0267

Re: CWPPRA Project, Cameron Meadows Marsh Creation and Wetlands Restoration Project

Dear Thomas,

Please accept this letter as my support of the Cameron Meadows Marsh Creation and Wetland Restoration Project that was nominated at the Coastal Wetlands, Planning, Protection, and Restoration Act Project Priority List 20. The aftermath of the hurricanes of 2005 and 2008 has left the Cameron Meadows Marsh in serious need. It is my understanding that the project goals are to create approximately 610 acres of marsh with dredge material and terraces, restore coastal marsh habitat, and reverse the conversion of wetlands to shallow open water in the project through reestablishment of hydrologic connectivity.

I strongly recommend this project and give it my full support. If you need further assistance, please feel free to contact me. I am

Yours very truly,

Willie L. Mount

Willie L. Mount
State Senator

WLM/aej

Post Office Box 3004, Lake Charles, LA 70602-3004
Magnolia Building, 1011 Lakeshore Drive, Suite 200, Lake Charles, LA 70601
Phone (337) 491-2016 or 888-772-2655; Fax (337) 433-8080
lasen27@legis.state.la.us

WAYNE TOUCHET
PRESIDENT

DANE HEBERT
VICE-PRESIDENT

CHRIS THERIOT
ADMINISTRATOR /
SECRETARY-TREASURER

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DISTRICT 13
T. J. PREJEAN, JR.

DISTRICT 14
LEON BROUSSARD

VERMILION PARISH POLICE JURY
Courthouse Bldg.
100 N. State St., Suite 200
Abbeville, Louisiana 70510

337-898-4300
FAX 337-898-4310

February 18, 2010

U.S. ARMY CORPS OF ENGINEERS
ATTN: Ms. Melanie Goodman
New Orleans District
P. O. Box 60267
New Orleans, LA 70160-0267

Re: PPL 20 – Region 3 Projects

Dear Ms. Goodman:

In action taken at their February 18, 2010 meeting, the Vermilion Parish Police Jury approved sending a letter of support for the Parish's project for PPL 20 in Region 3 for the "Cole 's Bayou Marsh Creation and Restoration Project".

The Jury feels that this project will restore and sustain wetlands, restore and protect the wetlands and stabilize the width and depth of major navigational channels. This project will also create approximately 365 acres of marsh and terracing and will reduce shoreline erosion.

Should you have any questions, or need additional information, please feel free to call on us.

Very Truly Yours,

Wayne Touchet
President

RWT/ld

WAYNE TOUCHET
PRESIDENT

DANE HEBERT
VICE-PRESIDENT

CHRIS THERIOT
ADMINISTRATOR /
SECRETARY-TREASURER

MEMBERS

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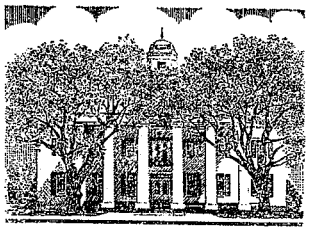
DISTRICT 12
CLORIS J. BOUDREAUX

DISTRICT 13
T. J. PREJEAN, JR.

DISTRICT 14
LEON BROUSSARD

VERMILION PARISH POLICE JURY
Courthouse Bldg.
100 N. State St., Suite 200
Abbeville, Louisiana 70510

337-898-4300
FAX 337-898-4310



April 14, 2010

U.S. ARMY CORPS OF ENGINEERS
ATTN: Ms. Melanie Goodman
New Orleans District
P. O. Box 60267
New Orleans, LA 70160-0267

Re: PPL 20 – Region 3 Projects
PPL 20 – Region 4 Projects

Dear Ms. Goodman:

In action taken at their February 18, 2010 meeting, the Vermilion Parish Police Jury approved sending a letter ranking the following projects according to importance for PPL 20 for Region 3 and Region 4:

REGION 3

A. Cole's Bayou Marsh Creation and Restoration Project
B. GIWW Bankline Protection Project
C. Cote Blanche Freshwater and Sediment Introduction and Shoreline Protection
D. Shark Island Shoreline Protection Project

REGION 4

A. Big Marsh Restoration at Freshwater Bayou Project
B. Lower Mud Lake Terracing and Bank Stabilization Project
C. Grand Lake Shore Protection at Lacassine Point and Umbrella Bay Shoreline Protection Project
D. Rockefeller Gulf of Mexico Shoreline Stabilization, Joseph's Harbor East Project

Should you have any questions, or need additional information, please feel free to call on us.

Very Truly Yours,

Chris Theriot

Chris Theriot
Administrator/Secretary-Treasurer

CPT/ldb

ST. TAMMANY PARISH
DEPARTMENT OF ENGINEERING
P. O. BOX 628
COVINGTON, LA 70434
PHONE: (985) 898-2552 OR (985) 646-4086
FAX: (985) 898-5205
e-mail: eng@stpgov.org

Kevin Davis
Parish President

March 31, 2010

Coastal Wetlands Planning, Protection and Restoration Act Task Force
C/O Mr. Scott Wandell
US Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160-0267

Re: Parish Support for Bayou Bonfouca Marsh Creation Project

Dear Sirs,

St. Tammany Parish enthusiastically supports the selection of the Bayou Bonfouca Marsh Creation Project for implementation in Project Priority List 20 this year. This project will create emergent marsh in an area devastated by Hurricane Katrina and in imminent danger of further collapsing into an open water area as part of Lake Pontchartrain.

While prior to Katrina this marsh consisted of a significant amount of open water, it had appeared to be stabilizing until the storm hit. It sheared acre upon acre of emergent vegetation and sediment from the area around Bayou Bonfouca and carried it north into a rack line that extended into the pine forests that back up our coastal marshes. Additionally, Katrina and subsequent tropical events have eroded the sand shoreline of Lake Pontchartrain back into the open water areas creating a breach that now allows the water and energy of Lake Pontchartrain direct access to the interior marsh shorelines, causing a drastic increase in the rate of open water conversion.

St. Tammany Parish has recognized the immediacy of this problem by devoting Coastal Impact Assistance Program money to constructing an emergency dedicated dredging project at the breach. While it will not repair the damage being caused to the interior marsh, nor will it be a permanent solution, it is hoped that it will fill the breach in the lake shore long enough for larger federal restoration efforts to be directed at the area.

Additionally, St. Tammany Parish has recently begun implementing a project which is taking the organic sediments and marsh vegetation dislodged from the marsh and carried into canals off of Bayou Bonfouca and pumping them back into open water areas scoured by Katrina. We hope to

create between 15 and 35 acres of emergent marsh using the same material that was removed by the energy of this area's most destructive tropical event in recent history.

The Bonfouca Marsh is part of the Big Branch Marsh National Wildlife Refuge and is a natural resource that is widely used by residents from all over the New Orleans metro area. It provides, in a healthy state, some measure of protection for the residents of southwest Slidell from storm surge. It is an integral part of the contiguous marsh fringing the north shore of Lake Pontchartrain and contributes to the biological heath as well as providing water quality benefits to the entire basin.

