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Breaux Act

Coastal Wetlands Planning, Protection and Restoration Act



Technical Committee Meeting

March 15, 2006

New Orleans, Louisiana

BREAUX ACT

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Technical Committee Meeting

AGENDA

March 15, 2006, 9:30 a.m.

Location:

U.S. Army Corps of Engineers, Mississippi Valley Division, New Orleans District (CEMVN)
District Assembly Room
7400 Leake Ave.
New Orleans, LA

Documentation of Task Force and Technical Committee meetings may be found at:

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

or

<http://www.lacoast.gov/reports/program/index.asp>

Agenda Item

- 1 Discussion/Decision: Priority Project List 16 Process (Podany) 9:30 a.m. to 9:50 a.m.** The Task Force approved a modification to the PPL 16 Process to increase the number of candidate projects considered. The final PPL 16 Process approved by the Task Force on February 8, 2006 allows for 20 nominees, 10 candidate projects, and up to 4 projects selected for Phase I.
 - a. The Task Force directed the Technical Committee to discuss the number of final PPL 16 projects selected for Phase I approval, currently “up to 4” will be selected.
 - b. The Task Force directed the Technical Committee to discuss the need to allocate a set amount of funds each year for demonstration projects.

- 2 Decision: Selection of Ten (10) Candidate Projects and up to Three (3) Demonstration Projects to Evaluate for PPL 16 (Podany) 9:50 a.m. to 10:15 a.m.** The committee will consider preliminary costs & benefits, and select 10 projects and up to 3 demonstration projects as Phase 0 candidates for further analysis for Project Priority List 16. The Technical Committee will also assign a lead agency to each project for further evaluation.

- 3 Report: Mississippi River Reintroduction into Bayou Lafourche (Parrish) 10:15 p.m. to 10:45 p.m.** EPA and DNR will provide an update on the status of the Mississippi River Reintroduction into Bayou Lafourche Project (BA-25b).

- 4 **Discussion: Initial Discussion Regarding FY07 Budget Development (Process, Size, Funding, etc) (Podany) 10:45 a.m. to 11:00 a.m.** The FY07 planning program budget discussion will be initiated.
- 5 **Additional Agenda Items (Podany) 11:00 a.m. to 11:10 a.m.**
- 6 **Date of Upcoming Task Force Meeting (Podany) 10:10 a.m. to 11:15 a.m.**
The spring Task Force meeting will be held April 12, 2006 in Lafayette, Louisiana.
- 7 **Dates of Future Program Meetings (LeBlanc) 11:15 a.m. to 11:20 a.m.**

2006

April 12, 2006	9:30 a.m.	Task Force	Lafayette
June 14, 2006	9:30 a.m.	Technical Committee	Baton Rouge
July 12, 2006	9:30 a.m.	Task Force	Baton Rouge
August 30, 2006	7:00 p.m.	PPL 16 Public Meeting	Abbeville
August 31, 2006	7:00 p.m.	PPL 16 Public Meeting	New Orleans
September 13, 2006	9:30 a.m.	Technical Committee	New Orleans
October 18, 2006	9:30 a.m.	Task Force	New Orleans
December 6, 2006	9:30 a.m.	Technical Committee	Baton Rouge

2007

January 31, 2007	9:30 a.m.	Task Force	Baton Rouge
March 14, 2007	9:30 a.m.	Technical Committee	New Orleans
April 11, 2007	9:30 a.m.	Task Force	Lafayette
June 13, 2007	9:30 a.m.	Technical Committee	Baton Rouge
July 11, 2007	9:30 a.m.	Task Force	New Orleans
August 29, 2007	7:00 p.m.	PPL17 Public Meeting	Abbeville
August 30, 2007	7:00 p.m.	PPL17 Public Meeting	New Orleans
September 12, 2007	9:30 a.m.	Technical Committee	New Orleans
October 17, 2007	9:30 a.m.	Task Force	New Orleans
December 5, 2007	9:30 a.m.	Technical Committee	Baton Rouge

2008

January 30, 2008	9:30 a.m.	Task Force	Baton Rouge
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- 8 **Adjourn**

Discussion/Decision: Priority Project List 16 Process

APPENDIX A

PRIORITY LIST 16 SELECTION PROCESS

Coastal Wetlands Planning, Protection and Restoration Act Guidelines for Development of the 16th Priority Project List FINAL, 9 Jan 06

I. Development of Supporting Information

A. COE staff prepares spreadsheets indicating status of all restoration projects (CWPPRA PL 1-15; Louisiana Coastal Area (LCA) Feasibility Study, Corps of Engineers Continuing Authorities 1135, 204, 206; and State only projects). Also, indicate net acres at the end of 20 years for each CWPPRA project.

B. DNR/USGS staff prepares basin maps indicating:

- 1) Boundaries of the following projects types (PL 1-15; LCA Feasibility Study, COE 1135, 204, 206; and State only).
- 2) Locations of completed projects,
- 3) Projected land loss by 2050 with freshwater diversions at Caernarvon and Davis Pond and including all CWPPRA projects approved for construction through October 2002.
- 4) Regional boundary maps with basin boundaries and parish boundaries included.

II. Areas of Need and Project Nominations

A. The four Regional Planning Teams (RPTs) meet, examine basin maps, discuss areas of need and Coast 2050 strategies, and accept nomination of projects by hydrologic basin. Nominations for demonstration projects will also be accepted at the four RPT meetings. The RPTs will not vote at their individual regional meetings, rather voting will be conducted during a separate coast-wide meeting. At these initial RPT meetings, parishes will be asked to identify their official parish representative who will vote at the coast-wide RPT meeting.

B. One coast-wide RPT voting meeting will be held after the individual RPT meetings to present and vote for nominees (including demonstration project nominees). The RPTs will choose no more than two projects per basin, except that three projects may be selected from Terrebonne and Barataria Basins because of the high loss rates in those basins. A total of up to 20 projects could be selected as nominees. Selection of the projects nominated per basin will be by consensus, if possible. If voting is required, each officially designated parish representative in the basin will have one vote and each

federal agency and the State will have one vote. The RPTs will also select up to six demonstration project nominees at this coast-wide meeting. Selection of demonstration project nominees will be by consensus, if possible. If voting is required, officially designated representatives from all coastal parishes will have one vote and each federal agency and the State will have one vote.

C. Following the coast-wide voting meeting, the nominated projects will be indicated on a map and paired with Coast 2050 strategies. A lead Federal agency will be designated for the nominees and demonstration project nominees to assist LDNR and local governments in preparing preliminary project support information (fact sheet, maps, and potential designs and benefits). The Regional Planning Team Leaders will then transmit this information to the P&E Subcommittee, Technical Committee and members of the Regional Planning Teams.

D. PPL15 projects not selected by the Task Force on February 8, 2006 for Phase I funding will automatically become nominees under PPL16. The projects will compete for Phase 0 candidate status with the other nominees selected at the coast-wide voting meeting.

III. Preliminary Assessment of Nominated Projects

A. Agencies, parishes, landowners, and other individuals informally confer to further develop projects. Nominated projects should be developed to support one or more Coast 2050 strategies. The goals of each project should be consistent with those of Coast 2050.

B. Each sponsor of a nominated project will prepare a brief Project Description (no more than one page plus a map) that discusses possible features. Fact sheets will also be prepared for demonstration project nominees.

C. Engineering and Environmental Work Groups meet to review project features, discuss potential benefits, and estimate preliminary fully funded cost ranges for each project. The Work Groups will also review the nominated demonstration projects and verify that they meet the demonstration project criteria.

D. P&E Subcommittee prepares matrix of cost estimates and other pertinent information for nominees and demonstration project nominees and furnishes to Technical Committee and State Wetlands Authority (SWA).

IV. Selection of Phase 0 Candidate Projects

A. Technical Committee meets to consider the project costs and potential wetland benefits of the nominees. Technical Committee will select six candidate projects for detailed assessment by the Environmental, Engineering, and Economic Work Groups. At this time, the Technical Committee will also select up to three demonstration project candidates for detailed assessment by the Environmental, Engineering, and Economic Work Groups. Demonstration project candidates will be evaluated as outlined in Appendix E.

B. Technical Committee assigns a Federal sponsor for each project to develop preliminary Wetland Value Assessment data and engineering cost estimates for Phase 0 as described below.

V. Phase 0 Analysis of Candidate Projects

A. Sponsoring agency coordinates site visits for each project. A site visit is vital so each agency can see the conditions in the area and estimate the project area boundary. Field trip participation should be limited to two representatives from each agency. There will be no site visits conducted for demonstration projects.

B. Environmental and Engineering Work Groups and the Academic Advisory Group meet to refine project features and develop boundaries based on site visits.

C. Sponsoring agency develops Project Information Sheets on assigned projects, using formats developed by applicable work groups; prepares preliminary draft Wetland Value Assessment Project Information Sheet; and makes Phase 1 engineering and design cost estimates and Phase 2 construction cost estimates.

D. Environmental and Engineering Work Groups evaluate all projects (excluding demos) using the WVA and reviews design and cost estimates.

E. Engineering Work Group reviews and approves Phase 1 and 2 cost estimates.

F. Economics Work Group reviews cost estimates and develops annualized (fully funded) costs.

G. Environmental and Engineering Work Groups apply the Prioritization Criteria and develop prioritization scores for each candidate project.

H. Corps of Engineers staff prepares information package for Technical Committee and State Wetlands Authority. Packages consist of:

- 1) updated Project Information Sheets;
- 2) a matrix for each region that lists projects, fully funded cost, average annual cost, Wetland Value Assessment results in net acres and Average Annual Habitat Units (AAHUs), cost effectiveness (average annual cost/AAHU), and the prioritization score.
- 3) qualitative discussion of supporting partnerships and public support; and
- 4) oyster lease impact areas delineated for the State's Restricted Area Map (this map should also be provided to DNR).

I. Technical Committee hosts two public hearings to present information from H above and allows public comment.

VI. Selection of 16th Priority Project List

A. The selection of the 16th PPL will occur at the Fall Technical Committee and Task Force meetings.

B. Technical Committee meets and considers matrix, Project Information Sheets, and public comments. The Technical Committee will recommend up to four projects for selection to the 16th PPL. The Technical Committee may also recommend demonstration projects for the 16th PPL.

C. The CWPPRA Task Force will review the TC recommendations and determine which projects will receive Phase 1 funding for the 16th PPL.

D. State Wetlands Authority reviews projects on the 16th Priority List and considers for Phase I approval and inclusion in the upcoming Coastal Wetlands Conservation and Restoration Plan.

16th Priority List Project Development Schedule (dates subject to change)

November 2005	Distribute public announcement of PPL16 process and schedule
January 10, 2006	Region IV Planning Team Meeting (Abbeville)
January 11, 2006	Region III Planning Team Meeting (Morgan City)
January 12, 2006	Regions I and II Planning Team Meetings (New Orleans)
February 8, 2006	Task Force Meeting (New Orleans), PPL15 Phase I selection
February 1, 2006	Coast-wide RPT Voting Meeting (Baton Rouge)
February 28, 2006	Mardi Gras
February 1 – February 24	Agencies prepare fact sheets for RPT nominated projects
February 20, 2006	President's Day Holiday
March 1 – 2, 2006	Engineering/ Environmental work groups review project features, benefits & prepare preliminary cost estimates for nominated projects (Baton Rouge)
March 3, 2006	P&E Subcommittee prepares matrix of nominated projects showing initial cost estimates
March 15, 2006	Technical Committee meets to select PPL16 candidate projects (New Orleans)
April 12, 2006	Spring Task Force meeting (Lafayette)
April/May	Candidate project site visits
May/June/July/August	Env/Eng/Econ work group project evaluations
June 14, 2006	Technical Committee meeting (Baton Rouge)
July 12, 2006	Task Force meeting (New Orleans) – announce public meetings
August 30, 2006	PPL 16 Public Meeting (Abbeville)
August 31, 2006	PPL 16 Public Meeting (New Orleans)
September 13, 2006	Technical Committee meeting - recommend PPL16 (New Orleans)
October 18, 2006	Task Force meeting to select PPL 16 (New Orleans)
December 6, 2006	Technical Committee meeting (Baton Rouge)
January 2007	RPT meetings for PPL 17
January 31, 2007	Task Force meeting (Baton Rouge)

APPENDIX E
DEMONSTRATION PROJECT SOP

Coastal Wetlands Planning, Protection and Restoration Act
Standard Operating Procedures for
Demonstration Projects

I. Introduction:

Section 303(a) of the CWPPRA states that in the development of Priority Project List, “. . . [should include] due allowance for small-scale projects necessary to demonstrate the use of new techniques or materials for coastal wetlands restoration.”

The CWPPRA Task Force on April 6, 1993, stated that: “The Task Force directs the Technical Committee to limit spending on demonstration projects to \$2,000,000 annually. The Task Force will entertain exceptions to this guidance for projects that the Technical Committee determines merit special consideration. The Task Force waives the cap on monitoring cost for demonstration projects.”

II. What constitutes a demonstration project:

A. Demonstration projects contain technology that has not been fully developed for routine application in coastal Louisiana or in certain regions of the coastal zone.

B. Demonstration projects contain new technology which can be transferred to other areas of the coastal zone.

C. Demonstration projects are unique and are not duplicative in nature.

III. Submission of candidate demonstration projects:

A. Demonstration projects are nominated each year at the four Regional Planning Team (RPT) meetings. At that time, the RPTs will not vote on which demonstration projects will become official demonstration project nominees. One coast-wide RPT voting meeting will be held after the individual RPT meetings to present and vote for demonstration project nominees. At that meeting, the RPTs will select up to six demonstration project nominees. A lead Federal agency will be assigned to each demonstration project nominee to prepare preliminary supporting information (fact sheet, figures, drawings, etc.). Demonstration project nominees will be reviewed by the Environmental and Engineering Work Groups to verify that they meet demonstration project criteria. Subsequent to Work Group review, the Technical Committee will select up to three demonstration project candidates for detailed assessment by the Work Groups.

B. The Engineering and Environmental Work Groups will evaluate all candidate demonstration projects (see item IV below). At the time of the project evaluation, an information packet must be submitted which includes the following: 1) a possible location for the project; 2) the problem or question being addressed; 3) the goals of the project; 4) the proposed project features; 5) the monitoring plan to evaluate the project's effectiveness; 6) costs for construction and monitoring; and 7) a discussion of the Demonstration Project Evaluation Parameters (see below). No Wetland Value Assessments (WVA) will be performed on candidate demonstration projects.

C. CWPPRA projects are designed and evaluated on a 20-year project life. However, demonstration projects are unique and each project must be developed accordingly. A specific plan of action must be developed, and operation and maintenance (if applicable) and project monitoring costs included. Monitoring plans are developed to evaluate the demonstration project's technique and the wetland response. Monitoring plans should provide sufficient details of the status of all constructed features of the project such that the performance of all engineered features can be determined. Monitoring should be only long enough to evaluate the demonstration project's performance and may be less than 20 years.

IV. Evaluation of candidate demonstration projects:

A. The Engineering and Environmental Work Groups will conduct a joint meeting, during the annual evaluation of candidate projects, to evaluate all demonstration projects. The lead Federal agency will present the information packet described in III B above to the CWPPRA work groups. Each candidate demonstration project will be evaluated and compared to other demonstration projects based on the following evaluation parameters:

Demonstration Project Evaluation Parameters

Innovativeness – The demonstration project should contain technology that has not been fully developed for routine application in coastal Louisiana or in certain regions of the coastal zone. The technology demonstrated should be unique and not duplicative in nature to traditional methods or other previously tested techniques for which the results are known. Techniques which are similar to traditional methods or other previously tested techniques should receive lower scores than those which are truly unique and innovative.

Applicability or Transferability – Demonstration projects should contain technology which can be transferred to other areas of the coastal zone. However, this does not imply that the technology must be applicable to all areas of the coastal zone. Techniques, which can only be applied in certain wetland types or in certain coastal regions, are acceptable but may receive lower scores than techniques with broad applicability.

Potential Cost-Effectiveness – The potential cost-effectiveness of the demonstration project's method of achieving project objectives should be compared to the cost-effectiveness of traditional methods. In other words, techniques which provide substantial cost savings over traditional methods should receive higher scores than those with less substantial cost savings. Those techniques which would be more costly than traditional methods, to provide the same level of benefits, should receive the lowest scores. Information supporting any claims of potential cost savings should be provided.

Potential Environmental Benefits – Does the demonstration project have the potential to provide environmental benefits equal to traditional methods? Somewhat less than traditional methods? Above and beyond traditional methods? Techniques with the potential to provide benefits above and beyond those provided by traditional techniques should receive the highest scores.

Recognized Need for the Information to be Acquired – Within the restoration community, is there a recognized need for information on the technique being investigated? Demonstration projects which provide information on techniques for which there is a great need should receive the highest scores.

Potential for Technological Advancement – Would the demonstration project significantly advance the traditional technology currently being used to achieve project objectives? Those techniques which have a high potential to completely replace an existing technique at a lower cost and without reducing wetland benefits should receive the highest scores.

The Work Groups will prepare a joint evaluation for submission to the Planning and Evaluation Subcommittee outlining the merits of each project and stating how well each project meets each of the evaluation parameters.

B. The Engineering Work Group will review costs to ensure consistency and adequacy; address potential cost-effectiveness; compare the cost of the demonstration project to the cost of traditional or other methods of achieving project objectives, when such information is available; and report the pros and cons of the demonstration vs. traditional or other methods. The Engineering Work Group will check monitoring costs with the Monitoring Work Group Chairman.

C. The Planning and Evaluation Subcommittee will present information on the demonstration projects at the public meetings that are held to present the results of the annual evaluation of candidate projects, including any such meetings of the Technical Committee or the Task Force.

V. Funding approval:

A. Demonstration projects shall be considered for funding on an annual basis as (a) part(s) of a priority project list (i.e., October budgeting meeting). Demonstration projects follow non-cash flow procedures and are capped at 100%. However, agencies may choose to employ cash flow procedures if they believe it is necessary to maintain consistent accounting procedures or if they believe it would improve dissemination of project information to the Task Force and public.

VI. Engineering and design:

A. Project Workplan: Federal and State Sponsors shall develop a plan of work for accomplishing all engineering and design tasks. This plan shall include, but not be limited to: a detailed task list, time line with specific milestones, and budget which breaks out specific tasks such as geo-technical evaluations, hydrological investigations, modeling, environmental compliance (cultural resources, NEPA, and

HTRW), surveying, and other items deemed necessary to justify the proposed project features. The plans shall be developed within 3 months following funding approval and shall be reviewed by the P&E Subcommittee.

B. Design Review Conference:

The Federal and Local Sponsors shall hold a "Design Review Conference" with the other Agencies upon completion of a Preliminary Design Report (PDR), to allow the other Agencies an opportunity to comment on the proposed design of the project. The other Agencies shall be notified by the Federal Sponsor at least four weeks prior to the conference of the date, time and place and invited to attend. The PDR shall be forwarded to the other Agencies for their review, with receipt two weeks prior to the conference. Invitations and supporting data shall be sent to agency representatives of the Technical Committee, Planning and Evaluation Subcommittee, Project Manager of the Local Sponsor and the Governor's Office of Coastal Activities.

The Preliminary Design Report shall include; 1) recommended project features, 2) a discussion of the project location reviewed/approved by the Engineering and Environmental Work Groups, 3) engineering and design surveys, 4) engineering and design geotechnical investigation (borings, testing results, and analysis), 5) land ownership investigation, 6) preliminary cultural resources assessment, 7) revised project construction cost estimates based on the current design, 8) description of changes since funding approval, and 9) a detailed monitoring plan.

This review will verify the viability of the project and whether or not the Federal and Local Sponsors agree to continue with the project. This review must indicate the project is viable before there are expenditures of additional funds.

After the conference, the Federal Sponsor shall forward a letter (or e- mail) summarizing the results of the Design Review Conference to the Technical Committee with a copy to the Planning and Evaluation Subcommittee. It should include the revised estimate, a description of project revisions from the previously authorized project, and a letter of concurrence from the Local Sponsor agreeing to continue with the project. The Technical Committee may make a recommendation on whether or not to continue with the project.

C. Final Design Report: A Final Design Report and a set of Plans and Specifications shall be submitted to the Technical Committee and Planning and Evaluation Subcommittee prior to requesting permission from the Technical Committee (with subsequent approval by the Task Force) to proceed to construction. The Final Design Report shall include; 1) project features and location, 2) a revised project cost estimate (fully-funded, approved by the Economic Work Group), 3) a description of how the project differs in cost and features since funding approval, 4) final monitoring plan, 5) responses to comments brought up at the Design Review Conference, and 6) all supporting data.

VII. Reporting of results:

A. The sponsoring agency will prepare a report for the Technical Committee as soon as meaningful results of the demonstration project are available. The report will describe the initial construction details, including actual costs and the current condition of all constructed features. The report will summarize the results and assess the success or failure of the project and its applicability to other similar sites. The sponsoring agency will prepare follow-up reports for the Technical Committee if and when more information becomes available.

Decision: Selection of Ten (10) Candidate Projects and up to Three (3) Demonstration Projects to Evaluate for PPL 16

CWPPRA Technical Committee Meeting

15 Mar 06



Priority Project List 16

Nominees

Overview of Project Nomination Process

- Regional Planning Team meetings were held Jan. 10 - 12, 2006 for each Coast 2050 region (Abbeville, Morgan City, and New Orleans)
- Participants nominated project ideas by hydrologic basin within the regions
- Regional Planning Teams voted at a Coastwide Voting Meeting held on Feb 1, 2006 to select two projects per basin except for 3 projects in Barataria and Terrebonne Basins.
- A total of 20 projects and 6 demonstration projects were nominated by the teams.
- Two unselected projects were rolled over from PPL 15
- There were a total of 22 nominees for PPL 16.

Overview of Project Nomination Process

- Since the Coastwide Voting Meeting
 - The Engr/Env Work groups met to assign fully-funded cost ranges and benefit ranges to the nominees.
 - The PPL 15 rollover project South Terrebonne Terracing has been withdrawn at the request of Terrebonne Parish (RE: Madison Bay).
 - The Wisner Wildlife Management Area Project has been withdrawn at the request of the landowner.
 - The Calcasieu River Sediment Bypass Project and the Mermentau River Sediment Bypass Project were combined into one project at the request of DNR.
 - The Dredge Containment Demo has been withdrawn at the request of the nominating party.
 - As a result: There are 19 - PPL 16 Nominees and 5 - demonstration projects that are up for consideration today.