In the 20 years that the Coastal Wetland Planning, Protection, and Restoration Act has been implemented, and after approximately 150 projects have been selected for funding, St. Tammany Parish has received funding for two projects. In the early 90's, St. Tammany proposed a project in this very area that was not funded in favor of the original Fritchie Marsh Project (PO-6). This area has long been a concern from a restoration standpoint and it continues to be one. If work is not done soon to repair the marsh loss in this area, our fear is that it will continue to erode until it is lost forever.

Sincerely,

Brian K. Fortson
Environmental Specialist
St. Tammany Parish Government

St. Bernard Parish Government

8201 West Judge Perez Drive Chalmette, Louisiana 70043
Phone (504) 278-4200 Fax (504) 278-4330

Craig P. Taffaro, Jr.
Parish President

April 6, 2010

Colonel Alvin B. Lee, District Engineer, New Orleans District
c/o Melanie Goodman
U. S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA. 70160

RE: CWPPRA PPL-20 Project Recommendations

Dear Colonel Lee,

As the Parish President of St. Bernard Parish and an active member of Parishes Against Coastal Erosion (P.A.C.E.), I would like to express my support of the **Lake Lery Marsh Creation Nominee Project.**

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.

This project will directly and indirectly create and / or nourish 493 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 around the marsh creation/nourishment area and will be gapped within 3 years of construction to allow greater tidal exchange and estuarine organism access.

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 4th 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.

I would like to strongly support this project for further development and funding by the CWPPRA Task Force.
Respectfully,

Craig P. Taffaro, Jr.
Parish President

Wandell, Scott F MVN

From: Creel, Travis J MVN
Sent: Thursday, April 08, 2010 2:35 PM
To: Wandell, Scott F MVN
Subject: Fw: CWPPRA PPL 20 recommendation

Message sent via my BlackBerry Wireless Device

_____

From: John Lopez <johnlopez@pobox.com>
To: Hennington, Susan M MVN; Creel, Travis J MVN; Melanie L MVN Goodman <melanie.L.goodman@army.mil>
Cc: anne@saveourlake.org <anne@saveourlake.org>; Fisher, Wynecta
Sent: Tue Apr 06 11:38:11 2010
Subject: CWPPRA PPL 20 recommendation

Ms. Melanie Goodman

Mr. Travis J. Creel

Ms. Susan Hennington

USACE

Re: PPL 20 "Unknown Pass to Rigolets Shoreline Protection"

As the newly elected chair of New Orleans Coastal Zone Advisory Committee, I have been requested by the committee by unanimous vote to send a letter of support for the "Unknown Pass to Rigolets Shoreline Protection" being considered for PPL 20. The importance of the Orleans land bridge is now well documented and is considered a “Critical Landscape feature” in the Corps’ LACPR report, because the land bridge reduces surge into Lake Pontchartrain. This project complements PO-34 being designed by CWPPRA and will have the advantage of prior experience and geotechnical information. The project has a high chance of success.

Regards,

John A. Lopez, Ph.D.

Director-Coastal Sustainability Program Lake Pontchartrain Basin Foundation

Chari New Orlean Coastal Zone Advisory COmmittee

985 643-4589 - land line

504-421-7348 - cell

johnlopez@pobox.com

FLOATING ISLAND
ENVIRONMENTAL SOLUTIONS

February 23, 2010

Mr. Tom Holden
U.S. Army Corps of Engineers, New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

Mr. Holden,

As you know, our product, BioHaven® Floating Islands, has been introduced into PPL 20 as a Demo project for 2010. We are extremely excited about the possibility of what selection could do for our product, but even more so about what it could mean for our coast. Enclosed you will find a copy of our presentation. If you have any lingering questions about our product that were not answered at the regional meetings, please let me know. I would be happy to answer any questions you may have and/or provide you with any information that you request. I look forward to working with you through this selection process.

Sincerely,

Nicole Waguespack

Nicole Waguespack

3185 Balis Drive, Suite 113 Baton Rouge, LA 70808
Office: 225.923.2194 Toll Free: 866.821.0226 Fax: 225.923.2528
www.floatingislandes.com

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WASHINGTON, DC 20510

WASHINGTON, D.C.
HART SENATE OFFICE BUILDING
SUITE SH-516
WASHINGTON, DC 20510
(202) 224-4623
FAX: (202) 228-5061

BATON ROUGE
858 CONVENTION STREET
BATON ROUGE, LA 70802
(225) 383-0331
FAX: (225) 383-0952

Website with E-Mail Access:
vitter.senate.gov

February 10, 2010

Colonel Alvin B. Lee, District Commander
U. S. Army Corps of Engineers, New Orleans District
Executive Office
P. O. Box 60267
New Orleans, LA 70160-0267

Dear Colonel Lee,

It has been brought to my attention that there is a project proposal submitted to the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) for the Mermentau River Basin "Lower Mud Lake Terracing and Bank Stabilization Project." The objective of this project is to induce sedimentation to create emergent vegetated wetlands by reducing wave fetch.

It is my understanding the large area of fetch and associated wave energies prevent sediments from the Mermentau River from being deposited. Therefore, much of the sediment is being exported out of the Mermentau Ship Channel. This project would construct sediment trapping terraces similar to those used by Little Vermilion Bay, TV-12, and the Jaws, TV-15. Those terraces would dissipate wave energy and allow sediment to drop out of the water column and increase accretion, which would permit emergent vegetation to establish. Distributaries would be dredged to direct sediments to the project and distribute that sediment throughout the project area.

I am told approximately 5,500 linear feet of shoreline protection would be constructed along the west bank of the Mermentau Ship Channel, and that shoreline protection feature is expected to completely halt shoreline erosion. The proposed 36,000 linear feet of terracing will establish approximately 50 acres of emergent marsh and maximize sedimentation within the project area.

I commend this effort to create wetlands in our state and ask that you give your full consideration to the above referenced proposal. A report of the final decision would be helpful and appreciated. Please contact me through Ms. Brenda Moore in my Metairie Office with any questions. Thank you for our time and attention.

Sincerely,

David Vitter

David Vitter
United States Senate

cc: CWPPRA Task Force Voting Members

ACADIANA
800 LAFAYETTE STREET
SUITE 1200
LAFAYETTE, LA 70501
(337) 262-6898
FAX: (337) 262-6373

CENTRAL LOUISIANA
2230 SOUTH MACARTHUR DRIVE
SUITE 4
ALEXANDRIA, LA 71301
(318) 448-0169
FAX: (318) 448-0189

NORTHEAST LOUISIANA
1217 NORTH 19TH STREET
MONROE, LA 71201
(318) 325-8120
FAX: (318) 325-9165

NORTHWEST LOUISIANA
920 PIERREMONT ROAD
SUITE 113
SHREVEPORT, LA 71106
(318) 861-0437
FAX: (318) 861-4865

SOUTHEAST LOUISIANA
2800 VETERANS BOULEVARD
SUITE 201
METAIRIE, LA 70002
(504) 589-2753
FAX: (504) 589-2607

SOUTHWEST LOUISIANA
3221 RYAN STREET
SUITE E
LAKE CHARLES, LA 70601
(337) 436-0453
FAX: (337) 436-3163

CHARLES W. BOUSTANY, JR., MD
7TH DISTRICT, LOUISIANA

LAFAYETTE DISTRICT OFFICE:
500 LAFAYETTE STREET
SUITE 1400
LAFAYETTE, LA 70501
(337) 235-6322

LAKE CHARLES DISTRICT OFFICE:
ONE LAKESHORE DRIVE
SUITE 1135
LAKE CHARLES, LA 70629
(337) 433-1747

Congress of the United States
House of Representatives
Washington, DC 20515–0304

COMMITTEE ON WAYS AND MEANS
SUBCOMMITTEES:
OVERSIGHT, RANKING MEMBER
INKIME SECURITY AND FAMILY SUPPORT

WASHINGTON, DC OFFICE:
1117 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-2031

February 10, 2010

Dear CWPPRA Task Force:

As the Member of Congress representing Southwest Louisiana, I would like to offer my support for the Lower Mud Lake Terracing and Bank Stabilization Project proposed for PPL-20.

This project is projected to construct 36,000 linear feet of terraces approximately 60 feet wide and benefit approximately 50 acres of emergent marsh. 5,500 linear feet of shoreline protection would also be constructed along the Mermentau Ship Channel, which is expected to completely halt shoreline erosion at that location.

The proposed project would greatly compliment various other coastal protection and restoration projects previously authorized in the region and I respectfully request your full support for the Lower Mud Lake Terracing and Bank Stabilization Project.

Sincerely,

Charles W. Boustany, Jr., MD
Member of Congress

PARISH OF CALCASIEU

State of Louisiana

RESOLUTION

BE IT RESOLVED BY THE POLICE JURY OF CALCASIEU PARISH, LOUISIANA, in Regular Session convened on the 18th day of February, 2010, that it does hereby support two (2) coastal restoration projects in Cameron Parish known as Mermentau River Basin - "Lower Mud Lake Terracing and Bank Stabilization Project" and Calcasieu-Sabine River Basin - "Hollynd Beach Breakwaters" that will be presented to the CWPPRA (Coastal Wetlands, Planning, Protection and Restoration Act) Task Force on February 24, 2010, as per the request of Ms. Tina Horn, Parish Administrator, Cameron Parish Police Jury.

THUS DONE AND PASSED on the date above inscribed.

* * * * * * * * * * * * *

STATE OF LOUISIANA
PARISH OF CALCASIEU

I HEREBY CERTIFY that the foregoing is a true and correct copy of the original resolution as adopted by the Calcasieu Parish Police Jury in Regular Session convened on the 18th day of February, 2010.

IN TESTIMONY WHEREOF, witness my official signature and the seal of the Parish of Calcasieu, Louisiana, on this the 19th day of February, 2010.

Kathy P. Smith

Kathy P. Smith, Recording Secretary

Wandell, Scott F MVN

From: Carl Moller [ceeemo@gmail.com]
Sent: Friday, April 02, 2010 11:10 AM
To: Wandell, Scott F MVN
Subject: CWPPRA program

Greetings,

I writing to tell you of my support for NOLA Glass and of my hopes that you will choose them as one of your CWPPRA Programs in New Orleans, LA.

Sincerely,
Carl Moller
New Orleans, 70130

Wandell, Scott F MVN

From: Hirsh Katzen [hirshk@mac.com]
Sent: Thursday, April 01, 2010 5:23 AM
To: Wandell, Scott F MVN
Subject: CWPPRA PPL 20

Follow Up Flag: Follow up
Flag Status: Completed

Please accept this email as an indication of my strong support for the USACE's consideration of NOLA GLASS to be selected as a company in the demonstration projects for CWPPRA program.

Thank you.

-Hirsh Katzen
NOLA 70118

Wandell, Scott F MVN

From: Stacey Kmetyk [kinetyk@verizon.net]
Sent: Wednesday, March 31, 2010 3:51 PM
To: Wandell, Scott F MVN
Subject: Glass Recycling

To Whom it May Concern,

My name is Stacey Kmetyk and I own a home in New Orleans. I moved here from New York where just about every thing is recycled. It has always been difficult to simply throw away items that I am used to recycling, especially glass. In New York, they pulverize it and add it to road surfacing material with great success. I often wondered why it isn't used for such projects here.
It has come to my attention that NOLA Glass is a new company that would like to recycle glass in New Orleans, and that one way is to re-use it would be as sand. They are one of the "CWPPRA PPL 20 Project Nominees".
This sounds like a wonderful idea to me and I hope you will give this concept and this company your attention and consideration.
Sincerely,
Stacey Kmetyk

Wandell, Scott F MVN

From: Holt Kolb [holtkolb@gmail.com]
Sent: Wednesday, March 31, 2010 7:59 PM
To: Wandell, Scott F MVN
Subject: nola glass

We received the recent email in regards to glass recycling in NOLA.
We are very much in favor of that as it seems to be such a waste that we are not able to recycle glass. My parents in NC are able to recycle all glass as well as plastics. In a city as large as New Orleans with as many bars and restaurants, not recycling glass seems extremely wasteful.

Thank you,

Mr. and Mrs. Gordon Hardin Kolb, Jr

Wandell, Scott F MVN

From: Nancy Adams [nanscholar@gmail.com]
Sent: Friday, April 02, 2010 11:00 AM
To: Wandell, Scott F MVN
Subject: NOLA GLASS PROJECT

Dear Mr. Wandell,
I am strongly in favor of the glass recycling project proposed by NOLA Glass and hope you will choose it for one of your projects. Our area is in desperate need of such a project both for coastal restoration purposes and because no other glass recycling program currently exists in the New Orleans metro area.
Thanks so much.
Nancy Adams

Wandell, Scott F MVN

From: Patti Dunn [patti@pattidunndesign.com]
Sent: Wednesday, March 31, 2010 10:03 AM
To: Wandell, Scott F MVN
Cc: patti@pattidunndesign.com
Subject: NOLA Glass support

Hello Scott Wandell,

My name is Patti Dunn and I am a local business owner and designer in New Orleans. I have recently learned about the NOLA Glass project and am very much in support of these efforts. This project seems like a potentially very efficient use of and fantastic solution for the un-recycled glass in our area. Please let me know if there is anything more I can do to help in the passing of your vote for this program with the Army Corps of Engineers.