REGION 1

RPT Leader: Dan Llewellyn, DNR

RPT meeting held on January 12, 2006

Basins: Pontchartrain



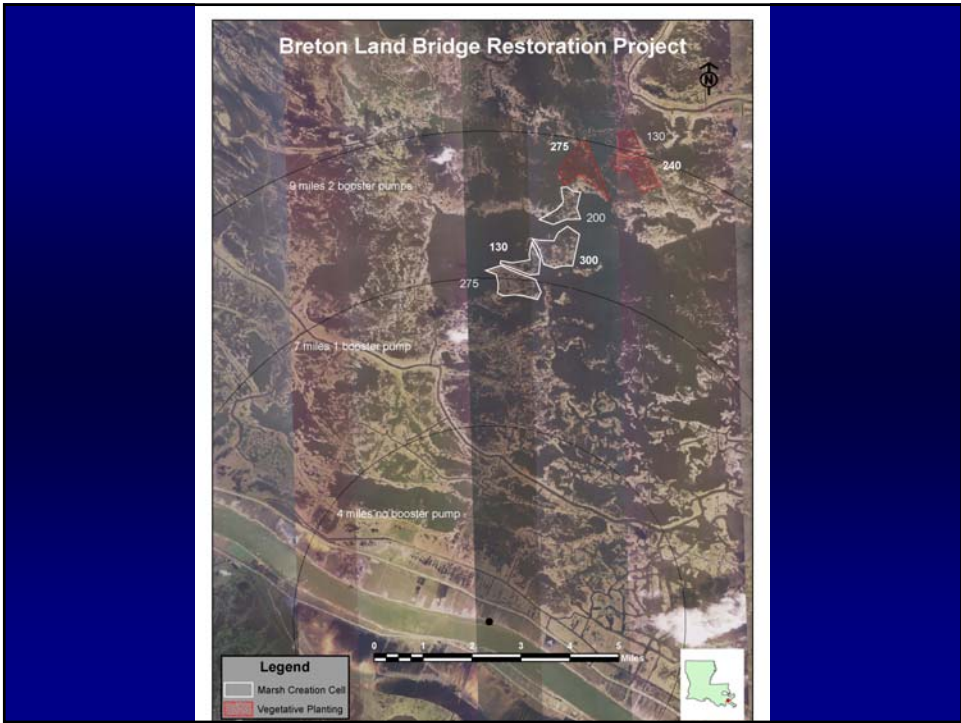
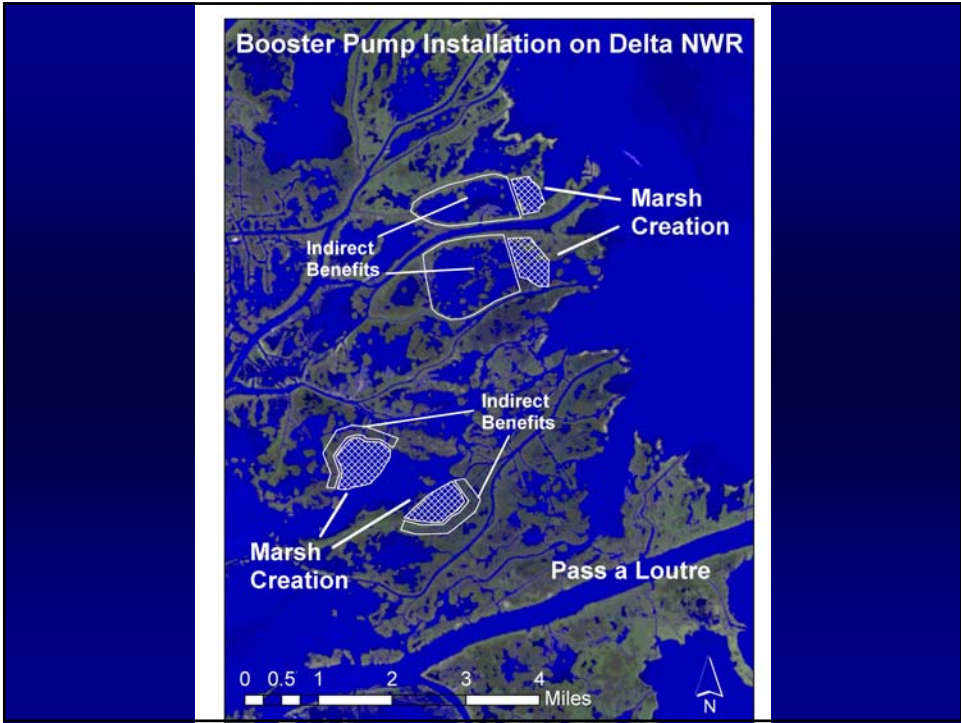
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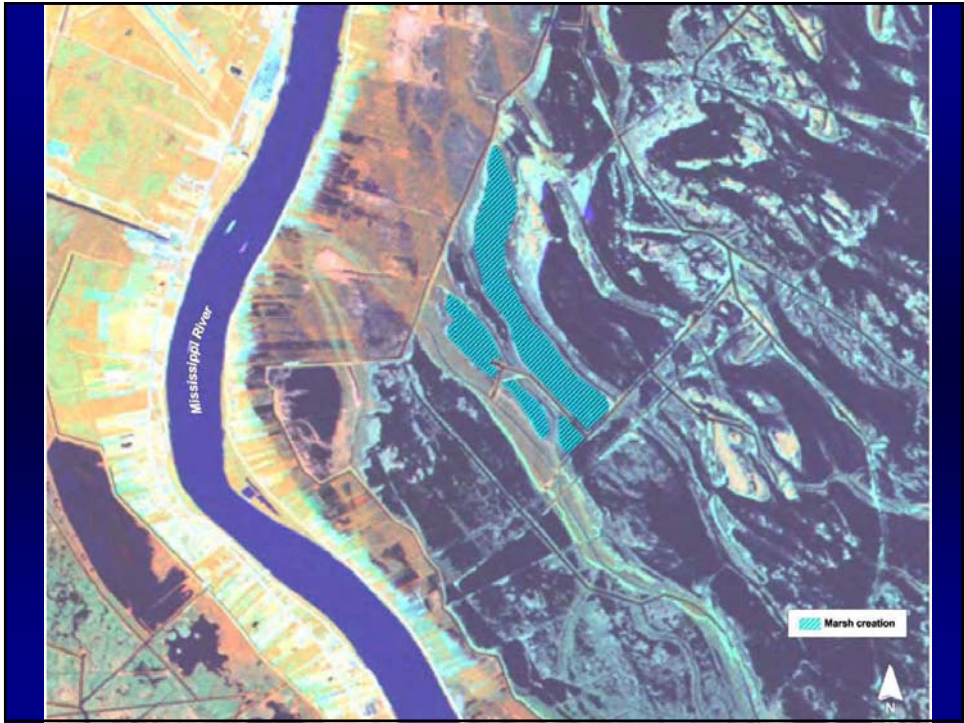
RPT Leader: Greg Miller, USACE

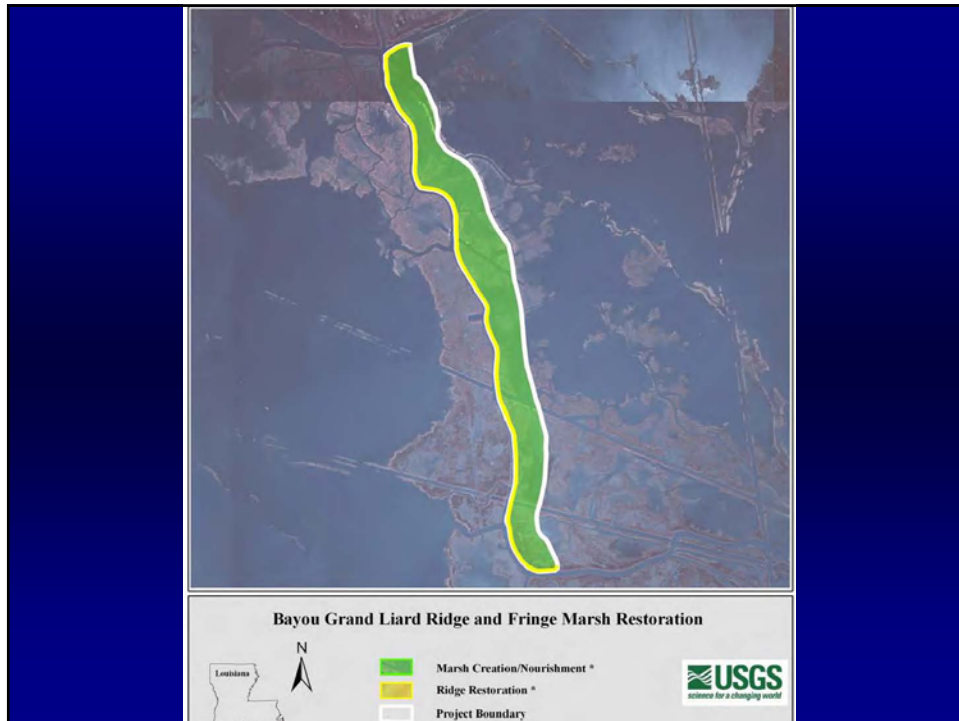
RPT meeting held on January 12, 2006

Basins: Barataria, Breton, &
Mississippi River Delta







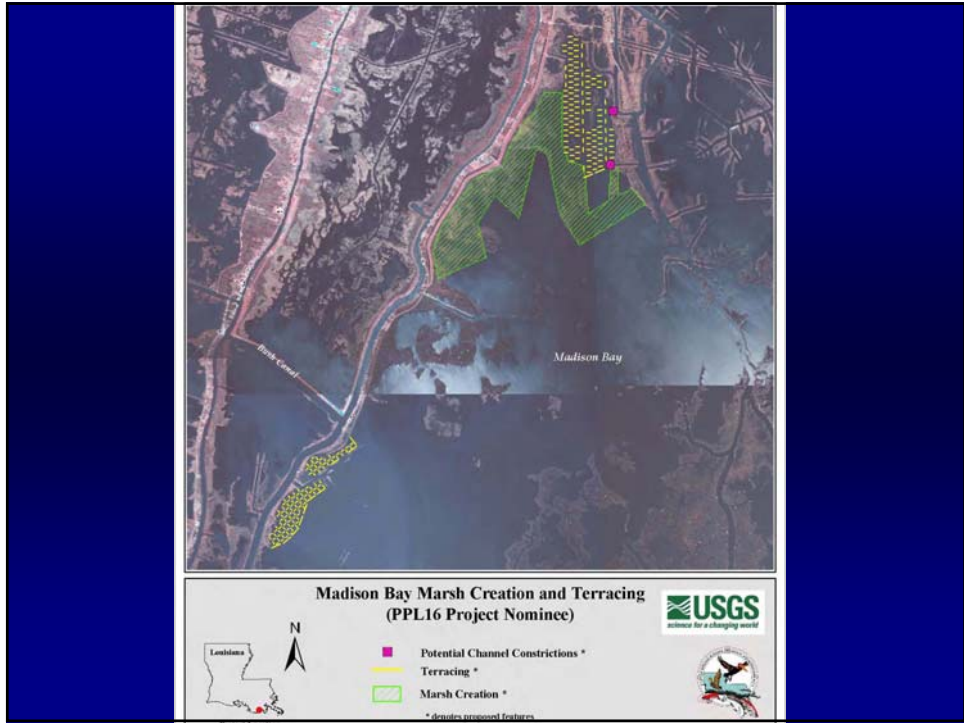


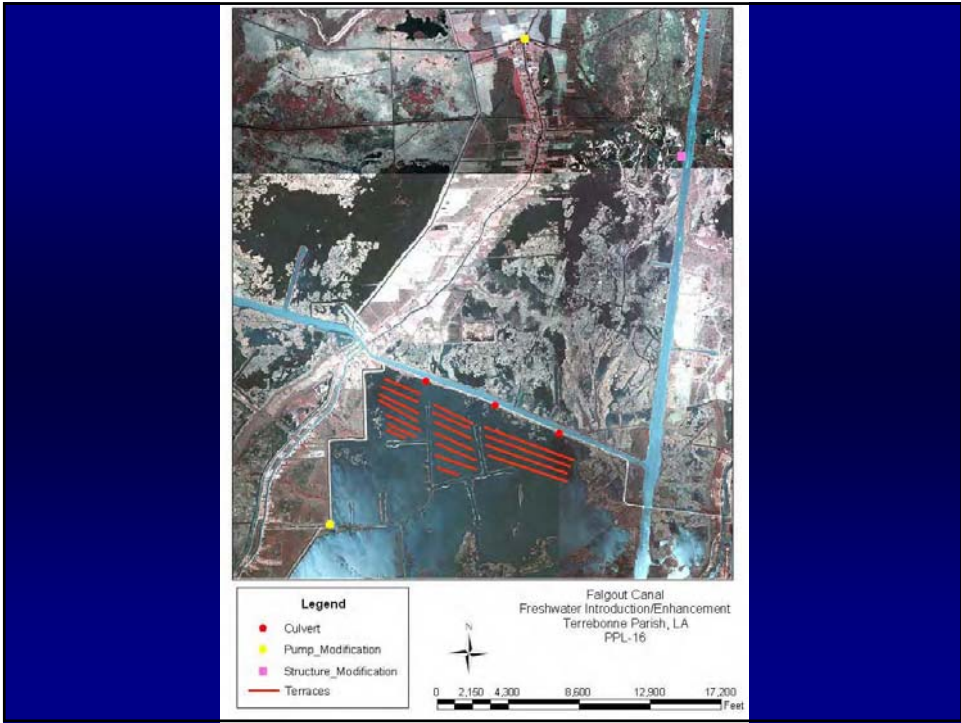
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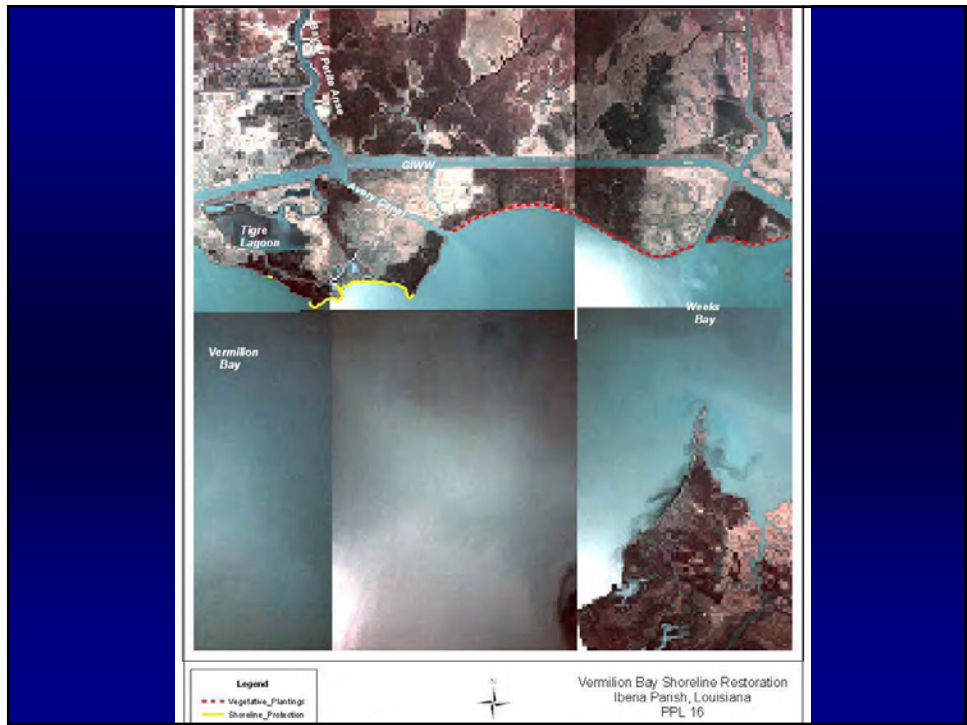
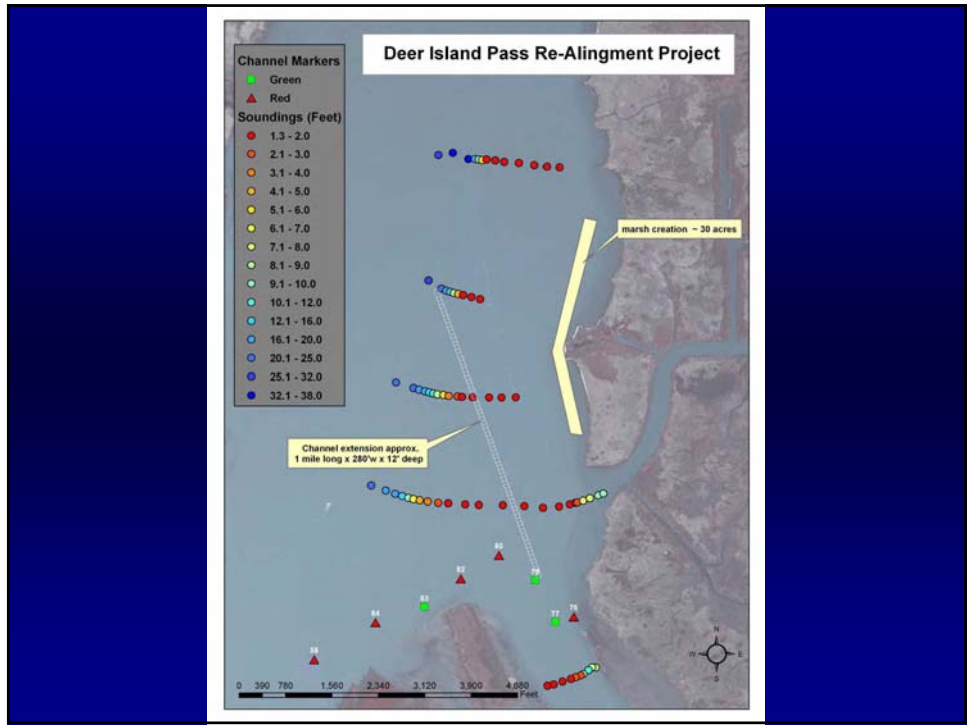
RPT Leader: Ronny Paille, USFWS

RPT meeting held on January 11, 2006

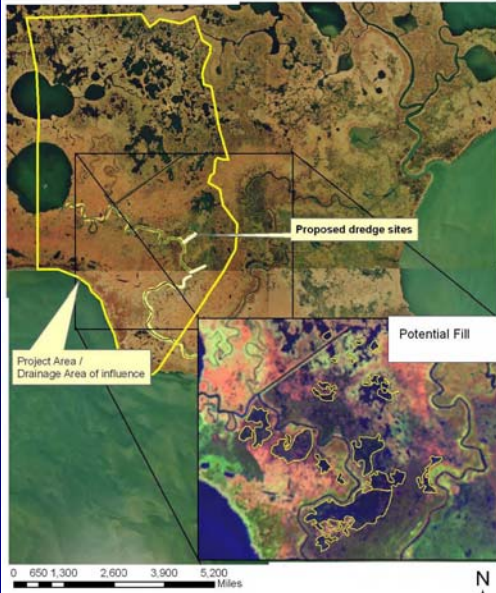
Basins: Atchafalaya, Teche/Vermilion, &
Terrebonne







South Marsh Island Marsh Creation
PPL 16



Source: 2004 DOQQ Inset Source: Post Hurricane Lile LIDAR



Bird Island/Southwest Pass
Marsh Creation and Shoreline Protection
(PPL15 Project Candidate)



- Shoreline Protection*
- Retention Levee*
- Tidal Creeks*
- Possible Island Location*
- Marsh Creation *
- Project Boundary



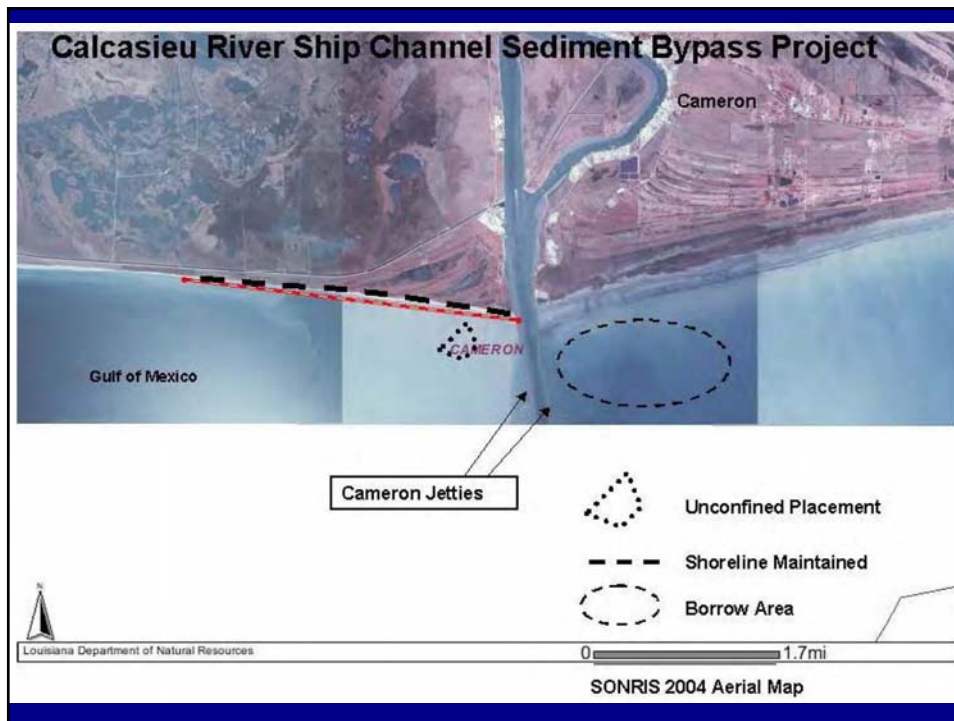
* denotes proposed features

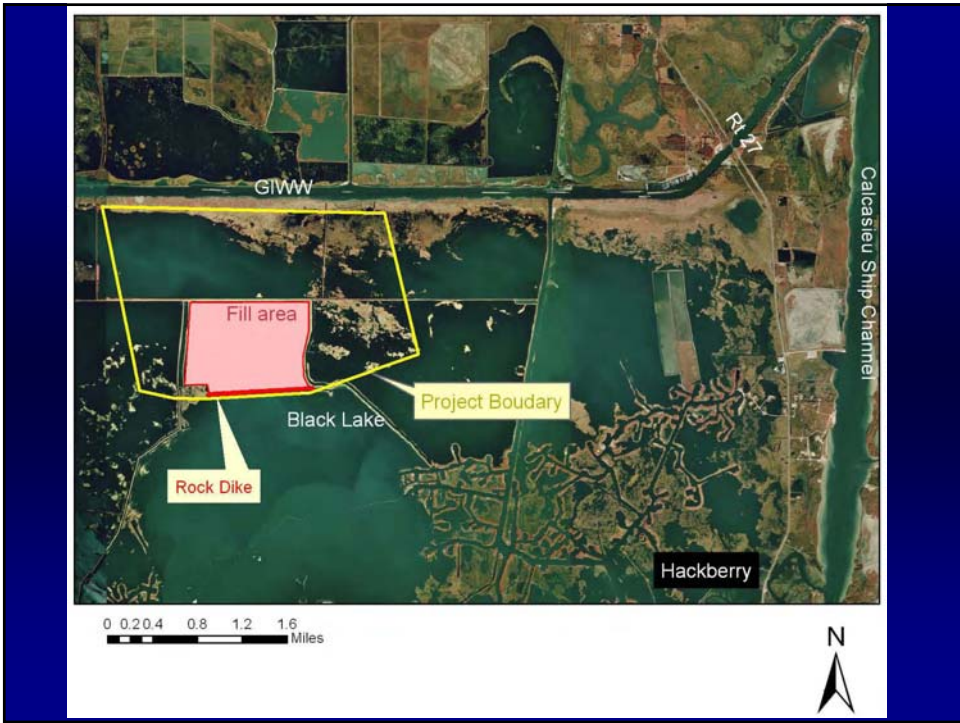
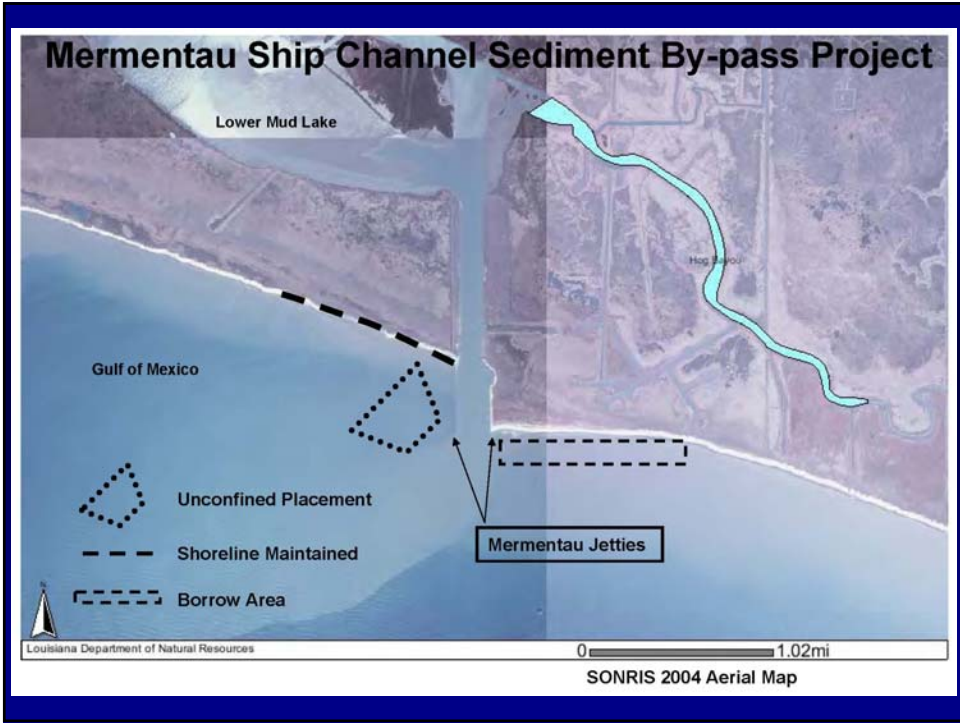
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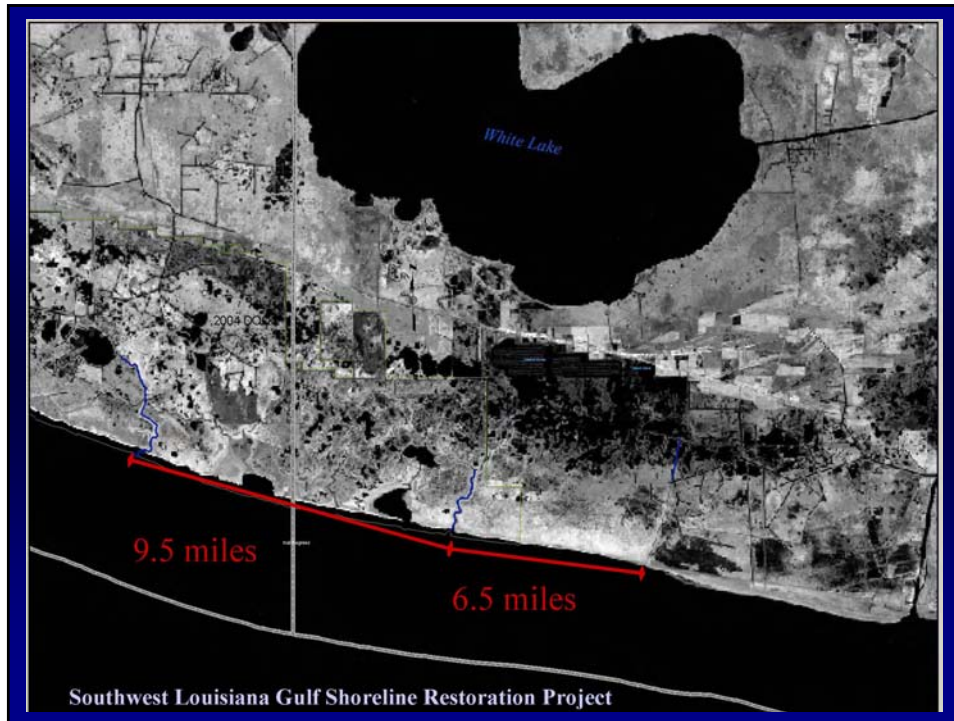
RPT Leader: Darryl Clark, USFWS