Thank your for considering my opinion and good luck with your decisions -

patti dunn

Industrial Designer
832 Clouet Street
New Orleans, LA 70117
504.427.3247
www.coroflot.com/padunn <http://www.coroflot.com/padunn>

Wandell, Scott F MVN

From: Jennifer Pearl [jen@jennifervpearl.com]
Sent: Wednesday, March 31, 2010 12:18 PM
To: Wandell, Scott F MVN
Subject: NOLA Glass

Attachments: image003.jpg

image003.jpg (6 KB)

To Whom It May Concern,

I am writing in support of NOLA Glass, this project has multiple benefits including reducing waste to our landfills, providing employment opportunities and helping to protect our wetlands by using pulverized glass as fill.

Please give this project serious consideration as it’s a win-win-win for New Orleans.

Thank You,

Jennifer Pearl

onenesslogo.jpg

Jennifer V. Pearl

504-258-5724 C

504-488-7803 F

jen@jennifervpearl.com

www.jennifervpearl.com

It's time for real change in New Orleans, starting with re-structuring our city government for efficiency

Check out www.councilmanagernola.com <http://www.councilmanagernola.com> for more information.

Wandell, Scott F MVN

From: kgelderman1@cox.net
Sent: Wednesday, March 31, 2010 7:33 AM
To: Wandell, Scott F MVN

Please bring glass recycling back to our area! We are long overdue.

Thank you

Wandell, Scott F MVN

From: Dru Lamb [dlamb@studioedr.com]
Sent: Tuesday, March 30, 2010 10:39 AM
To: Wandell, Scott F MVN
Subject: CWPPRA program

Follow Up Flag: Follow up
Flag Status: Red

I would like to see the NOLA Glass project picked for the CWPPRA program. It is an incredible plan to deal with the extensive amount of glass trash that southern Louisiana produces and rebuild our coast at the same time.

Thank you.

Dru Lamb, IIDA, LEED AP, LA Reg. ID #1297 | Interior Designer | Eskew+Dumez+Ripple | 365 Canal Street, Suite 3150 | New Orleans, LA 70130 | 504.561.8686 | studioedr.com
<http://www.studioedr.com/>

Wandell, Scott F MVN

From: Tina Freeman [tina@tinafreeman.com]
Sent: Tuesday, March 30, 2010 7:09 PM
To: Wandell, Scott F MVN
Subject: Recycled Glass

Dear Scott Wandell,

I would like to see the U.S. Army Corps of Engineers award the demonstration project to NOLA Glass... It would allow a free and readily available resource to be used for the rebuilding of the wetlands rather than be dumped in to landfills...

Thank you,
Tina Freeman

April 6, 2010

Scott Wandell
CWPPRA Program
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160

Re: Crushed Glass for Coastal Nourishment

To Whom It May Concern:

I am writing on behalf of Tierra Resources LLC in support of the CWPPRA demonstration project to use crushed glass for coastal nourishment and restoration programs. I believe that this could be a potential vital component to future coastal restoration. Tierra Resources LLC consults on many coastal restoration projects in the region. Many times the cost to fill eroded wetland areas make many restoration projects unfeasible. A demonstration project would determine the viability and costs associated with this technique and promote sustainable waste management. I give my full support to NOLA glass on this important and exciting demonstration project.

If you have any questions please feel free to contact me.

Kind Regards,

Sarah K. Mack, MSPH, PhD, CFM
President
Tierra Resources LLC

1310 ST. ANDREW STREET SUITE 1 NEW ORLEANS, LA 70130
TIERRARESOURCESLLC.COM
(504) 339-4547

Wandell, Scott F MVN

From: Beverly Nichols [bevn@bb-cpa.com]
Sent: Friday, April 02, 2010 11:46 AM
To: Wandell, Scott F MVN
Subject: RE CWPPRA PPL 20 Project

Follow Up Flag: Follow up
Flag Status: Red

Dear Mr. Wandell,

I and many of my neighbors in the Uptown area of the city that pay for recycling are very much in support of the program to restore the recycling of glass and to find ways of using it in our critical coastal restoration. Yes, yes, yes, please move forward with this program.

I understand the you are considering three projects for this program and that NOLA Glass, a 501(c)(3) is one. I also strongly support NOLA Glass to take part in this project.

Bev Nichols

Beverly R. Nichols
Bourgeois Bennett, L.L.C.
111 Veterans Blvd, Suite 1700
Metairie, LA 70005
504-831-4949
bevn@bb-cpa.com
Required notice if this communication includes tax advice:
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Wandell, Scott F MVN

From: Tina Freeman [tina@tinafreeman.com]
Sent: Tuesday, March 30, 2010 7:09 PM
To: Wandell, Scott F MVN
Subject: Recycled Glass

Dear Scott Wandell,

I would like to see the U.S. Army Corps of Engineers award the demonstration project to NOLA Glass... It would allow a free and readily available resource to be used for the rebuilding of the wetlands rather than be dumped in to landfills...

Thank you,
Tina Freeman

Wandell, Scott F MVN

From: Creel, Travis J MVN
Sent: Tuesday, April 06, 2010 7:56 AM
To: Wandell, Scott F MVN
Subject: FW: PPL 20: Unknown Pass to Rigolets Shoreline Protection

Scott add this to the letters of support.

-----Original Message-----
From: Leo F. Richardson, II [mailto:lfrichardson@cox.net]
Sent: Tuesday, April 06, 2010 7:52 AM
To: Creel, Travis J MVN; Hennington, Susan M MVN
Cc: Miller, Gregory B MVN; Fisher, Wynecta; Lopez John; Schexnayder Mark; Crews Woody
Subject: PPL 20: Unknown Pass to Rigolets Shoreline Protection

Mr. Travis J. Creel
Ms. Susan Hennington

USACE

Re: PPL 20 "Unknown Pass to Rigolets Shoreline Protection"

Dear Mr. Creel
We would appreciate your advising the CWPPRA Technical Committee that the Lake Catherine Civic Association strongly supports the PPL 20 project nominee titled Unknown Pass to Rigolets Shoreline Protection.

We believe that it is in the interests of all of the Lake Pontchartrain shoreline communities sheltered by the surge attenuation capabilities of the Orleans Land Bridge that the Lake Borgne shoreline protection plans already in place under CIAP (Bayou Bienvenue to Alligator Point) and CWPPRA (Alligator Point to Unknown Pass) be extended to the Rigolets. We believe that the integrity of the Orleans Land Bridge is a sine qua non for the integrity of the lakefront levees of Orleans and Jefferson Parishes. Its southern shorelines have long been recognized as significant elements in the Multiple Lines of Defense strategy for the region.
Let's finish the job we have already started.