RPT meeting held on January 10, 2006

Basins: Calcasieu/Sabine & Mermentau







PPL 16 Nominees' Cost & Benefit Matrix

Region	Basin	Type	Project	Preliminary Fully Funded Cost Range	Preliminary Benefits (Net Acres Range)	Potential Issues					Comments on Other Issues
						Oysters	Land Rights	Pipelines/Utilities	O&M	Other Issues	
1	Pochartrain	MC	Alligator Bend Marsh Restoration and Shoreline Protection Project	\$20M - \$25M	500 - 550	X					
1	Pochartrain	DV	Mississippi River Reintroduction at Violet (Violet Siphon Enlargement) and Marsh Creation Project	\$40M - \$50M	300 - 350	X	X	X	X		
2	MR Delta	MC	Romere Pass Marsh Creation Project	\$20M - \$25M	350 - 400			X			
2	MR Delta	MC	Delta National Wildlife Refuge Marsh Creation Project	\$30M - \$35M	500 - 550			X			
2	Breton Sound	MC/SP	Breton Landbridge Marsh Creation and Shoreline Protection Project	\$30M - \$35M	650 - 700	X		X			
2	Breton Sound	MC	Wills Point Marsh Creation Project	\$35M - \$40M	650 - 700			X			
2	Iberaria	SP/MC	Jean Lafitte Shoreline Protection and Marsh Creation Project	\$20M - \$25M	400 - 450			X	X		
2	Iberaria	MC	Grand Liard Ridge and Fringe Marsh Restoration Project	\$30M - \$35M	250 - 300	X	X	X			
3	Terrebonne	MC/TR	Madison Bay Marsh Creation and Terracing Project	\$20M - \$25M	300 - 350	X		X	X		
3	Terrebonne	BI	West Belle Pass Barrier Headland Restoration Project	\$20M - \$25M	300 - 350			X			
3	Terrebonne	DV/TR	Falgout Canal Freshwater Enhancement Project	\$5M - \$10M	50 - 100		X		X		
3	Atchafalaya	SP	Point Chevreaux Shoreline Protection Project	\$10M - \$15M	100 - 150			X	X		
3	Atchafalaya	DV/MC	Deer Island Pass Re-Alignment Project	\$5M - \$10M	300 - 350		X		X	X	potential impact to navigation channel
3	Teche-Vermilion	SP	Vermilion Bay Shoreline Beach Restoration/Vegetative Planting and Maintenance Project	\$0M - \$5M	150 - 200				X		
3	Teche-Vermilion	HR/MC	South Marsh Island Hydrologic Restoration	\$10M - \$15M	250 - 300				X		
3	Teche-Vermilion	MC/SP	Bird Island/Southwest Pass Marsh Creation and Shoreline Protection (PPL15 rollover)	\$15M - \$20M	100 - 150	X	X		X		
4	Cacousis-Sabine & Mermentau	MC	Cacousien River Ship Channel Sediment Bypass/Restoration of Longshore Sediment Flow Across the Mouth of the Mermentau Ship Channel Project	\$15M - \$20M	50-100			X	X	X	potential navigation hazard
4	Cacousis-Sabine	MC/SP	North Black Lake Marsh Creation Project	\$30M - \$35M	450 - 500			X			
4	Mermentau	MC	Southwest LA Gulf Shoreline Restoration Project	\$15M - \$20M	800 - 850			X	X		

Demonstration Project Nominees

1. Sediment Containment System for Marsh Creation Demo
2. Enhancement of Barrier Island Vegetation Demo
3. Barrier Island Sand Blowing Demo
4. Nourishment of Permanently Flooded Cypress Swamps Through Dedicated Dredging Demo
5. Evaluation of Bioengineered Reefs Performing as Submerged Breakwaters Demo

Sediment Containment System for Marsh Creation Demonstration Project

- Goals: To demonstrate a cost-effective alternative to traditional dredge containment methods.
- Solutions: A new containment system consisting of a filter cloth or geotextile fabric that is anchored by a chain and floated on the surface by an absorbent boom will be used to trap sediment in the outfall of freshwater diversion sites.
- Cost: The estimated fully funded cost is \$740,806.

Enhancement of Barrier Island and Salt Marsh Vegetation Demonstration Project

- Goals: To test several technologies and products to enhance cost-effective establishment of barrier island and salt marsh vegetation.
- Solutions: Humic acid and broadcast fertilization regimes will be applied to barrier island and salt marsh plantings.
- Cost: The estimated fully funded cost is \$845,187.

Barrier Island Sand Blowing Demonstration Project

- Goals: To demonstrate the use of sand blowing technology to restore barrier islands.
- Solutions: Sand will be mined in the dry from upland disposal sites and placed on the barrier islands in the dry using the sand blowing technology.
- Cost: The estimated fully funded cost is \$1,919,343.

Nourishment of Permanently Flooded Cypress Swamps Through Dedicated Dredging Demonstration Project

- Goals: To demonstrate how the deposition of differing heights of dredged material within a cypress/tupelo swamp impact the growth of cypress trees.
- Solutions: 3 dredge material containment or study sites would be constructed to receive varying heights of dredged material.
- Cost: The estimated fully funded cost is \$1,550,188.

Evaluation of Bioengineered Reefs Performing as Submerged Breakwaters Demonstration Project

- Goals: To investigate specific designs of bioengineered oyster reefs performing as submerged breakwaters.
- Solutions: Construction and monitoring of the performance of submerged oyster breakwaters.
- Cost: The estimated fully funded cost is \$1,421,702.

PPL 16 Demonstration Project Nominees Matrix

Demonstration Project Name	Meets Demonstration Project Criteria?	Lead Agency	Total Fully Funded Cost	Technique Demonstrated
Sediment Containment System for Marsh Creation Demo	Yes	NRCS	\$740,806	Demonstrates the effectiveness of a sediment trapping system to facilitate sedimentation in the outfall of freshwater diversion sites.
Enhancement of Barrier Island Vegetation Demo	Yes	EPA	\$845,187	Tests several technologies and/or products (e.g., humic acid addition, fertilization, seed dispersal) to enhance the establishment and growth of barrier island and salt marsh vegetation.
Barrier Island Sand Blowing Demo	Yes	USACE	\$1,919,343	Demonstrates the use of sand blowing technology for the purpose of mining sand sources in the dry and placing (unloading) the material in the dry for barrier island restoration.
Nourishment of Permanently Flooded Cypress Swamps Through Dedicated Dredging Demo	Yes	FWS	\$1,550,188	Investigates the effects of deposition of dredged material in cypress swamp. Determines the effects on tree growth and regeneration. Several methods of planting cypress trees in the newly deposited dredged material would also be investigated.
Evaluation of Bioengineered Reefs Performing as Submerged Breakwaters Demo	Yes	NMFS	\$1,421,702	Investigates specific designs of bioengineered reefs and their ability to mitigate shoreline erosion in poor soil environments. Performance of the reefs will be compared to traditional submerged rock breakwaters and their potential to serve as an oyster reef.



CWPPRA PPL16 Nominees - SUMMARY MATRIX

3-Mar-06

Region	Basin	Type	Project	Potential Issues							Comments on Other Issues
				Preliminary Fully Funded Cost Range	Preliminary Benefits (Net Acres Range)	Oysters	Land Rights	Pipelines/Utilities	O&M	Other Issues	
1	Pontchartrain	MC	Alligator Bend Marsh Restoration and Shoreline Protection Project	\$20M - \$25M	500 - 550	X					
1	Pontchartrain	DV	Mississippi River Reintroduction at Violet (Violet Siphon Enlargement) and Marsh Creation Project	\$40M - \$50M	300 - 350	X	X	X	X		
2	MR Delta	MC	Romere Pass Marsh Creation Project	\$20M - \$25M	350 - 400			X			
2	MR Delta	MC	Delta National Wildlife Refuge Marsh Creation Project	\$30M - \$35M	500 - 550			X			
2	Breton Sound	MC/SP	Breton Landbridge Marsh Creation and Shoreline Protection Project	\$30M - \$35M	650 - 700	X		X			
2	Breton Sound	MC	Wills Point Marsh Creation Project	\$35M - \$40M	650 - 700			X			
2	Barataria	SP/MC	Jean Lafitte Shoreline Protection and Marsh Creation Project	\$20M - \$25M	400 - 450			X	X		
2	Barataria	MC	Grand Liard Ridge and Fringe Marsh Restoration Project	\$30M - \$35M	250 - 300	X	X	X			
3	Terrebonne	MC/TR	Madison Bay Marsh Creation and Terracing Project	\$20M - \$25M	300 - 350	X		X	X		
3	Terrebonne	BI	West Belle Pass Barrier Headland Restoration Project	\$20M - \$25M	300 - 350			X			
3	Terrebonne	DV/TR	Falgout Canal Freshwater Enhancement Project	\$5M - \$10M	50 - 100		X		X		
3	Atchafalaya	SP	Point Chevreuil Shoreline Protection Project	\$10M - \$15M	100 - 150			X	X		
3	Atchafalaya	DV/MC	Deer Island Pass Re-Alignment Project	\$5M - \$10M	300 - 350		X		X	X	potential impact to navigation channel
3	Teche-Vermilion	SP	Vermilion Bay Shoreline Beach Restoration/Vegetative Planting and Maintenance Project	\$0M - \$5M	150 - 200				X		
3	Teche-Vermilion	HR/MC	South Marsh Island Hydrologic Restoration	\$10M - \$15M	250 - 300				X		
3	Teche-Vermilion	MC/SP	Bird Island/Southwest Pass Marsh Creation and Shoreline Protection (PPL15 rollover)	\$15M - \$20M	100 - 150	X	X		X		
4	Calcasieu-Sabine & Mermentau	MC	Calcasieu River Ship Channel Sediment Bypass/Restoration of Longshore Sediment Flow Across the Mouth of the Mermentau Ship Channel Project	\$15M - \$20M	50-100			X	X	X	potential navigation hazard
4	Calcasieu-Sabine	MC/SP	North Black Lake Marsh Creation Project	\$30M - \$35M	450 - 500			X			
4	Mermentau	MC	Southwest LA Gulf Shoreline Restoration Project	\$15M - \$20M	800 - 850			X	X		

CWPPRA PPL 16 Demonstration Projects

Demonstration Project Name	Meets Demonstration Project Criteria?	Lead Agency	Total Fully Funded Cost	Technique Demonstrated
Sediment Containment System for Marsh Creation Demo	Yes	NRCS	\$740,806	Demonstrates the effectiveness of a sediment trapping system to facilitate sedimentation in the outfall of freshwater diversion sites.
Enhancement of Barrier Island Vegetation Demo	Yes	EPA	\$845,187	Tests several technologies and/or products (e.g., humic acid addition, fertilization, seed dispersal) to enhance the establishment and growth of barrier island and salt marsh vegetation.
Barrier Island Sand Blowing Demo	Yes	USACE	\$1,919,343	Demonstrates the use of sand blowing technology for the purpose of mining sand sources in the dry and placing (unloading) the material in the dry for barrier island restoration.
Nourishment of Permanently Flooded Cypress Swamps Through Dedicated Dredging Demo	Yes	FWS	\$1,550,188	Investigates the effects of deposition of dredged material in cypress swamp. Determines the effects on tree growth and regeneration. Several methods of planting cypress trees in the newly deposited dredged material would also be investigated.
Evaluation of Bioengineered Reefs Performing as Submerged Breakwaters Demo	Yes	NMFS	\$1,421,702	Investigates specific designs of bioengineered reefs and their ability to mitigate shoreline erosion in poor soil environments. Performance of the reefs will be compared to traditional submerged rock breakwaters and their potential to serve as an oyster reef.

Priority Project List Number 16 Nominees



Technical Committee Meeting

New Orleans

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Nominee Projects located in Region One

- Alligator Bend Marsh Restoration and Shoreline Protection Project
- Mississippi River Reintroduction at Violet (Violet Siphon Enlargement) and Marsh Creation Project

Nominee Projects located in Region Two

- Romere Pass Marsh Creation Project
- Delta National Wildlife Refuge Marsh Creation Project
- Breton Landbridge Marsh Creation and Shoreline Protection Project
- Wills Point Marsh Creation Project
- Jean Lafitte Shoreline Protection and Marsh Creation Project
- Wisner Wildlife Management Area Marsh Creation and Terracing Project
- Grand Liard Ridge and Fringe Marsh Restoration Project

Nominee Projects located in Region Three

- Madison Bay Marsh Creation and Terracing Project
- West Belle Pass Barrier Headland Restoration Project
- Falgout Canal Freshwater Enhancement Project
- Point Chevreuil Shoreline Protection Project
- Deer Island Pass Re-Alignment Project
- Vermilion Bay Shoreline Beach Restoration/Vegetative Planting and Maintenance Project
- South Marsh Island Hydrologic Restoration
- Bird Island/Southwest Pass Marsh Creation and Shoreline Protection (PPL15 rollover)

Nominee Projects located in Region Four

- Calcasieu River Ship Channel Sediment Bypass Project
- North Black Lake Marsh Creation Project
- Restoration of Longshore Sediment Flow Across the Mouth of the Mermentau Ship Channel/Mermentau Ship Channel By-Pass Project
- Southwest LA Gulf Shoreline Restoration Project

Nominee Demonstration Projects

- Sediment Containment System for Marsh Creation Demo
- Enhancement of Barrier Island Vegetation Demo
- Barrier Island Sand Blowing Demo
- Nourishment of Permanently Flooded Cypress Swamps Through Dedicated Dredging Demo
- Evaluation of Bioengineered Reefs Performing as Submerged Breakwaters Demo

Letters of Support for Nominees

**Region 1
PPL 16 Nominees**

Alligator Bend Marsh Restoration and Shoreline Protection Project

PPL16 PROJECT NOMINEE FACT SHEET
February 27, 2006

Project Name

Alligator Bend Marsh Restoration and 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 – Dedicated dredging for wetland creation.
- 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 Chef Pass, Unknown Pass, the Gulf Intracoastal Waterway (GIWW), and Lake Borgne.

Problem

The landfall of hurricane Katrina in southeast Louisiana destroyed thousands of acres of marsh and other coastal habitats in the Lake Pontchartrain basin. Along the shorelines of Lake Borgne the storm created breaches between the lake and interior marshes and in some cases removed large expanses of wetlands. Loss of wetlands in the Alligator Bend area (see attached map) has created more than 1,000 acres of open water in a complex that formerly supported relatively stable brackish marshes. Post-storm aerial photographs show the most significant losses occurred along the flanks of Bayou Platte. The current landscape configuration has left a large area of open water between eroding shorelines on Lake Borgne and along the GIWW. Continued shoreline erosion and future storms could create a direct path of open water connecting the GIWW and Lake Borgne and threaten the integrity of this important landbridge.

Proposed Project Feature

- Dedicated dredging to restore wetlands on the East Orleans Land Bridge that were destroyed during the passage of hurricane Katrina.
- Planting wetlands vegetation in the marsh creation area and along the Lake Borgne shoreline.

Goals

- Restore critical wetlands destroyed by hurricane Katrina.
- Prevent breaching of degraded marshes between the GIWW and Lake Borgne.

Preliminary Project Benefits

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

The project would directly create approximately 500 acres of marsh. An additional estimated 250 acres of marsh and open water habitats could be benefited over the project life by preventing breaches in the Lake Borgne and GIWW shorelines and stopping expansion of the large ponds and broken marsh areas created during Hurricane Katrina.

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

At the end of 20 years, approximately 502 acres should remain. Approximately 500 acres of marsh will be initially created and eroded at a loss rate of 0.105% per year (50% reduction of 0.21%/yr loss rate taken from Coast 2050 New Orleans East Mapping Unit Data). At that rate, 490 acres would remain at TY20 as a result of the marsh creation. The average shoreline erosion rate for this segment of the Lake Borgne shoreline is estimated to be approximately 5 ft/yr. The 2 mile stretch of shoreline with vegetative plantings will result in a reduction of 50% of the 5 ft/yr shoreline erosion rate. This results in an additional 12 acres of marsh that should remain after 20 years. (490 + 12 = 502 net 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%).

For the created marsh, a 50% loss rate reduction is anticipated. For the shoreline protection plantings the loss rate will be reduced 50%.

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

The project would restore/protect a lake shoreline and preserve portions of the critical East Orleans Landbridge.

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

The project will provide protection to critical infrastructure including the GIWW and a nearby railroad corridor by preventing the breaching between the waterbodies. Failure to prevent the breach would significantly alter water circulation through the opening of a new direct connection between the GIWW and Lake Borgne.

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

The project provides some synergy with other projects protecting the East Orleans Landbridge and nearby mapping units including projects at Bayou Chevee, the Fritchie Marsh, and on the Bayou Sauvage NWR.

Identification of Potential Issues

There are potential oysters issues associated with borrowing from Lake Borgne.

Preliminary Construction Costs

The construction cost including 25% contingency is approximately \$16,461,000. The estimated fully funded cost range is \$20 - \$25 million.

Preparers of Fact Sheet

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Alligator Bend Marsh Creation and Shoreline Protection



**Mississippi River Reintroduction at Violet (Violet Siphon Enlargement) and Marsh
Creation Project**

Approximately 240 acres of marsh would be created. There would be direct and indirect benefit to about 18,000 acres of marsh and open water from freshwater, sediment and nutrient input (i.e., project area).

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

- Assume 50% reduction of the background rate (i.e., - 0.035%/yr) for the marsh creation areas
- Assume 50% reduction of the background rate (i.e., - 0.035%/yr) for rest of project area

309 acres would be protected/created over the project life (i.e., TY20, net after applying the above assumptions)

3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life?

50-75%

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.?

No.

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

The net impact of the project on critical and non-critical infrastructure would be positive. The project would provide substantial protection to the St. Bernard Parish levee system adjacent to the project area, and provide moderate protection to one pump station, a state highway, six natural gas pipelines, and 17 oil and/or natural gas wells.

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

The project would provide some synergy with other projects including the Lake Borgne Shoreline Protection project and various beneficial use of dredged material projects along the MRGO near Bayou Dupre.

Identification of Potential Issues:

The proposed project has the following potential issues: utilities/pipelines/roads, land rights, navigation, oyster leases, operations and maintenance, outfall management.

Preliminary Construction Costs:

The construction cost including 25% contingency is approximately \$22,299,000. The estimated fully funded cost range is \$40 - \$50 million.

Preparer of Fact Sheet

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PPL16 PROJECT NOMINEE FACT SHEET
March 1, 2006

Project Name:

Mississippi River Reintroduction and Marsh Creation at Violet

Coast 2050 Strategies:

- Coastwide: Dedicated dredging to create, restore, or protect wetlands.
- Coastwide: Vegetative plantings
- Coastwide: Offshore and riverine sand and sediment resources.
- Coastwide: Diversions and riverine discharge
- Coastwide: Management of diversion outfall for wetland benefits
- Regional ecosystem: Dedicated delivery for marsh building
- Mapping unit: Beneficial use of dredged material
- Mapping unit: vegetative plantings

Project Location:

Region 1, Pontchartrain Basin, Central Wetlands mapping unit, near Violet, in St. Bernard Parish.

Problem:

The Central Wetlands mapping unit has experienced wetland loss due to a variety of factors including filling, subsidence, saltwater intrusion, lack of sediment input, tropical storm activity, canal dredging and maintenance, and hydrologic modifications. Between 1932 and 1990, the mapping unit lost 13,480 acres of the 35,080 acres of marsh and swamp present in 1932 (LCWCRTF & WCRA 1999). The wetland loss rate for 1974 to 1983 time period is $-0.23\%/yr$ and for the 1983 to 1990 time period is $-0.07\%/yr$. The rate of subsidence in this mapping unit is estimated to be about 1.1 to 2.0 ft/century (LCWCRTF & WCRA 1999).

Proposed Project Features:

The project consists of enlarging the existing siphon at Violet and creating marsh through dedicated dredging to provide fish and wildlife habitat and provide storm buffer protection to the communities of Violet, Meraux, and Chalmette. The siphon, which currently consists of two 50-inch pipes, would be enlarged to include 10 54-inch pipes. The maximum projected volume of the expanded siphon would be approximately 2,700 cubic feet per second. Additionally, about 240 acres of marsh would be created through sediment mining in the Mississippi River, MRGO, and/or the improvement of the Violet canal. Created marsh will be planted with an appropriate vegetative species to help stabilize each area. Some outfall management (e.g., gapping the Violet canal banks, structural management) is probable.