Respectfully,

Leo F. Richardson, II
Board member / Executive Director
Lake Catherine Civic Assn.
504-782-9399

Orleans Parish CWPPRA Project
Unknown Pass to Rigolets Shoreline Protection
April 6, 2010

We, the undersigned, request that the CWPPRA Technical Committee include the Unknown Pass to Rigolets Shoreline Protection Project on the PPL 20 Priority List. We submit that this comprehensive project will provide better protection and more benefits to the residents of New Orleans and surrounding Parishes. The project will protect infrastructure to include three federal highways, railroads, Bayou Sauvage and surrounding communities. There has been continued loss between Unknown Pass and the Rigolets and this project, if built, will help reduce storm surge and the continued loss. This area has been recognized as a Critical Landscape feature in the LACPR report and mentioned as part of the Multiple Lines of Defense strategy. Please give this project the high consideration.

Name	Address	Phone Number
Pamela M. Davis	2156 Greenwood Dr. LaPlace, LA 70068	(225)240-3068(c)
Antoinette Foster	2011 Adams ST N.O. LA 70118	(504)458-9593
Lisa Richard	2939 Chelsea Dr. N.O. LA. 70131	(504) 324-5607
ARLEN BRUNSON	7921 S. Claiborne Ave.	504 861 8426

Name	Address	Phone Number
Madelyn Sanchez	1340 Poydras St Rm 1007 New Orleans, LA 70112	(504) 658-4214
Marbarell Simmons	1340 Poydras Suite 1000 N.O. La. 70112	504-658-4232
Juanita Reynolds	1340 Poydras #1000	504 658-4231
Quwanda Washington	7040 Boston Dr N.O La 70127	(504) 994-1339
mary Tyler	2258 Lafreniere St N.O. LA 70122	(504) 669-6952
Ronald Fornorette	7162 Grey Oaks NOLA 70126	(504) 658-4252
Myron O. Lee Sr	1900 Van Arpel Dr LaPlace, LA 70068	(985) 652-1159

Name	Address	Phone Number
Zak Rahman	2483 Royal N.O., LA 70117	504-945-4425
Joyce Atkins	N.O. Pow 70118	504-253-1104
Sabrina R. Johnson	1340 Poydras St. NOLA 70112	(504) 658-0905
Phyllis Graves	1340 Poydras Street Suite 1000 New Orleans, LA 70112	(504) 658-4346
Bobbie Howard	1340 Poydras St. Suite 1000 NOLA 70112	504818-4272
Randal Smallwood Sr.	1340 Poydras St Suite 1000 NOLA 70112	504 658-4254
Perry Britz	1340 Poydras St. Suite 1000 New Orleans LA 70112	504-058-4227

Name	Address	Phone Number
Karen A. Richards	5629 3rd St. Violet, LA. 70092	(504) 304-7366
Samuel Loftfan	5629 3rd St. Violet, LA. 70092	(504) 723-6521
John Mm	603 Race Street New Orleans, La 70130	~~504~~ 404-276-1679
Kristy Palumbo	6463 Memphis St. New Orleans, LA 70124	(716) 861-3160
Tyra Johnson Brown	4811 Camelot Dr. New Orleans, LA 70127	812-2831
Pinky Taylor	104 Angel Drive Boutte, LA 70039	504-799-7378
TRACEY JACKSON	1340 Poydras St. NEW ORLEANS, LA 70112	504-658-4955

Name	Address	Phone Number
Raymond Breaux	5311 Berkley Drive N.O.LA 70131	504 391 1715

Massiello, Allison MVN-Contractor

From: Goodman, Melanie L MVN
Sent: Monday, April 19, 2010 10:46 AM
To: (Cecelia.Linder@noaa.gov); britt.paul@la.usda.gov; Browning, Gay B MVN; Crawford.Brad@epamail.epa.gov; Creel, Travis J MVN; Darryl Clark; Goodman, Melanie L MVN; Holden, Thomas A MVN; jacqueline.guillory@la.usda.gov; Karen McCormick (McCormick.Karen@epamail.epa.gov); Kaspar.Paul@epamail.epa.gov; Kinsey, Mary V MVN; kirk.rhinehart@la.gov; Lachin, Donna A MVN; Massiello, Allison MVN-Contractor; Richard.Hartman@noaa.gov; Rodi, Rachel MVN; Teague.Kenneth@epamail.epa.gov; Wandell, Scott F MVN; Wingate, Mark R MVN; Wittkamp, Carol MVN; (Chris.Allen@LA.GOV); Angela Trahan (Angela_Trahan@fws.gov); Bren Haas (Bren.Haase@LA.GOV); Cynthia.duet@gov.state.la.us; Jerome Zeringue (jzee@tlcd.org); John Jurgensen; Kelley.Templet@LA.GOV; Kevin_Roy@fws.gov; rachel.sweeney@noaa.gov
Subject: CWPPRA PPL 20 Public Comment

Technical Committee, please see the below email in reference to PPL 20 nominee project.

Thanks,

Melanie Goodman
CWPPRA Program Manager
US Army Corps of Engineers
New Orleans District
Restoration Branch

Office: 504-862-1940
FAX: 504-862-1892

http://www.lacoast.gov/cwppra/
http://www.mvn.usace.army.mil/pd/cwppra_mission.htm

-----Original Message-----
From: awmarchal@cox.net [mailto:awmarchal@cox.net]
Sent: Monday, April 19, 2010 10:24 AM
To: Goodman, Melanie L MVN
Subject: CWPPRA Input

I would like to express our concern relative to the current ranking of the CWPPRA projects in Region 1 – Pontchartrain Basin. The Bayou Bonfouca Marsh Creation Project ranks higher than both of the other projects, New Orleans Land Bridge and Unknown Pass to Rigolets, that will help keep water out of Lake Pontchartrain. If we don't protect and create marsh on the Landbridge, there won't be a need for any Bonfouca marsh because there won't be any Slidell to protect

In your review of the Pontchartrain Basin projects, please build perimeter protection first and then work on interior projects.

Billy Marchal
Executive Director
Flood Protection Alliance
504-756-7830

CITY OF NEW ORLEANS

April 6, 2010

Mr. Thomas Holden
CWPPRA
USACE
PO Box 60267
New Orleans, LA 70160-0267

Dear Mr. Holden:

As the Mayor of New Orleans, I am excited to support a project within the City of New Orleans that will help to restore coastal Louisiana. I am thankful for the opportunity that the Breaux Act has provided our city in the past and look forward to doing whatever I can to support the Unknown Pass to Rigolets Shoreline Protection Project. Hurricane Katrina removed large areas of the shoreline and left several communities vulnerable.

The shorelines and marshes of the Orleans Land Bridge areas are vital to the safety of the 750,000 people who live around the shores of Lake Pontchartrain. Reducing shoreline erosion and creating marsh is a priority for me as the marshes benefit local wildlife, fisheries habitats and improve water quality in our Parish. The Bayou Bienvenue to Alligator Point (CIAP) and Alligator Point to Unknown Pass (CWPPRA) are currently in the engineering and design phases and this PPL20 project is a continuation of the already existing projects in the Parish.

Please give serious consideration to this request and thank you for your time and attention.