Goals:

The project goals include creating of 240 acres of marsh and reintroducing freshwater, sediment, and nutrients to the project area to maintain, and nourish existing and created marshes. Additionally, the project may improve the area's storm buffering ability and benefit fisheries in Lake Borgne and the Biloxi marshes.




Preliminary Project Benefits:

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

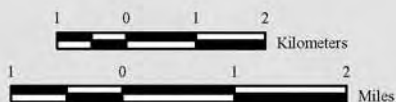


Mississippi River Reintroduction and Marsh Creation at Violet



-  Violet Siphon Enlargement *
-  Marsh Creation *
-  Project Boundary *

* denotes proposed features



Scale 1:109,000



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

Image Source:
 2004 Digital Orthophoto Quarter Quadrangle

**Region 2
PPL 16 Nominees**

Romere Pass Marsh Creation Project

PPL16 PROJECT NOMINEE FACT SHEET
March 1, 2006

Project Name

Romere Pass Marsh Creation

Coast 2050 Strategy

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

Project Location

Region 2, Mississippi River Basin, Plaquemines Parish, Delta National Wildlife Refuge (NWR), west of Main Pass near the terminus of Romere Pass

Problem

Interior ponding and shoreline erosion are the major causes of wetland loss in the project area. Loss rates accelerated in the mid 1950's and have continued to the present. Subsidence and physical erosion have formed large ponds which are now connected to Breton Sound. A narrow strip of marsh is all that separates these ponds from the open Gulf of Mexico. Additional marsh loss has occurred with the passage of Hurricane Katrina.

Proposed Project Features

This project was originally presented as a beneficial use project. However, further investigation revealed that the Corps does not dredge the Mississippi River in this vicinity (Venice to Cubits Gap) and Main Pass is not an authorized channel. Therefore, it is proposed that sediment be dredged from the Mississippi River, Main Pass or the adjacent bay/gulf and pumped to create 442 acres of marsh and rebuild/restore the shoreline between the interior ponds and Breton Sound. Containment dikes would be built where existing marsh does not provide adequate containment.

Goals

The goal of this project is to re-create marsh habitat in the open water adjacent to the shoreline. This new marsh will maintain the shoreline rim function by repairing existing breaches and preventing the formation of new breaches into the interior marsh.

Preliminary Project Benefits

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

Approximately 442 acres of marsh would be directly created. An additional 1,300 acres of marsh and open water habitats could be benefited over the project life by a reduction in wave energy.

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

Approximately 442 acres will be initially created and lost at a rate of -1.15% per year (50% reduction of -2.3%/yr loss rate from PPL10 Benneys Bay Diversion Project). At that rate, **351** acres would remain at TY20. An additional acreage would be protected along the perimeter of the interior ponds in the project area.

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%).*

For the created marsh, a 50% loss rate reduction is anticipated.

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 restore/protect a bay rim which separates interior ponds from wave energy from the bay.

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

The project could afford some protection to non-critical infrastructure (i.e., minor oil/gas facility on Romere Pass).

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

The project provides some synergy with the Benneys Bay Diversion Project.

Identification of Potential Issues

Pipelines are located in the project area.

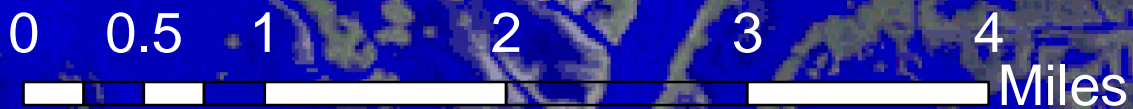
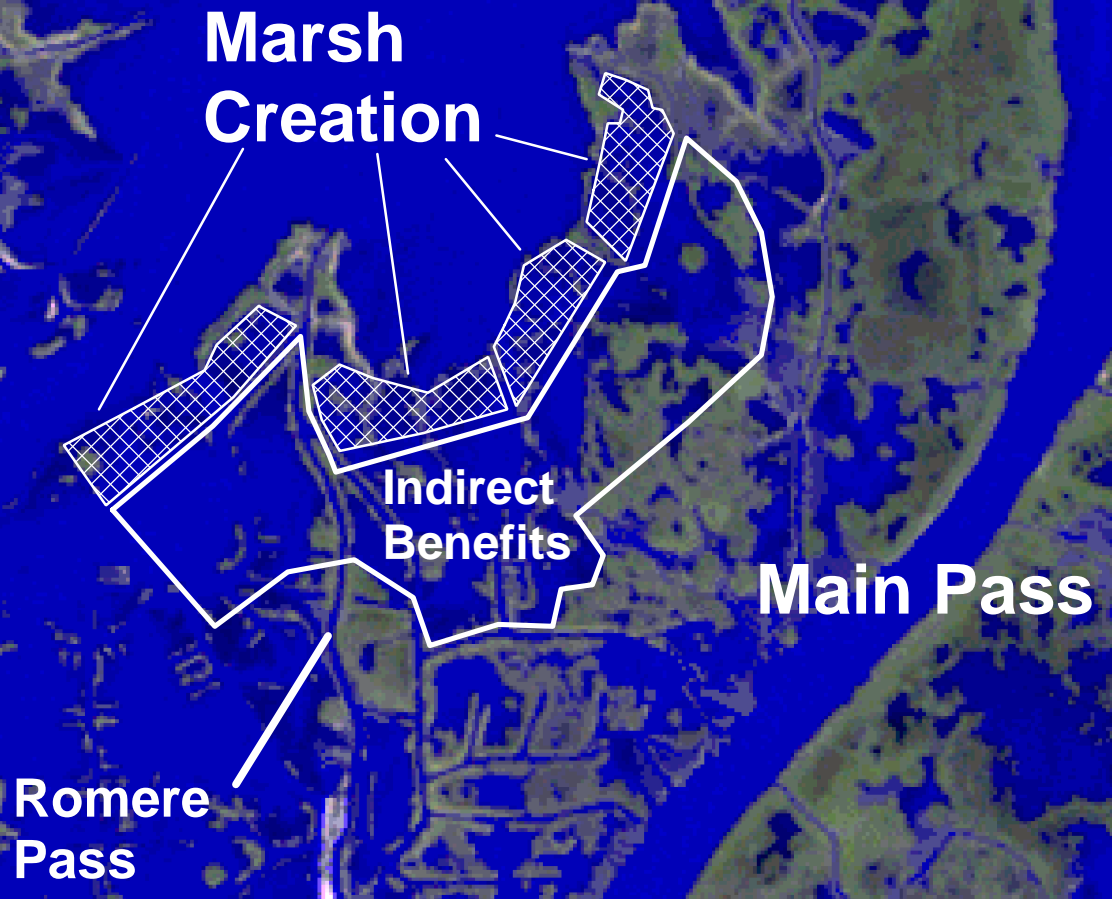
Preliminary Construction Costs

The construction cost including 25% contingency is approximately \$ 17,986,475. The estimated fully funded cost range is \$20 - \$25 million.

Preparer of Fact Sheet

Kevin Roy, USFWS, 337-291-3120, kevin_roy@fws.gov

Romere Pass Marsh Creation



Delta National Wildlife Refuge Marsh Creation Project

PPL16 PROJECT NOMINEE FACT SHEET
March 1, 2006

Project Name

Delta NWR Marsh Creation

Coast 2050 Strategy

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

Project Location

Region 2, Mississippi River Basin, Plaquemines Parish, Delta National Wildlife Refuge

Problem

Interior ponding and shoreline erosion are the major causes of wetland loss in the project area. Loss rates accelerated in the mid 1950's and have continued to the present. Subsidence and physical erosion have formed large ponds which are now connected to Breton Sound. At some locations, a narrow strip of marsh is all that separates these ponds from the open Gulf of Mexico. Additional marsh loss has occurred with the passage of Hurricane Katrina.

Proposed Project Features

This project was originally presented as a beneficial use project. However, further investigation revealed that the Corps does not dredge the Mississippi River in this vicinity (Venice to Cubits Gap) and Main Pass and Pass a Loutre are not authorized channels. Therefore, it is proposed that sediment be dredged from Pass a Loutre or the adjacent bay/gulf and pumped to create 642 acres of marsh. Containment dikes would be built where existing marsh does not provide adequate containment.

Goals

The goal of this project is to re-create marsh habitat in open water. In some areas, this new marsh will maintain the shoreline rim function by repairing existing breaches and preventing the formation of new breaches into the interior marsh.

Preliminary Project Benefits

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

Approximately 642 acres of marsh would be directly created. An additional 1,400 acres of marsh and open water habitats could be benefited over the project life by a reduction in wave energy.

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

Approximately 642 acres will be initially created and lost at a rate of -1.15% per year (50% reduction of -2.3%/yr loss rate from PPL10 Benneys Bay Diversion Project). At that rate, **509** acres would remain at TY20. An additional acreage (not calculated) would be protected along the perimeter of the interior ponds in the project area.

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

25-49%. For the created marsh, a 50% loss rate reduction is anticipated. However, lowering wave energy in adjacent marsh would result in a reduction of 25-49% in the background 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.*

At some locations, the project will restore/protect a bay rim which separates interior ponds and marsh from the bay.

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

No impacts on infrastructure are anticipated.

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

The project has no synergistic effect with other projects.

Identification of Potential Issues

Pipelines are located in the project area.

Preliminary Construction Costs

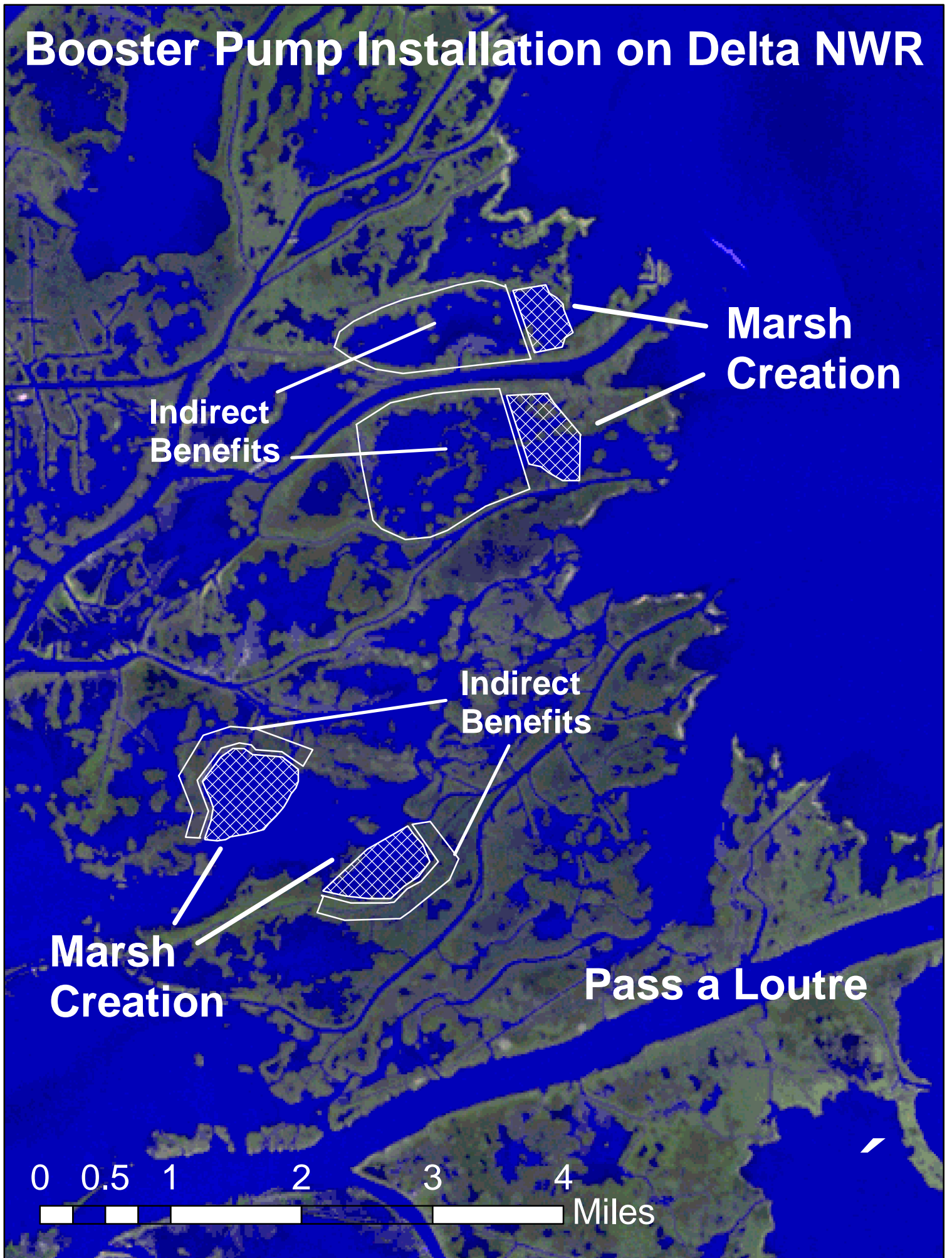
The construction cost including 25% contingency is approximately \$ 24,713,975. The estimated fully funded cost range is \$30 - \$35 million.

Preparer of Fact Sheet

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Booster Pump Installation on Delta NWR



Indirect
Benefits

Marsh
Creation

Indirect
Benefits

Marsh
Creation

Pass a Loutre

0 0.5 1 2 3 4 Miles

Breton Landbridge Marsh Creation and Shoreline Protection Project

PPL16 PROJECT NOMINEE FACT SHEET

Date Feb. 22, 2006

Project Name

Breton Land Bridge Marsh Restoration

Coast 2050 Strategy

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

Project Location

Region 2, Breton Basin, Plaquemines Parish, Caernarvon mapping unit, between MRGO and the Mississippi River.

Problem

The landfall of Hurricane Katrina in southeast Louisiana destroyed thousands of acres of marsh and other coastal habitats east of the Mississippi River. One of the areas most severely impacted was the Breton Sound Basin where it is estimated 40.9 square miles of marsh were converted to open water. The operational plan of Caernarvon Freshwater diversion for 2006 proposes higher discharge during the winter and spring to address the hurricane impact. However, this discharge will have little potential to rebuild wetlands near the Breton Land Bridge- an area located south of Lake Lery between Delacroix and Oak River. Without restoration this region will begin to see the coalescence of water bodies such as Grand Lake, Lake Petit, and the surrounding marsh areas resulting in more direct connection between interior marshes and the open Black Bay system.

Proposed Project Features

According to USGS-NWRC mapping, much of the wetlands between the MRGO and the Mississippi River were damaged due to Hurricane Katrina. This project would use dedicated dredging or long distance piping from Mississippi River sediment to restore wetlands on the Breton Land Bridge that were destroyed during the passage of Hurricane Katrina. Vegetative plantings would also be used to stabilize lake shorelines damaged by Hurricane Katrina.

Goals

- Restore critical wetlands destroyed by Hurricane Katrina
- Maintain the Breton Land Bridge

Preliminary Project Benefits

1) Direct benefits= 905 acres created marsh and 645 acres of vegetative plantings totaling 1,550 acres.

Indirect benefits=Petite Lake rim.

2) Over the 20 year project life 369 acres of marsh will be created through hydraulic dredging and 308 acres of marsh will be reclaimed due to vegetative planting. Total direct benefits would be $369 + 308 = 677$.

	FWOP		FWP	
TY0	540 ac marsh	365 ac water	905 ac marsh	0 ac water
TY20	515 ac water	390 ac water	884 ac marsh	21 ac water

A 50% mortality was anticipated with the vegetative plantings (645 x 0.5) and the original subsidence rate was applied to the FWP acres.

- 3) The anticipated loss rate reduction throughout the area of direct benefits over the project life 25-49%.
- 4) Project features will maintain portions of Petite Lake rim and help restore the landbridge located between two bayou ridges-River aux Chenes and Bayou Terre aux Boeuf.
- 5) The project will have no impact on critical and non-critical infrastructure.
- 6) This project is the first step in recreating the land bridge that is in the advanced stages of deterioration. As this and hopefully future projects begin to recreate this land bridge, it will help to retain the fresh water from the Carnarven freshwater diversion and decrease the amount of high saline waters from Black Bay piercing deeper into the lower saline northern marshes.

Identification of Potential Issues

- Potential problems with pipelines as they do cross areas designated for vegetative planting.
- There are oyster leases adjacent to the marsh creation areas.

Preliminary Construction Costs

The construction cost including 25% contingency is approximately \$23,376,929. The estimated fully funded cost range is \$ 30 - \$ 35 million.

Preparer of Fact Sheet

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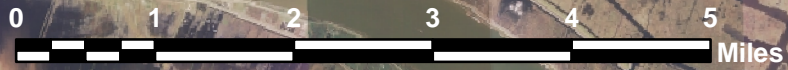
Breton Land Bridge Restoration Project

F

9 miles 2 booster pumps

7 miles 1 booster pump

4 miles no booster pump



Legend

- Marsh Creation Cell
- Vegetative Planting



Wills Point Marsh Creation Project

PPL16 PROJECT NOMINEE FACT SHEET
27 February 2006

Project Name

Wills Point Marsh Creation

Coast 2050 Strategy

Coastwide Strategy: Dedicated Dredging for Wetland Creation

Project Location

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

Problem

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

Proposed Project Features

Approximately 5.8 million CY of material would be mined from the Mississippi River from the point bar at Wills Point. It would be used to create 689 acres of marsh in shallow open ponds. The marsh would be planted.

Goals

1. Create 689 acres of marsh
2. Provide additional protection to the 40-Arpent levee
3. Provide additional protection to the natural ridge of Rive aux Chene and Tigers Ridge.

Preliminary Project Benefits

- 1) What is the total acreage benefited both directly and indirectly?
689 acres of marsh would be created immediately.
- 2) How many acres of wetlands will be protected/created over the project life?
Applying the half of the 0.42 % per year 1983-1990 loss rate from the Rive Aux Chenes Mapping Unit to 689 acres for 20 years shows 661 acres remaining after 20 years.
- 3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%)?
50% loss rate reduction applied to the created marsh
- 4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.
Project protects 40-Arpent Levee, natural ridge of Rive aux Chenes and Tigers Ridge.
- 5) What is the net impact of the project on critical and non-critical infrastructure?
Project protects 40-Arpent levee, which could be critical to inhabitants of Bertraville and Wills Point.

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

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

Identification of Potential Issues

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

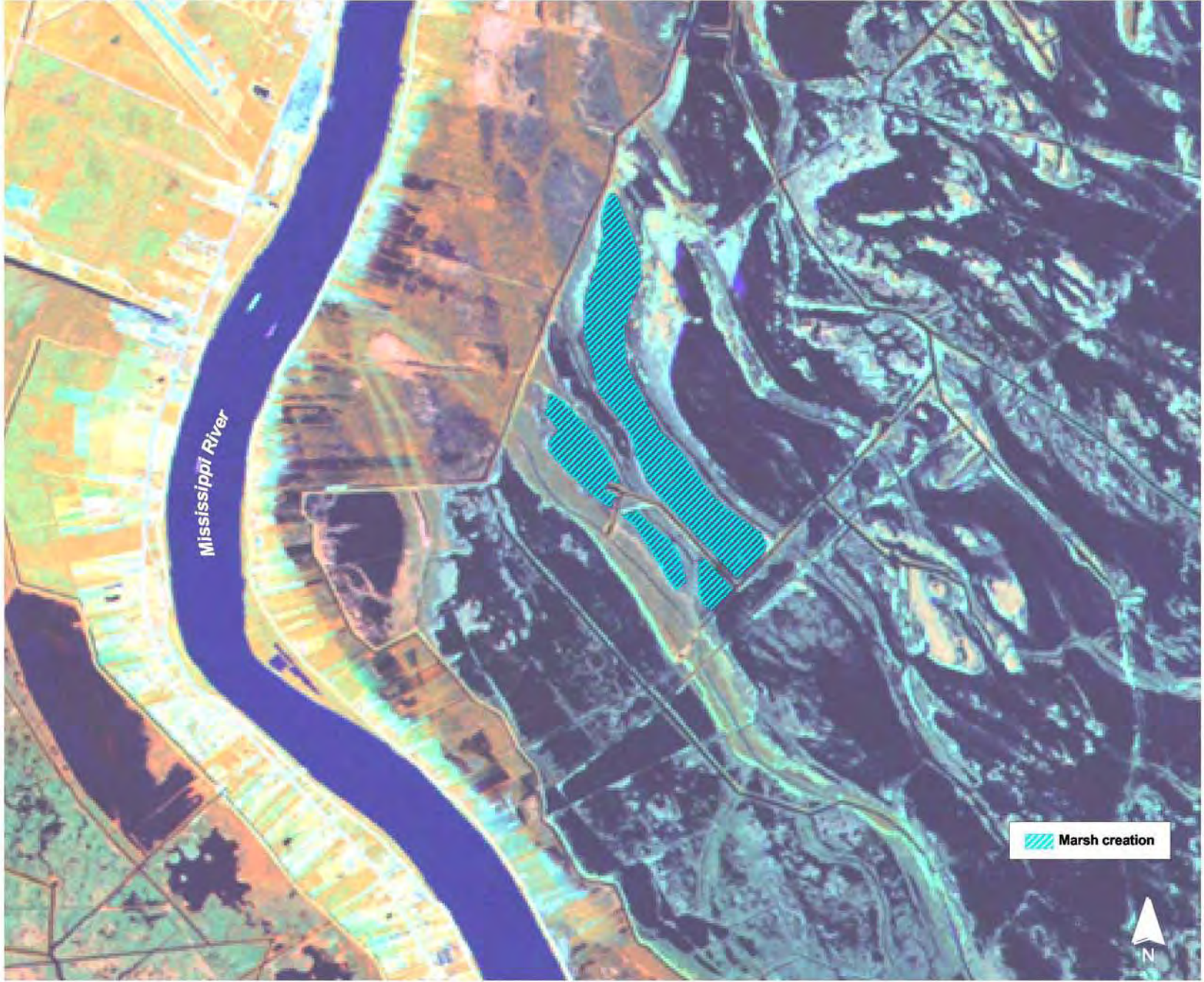
Preliminary Construction Costs

The construction cost including 25% contingency is approximately \$27,200,000. The estimated fully funded cost range is \$35 - \$40 million.

Preparers of Fact Sheet

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Jean Lafitte Shoreline Protection and Marsh Creation Project

PPL16 PROJECT NOMINEE FACT SHEET
February 27, 2006

Project Name:

Jean Lafitte Shoreline Protection and Marsh Creation Project

Coast 2050 Strategies:

Coastwide Strategy: Dedicated dredging for wetland creation

The Cataouatchie/Salvador Mapping unit strategy: “maintaining shoreline integrity along lakes...”

Project Location:

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

Problem:

Within the past 50 years, the project area has undergone a remarkable transformation including the loss of more than 650 acres of wetlands along the southeast shore of Lake Salvador. Since the late 1950's, annual shoreline erosion rates at the Barataria Preserve averaged 21 linear feet with a high exceeding 90 feet. Astonishing shoreline retreat of approximately 2,400 feet (55 feet per year) has occurred at the southern end of the Pipeline Canal since 1958. Shoreline retreat and wetland loss were accelerated by the powerful winds and storm surge caused by Hurricanes Katrina and Rita. Within the project area, these storms caused 100 feet of shoreline retreat in places and the interior marsh was compacted or torn apart creating open water ponds. The high loss of wetlands that has occurred could also be partially responsible for flooding of the neighboring communities of Crown Point, Jean Lafitte, and Barataria. Shoreline stabilization and marsh restoration will ensure protection of natural resources, communities and infrastructure.

Mapped land loss by the USACE indicates sustained high shoreline erosion rates for this reach of Lake Salvador. Average shoreline retreat in the project area is 21'/year for the period 1930 to 2001. In the northern portion of the project area, Lake Salvador has nearly broken through to the Bayou Segnette Waterway, leaving only a thin portion of the spoil bank, treeless in some places. Maximum retreat nearer the mouth of Bayou Villars for the same 71 year period is 38'/year. Shoreline retreat appears to be accelerating with rates for the 1983 to 1990 period as great as 89'/year. Shoreline retreat along the southern bank of Bayou Villars is nearing the Gulf Intracoastal Waterway (GIWW).

Proposed Project Features:

1. Approximately 27,000 lf of rock shoreline protection.
2. Approximately 140 acres of marsh creation behind the shoreline protection in the area of Lake Salvador at the break through to the Bayou Segnette Waterway and behind the shoreline protection near the mouth of Bayou Villars where the break through to the GIWW is possible. There will be 210 acres of nourishment in the latter fast-eroding area. Dredged material will be obtained from a borrow source located near the project area in Lake Salvador.

Goals:

1. Stop shoreline erosion.
2. Create and nourish marsh.
3. Prevent coalescence of Lake Salvador with the Bayou Segnette Waterway and the GIWW.

Preliminary Project Benefits:

The following questions should be addressed:

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

Directly benefited: 610 acres (140 acres of marsh creation + 210 acres of nourishment + 260 acres of shoreline erosion prevented)

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

At the end of 20 years, approximately 412 acres should remain. The shoreline protection should stop erosion of at least 21 feet per year over 27,000 feet, which means that 260 acres should remain. The 70 acres created behind the shoreline protection on the Jean Lafitte NHP should remain at the end of 20 years – the Coast 2050 Jean Lafitte Mapping Unit showed no interior loss from 1974-1990. The 70 acres created near B. Villars in the Perot/Rigolettes MU should be lost at half the background rate of 1.07% per year. Thus 63 acres would remain at the end of 20 years. The 210 acres of nourished marsh near Bayou Villars should be lost at half the background rate of 1.07% per year. There would be 19 net acres from this nourishment. Thus at the end of 20 years $260 + 70 + 63 + 19 = 412$ acres.

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

50-74%

- 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 restores a portion of the rims of Lake Salvador and Bayou Villars, which are structural components of the coastal ecosystem.

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

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

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

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

Identification of Potential Issues:

Rock shoreline protection projects historically require O&M. There are also pipelines in the project area that could be an issue.

Preliminary Construction Costs:

The construction cost including 25% contingency is approximately \$16,300,000. The estimated fully funded cost range is \$20 - \$25 million.



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Lake Salvador

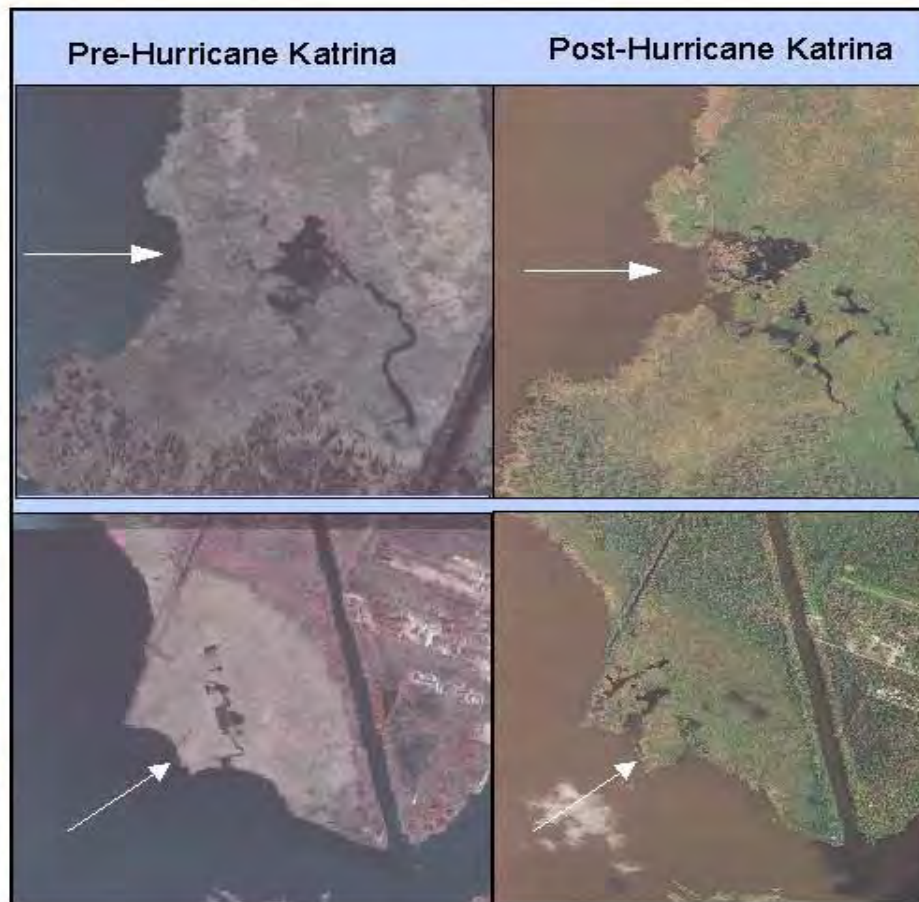
-  Shoreline protection
-  Marsh creation

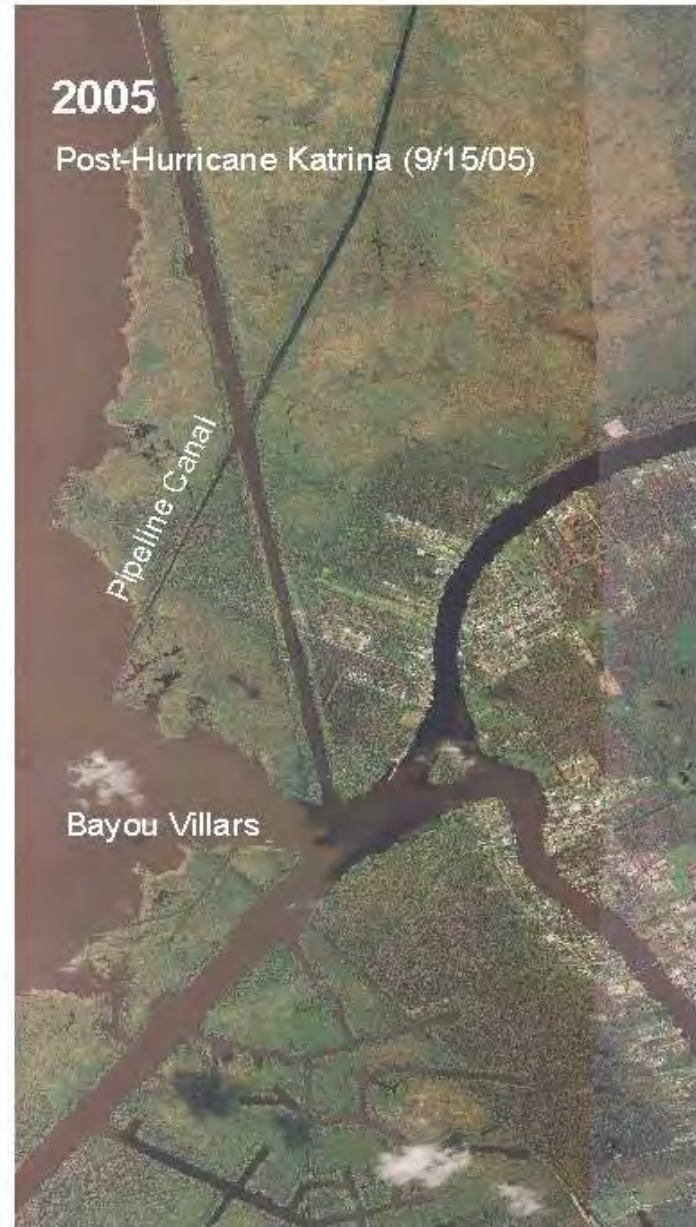


Marsh Loss at the Barataria Preserve Following Hurricane Katrina

Jean Lafitte National Historical Park and Preserve
New Orleans, Louisiana

National Park Service
U.S. Department of the Interior





Wisner Wildlife Management Area Marsh Creation and Terracing Project

PPL16 PROJECT NOMINEE FACT SHEET
March 1, 2006

Project Name

Wisner Wildlife Management Area Marsh Creation and Terracing.

Coast 2050 Strategy

Coastwide

Dedicated Dredging, to Create, Restore, or Protect Wetlands; Terracing

Region

Dedicated Dredging and/or beneficial use of dredged material to create marsh in the Clovelly, Little Lake, Caminada, and Fourchon Mapping Units

Project Location

Region 2, Barataria Basin, Caminada Bay Mapping Unit, Lafourche Parish, north of LA1 and between Lakes Laurier and Palourde

Problem

The area is suffering from rapid wetland loss from subsidence, shoreline erosion, and brown marsh die-off. The subsidence rate in the mapping unit is high at 2.1 – 3.5 ft/century. The landbridge between the lakes have begun to coalesce and the marsh buffer along LA Highway 1 continues to be rapidly lost. The land loss rate for the Caminada Bay Mapping Unit is -2.4%/yr based on 1983 to 1990 USACE data.

Proposed Project Features

The project consists of marsh creation, nourishment, and terracing. Tentatively, 300 acres of saline marsh would be created in three areas between LA1 and Lake Laurier to re-establish the lake rim and protect the highway. Approximately 270 acres of marsh would be nourished with thin layer sediment disposal in two areas on the landbridge between Lake Laurier and Lake Palourde to prevent coalescing of the lakes. Approximately 24,000 feet of earthen terraces would be constructed in open water between LA1 and Lake Laurier and along the western shoreline of Lake Laurier to create additional habitat and further re-establish and protect the lake rim and the highway. Marsh creation areas and terraces would be planted with smooth cordgrass. Sediment would be mined from the lakes and/or potentially Caminada Bay.

Goals

The intended project goals during further development are to create over 300 acres of marsh, nourish over 270 acres of marsh, and construct approximately 50,000 feet of earthen terraces. If the project is selected as a candidate, minimizing adverse impacts to the ecology of the lakes would be considered when siting and designing borrow areas during further refinement of the project scale and features.

Preliminary Project Benefits

1) What is the total acreage benefited both directly and indirectly? Tentatively, the project would create 300 acres of saline marsh, nourish 270 acres of saline marsh, and create an additional 39 acres from terrace construction. The total area estimated to be benefited is approximately 1,700 acres including the creation and nourishment areas, the terrace fields, and some adjacent existing marsh.

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

- Assume terraces are lost at half the background rate (i.e., -1.2%/yr)
- Assume a 50% reduction of the background rate applied to the marsh creation and nourishment areas

340 acres would be protected/created over the project life (i.e., TY20 net after applying the above assumptions)

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%). Based on a weighted application of the above assumptions the loss rate reduction would 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.? The project would restore the portions of the rim of Lake Laurier and Palourde.

5) What is the net impact of the project on critical and non-critical infrastructure? The project would have moderate net positive impact to critical infrastructures which consists of LA1, a hurricane evacuation route.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? There are not other projects in the immediate vicinity to provide for a synergistic effect. The absence of other such projects and the substantial amount of wetland loss that has occurred makes this an area of high need.

Identification of Potential Issues

The proposed project has the following potential issues: There are some oyster leases in the vicinity of potential borrow areas. A portion to a majority of the project would be located on the Wisner Wildlife Management Area. No operations and maintenance is planned. Some utilities/pipeline issues may be encountered during design phases, but project features and layout could avoid potential conflicts.

Preliminary Construction Costs

The construction cost including 25% contingency is approximately \$20,089,110. The estimated fully funded cost range is \$25 - 30 million.

Preparer of Fact Sheet

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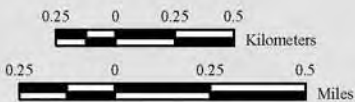


Wisner WMA Marsh Creation and Terracing (PPL16 Project Nominee)



- Terracing *
- Marsh Creation *
- Marsh Nourishment *

* denotes proposed features



Scale 1:31,900

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

Image Source:
2004 Digital Orthophoto Quarter Quadrangle

Grand Liard Ridge and Fringe Marsh Restoration Project

PPL16 PROJECT NOMINEE FACT SHEET
March 6, 2006

Project Name

Grand Liard Ridge and Fringe Marsh Restoration

Coast 2050 Strategy

Coastwide Common Strategies

Dedicated dredging to create, restore or protect wetlands
Off-shore and Riverine Sand and sediment delivery systems
Vegetative Plantings

Project Location

Region 2, Barataria Basin, Plaquemines Parish, Bastian Bay and Grand Liard mapping units, vicinity of Triumph

Problem

Bastian Bay and Grand Liard mapping units were historically structured by a series of north south bayous and associated ridges (i.e., Bayou Long, Dry Cypress Bayou). Currently, the majority of these bayou ridges have eroded. Ridge loss combined with interior wetlands loss has resulted in large expanses of unbroken open water.

The Grand Liard ridge is the most prominent remaining ridge, and separates the open bays of the Bastian Bay and Grand Liard mapping units. Land loss projections suggest that the remaining bayou bank wetlands are anticipated to be completely converted to open water by 2050.

Proposed Project Features

Material will be dredged from the Mississippi River and placed in confined disposal areas east of Grand Liard Bayou. A ridge feature will be constructed by building substantial retention dikes (i.e., 20-foot crown width at +6 feet NAVD) with material dredged from Grand Liard Bayou. The ridge will grade immediately into a 504-acre back ridge intertidal marsh platform. An estimated 5.3 M cy of river materials will be required for marsh creation and about 20,000 feet of retention dikes will be required for containment dikes. Due to the geometry of the disposal site, it is not anticipated that tidal creeks will be constructed; however this issue will be evaluated during the design process. Containment dike gapping will be incorporated into the project design and cost estimate. Following consolidation of the marsh platform, vegetative plantings will be installed (including woody species on ridge), although at a reduced density due to project scale.

Goals

Maintain the integrity of the Grand Liard Ridge

Preliminary Project Benefits

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

The project is anticipated to benefit about 627 total acres. The project would directly benefit about 504 acres of saline marsh and 23 acres of restored ridge.

Additional indirect benefits are anticipated to about 100 acres of wetlands immediately west of Grand Liard Bayou due reduction in wind-generated erosion.

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

The project is estimated to provide net benefits to 254 acres over the project life. It is estimated that about 40% of the project area is currently vegetated wetlands. Using Coast 2050 Grand Liard mapping unit loss rates for 1983 – 1990 (1.66%/year) (Table 1), TY20 FWOP acres are projected to be 153. Assuming 50% reduction in loss rate projects FWP TY20 430 acres (Table 2). TY20 Net acres = 430a – 153a – 23a (removed from benefits as supratidal ridge). Some indirect net benefits may be realized to the marshes west of Bayou Liard but are not included here.

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

It is projected that loss rates for the created marsh (0.83%/year) will be about 50% of background loss rate for the mapping unit. Minor reduction (<<<25%) in land loss rates for marshes immediately west of Grand Liard Bayou are anticipated.

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

Yes. The Grand Liard Ridge is the one of the only remaining north-south ridges left in the project vicinity, and serves to separate the Grand Liard and Bastian Bay mapping units.

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

No net impact or benefit

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

The project will reduce lateral tidal movement occurring within the mapping unit. The project, combined with on-going barrier island restoration, will benefit southeastern Barataria Bay by restoring structural components of the estuarine system.

Identification of Potential Issues

Oysters, pipeline crossings

Preliminary Construction Costs

The construction cost including 25% contingency is approximately \$24.3 million. The estimated fully funded cost range is \$30 - \$35 million.

Preparer of Fact Sheet




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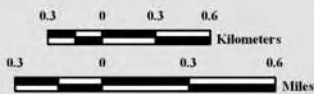


Bayou Grand Liard Ridge and Fringe Marsh Restoration



-  Marsh Creation/Nourishment *
-  Ridge Restoration *
-  Project Boundary

* denotes proposed features



Scale 1:36,000



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

Image Source:
 2004 Digital Orthophoto Quarter Quadrangles

Map ID: USGS-NWRC 2005-11-0129
 Map Date: February 28, 2006

**Region 3
PPL16 Nominees**

Madison Bay Marsh Creation and Terracing Project

PPL16 PROJECT NOMINEE FACT SHEET
March 1, 2006

Project Name:

Madison Bay Marsh Creation and Terracing

Coast 2050 Strategies:

Coastwide

-Terracing and Dedicated Dredging, to Create, Restore, or Protect Wetlands

Regional

- Dedicated delivery and/or beneficial use of sediment for marsh building by any feasible means

Montegut Mapping Unit

- Establish and Protect Ridge Function and Beneficial Use of Dredged Material

Project Location:

Region 3, Terrebonne Basin, Montegut Mapping Unit, Madison Bay, northeast and southeast of Madison Canal

Problem:

The Madison Bay area has experienced tremendous wetland loss due to a variety of forces including subsidence, salt water intrusion, a lack of sediment supply, and oil and gas activities. The loss of these brackish marshes has exposed significant infrastructure to open water conditions. The loss rate for the area is -1.3%/yr based on USGS 1978 to 2000. The Montegut mapping unit has a 1.1 to 2.0 ft/century subsidence rate. Loss rates based on newer analyses of both aerial infrared photography and satellite imagery and evaluation of sediment cores support rapid loss predominantly caused by subsidence. Morton et al. 2002 theorizes that fluid withdrawal has contributed to the subsidence. With high wetland loss in the vicinity, the Montegut levee has become more susceptible to breaching as has occurred during Hurricanes Lili and Rita in 2002 and 2005, respectively

Proposed Project Features:

The project consists of both marsh creation and terracing by dedicated dredging to create habitat and provide buffer protection to the existing Montegut Levee and planned Reach I Levee of the Morganza to the Gulf Hurricane Protection Project. Approximately 395 acres of marsh would be created. Two terrace fields would be constructed one with 25,500 feet of terraces north of Madison Bay the other with 22,500 feet of terraces along Bayou Terrebonne. Larger terraces would be constructed on open water sides of the terrace field to maximize their longevity. Two potential channel constrictions may be constructed in existing channels connecting with Humble Canal. Sediment would be mined from open water in Madison Bay. If the project is selected as a candidate, nourishment of existing marsh also would be considered.

Goals:

Project goals include the creation and nourishment of intertidal brackish marsh and edge habitat and protection of existing and planned future flood and hurricane protection levees and associated property in the nearby vicinity with marsh buffers similar to that which historically existed. Additionally, the backside of eastern bankline of Bayou Terrebonne would be protected to maintain the bayou structural framework and hydrology.

Preliminary Project Benefits:

- 1) What is the total acreage benefited both directly and indirectly?
Approximately 395 acres of brackish marsh would be created. An additional 28 acres of brackish marsh would be created with the terraces. Additional 12 acres of marsh benefit would be derived from reducing shoreline erosion of existing marsh. There would be direct and indirect benefit to 9,800 acres of marsh and open water habitat within the marsh creation areas, terrace field, existing areas (i.e., project area).

- 2) How many acres of wetlands will be protected/created over the project life?
 - Assume terraces are lost at half the background rate (i.e., -0.65%/yr)
 - Assume a 50% reduction of the background rate applied to the marsh creation and nourishment areas332 acres would be protected/created over the project life (i.e., TY20 net after applying the above assumptions)

- 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%)? Based on a weighted application of the above assumptions the loss rate reduction would 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.?
Yes, the project would re-establish and preserve the natural lake rims of Madison Bay. The project would also maintain the structural framework function of the Bayou Terrebonne Ridge by preventing further breaching through reduction in wave energy.

- 5) What is the net impact of the project on critical and non-critical infrastructure?
The project would provide substantial protection to critical infrastructure along Bayou Terrebonne and Montegut primarily including an existing and future levee system. Moderate benefits would be provided to a pump station, a state highway, a municipal water line and an oil and gas facility.

- 6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?
There are not other projects in the immediate vicinity to provide for a synergistic effect. The absence of other such projects and the substantial amount of wetland loss that has occurred makes this an area of high need.

Identification of Potential Issues:

There are oyster leases within the project area. There are pipelines in the project vicinity that would have to be avoided with construction alignments or adoption of strategic designs and contract specifications. Project features have been refined to target shallow water areas only for terracing and now include substantial marsh creation to maximize habitat creation.

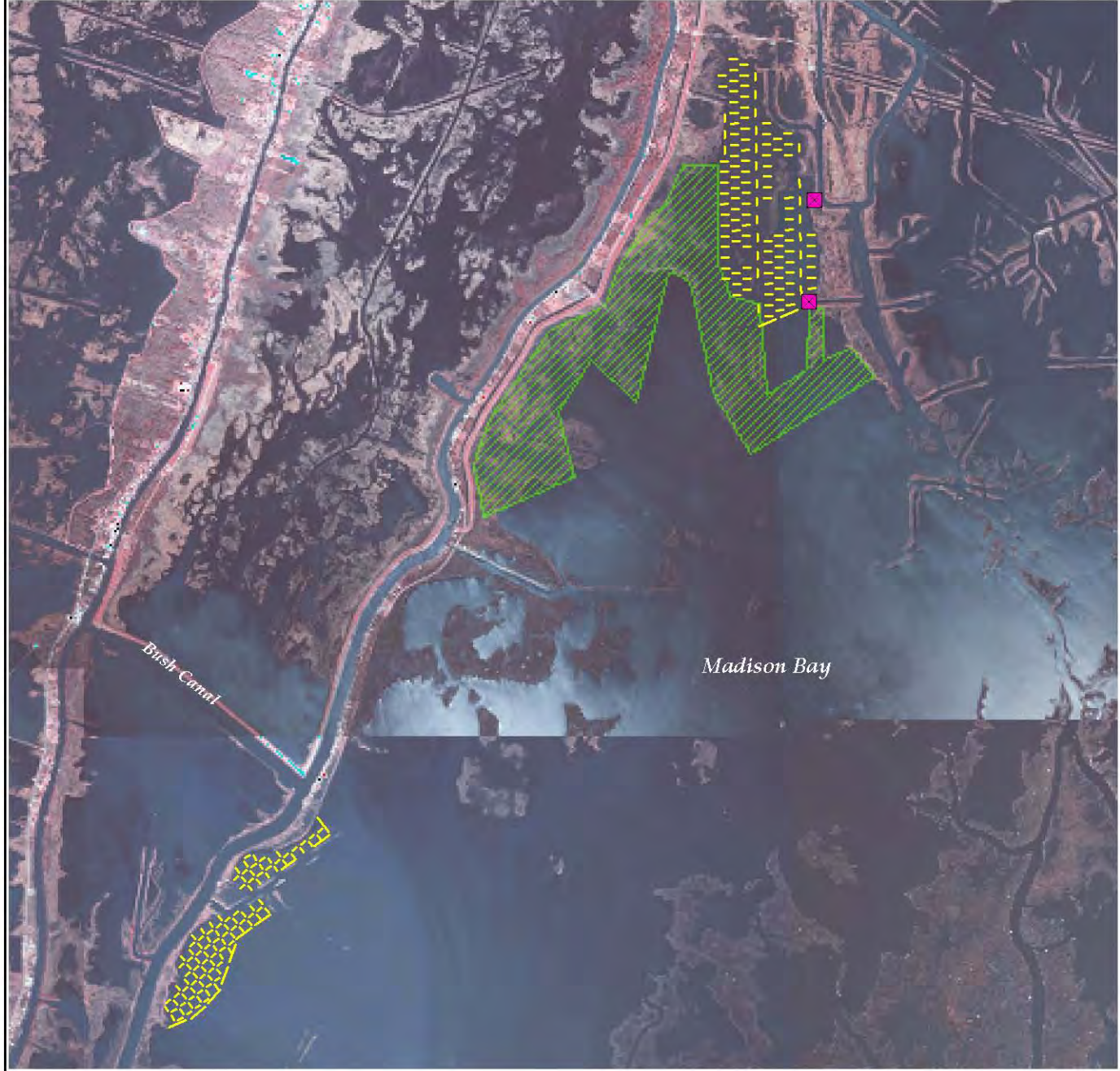
Preliminary Construction Costs:

The construction cost including 25% contingency is approximately \$15,086,153. The estimated fully funded cost range is \$20 - \$25 million.