Sincerely,

C. Ray Nagin
Mayor

1776 LINCOLN STREET, SUITE 700

DENVER, COLORADO 80203

303/861-8140

FAX 303/839-3328

ST. MARY LAND & EXPLORATION COMPANY

April 6, 2010

Ms. Melanie L. Goodman
Senior Project Manager
U. S. Army Corps of Engineers, New Orleans District
P. O. Box 60267
New Orleans, LA 80160-0267

Dear Mr. Goodman:

St. Mary Land & Exploration Company (St. Mary) fully supports the West Wax Lake Outlet Wetlands Diversion project, one of 20 projects being considered for the PPL-20 Project List. Almost all of the project's area of benefit (± 25,360 ac) and the mouths of the three diversion channels (Bayou Blue, Leopard Bayou and Hog Bayou) are on St. Mary's property. The NRCS, the project's federal sponsor, assisted in development of the fact sheet and prepared data on land loss, costs and conceptual design.

This project involves dredging to restore the direct connection of Bayou Blue and Leopard Bayou and to restore the depth of Hog Bayou at their junctures with the Wax Lake Outlet, dredged through Wax Lake by the US Army Corps of Engineers in 1941. Without maintenance of these connections, the natural levee developing along the west side of the Outlet will cut off the east-to-west flow of Atchafalaya River through the West Wax Lake Wetlands to East Cote Blanche Bay and southwestward to Atchafalaya Bay. This through-flow delivers fresh water, sediments and nutrients through an intricate network of channels and sustains freshwater wetlands and water quality, contributes to deltaic landforms such as natural levees along interior distributary channels and repairs marshes damaged by natural and man-induced processes. Maintaining the natural hydrologic processes for delivery of sediment, nutrients and fresh water is a cost-effective means of introducing sediments and sustaining the freshwater wetlands along the east flank of the Bayou Sale Ridge and flood protection levee, an important corridor for the petroleum industry as well as for agriculture, tourism and wildlife habitat. Compared to other CWPPRA projects, both approved and proposed, this project, at an estimated cost of $5,614,645, can deliver enhancement to a very large wetland area at a very economical cost.

We respectively request the support of the U.S. Army Corps of Engineers on selection of this project which is consistent with coastwide, regional and mapping unit strategies identified in the Coast 2050 Plan and the state's Master Plan (See Attachment 1).

Sincerely,

Linda Ditsworth

Linda Ditsworth
Assistant Vice President - Land

Attachment

Cc: Colonel Alvin B. Lee, U. S. Army Corps of Engineers
Mr. Garret Graves, Senior Advisor to the Governor for Coastal Activities
Mr. William K. Honker, Deputy Director, Water Quality Protection Division, USEPA
Mr. Jim Boggs, Field Supervisor, USFWS
Mr. Kevin North, State Conservationist, NRCS
Mr. Christopher Doley, Director, NOAA Restoration Center
Mr. Tom Holden, Deputy District Engineer, USACE, NOD
Mr. Troy Constance, Chief, Restoration Branch, USACE, NOD
Mr. Darryl Clark, Senior Field Biologist, USFWS
Mr. Kirk Rhinehart, Acting Asst. Secretary, LDNR
Mr. Richard Hartman, Fishery Biologist, NMFS
Mr. Tim Landers, Life Scientist, USEPA
Mr. Britt Paul, P.E., Assistant State Conservationist, Water Resources, NRCS
Mr. Kevin Roy, Senior Field Biologist, USFWS
Mr. Brad Crawford, P.E., Water Quality Protection Division, USEPA
Mr. John Jurgensen, P.E., NRCS
Ms. Rachel Sweeney, NOAA, NMFS

1776 LINCOLN STREET, SUITE 700

DENVER, COLORADO 80203

303/861-8140

FAX 303/839-3328

ST. MARY LAND & EXPLORATION COMPANY

→ Melanie

April 6, 2010

Mr. Tom Holden
Deputy District Engineer
U.S. Army Corps of Engineers, New Orleans District
Office of the Chief
P. O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Holden:

St. Mary Land & Exploration Company (St. Mary) fully supports the West Wax Lake Outlet Wetlands Diversion project, one of 20 projects being considered for the PPL-20 Project List. Almost all of the project's area of benefit (± 25,360 ac) and the mouths of the three diversion channels (Bayou Blue, Leopard Bayou and Hog Bayou) are on St. Mary's property. The NRCS, the project's federal sponsor, assisted in development of the fact sheet and prepared data on land loss, costs and conceptual design.

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Sincerely,

Linda Ditsworth

Linda Ditsworth
Assistant Vice President - Land

Attachment

Cc: Colonel Alvin B. Lee, U. S. Army Corps of Engineers
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Mr. William K. Honker, Deputy Director, Water Quality Protection Division, USEPA
Mr. Jim Boggs, Field Supervisor, USFWS
Mr. Kevin North, State Conservationist, NRCS
Mr. Christopher Doley, Director, NOAA Restoration Center
Mr. Troy Constance, Chief, Restoration Branch, USACE, NOD
Mr. Darryl Clark, Senior Field Biologist, USFWS
Mr. Kirk Rhinehart, Acting Asst. Secretary, LDNR
Mr. Richard Hartman, Fishery Biologist, NMFS
Mr. Tim Landers, Life Scientist, USEPA
Mr. Britt Paul, P.E., Asst. State Conservationist, Water Resources, NRCS
Ms. Melanie L. Goodman, Senior Project Manager, USACE, NOD
Mr. Kevin Roy, Senior Field Biologist, USFWS
Mr. Brad Crawford, P.E., Water Quality Protection Division, USEPA
Mr. John Jurgensen, P.E., NRCS
Ms. Rachel Sweeney, NOAA, NMFS

Wandell, Scott F MVN

From: Wandell, Scott F MVN
Sent: Thursday, April 15, 2010 4:07 PM
To: Wandell, Scott F MVN
Subject: FW: Bayou L'Ours Ridge Restoration and Terracing Project, Lafourche Parish, Louisiana

From: Bill Johnson [mailto:bjohnson@castexenergy.com]
Sent: Tuesday, April 13, 2010 4:53 PM
To: Hennington, Susan M MVN
Cc: 'Mike Plaisance'
Subject: RE: Bayou L'Ours Ridge Restoration and Terracing Project, Lafourche Parish, Louisiana

Ms. Henning ton

This is to confirm Castex Lafourche L. P.'s support of the Bayou L'Ours Ridge Restoration Project and to reiterate our intention to work with the various agencies to enter into a mutually agreeable instrument to allow access to the Tidewater Canal.

Please let me know if you need anything further.

Bill Johnson

From: Hennington, Susan M MVN [mailto:Susan.M.Hennington@usace.army.mil]
Sent: Tuesday, April 13, 2010 3:42 PM
To: bjohnson@castexenergy.com
Subject: Bayou L'Ours Ridge Restortation and Terracing Project, Lafourche Parish, Louisiana

Hello Mr. Johnson,

I am writing to determine if you are still in support of this Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) project called "Bayou L'Ours Ridge Restoration and Terracing". Please find attached a copy of your letter dated January 19, 2009, to Ms Fay Lachney. She was the Project Manager for this project last year and those duties have been passed down to me.