Preparers of Fact Sheet:

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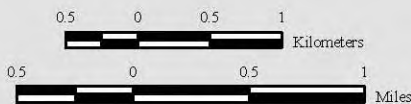


Madison Bay Marsh Creation and Terracing (PPL16 Project Nominee)



- Potential Channel Constrictions *
- Terracing *
- Marsh Creation *

* denotes proposed features



Scale 1:52,500

Map ID: USGS-NWRC 2006-11-0033
Map Date: December 28, 2005

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

Image Source:
2004 Digital Orthophoto Quarter Quadrangle

West Belle Pass Barrier Headland Restoration Project

PPL-16 Project Nominee Fact Sheet

February 27, 2006

Project Name:

West Belle Pass Barrier Headland Restoration

Coast 2050 Strategy:

Coastwide strategy: Dedicated dredging to create, restore, or protect wetlands

Regional Strategy 12: Restore/maintain barrier islands

Project Location:

Region 3. Terrebonne Basin, Lafourche Parish. The area extends from the west side of West Belle Pass to the end of that barrier headland, and includes the shallow open water to the west of the pass.

Problem:

The Caminada-Moreau headland experiences some of the highest shoreline retreat rates in the nation. Shoreline retreat rates immediately west of West Belle Pass have been estimated to range from a long-term rate of 82 feet per year from 1887 to 1992, to a short-term rate of 21 feet per year from 1988 to 2002 (Pontchartrain Institute for Environmental Science). In some areas of the Fourchon mapping unit, gulf erosion rates are as high as 100 feet per year (Coast 2050 study). The process of shoreline erosion of the Caminada-Moreau headland results in the net loss of material from the area mainly caused by lateral and offshore sediment transport. Only small portions of the material eroded from the shoreface are conserved within the system by landward transport and deposition through overwash (Williams et al. 1992).

Consequently, the shoreface is eroding rather than undergoing landward retreat, and is not maintaining a back-barrier platform to support continued landward migration. Interior saline marshes of the Timbalier Islands Shoreline mapping unit experience a high subsidence rate (2.1 to 3.5 feet per century) and also suffer from storms and cold front passages (Coast 2050 plan). This area was significantly eroded by the passing of Hurricanes Katrina and Rita, which removed almost all the subaerial headland west of Belle Pass. Removal of this storm buffer further threatens the southwestern perimeter of Port Fourchon and surrounding areas.

Proposed Project Features:

Project features include reestablishing 2.7 miles of beach and dune habitat and 500 acres of intertidal marsh via dedicated dredging of 3.1 M cubic yards of near-shore material. The preliminary dimensions are 500 foot width of beach/dune habitat to 1,000 foot width of marsh habitat for a distance of 2.7 miles. Dune material will be pumped to +6 ft NAVD88 and marsh will be created at high marsh elevation which will consolidate to intertidal elevations. Although the storms removed most of the subaerial material from the headland, there remains a shoal on which to rebuild the shoreline. Following consolidation of the material, 75% of the marsh platform will be planted and three rows of dune plantings will be installed to help secure the sediments and boost vegetative colonization. By reestablishing the barrier headland, it is anticipated that some land loss reduction will occur (25-49%) within interior marshes that are no longer directly exposed to the gulf. This project will restore the barrier headland function of this shoreline and help maintain a back-barrier platform to support continued landward migration. Moreover, these marshes provide much needed refuge to the many oil and gas facilities located within the area.

Goals:

1. Create approximately 165 acres of dune and beach habitat, and 335 acres of saline marsh.
2. Reestablish the barrier headland and back-beach platform west of West Belle Pass in order to sustain the function of the barrier headland in terms of habitat and storm protection.

3. Reduce erosion of adjacent interior marshes.

Preliminary Project Benefits:

- 1) What is the total acreage benefited both directly and indirectly?
500 acres directly reestablished, including 2.7 miles of barrier shoreline
- 2) How many acres of wetlands will be protected/created over the project life?
321 acres total - 15 acres of the existing interior marsh protected (assuming reduction in shoreline erosion rate), 26 acres of the created dune and beach habitat (using 21 ft per year erosion rate), and 280 acres marsh created (assuming a 50% reduction in loss rate of 1.8%) at the end of twenty years.
- 3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life?
It is anticipated that the loss rate of the adjacent interior marsh would be reduced by 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 will restore a barrier headland/beach that has been completely eroded by the passing of Hurricanes Katrina and Rita. Through this project, the barrier headland west of West Belle Pass will be reconstructed, thus reestablishing marine habitat, reducing wave energy entering Timbalier Bay, and providing storm protection to the west side of Port Fourchon.
- 5) What is the net impact of the project on critical and non-critical infrastructure?
This project will provide direct storm protection to Port Fourchon and several oil fields and pipelines in the vicinity. For this reason, it is expected that this project will have a net positive impact on critical infrastructure.
- 6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?
This project contributes to the Coast 2050 and LCA objective to restore/maintain the barrier island chain. Construction of this project also compliments the TE-23 West Belle Pass project which is located immediately east of this project area, and also provides storm protection to Port Fourchon. By reestablishing this barrier headland, it reduces wave and tidal energy entering east Timbalier Bay, and helps complete the goal of maintaining barrier islands/headlands as a form of first defense against storms and gulf encroachment.

Identification of Potential Issues:

There are some pipelines in the area that will require project coordination with the pipeline owners. There are no known state-issued oyster leases in the immediate project area. The project is supported by the major landowner and parish, and no major landright issues are anticipated.

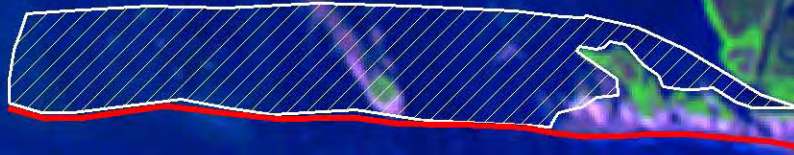
Preliminary Construction Costs:

Preliminary construction cost estimate is \$18,618,520. This includes construction, mobilization, vegetative plantings, and 25% contingency.

Preparer of Fact Sheet:

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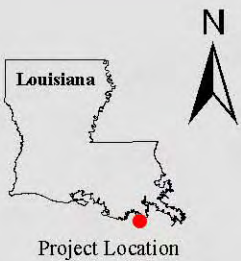
Timbalier Bay





Belle Pass

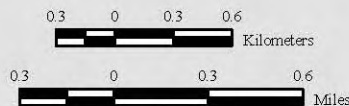
Gulf of Mexico

West Belle Pass Headland Restoration



-  Dune/Beach Fill *
-  Marsh Creation *

* denotes proposed features



Scale 1:38,700

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

Image Source:
October 25, 2005 Thematic Mapper Imagery

Falgout Canal Freshwater Enhancement Project

PPL16 PROJECT NOMINEE FACT SHEET
2/15/2006

Project Name

Falgout Canal Freshwater Enhancement Project

Coast 2050 Strategy

Region 3, Strategy 5: Enhance Atchafalaya River water influence to central Terrebonne marshes (Bayou Delarge to Bayou Terrebonne).

Project Location

Region 3, Terrebonne Basin, Terrebonne Parish, Marshes adjacent to Falgout Canal between Bayou Dularge and Houma Navigation Canal.

Problem

The marshes located in the project area have been hydrologically isolated from southward movement of fresh water by construction of various local barriers including navigation channels, such as the Houma Navigation Canal (HNC) and the Falgout Canal, and roadways, such as the Bayou Gillaume Road, and Falgout Canal Road. Because of these current and historic barriers, the prevailing hydrologic influence is confined to northerly tidal flows, which has resulted in elevated salinity and land loss in historically fresh and intermediate marshes.

The mapping of O'Neil (1949) shows the project area as floating three-corner grass marsh with possibly some brackish three-corner grass marsh at the southern extent. Floating three-corner grass marsh is distinct from floating fresh marsh in O'Neil's map indicating that by 1949 project area was no longer dominated by fresh conditions. The project would expand the zone of Atchafalaya beneficial influence by modifying water flow patterns to include these areas of need. The marshes are expected to benefit from reduced salinity and increased nutrients and sediment.

Proposed Project Features

Three sets of four 36" culverts would be installed through the road separating the Falgout Canal from the marshes to the south to introduce freshwater nutrients and sediment. Approximately 50,000 linear feet of earthen terraces would be constructed and vegetated in the broad shallow open water to facilitate marsh development. The project would also include possible modification of structure operation at a site located on the HNC north of the Falgout Canal to increase freshwater flow to marshes north of Falgout Canal and to create a freshwater plume to benefit marshes south of the canal.

Goals

The project will increase north to south flow in which the benefits of increasing freshwater, nutrients and sediment derived from the Atchafalaya River can be extended to marshes that have suffered due to hydrologic isolation and salinity intrusion. The project will also facilitate creation of new marsh by terracing large shallow open water areas receiving new freshwater flow.

Preliminary Project Benefits

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

Approximately 68 acres of marsh would be created through the construction of earthen terraces. An additional 1500 acre area marsh and open water encompassing the terrace field will benefit from the freshwater, nutrients and sediment input.

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

Approximately 57 acres of marsh will be created in the initial construction of the terraces. An additional 11 acres for a total of 68 acres will be created through terrace expansion over the 20 years life of the project.

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

>75%

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

The terrace field construction will reduce eroding wave energy along the levee ridges of Bayou Dularge and the Houma Navigation Canal on the east and west sides of the project.

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

The project will protect the parish road north of the project area from eroding wave energy as well as provide some hurricane protection to communities north of the project through tidal surge abatement.

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

There are no projects in the immediate area that have direct synergy with this project.

Identification of Potential Issues

The proposed project has the following potential issues: Landrights and O&M.

Preliminary Construction Costs

The construction cost including 25% contingency is approximately \$2,406,250. The estimated fully funded cost range is \$5-\$10 million.

Preparer of Fact Sheet

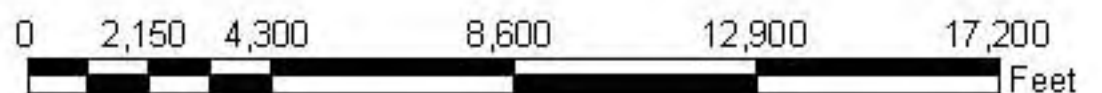
Ron Boustany, NRCS, (337) 291-3067, ron.boustany@la.usda.gov



Legend

- Culvert
- Pump_Modification
- Structure_Modification
- Terraces

Falgout Canal
Freshwater Introduction/Enhancement
Terrebonne Parish, LA
PPL-16



Point Chevreuil Shoreline Protection Project

PPL16 PROJECT NOMINEE FACT SHEET
March 3, 2006

Project Name

Point Chevreuil Shoreline Protection

Project Location

The project is located in Region 3, Atchafalaya River Basin, St. Mary Parish, along the southeastern shoreline of East Cote Blanche Bay, around Point Chevreuil, and the northwestern shoreline of Atchafalaya Bay.

Coast 2050 Strategy

Regional: #10. Protect, restore and maintain ridge functions; #11. Maintain shoreline integrity and stabilize critical shoreline areas.

Coastwide: Maintenance of gulf, bay and lake shoreline integrity; maintain, protect or restore ridge functions.

Mapping Unit: East Cote Blanche Bay (73) - Protect Bay/Lake Shorelines
Wax Lake Wetlands (60) - Protect Bay/Lake Shorelines

Problem

Eroding shoreline caused by the open water fetch and resulting wave energy from East Cote Blanche and Atchafalaya Bays. The retreating shoreline has resulted in a substantial loss of emergent wetlands and critical habitat used by a multitude of wildlife and fish species. Project features will protect the natural ridge functions of the Bayou Sale Ridge and protect the adjacent marshes. Shoreline erosion rates have been estimated at 13.5 LF/year (USGS 2003).

Proposed Project Features

Construction of a foreshore rock dike or rock revetment parallel to the existing eastern shoreline of East Cote Blanche Bay, from Bayou Sale southward to Point Chevreuil and the northern shoreline of Atchafalaya Bay from Point Chevreuil eastward to an underground pipeline crossing. The linear footage of shoreline is approximately 20,000 linear feet (~3.8 miles). It is possible that marsh can be created with the fill material from dredging of an access channel to accommodate construction equipment, where needed. This created area will be from the existing shoreline out to the rock dike.

Goals

Reduce and/or reverse shoreline erosion rates and protect natural ridge and marsh habitat as well as maintaining the existing hydrology of the area by preventing the Atchafalaya Bay shoreline from intercepting an oilfield and pipeline canal. The ridge and marsh area provides important habitat for black bears, neo-tropical migrants, wintering migratory waterfowl, etc.

Preliminary Project Benefits

The project is anticipated to directly protect approximately 124 acres of forested wetlands and intermediate marshes by reducing the current erosion rate of 13.5 ft/yr by 75-100%. Project features will provide protection to and maintain the small remnant of natural ridge/chenier function that currently exists along the eastern bank of the once-defined Bayou Sale channel. The project will also have an important synergistic effect with the TV-20 Bayou Sale CWPPRA-approved Project by extending similar benefits to the southern most extent of the East Cote

Blanche Bay shoreline.

Identification of Potential Issues

Rock shoreline protection projects historically require O&M. There are also pipelines in the project area that could be an issue.

Preliminary Construction Costs

The construction cost including 25% contingency is approximately \$9,155,000. The estimated fully funded cost range is \$10 - \$15 million.

Preparer of Fact Sheet

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Point Chevreuil Shoreline Protection St Mary Parish, Louisiana



East Cote
Blanche Bay

Bayou Sale

Hog Bayou

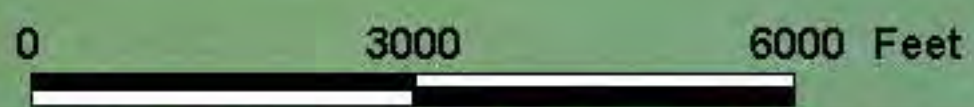
Shoreline Protection
Near Existing Shoreline

Pointe Chevreuil

Shoreline Protection
Off Shoreline to allow
Sediment to rebuild marsh
along existing shoreline.

Atchafalaya Bay

Shoreline Protection
TV-20 Bayou Sale Shoreline Protection



Deer Island Pass Re-Alignment Project

PPL16 PROJECT NOMINEE FACT SHEET
March 1, 2006

Project Name

Deer Island Pass Re-Alignment Project

Coast 2050 Strategy

Regional Strategy # 2 – Increase deltaic land building where feasible

Regional Strategy # 8 – Dedicated dredging and/or beneficial use of sediment for marsh building

Project Location

Northern portion of the Lower Atchafalaya River Delta near the mouth of Deer Island Bayou

Problem

Presently, the shoal at the mouth of Deer Island Pass does not allow the efficient flow of water and sediment from the Lower Atchafalaya River (LAR) into northeastern Atchafalaya Bay. Also, wave action is resulting in erosion along northeast portions of Atchafalaya Bay and the LAR near Deer Island Pass. A GIS comparison of 1998 and 2004 shoreline position reveals that erosion of the LAR east bank near Deer Island Pass has ranged from 5 feet per year to a maximum of 16 feet per year. Along the northeast shore of Atchafalaya Bay, shoreline erosion rates vary with location. Maximum erosion rates are approximately 5 feet per year.

Proposed Project Features

The proposed project consists of dredging a 5,280-foot-long, 280-foot-wide, and 12-foot-deep channel across the shallow flat at the north end of Deer Island Pass to improve water and sediment flow into northeast Atchafalaya Bay through the existing Deer Island Pass. Dredged material would be placed along the east shore of the Lower Atchafalaya River to reduce shoreline erosion and to create a protected backwater area. The exterior face of that marsh creation area may require rip-rap to protect it against erosion from boat wakes. Size and depth of the channel would be determined with the aid of hydrologic modeling. Maintenance dredging of the pass mouth would be included as project maintenance activity.

Goals

The project would hopefully accelerate deltaic land-building in the northeast portion of Atchafalaya Bay and reduce shoreline erosion there and along portions of the Lower Atchafalaya River shoreline. Additionally, the project would create roughly 30 acres of marsh with the dredged material (a more exact estimate would be made later after modeling and engineering).

Preliminary Project Benefits

- 1) The total acreage created would be approximately 30 acres of marsh. Reduced shoreline erosion on the LAR may result in an additional 18 acres of direct benefits (assume 10'/yr loss). Channel maintenance events, if needed, might result in the creation of additional marsh acres.
- 2) Indirect benefits would occur through increased delta growth and reduced shoreline erosion along the northeast side of Atchafalaya Bay in the vicinity of Palmetto Bayou. A very preliminary estimate based on an adjusted application of the DNR "crevasse" model is that the project would promote development of 300 additional acres.
- 3) Assuming that the LAR marsh creation area is armored to prevent its loss, we would assume that erosion of the protected LAR east bank would cease (loss reduction > 75%). It is also likely that sedimentation may be induced in the protected lagoon resulting in other indirect marsh

gains. Loss rate effects along the northeast shore of Atchafalaya Bay would vary over time and location. Accelerated land-building may occur due to increased sediment inputs and deposition. Those net effects cannot be assessed until modeling is completed.

4) The project would help to maintain the rim of Atchafalaya Bay, a structural component of the ecosystem.

5) The project would not protect critical or non-critical infrastructure, however, if successful, it would create marshes and shallow water areas that would help to impede northward transmission of storm surges.

6) By accelerating shoaling and delta growth in northeast Atchafalaya Bay, the proposed project may reduce physical erosion of existing marsh creation areas created through the beneficial use of dredged material. Similarly, erosional losses of marshes created under the Atchafalaya Sediment Delivery CWPPRA Project (AT-02) might also be reduced.

Identification of Potential Issues

The greatest potential difficulty associated with the proposed project would be the potential for project-induced sedimentation of the Corps of Engineers' navigation channel. That issue would be resolved through hydrologic modeling and associated consultations with the Corps, as previously done when engineering other CWPPRA projects within the Lower Atchafalaya River Delta. Reclamation may be another potential issue.

Preliminary Construction Costs

The construction cost including 25% contingency is approximately \$ 4,292,000. The estimated fully funded cost range is \$5 - \$10 million.

Preparer of Fact Sheet

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Deer Island Pass Re-Alingment Project

Channel Markers

Green

Red

Soundings (Feet)

1.3 - 2.0

2.1 - 3.0

3.1 - 4.0

4.1 - 5.0

5.1 - 6.0

6.1 - 7.0

7.1 - 8.0

8.1 - 9.0

9.1 - 10.0

10.1 - 12.0

12.1 - 16.0

16.1 - 20.0

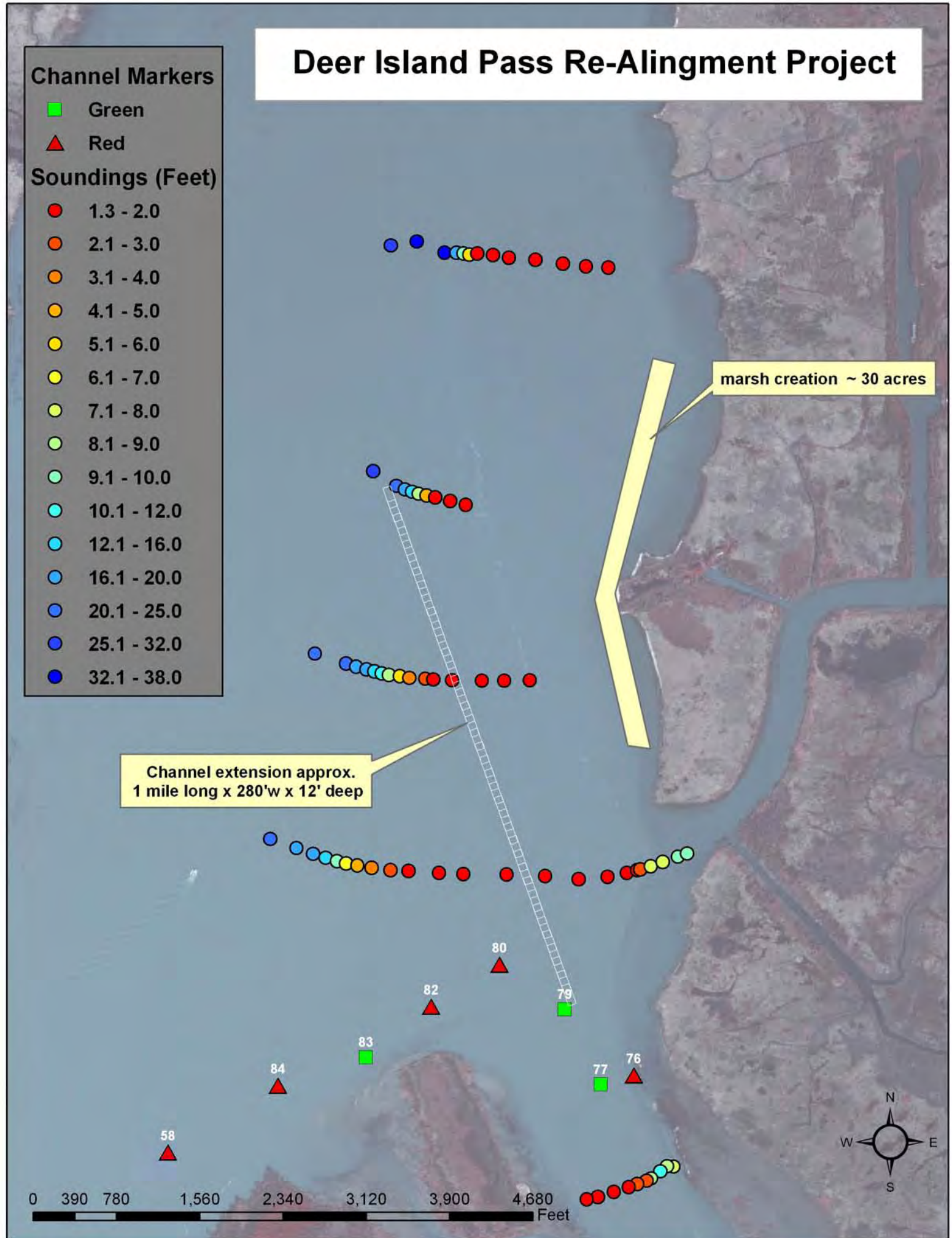
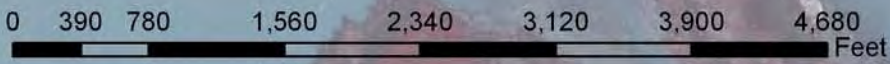
20.1 - 25.0

25.1 - 32.0

32.1 - 38.0

Channel extension approx.
1 mile long x 280'w x 12' deep

marsh creation ~ 30 acres



**Vermilion Bay Shoreline Beach Restoration/Vegetative Planting and Maintenance
Project**

PPL16 PROJECT NOMINEE FACT SHEET
3/1/2006

Project Name

Vermilion Bay Shoreline Restoration

Coast 2050 Strategy

Region 3. #12. Maintain shoreline integrity and stabilize critical areas of Vermilion, East, and West Cote Blanche, Atchafalaya, Calliou, Terrebonne, and Timbalier Bay systems including the Gulf shoreline.

Project Location

Region 3, Teche/Vermilion, Iberia Parish, North shore of Vermilion to Weeks Bay extending 1.5 miles west to 5 miles east of Avery Canal

Problem

The TV-13a Oak/Avery Hydrologic Restoration project included 5.1 miles of vegetative plants along the north Vermilion Bay shoreline between Oaks and Avery Canals. The plantings have been highly successful in reducing the rate of shoreline erosion by capturing and accreting sediments from the Atchafalaya River, proving quite resilient in the wake to two major hurricanes – Lili and Rita. However, a 1-mile stretch just east of Avery Canal has remained a problem because a preexisting shoreline breach that had eroded beyond the natural lake rim into organic interior marshes has proven too unstable for plantings. To complicate matters, the breach has broken through into a location keyway canal and threatens to undermine the remaining lake rim and a vast marsh complex. As a result, the lake rim will require reconstruction using some form of hardened structure. However, because of the success of the Oak/Avery plantings, the same restoration approach can be applied to an additional 5 miles of Vermilion Bay shoreline to the east of the Avery Canal. Yet because lake rim soils may be degraded at points along the stretch, a more intensive planting regime will be required to insure success.

Proposed Project Features

The project calls for reestablishing a lake rim function by constructing approximately 8,300 linear feet of wave dampening structure consisting of rock, sheet piles, or other method determined most feasible through further investigation. The structure will reconnect the solid lake rim on either side of the breach and, in addition to shoreline protection, will allow for trapping and accretion of sediment moving through the system to facilitate backfilling and new marsh creation. An intensive 5-year vegetation planting regime will be applied to the 5 mile stretch of shoreline east of Avery Canal. The first years planting will be followed by 50%, 50%, 25% and 10% consecutively in the following four years to insure complete coverage of the shoreline and jumpstart the mineral trapping and accretion characteristics observed in previous successful plantings in the area.

Goals

The project will complete the restoration of over 10 miles of north Vermilion Bay shoreline by repairing a breach into the interior marsh that threatens to undermine a much broader area and stabilizing an additional 5 miles of shoreline through a series of intensive low-cost vegetative plantings.

Preliminary Project Benefits

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

The project is designed to protect and restore the Vermilion Bay lake rim over a total of 6 miles. Approximately 192 acres of marsh would be benefited directly. An additional 65 acres of marsh and open water habitats could be benefited over the project life by a reduction in wave energy and tidal influence.

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

From 1998 to 2004 the breach area west of Avery Canal lost a total of 30 acres averaging 5 acres per year. Over the 20 years, a total of 101 acres are expected to be lost in this area. The five mile stretch of proposed planting area loses about 10 ft per year along the shoreline, which would be a total of 121 acres over 20 years. Therefore with the project in place over a 20 year period and assuming that shoreline loss would be reduced by 75% the project could expect to protect at least 192 (101 + 91) acres directly.

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%)?

We anticipate that the proposed shoreline structure will reduce the loss rate completely. The shoreline protected by the plantings is anticipated to reduce the loss rate by 75%. Overall, we anticipate that the loss rate throughout the area of direct benefit will be reduced >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?

This project restores a portion of the Vermilion Bay shoreline which protects interior marshes from wave energy from the bay.

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

The project area provides storm surge protection for the local communities of Avery Island, Erath, and Delcambre. The project also prevents Vermilion Bay from breaking through into the GIWW. In addition, oil and gas infrastructure in the immediate area will be protected from destructive storm surges.

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

This project completes the protection of the northern shoreline of Vermilion Bay and is synergistic with the existing shoreline protection projects of Boston Canal/Vermilion Bay Bank Protection (TV-09) and Oaks Canal/Vermilion Bay Shoreline Protection (TV-13b).

Identification of Potential Issues

None identified

Preliminary Construction Costs

The construction cost including 25% contingency is approximately \$2.9 million. The estimated fully funded cost range is \$0 - \$5 million.

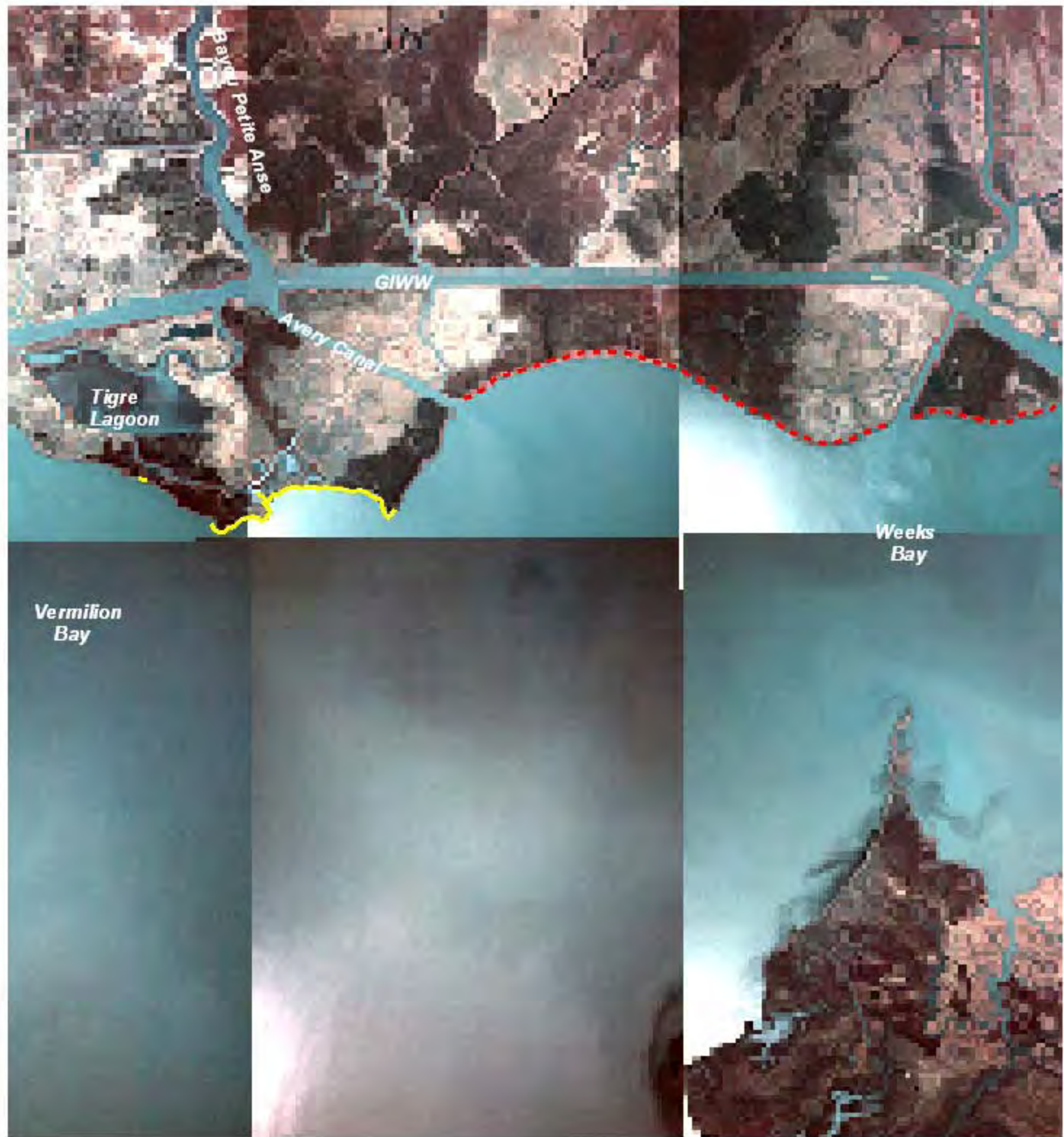
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Legend

- - - Vegetative_Plantings
- _ _ _ Shoreline_Protection



Vermilion Bay Shoreline Restoration
 Iberia Parish, Louisiana
 PPL 16

South Marsh Island Hydrologic Restoration

PPL16 PROJECT NOMINEE FACT SHEET

March 2, 2006

Project Name and Number

South Marsh Island Hydrologic Restoration, TV-7-3

Coast 2050 Strategy

**Coastwide: Dedicated dredging to create, restore or protect wetlands
Maintenance of gulf, bay and lake shoreline integrity
Vegetative planting**

Regional: #10.Maintain shoreline integrity and stabilize critical area of the Teche-Vermilion Bay system.

**Mapping Unit (Marsh Island) #64 Protect Bay Shorelines
#65 Beneficial use of dredge material**

Project Location

Region 3, Teche/Vermilion Basin, Iberia Parish, South end of Marsh Island Wildlife Refuge, Oyster Bayou

Problem

Substantial areas of interior emergent marsh on Marsh Island have been converted to open water, primarily due to Hurricanes Lili and Rita. Continuous data recorders recorded a tidal surge up to +8 NAVD during Lili. Areas targeted by this project are those with the greatest land loss and within close proximity to Oyster Bayou. The tidal surge severely scoured the marshes on the eastern and western sides of Oyster Bayou just southeast of Oyster Lake. The top 8-10 inches of the marsh was scoured and much of this material was deposited in Oyster Bayou, and smaller bayous which drain the marshes on either side. This resulted in several sections of Oyster Bayou becoming plugged, which greatly affected the hydrology of a larger area. The smaller bayous on the eastern side were completely blocked hindering drainage of those severely scoured marshes. The area of marsh scoured by Lili (estimate not available on Rita) was estimated at approximately 570 acres much of the acreage now appears to be shallow ponds. Using pre and post Lili satellite photography the approximated acres were derived. LDWF officials report that these scoured areas of marsh are holding water. *Spartina patens* in and adjacent to the edge of the scour is being stressed. There is concern that if this problem is not corrected and the hydrology restored, these scoured marshes will increase in size. Prior to the storm these marshes were hydraulically linked to Oyster Bayou, these marshes at present have little or no drainage potential during tidal exchange.

Proposed Project Features

Dredge 7.7 miles of bayous to -7 ft that have silted in to approximately -1 ft. Beneficially use the dredged material to create approximately 112 acres of interior emergent marshes adjacent to dredged location. The created areas will be planted with plugs of appropriate emergent marsh vegetation on approximately 5-ft centers.

Goals

Re-create the hydrologic flow of Oyster bayou and four adjacent bayous by dredging recent deposits. Re-create brackish marsh habitat in the open water areas of the interior marsh primarily caused by hurricane damage.

Preliminary Project Benefits

- 1) What is the total acreage benefited both directly and indirectly?
 - Assume there are 7.7 miles to dredge
 - Assume dredge area is 6' X 60' wide (channel depths are estimated at -7 natural, now filled to -1)
 - Assume 1.5:1 fill ratio

- Assume open water dredge placement needs fill of 10” (estimated from 8”-10” depth of scour).
- Since the whole channel is unlikely to be uniformly filled, we conservatively propose 112 acres of marsh creation with uncalculated marsh nourishment benefits.

Approximately 5,460 acres will be benefited indirectly, and 112 acres of marsh will be created by filling in open ponds and planting the created areas. It is anticipated that additional acres of marsh will be benefited through marsh nourishment as a result of hydraulic dredging for marsh creation without containment dikes. (The acres created are based on the amount of dredged material needed to be removed from the channel in order to re-establish hydrology in and benefit the 5,640 acres. Hydrologic improvement is the primary objective, with marsh creation being a beneficial use).

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

- Assume a 50% reduction in the background marsh loss on the created acres (-.29%/yr),
- Assume 112 acres created and uncalculated acres nourished

Approximately 109 acres would be protected/created over the project life (i.e., TY20 net after applying the above assumptions).

- To capture the land loss as a result of flooding, increase the background lost rate by 50% to -0.435% FWOP. Applying the loss rate to 5,460 ac (existing marsh) FWOP and a 0% reduction of that loss rate (for a -0.29%/yr FWP rate).
- FWOP= 5,004 ac at YR20
- FWP= 5,152 ac at YR20
- The net indirect benefit area of 148 ac.
- $109 + 148 = 257$ net acres benefited 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%)? The total direct benefit area would be reduced 25-49%. (This project is proposed due to recent losses, as described in the purpose statement, rather than historic losses typically considered in CWPPRA. It is an opportunity to prevent extensive losses that are expected due to flooding, though it would also create marsh where direct losses have occurred. Although it is yet unknown if Louisiana marshes damaged in recent hurricanes may yet recover, this area will remain flooded and therefore additional losses are eminent.

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 restore a portion of the Marsh Island barrier island.

5) What is the net impact of the project on critical and non-critical infrastructure? This project would have a net positive impact to critical infrastructures which consists of the communities of southern Iberia and southeastern Vermilion Parishes.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? This project provides a synergistic effect with the constructed Marsh Island Hydrologic Restoration (TV-14) project and the East Marsh Island Marsh Creation Project (TV-21).

Identification of Potential Issues

The proposed project has the following potential issues: No operations and maintenance is planned. Some utilities/pipeline issues may be encountered during design phases, but project features and layout could avoid potential conflicts. Landrights are held by LDWF.

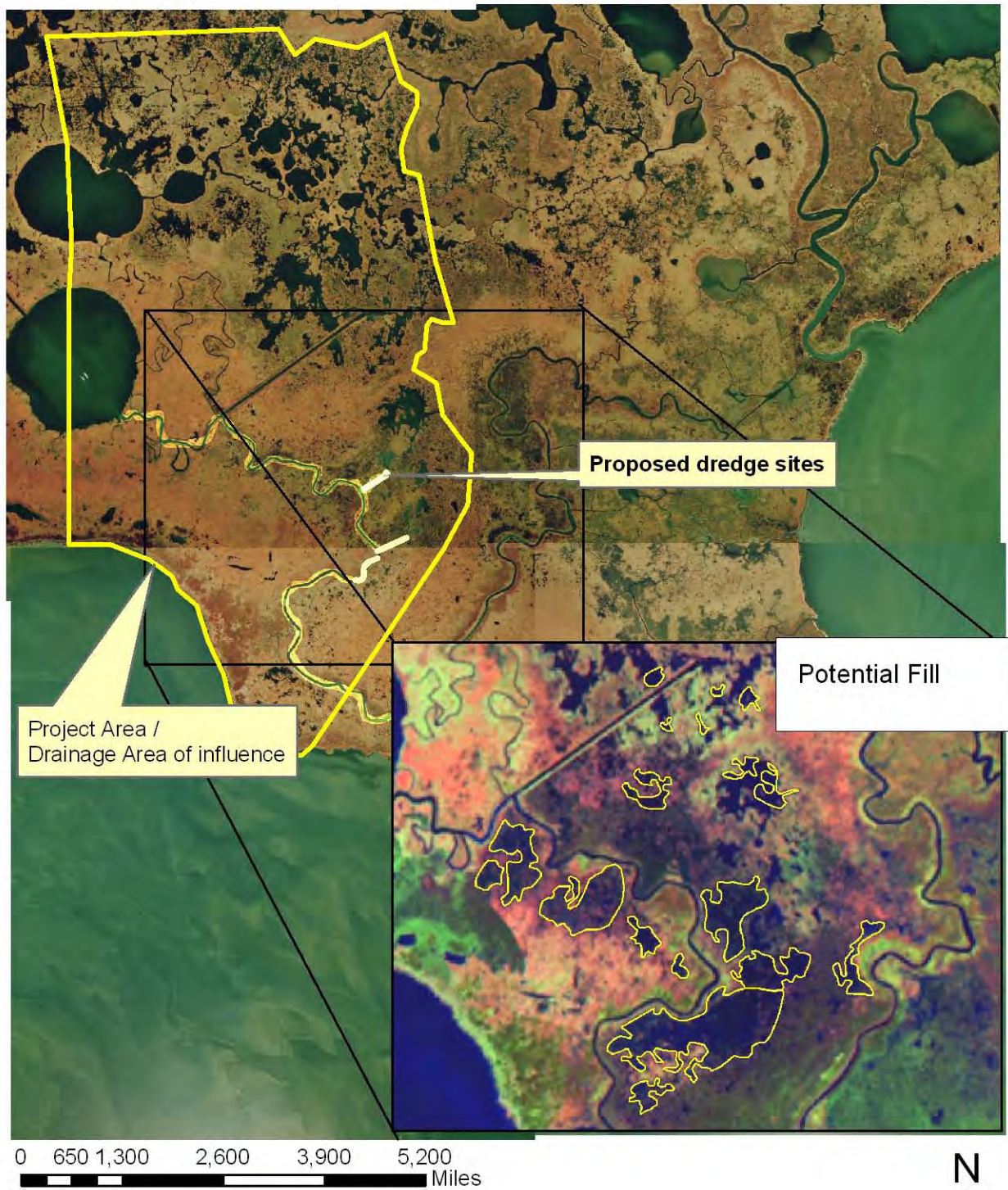
Preliminary Construction Costs

The construction cost including 25% contingency is approximately \$5,644,000. The estimated Fully Funded cost with a 1.9 HR multiplier is approximately \$10,723,600. The estimated fully funded cost range is \$10 - \$15 million.

Preparer of Fact Sheet

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South Marsh Island Marsh Creation PPL 16



Source: 2004 DOQQ Inset Source: Post Hurricane Lile LiDAR

**Bird Island/Southwest Pass Marsh Creation and Shoreline Protection (PPL15
rollover)**

PPL16 PROJECT NOMINEE FACT SHEET
March 1, 2006

Project Name

Bird Island/Southwest Pass Marsh Creation and Shoreline Protection

Coast 2050 Strategy

Regional:

- #7 Stabilize banks/cross sections of navigation channels for water conveyance.
- #8 Dedicated delivery of sediment for marsh building by any feasible means.
- #10 Maintain shoreline Integrity and stabilize critical areas of Teche-Vermilion Bay systems including the gulf shorelines.

Coastwide:

- Dedicated dredging for wetland creation
- Vegetative planting

Mapping Unit (Rainey Marsh, Marsh Island/ Vermilion Bay):

- #67 Stabilize critical Gulf shorelines
- #68 Protect Gulf shorelines
- #69 Beneficial and dedicated use of dredged material

Project Location

Region 3, Teche/Vermilion Basin, Marsh Island Wildlife Refuge in Iberia Parish, and Paul J. Rainey Wildlife Sanctuary in Vermilion Parish

Problem

Erosion of peninsulas in the project area is reducing the effectiveness of the landmass as a mainland barrier to gulf storm surge, wave energy and tidal flux reduction. Interior marsh loss at Tojan Island land mass combined with the shoreline erosion and north/south oriented tidal creeks increase the vulnerability of the island to withstand storm surges, which threaten the peninsulas integrity. An existing colonial wading bird rookery (Bird Island) located north of Tojan Island within Southwest Pass has sustained severe subsidence and erosion. Such impacts have reduced the effectiveness of the island in providing nesting habitat for wading birds. Average losses of 9.5 ft/yr at Southwest Point and 13.5 ft/yr at Lighthouse Point were measured (estimates calculated from USGS data used for the 2005 WVA).

Proposed Project Features

Armored shoreline protection via onshore revetment is proposed for the south shoreline of Vermilion Bay at Southwest Point (8,759 linear ft) and a foreshore rock dike for the north shoreline of the Gulf of Mexico at Lighthouse Point (4,619 linear ft). Also proposed is to re-create Bird Island (15 ac) west of the existing island and create 63 acres of marsh with tidal creeks along the north side of Tojan Island. Shoreline protection would consist of typical rock construction. Marsh creation would be accomplished by hydraulically dredging material and placing to a height that would settle at marsh level on Tojan Island and 1 ft. above marsh level for New Bird Island. Material would be confined by earthen containment dikes. Vegetative plantings of appropriate species would be placed in the New Bird Island marsh creation area. Vegetation is expected to occur naturally through propagation and the delivery of seeds by birds in the Tojan Island marsh creation area. Proposed borrow areas include a wide shallow oilfield channel immediately north of Tojan Island and an undetermined location in the cove area of Southwest Pass.

Goals

The project goal is to protect and stabilize critical points within Southwest Pass. The current width and subsequent flow pattern would be maintained by installing armor protection around the perimeter of Lighthouse Point and Southwest Point. The rock protection would prevent tidal currents from circumventing the restriction at the pass and breaching into adjacent marsh areas. An existing colonial wading bird rookery that has substantially deteriorated in size would be replaced by recreating a new island in an open water area within the same general vicinity. Any open water areas containing existing shell or oyster reefs will be avoided. The new island would create nesting bird habitat for wading birds and provide critical edge habitat for estuarine dependent fisheries.

Preliminary Project Benefits

1) What is the total acreage benefited both directly and indirectly? 149 acres would be benefited, including 70 acres of emergent marsh and 79 acres of open water. *2) How many acres of wetlands will be protected/created over the project life?* The net acres created over the project life is approx. 133 acres, assuming a conservative loss rate of 0.52% per year. *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 would significantly reduce loss rates through shoreline protection and land would be gained through re-creation of Bird Island and marsh creation within Tojan Island. From shoreline protection >75% of loss would be reduced. *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 critical areas of the gulf shoreline along a barrier island and peninsula. The project would restore a barrier island, which has critical wildlife and fisheries habitat. The project would help maintain a landmass that plays a significant role in regulating the hydrology of the Acadiana Bay system. *5) What is the net impact of the project on critical and non-critical infrastructure?* An oil and gas facility is located in the vicinity of the project area, which would receive benefits, if any impact, from the project. *6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* Maintaining the Gulf and Bay shoreline would protect existing CWPPRA restoration efforts in the northern areas of Vermilion Bay.

Identification of Potential Issues

There is a potential for oyster lease issues. There is a question of ownership between the State of Louisiana and Audubon. The project would not interfere with navigation. Because it is unknown how shoreline protection in this area will withstand the elements, O&M has been scheduled for target years 3 and 14.

Preliminary Construction Costs

The estimated construction cost with 25% contingency is approximately \$9,202,158. The estimated fully funded cost range for this project is \$15-\$20 million.