Last year the project was almost selected for further evaluation as a Priority Project List (PPL) 19 candidate. This year it has again made the PPL list of potential projects (the PPL 20 list) and the CWPPRA Technical Committee will be selecting 10 projects and up to 3 demo projects, next week at their 20 Apr 2010 meeting here in New Orleans. The current Bayou L'Ours project is almost the same as the PPL 19 version except that more terracing is proposed. Please see the attached Fact Sheet for the PPL 20 Bayou L'Ours project. If you are still in support of this project, would you please let me know so that I could pass that information on to the CWPPRA Environmental and Engineering Workgroups? You could send a letter similar to last years or an email would also suffice. Thank you and please feel free to call me with any questions at all.

Sincerely,

Susie Hennington

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

REQUEST FOR RIVERINE MINING/SCOFIELD ISLAND PROJECT SCOPE CHANGE

For Discussion/Decision:

Mr. Hartman will discuss a request by the National Marine Fisheries Service (NMFS) and LAOCPR for a Technical Committee recommendation for Task Force approval to change the scope of the Riverine Mining/Scofield Island Project (BA-40) due to project cost increases.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

PENDING DEAUTHORIZATION OF THE BROWN LAKE HYDROLOGIC RESTORATION PROJECT

Discussion/Decision:

The Task Force initiated procedures to deauthorize the Brown Lake Hydrologic Restoration Project on October 28, 2009. Deauthorization procedures are pending Corps sufficiency review of justification for deauthorization.

February 2008
Cost figures as of: April 2010

Brown Lake Hydrologic Restoration (CS-09)

Project Status

Approved Date: 1993
Cost: $4.00 M
Project Area: 916 acres
Status Engineering and Design
Net Benefit After 20 Years: 37 acres
Project Type: Hydrologic Restoration

Location

This project is located in Cameron and Calcasieu parishes, approximately 3 miles north of Hackberry, Louisiana.

Problems

Saltwater intrusion from the Calcasieu Ship Channel and increased tidal amplitudes have caused 90 % of the marsh in this system to be lost.

Restoration Strategy

This project will restore, to the extent possible, the altered hydrology of approximately 2,800 acres of wetlands in the area of Brown Lake. This project consists of the installation of two water control structures, two freshwater introduction structures, the rehabilitation or construction of approximately 30,000 linear feet of boundary levees, and 20,500 linear feet of terraces and associated vegetative plantings.

Progress to Date

This project is being coordinated with the U.S. Army Corps of Engineers dredging program. Several pipeline-related issues have caused delays, but these issues have been resolved. The permits, the effects of Crab Gully, and the operations agreements have been addressed. Contract advertisement will take place after receiving Phase 2 funding approval from the Louisiana Coastal Wetlands Conservation and Restoration Task Force.

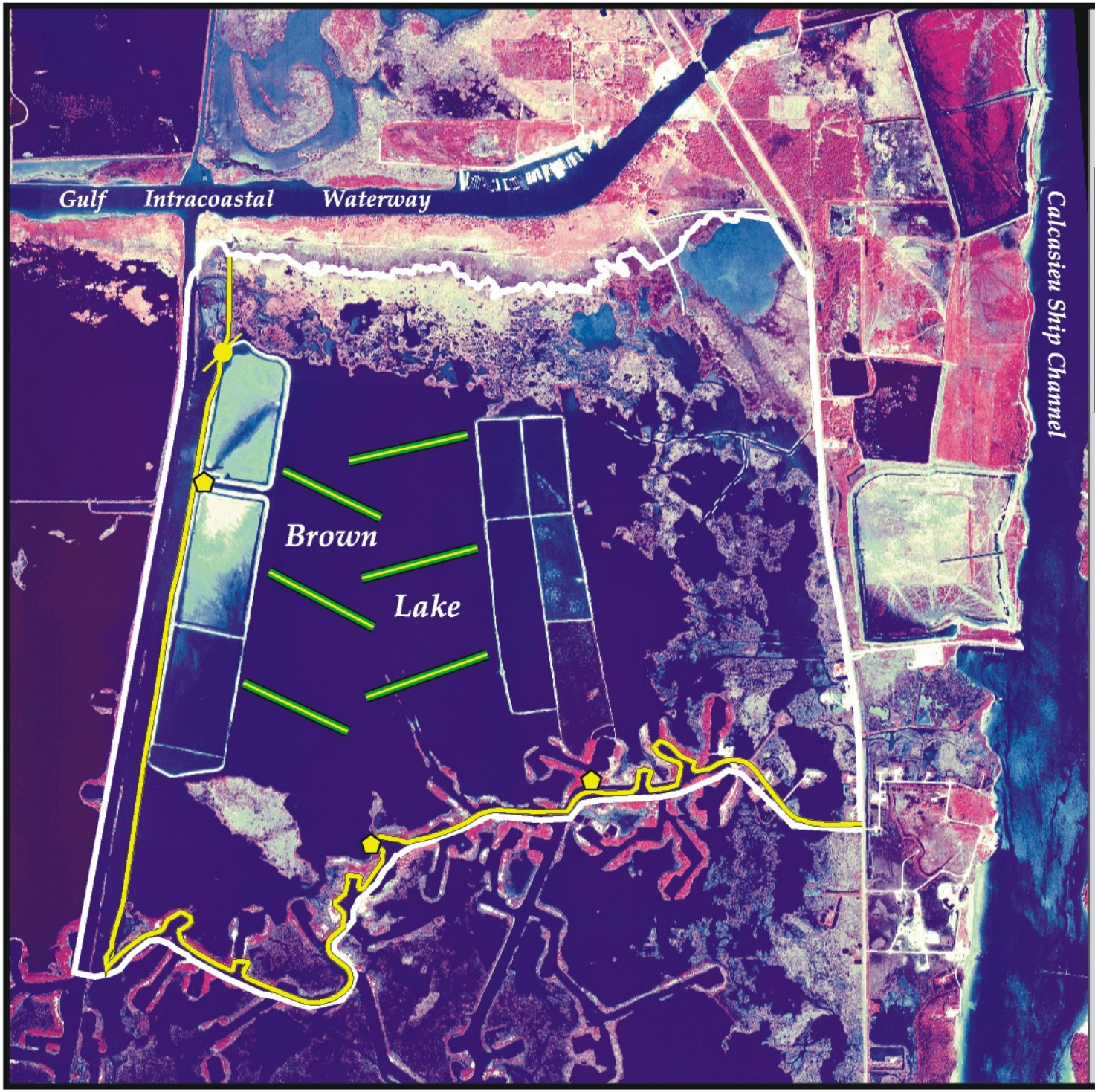
This project is on Priority Project List 2.

In order to prevent wind generated wave erosion from destroying the freshly added spoil, vegetation is planted to get a head start on providing cover for the fragile soil.

For more project information, please contact:

Federal Sponsor:
Natural Resources Conservation Service
Alexandria, LA
(318) 473-7756

Local Sponsor:
Louisiana Department of Natural Resources
Baton Rouge, LA
(225) 342-7308



Brown Lake Hydrologic Restoration (CS-09)

- Water Control Structure *
- Weir *
- Containment Dike *
- Terrace *
- Project Boundary

* denotes proposed features

USGS
science for a changing world

N

1000 0 1000 Feet

500 0 500 Meters

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

Background Imagery:
Color Infrared Aerial Photography 2002

Date: August 25, 2003
Map ID: USGS-NWRC 2003-11-096
Data accurate as of: April 4, 2003

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

DEAUTHORIZATION OF THE LAKE BORGNE/MRGO SHORELINE PROTECTION PROJECT

Discussion/Decision:

The Task Force initiated procedures to deauthorize the Lake Borgne/MRGO Shoreline Protection Project on January 20, 2010. Notice of the pending deauthorization was sent to Congress and the State House and Senate Natural Resources Committee chairs of the intent to deauthorize.

March 2010 (rev)
Cost figures as of: April 2010

Lake Borgne and MRGO Shoreline Protection (PO-32)

Project Status

Approved Date: 2003 **Project Area:** 465 acres
Approved Funds: $1.34 M **Total Est. Cost:** $25.0 M
Net Benefit After 20 Years: 266 acres
Status: Engineering and Design
Project Type: Shoreline Protection

Location

The project is located along the Lake Borgne shoreline between Doulluts Canal and Jahnckes Ditch and along the north bank of the Mississippi River Gulf Outlet (MRGO) between Doulluts Canal and Lena Lagoon in St. Bernard Parish, Louisiana.

Problems

Shoreline erosion rates in this area were estimated to be 9 feet per year along Lake Borgne and 24 feet per year along the MRGO.

Restoration Strategy

The objective of this project is to preserve the marsh between Lake Borgne and the MRGO by preventing shoreline erosion. In order to accomplish this objective, an 18,500 linear foot rock dike will be constructed along the Lake Borgne shoreline from Doulluts Canal to Jahnckes Ditch. A 14,250 linear foot rock dike will also be constructed along the north bank of the MRGO from Doulluts Canal to Lena Lagoon. Both dikes will have a layer of armor stone placed on top of a crushed stone core resting on a layer of geotextile fabric. Any flotation channel needed will be excavated with the spoil being placed behind the rock dikes. Gaps may be constructed in the dikes to allow organisms and water to move freely.

This project will help protect the fragile landbridge separating the MRGO (left side of picture) and Lake Borgne (upper right). Doulluts Canal is also visible in this photograph.

Progress to Date

The Louisiana Coastal Wetlands Conservation and Restoration Task Force approved funding for engineering and design at their January 2003 meeting. Engineering and Design were completed in March 2005. Following Hurricane Katrina MVN Operations Division received 3rd supplemental funds and constructed the Lake Bornge reach using the CWPPRA design. In January 2010, the Task Force initiated procedures to deauthorize this project.

This project is on Priority Project List 12.

For more project information, please contact:

US Army Corps of Engineers
New Orleans District

Federal Sponsor:
U.S. Army Corps of Engineers
New Orleans, LA
(504) 862-1597

CPRA

Local Sponsor:
Office of Coastal Protection and Restoration
Baton Rouge, La.
(225) 342-4122

Lake Borgne and MRGO Shoreline Protection (PO-32)

Rock Dike*

Project Boundary

*denotes proposed features

USGS
science for a changing world

Louisiana

Project Location

N

0.5 0 0.5 Miles

0.5 0 0.5 Kilometers

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

Background Imagery:
Digital Orthophoto Quarter Quadrangle

Map Date: December 23, 2003
Map ID: USGS-NWRC 2003-11-094
Data accurate as of: December 23, 2003

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

ADDITIONAL AGENDA ITEMS

For Report:

- **Monitoring Work Group CWPPRA Monitoring Program Evaluation**
  Dr. Foret will provide a preliminary report on the Monitoring Work Group findings concerning the CWPPRA Monitoring Program.

CRMS Review

John Foret and Jenneke Visser
Team Leaders

Work Plan: Action 1

Determine if there are potential programmatic cost savings by reducing the frequency of some monitoring efforts, reducing stations, etc.

- Preliminary Finding
  - Statistical Analyses indicate that the number of stations is at the bare minimum for most variables.
- Future Action
  - Changing the analyses to incorporate minimal differences that are biologically significant.

Work Plan: Action 2

Evaluate alternatives to improve monitoring input into decision-making

- Preliminary Finding
  - Meetings with NMFS, USFWS, and NRCS have been completed. At this time, no significant changes have been suggested within project specific monitoring, and all changes should be within existing budgets.
  - Report card for projects (compared to reference stations in similar marsh type and geological setting) are being developed by the CRMS Analysis Team.
- Future Action
  - Complete meetings with other agencies.

Work Plan: Action 3

Identify potential partners and level of support for sharing of CRMS funding responsibility

- Preliminary Finding
  - LCA has 6 projects through draft monitoring/adaptive management. If appropriated for construction, this could be a 10-year supplement to the CRMS program. In addition, more CRMS style stations would be built by LCA. Also, LCA S&T could be another source of supplemental support, as soon as the State enters into a CSA, could be as high as $1M annually for 10 years.
- Future Action
  - Potential contributions from the CIAP Program are being pursued.

Work Plan: Action 4

Evaluate existing level of use by various agencies

- Preliminary Finding
  - Interviews of personnel completed for NMFS and NRCS. Level of use varies by agency. Most use in planning and E&D for new projects
- Future Action
  - Complete interviews with other agency personnel

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

REQUEST FOR PUBLIC COMMENTS

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

ANNOUNCEMENT: DATE OF UPCOMING CWPPRA PROGRAM MEETING

The Task Force meeting will be held June 23, 2010 at 9:30 a.m. at the Estuarine Fisheries and Habitat Center, 646 Cajundome Blvd., Lafayette, Louisiana. Note: this date has recently changed.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

APRIL 20, 2010

ANNOUNCEMENT: SCHEDULED DATES OF FUTURE PROGRAM MEETINGS

2010

June 23, 2010	9:30 a.m.	Task Force	Lafayette
September 22, 2010	9:30 a.m.	Technical Committee	Baton Rouge
October 27, 2010	9:30 a.m.	Task Force	New Orleans
November 16, 2010	7:00 p.m.	PPL 20 Public Meeting	Abbeville
November 17, 2010	7:00 p.m.	PPL 20 Public Meeting	New Orleans
December 1, 2010	9:30 a.m.	Technical Committee	Baton Rouge