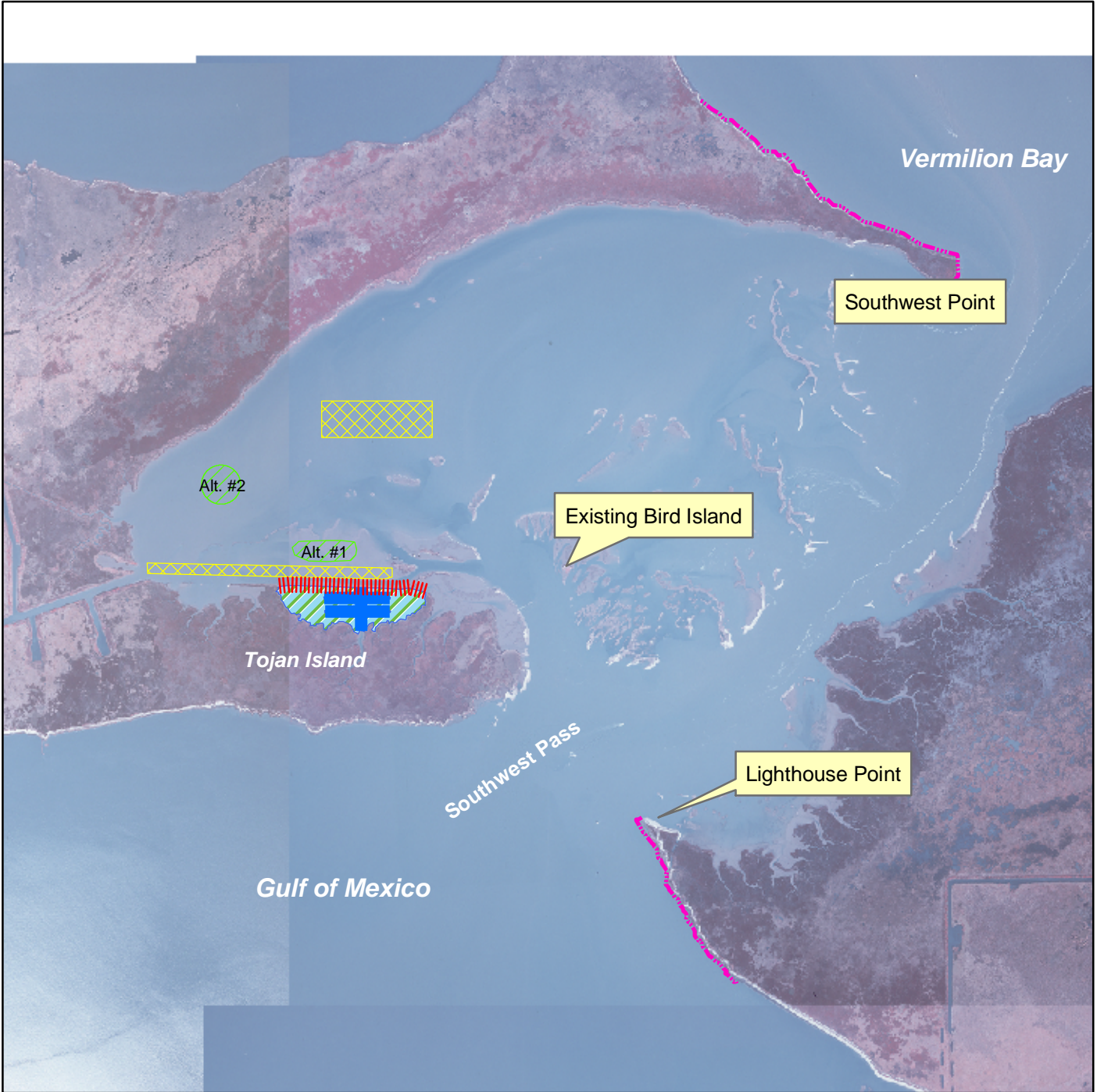
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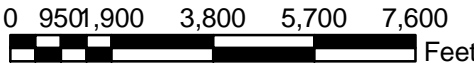


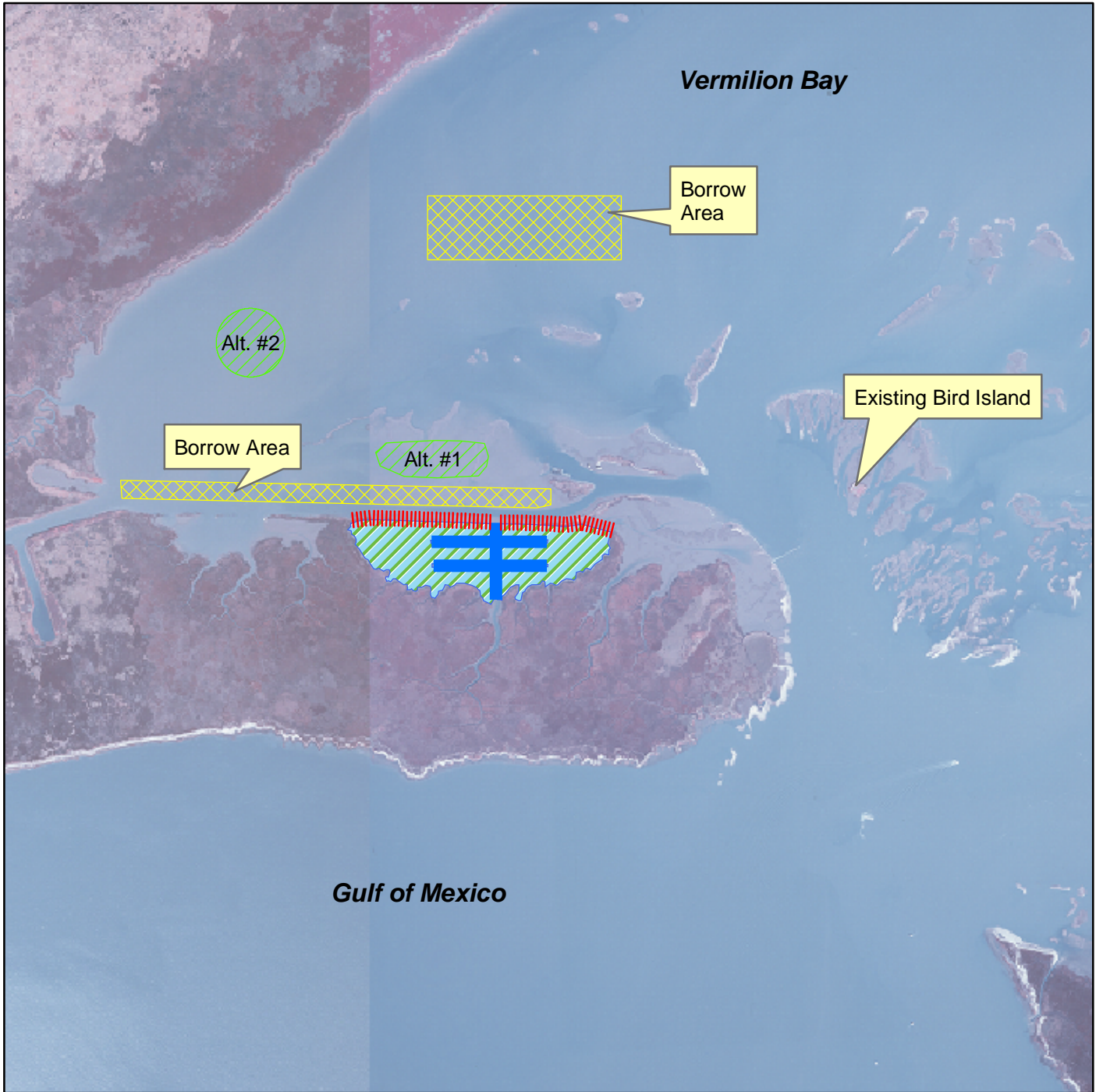
Legend

-  bankline stabilization
-  Retention_Levee
-  Tidal_Creeks
-  Borrow_Area
-  Proposed_Island
-  Marsh_Creation








**Bird Island/SW Pass SP/MC
Vermilion Parish, Louisiana
PPL-15**

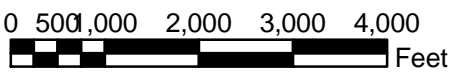




Legend

-  Retention_Levee
-  Tidal_Creeks
-  Borrow_Area
-  Proposed_Island
-  Marsh_Creation

**Bird Island/SW Pass SP/MC
Vermilion Parish, Louisiana
PPL-15**



**Region 4
PPL 16 Nominees**

Calcasieu River Ship Channel Sediment Bypass Project

PPL16 PROJECT NOMINEE FACT SHEET
March 6, 2006

Project Name

Calcasieu River Ship Channel Sediment Bypass Project

Coast 2050 Strategy

Coastwide Strategy – Dedicated dredging for wetland creation

Regional Ecosystem Strategy Number 16: Stabilize the Gulf of Mexico shoreline from Calcasieu Pass to Johnson's Bayou

Regional Ecosystem Strategy Number 18: Restore long-shore sediment flow across the mouth of Calcasieu Pass.

Project Location

Region 4, Calcasieu-Sabine Basin, Cameron Parish, Calcasieu Pass

Problem

Erosion in this area is caused by a deficit of sand and sediment in the littoral transport system along with interruption of the littoral drift by the Calcasieu Pass jetties. Sand is building along the Gulf shore on the east side of the mouth of the Calcasieu Ship Channel, but there is severe erosion on the west side. According to Byrnes and McBride (1995) the shoreline in this area has an average change rate of -4.6 ft/yr and a maximum retreat rate of -9.2 ft/yr. The jetties associated with the Calcasieu Ship Channel deflect the little material that does exist away from the area. The barrier shoreline serves to protect the fragile, low energy, intermediate and brackish marsh just north of the shoreline. The littoral sediment needs to be transported from the east side of the jetties to the west side. Removing the jetties is not an option due to the adverse impacts to the navigation channel.

Proposed Project Features

The proposed sand bypass project will mimic natural transport systems by nourishing the barrier shoreline on the west side of the jetties with sand at rates consistent with the natural processes of littoral drift. Sand will be delivered by periodically dredging accumulated sediment on the east side of the jetty system and pumping the material to the west side in order to bypass the jetty system. Maintenance dredging will be conducted as needed, and is anticipated to occur every five years. In order to reduce costs, the dredging events can be combined with other projects, such as the proposed Mermentau Ship Channel Sediment By-Pass PPL 16 nominee. No vegetated areas or existing marsh will be mined, only accumulated deposits.

Goals

Maintain the barrier shoreline from west of the Cameron jetties.

Protect the fresh and intermediate marsh by maintaining the shoreline.

Preliminary Project Benefits

This project results in a reduction in the shoreline erosion rate on the west side of the jetties. Assuming a shoreline impact of twice the length of the jetty (8,100 LF) equals 3.1 miles of shoreline maintained. Using the average annual shoreline change rate of -4.6 ft/yr yields 34 acres directly benefited over the 20 year project life. Considering the maximum retreat rate of -9.2 ft/yr, the benefited area is 68.4 acres for the 20 year project life. Averaging the two values yields 51.2 acres benefited. The 629 acres of marsh immediately north of the shoreline would be protected and indirectly benefited. The anticipated loss rate reduction is expected to be > 75%. This project also provides protection to critical infrastructure to the north and has the potential to provide a synergistic effect on the Holly Beach Sand Management CS-31 CWPPRA project.

At the February 22-23, 2006 Environmental Work Group meeting, it was decided that the project benefits ranged from 0 to 50 acres.

This project will reestablish and maintain the shoreline west of the Calcasieu jetties that is currently starved of sediment. These barrier shorelines are critical to protecting the emergent wetlands from the high energy wave action from the Gulf of Mexico. This project will provide surge protection to adjacent wetlands to the north, as well as the local infrastructure. It also will help maintain intermediate marsh conditions and the present land:water ratio in wetlands north of the beach ridge/highway embankment. The material will continue to benefit the shoreline and beaches further west of the jetties by reintroducing sediment into the natural littoral processes.

Identification of Potential Issues

The proposed project has the following potential issues: landrights and O&M.

Preliminary Construction Costs: The Environmental and Engineering Work Group included the costs for the three maintenance events with the initial cost, therefore the preliminary construction cost including 25% contingency is approximately \$ 8,250,000. The estimated fully funded cost range is \$ 10 to \$ 15 million.

Preparers of Fact Sheet

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Calcasieu River Ship Channel Sediment Bypass Project



Cameron Jetties

-  Unconfined Placement
-  Shoreline Maintained
-  Borrow Area



Louisiana Department of Natural Resources

0  1.7mi

SONRIS 2004 Aerial Map

North Black Lake Marsh Creation Project

PPL16 PROJECT NOMINEE FACT SHEET

March 1, 2006

Project Name

North Black Lake Marsh Creation Project

Coast 2050 Strategy

Coastwide: Maintenance of bay and lake shoreline integrity

Dedicated dredging for wetland creation

Regional #6 Dedicated dredging of sediment for wetland creation

Mapping Unit (Black Lake) #47 Beneficial use of dredge material

#49 Reestablish Black Lake shoreline

Project Location:

Region 4, Cameron Parish, just north and west of Black Lake.

Problem

This mapping unit has experienced significant land loss, 65%, since 1932, most of which has been attributed to altered hydrology. Increased salinities within the project area have caused interior marsh breakup. As ponds have coalesced, water bodies have grown which exacerbated marsh breakup from wave action.

Proposed Project Features

The project consists of marsh creation and shoreline protection along Black Lake. Tentatively, 523 acres of brackish marsh would be created along the northern shoreline of Black Lake to re-establish the lake rim and reclaim emergent marsh. The tentative marsh creation area has containment on three sides, however recent hurricane impacts may be such that repairs to these existing levees may be necessary, as such approximately 1,000 linear feet of levee refurbishment is being taken into account. The approximate water depth in this area is 3 feet that grades to 1 foot in areas. A 1.5:1 cut-to-fill was used for cost estimation, and conservatively assumes fill area to be -3 feet. Approximately 5,000 linear feet of rock dike would need to be constructed to protect the newly created emergent marsh from wave energies on Black Lake. The dike is estimated to have a 6' height (a +3 feet in -3 feet of water), 5' crown, and 3:1 side slopes constructed with standard 650 lb rock. The cost estimate conservatively factors in a 25% loss/settlement of rock. Sediment would be mined from the Calcasieu Ship Channel or its overburdened disposal area, a distance of roughly 5 miles.

Goals

Create 523 acres of emergent marsh; reestablish the northern portion of the Black Lake lake rim; establish submerged aquatic vegetation; increase fisheries habitat.

Preliminary Project Benefits:

1) What is the total acreage benefited both directly and indirectly? Tentatively, the project would create 523 acres of brackish marsh, and provide some upland areas along the levees for neo-tropical migrant habitat. The total area estimated to be benefited is

approximately 1034 acres, including the creation acres and adjacent existing marsh that is estimated to occur in the 2555 acre project area (511+523).

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

- Assume a 50% reduction in the background marsh loss with project (-0.705%/yr),
- Assume existing marsh is 20% (511 acres) of the 2555 acre project area
- Assume 523 created
- Acres and distances estimated by GIS calculations by NOAA.

Approximately 454 acres would be protected/created over the project life (i.e., TY20 net after applying the above assumptions).

3) What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%). The loss rate reduction would be 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.? The project would restore a portion of the rim of Black Lake.

5) What is the net impact of the project on critical and non-critical infrastructure? The project would have moderate net positive impact to the GIWW.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? There are not other projects in the immediate vicinity to provide for a synergistic effect. The absence of other such projects and the substantial amount of wetland loss that has occurred makes this an area of high need.

Identification of Potential Issues

The proposed project has no known potential issues. No operations and maintenance is planned. Some utilities/pipeline issues may be encountered during design phases, but project features and layout could avoid potential conflicts. The project would need to be coordinated with the USACE and future dredging cycles.

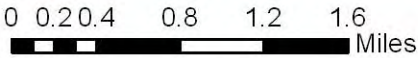
Preliminary Construction Costs

The preliminary cost including 25% contingency is approximately \$23,739,000. The Fully Funded cost with a 1.35 MC multiplier is approximately \$32,047,650. The estimated fully funded cost range is \$30-35 million.

Preparer of Fact Sheet

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North Black Lake Marsh Creation PPL 16



Restoration of Longshore Sediment Flow Across the Mouth of the Mermentau Ship Channel/Mermentau Ship Channel By-Pass Project

PPL16 PROJECT NOMINEE FACT SHEET
March 6, 2006

Project Name

Mermentau Ship Channel Sand By-Pass Project

Coast 2050 Strategy:

- Coastwide: Dedicated dredging to create, restore, or protect wetlands
- Coastwide: Maintenance of Gulf, bay and lake shoreline integrity Project
- Maintain Atchafalaya River mudstream in the Gulf of Mexico
- Restore long -shore sediment flow across the mouth of Mermentau Ship Channel
- Mapping Unit strategies: maintaining the chenier ridge function

Location:

Region 4, Mermentau Basin, Cameron Parish, Mermentau River Ship Channel Jetties

Problem:

In comparison of the aerial photography from 1994 through 2004, there is strong evidence of material accretion on the east side of the Mermentau Ship Channel, as well as shoreline erosion on the west side of the Ship Channel. It is believed that the erosion is based on a change in east to west littoral drift in the regional area. This change is a direct result of the installation of the Ship Channel jetties. The jetties reduce the natural exchange of sediment along the shoreline. Erosion rates for the reach between the Mermentau River outlet and the Calcasieu River from 1985 – 1998 are estimated at 9.5 ft/year (Beall et al. 2004).

Proposed Project Features

The project proposes to initially dredge 200,000 cu. yds. of material that has built up on the eastern side of the Ship Channel Jetties and place the material on the western side of the Ship Channel Jetties as beach nourishment. Similar maintenance cycles would be repeated at years 5, 10, and 15, for a total of 800,000 cu. yds. of material transported across the Mermentau Ship Channel. No containment is planned.

Goals

The goals of this project are to provide beach nourishment and a temporary restoration of the littoral sediment budget for this region to halt or reduce the shoreline erosion rate for the segment west of the Western Ship Channel Jetty.

Preliminary Project Benefits

It is estimated that the project will eliminate shoreline erosion west of the Western Ship Channel Jetty for approximately 1 mile for the 20 year life of the project as well as contribute to the sediment budget for longshore transport to the west. The net acres estimated to remain after 20 years is 23.3 acres (9.6 ft/year x 1 mile x 20 years). The project should also contribute to the longshore transport, reducing the erosion rate of the shoreline between the Mermentau Ship Channel and the Calcasieu Pass. The project protects the shoreline ridge separating the interior marsh from the Gulf. At the February 22-23, 2006 Environmental Work Group meeting, it was decided that the project benefits ranged from 0 to 50 acres.

Identification of Potential Issues

There do not appear to be any pipeline or oyster leases in the immediate area. Construction would need to maintain clearance thru the pass for shipping traffic.

Preliminary Construction Costs: The Environmental and Engineering Work Group included the costs for the three maintenance events with the initial cost, therefore the preliminary construction cost including 25% contingency is approximately \$ 8,250,000. The estimated fully funded cost range is \$ 10 to \$ 15 million. .

Preparer of Fact Sheet

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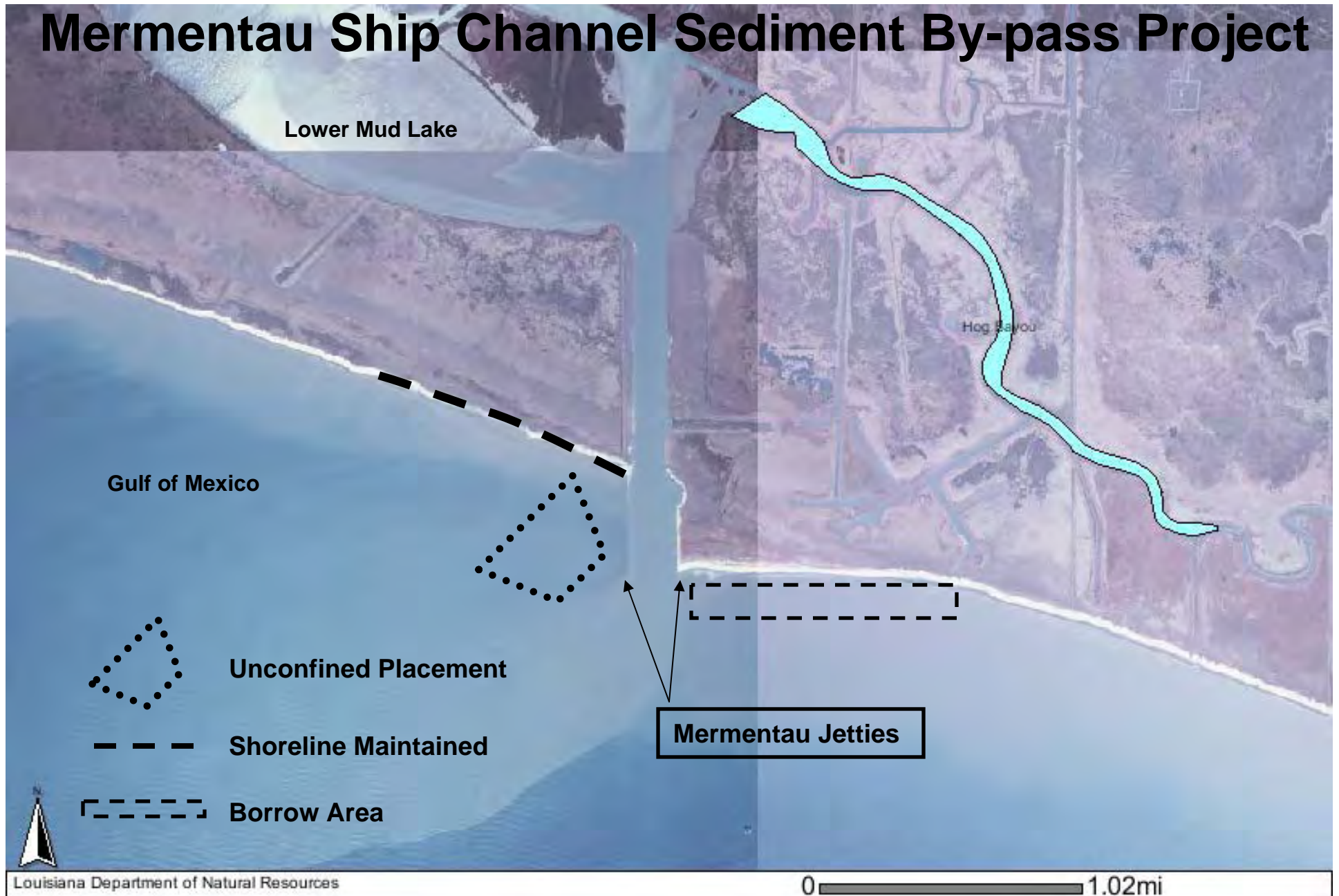
Brad Crawford, P.E., EPA R6, (214) 665-7255

Honora Buras, LA Dept. of Natural Resources, (225) 342-4103

References:

Beall, A.D., S. Penland, P.F. Connor, Jr., M.A. Kulp, S. Fearnley, S.J. Williams, and A.H.Sallenger, Jr. 2004. Short-term Shoreline Change History of Louisiana's Gulf Shoreline: 1980s to 2002. Pontchartrain Institute for Environmental Sciences. PIES_CRL Technical Report Series 04002.

Mermentau Ship Channel Sediment By-pass Project



SONRIS 2004 Aerial Map

Southwest LA Gulf Shoreline Restoration Project

PPL16 PROJECT NOMINEE FACT SHEET
Revised
March 1, 2006

Project Name: Southwest Louisiana Gulf Shoreline Restoration Project

Region IV, Coast 2050 Strategies 17: Stabilize Gulf of Mexico Shoreline in the vicinity of Rockefeller Refuge from the old Mermentau River to Dewitt Canal.

Project Location: Region 4, Mermentau Basin, Cameron and Vermilion Parish, South of Pecan Island and Rockefeller Refuge, between Dewitt Canal and Little Constance Bayou.

Problem: The gulf shoreline in the vicinity of Rockefeller Refuge is reportedly eroding at an estimated rate of 35 to 39 feet per year (Coast 2050 Report and Rockefeller Refuge Gulf Shoreline Stabilization Project (ME-18) respectively). A recent land loss map prepared for the project area by Del Britsch, U.S. Army Corps of Engineers, New Orleans District, indicates a measured average gulf shoreline erosion rate of approximately 35 feet a year in the project target area, between 1931 and 2001.

Proposed Project Features: Beneficially use dredge material and/or dedicate dredging to mine sediment from the Gulf of Mexico to rebuild up to 9.5 linear miles of gulf shoreline between Dewitt Canal and Little Constance Bayou. Dredged material would be placed in areas along the shoreline up to 350 feet seaward. The project shoreline would be maintained and increased by creating beach nourishment feeder berms in shallow open gulf water from additional dredge material in a five to seven year dredging cycle over twenty years. Fill material would be acquired either beneficially from dredging the Freshwater Bayou bar channel to benefit areas closer to Dewitt Canal or from dedicated dredging in the gulf for areas farther down drift, depending on location and availability of source material.

Goals: Based on comparing historic aerial photographs and discussing the proposed concept and dredging history of the Freshwater Bayou bar channel with various Corps personnel and local interests, it appears that unconfined beach nourishment from disposal and beneficial use of bar channel dredge material since 1990 has resulted in approximately 8.5 linear miles of gulf shoreline prograding, extending west from Freshwater Bayou to just past Dewitt Canal. Aerial photographs indicate that the gulf shoreline has prograded as much as 1,300 feet seaward within a mile down drift from the beach nourishment disposal area. The goal of the proposed project is to mimic this demonstrated shoreline nourishment project down drift of Dewitt Canal to restore and maintain approximately 9.5 miles of gulf shoreline south of Pecan Island and Rockefeller Refuge.

Preliminary Project Benefits:

1) Total acreage benefited:

- a. Direct: Approximately 320 acres (14,000' x 500' x 2 reaches) of near shore open water would be filled and maintained with dredge material to create sediment feeder berms along the shore to nourish existing shoreline. During this candidate project nominee evaluation stage, no direct project benefits are being attributed to the immediate fill areas/feeder berms or for potential shoreline prograding.

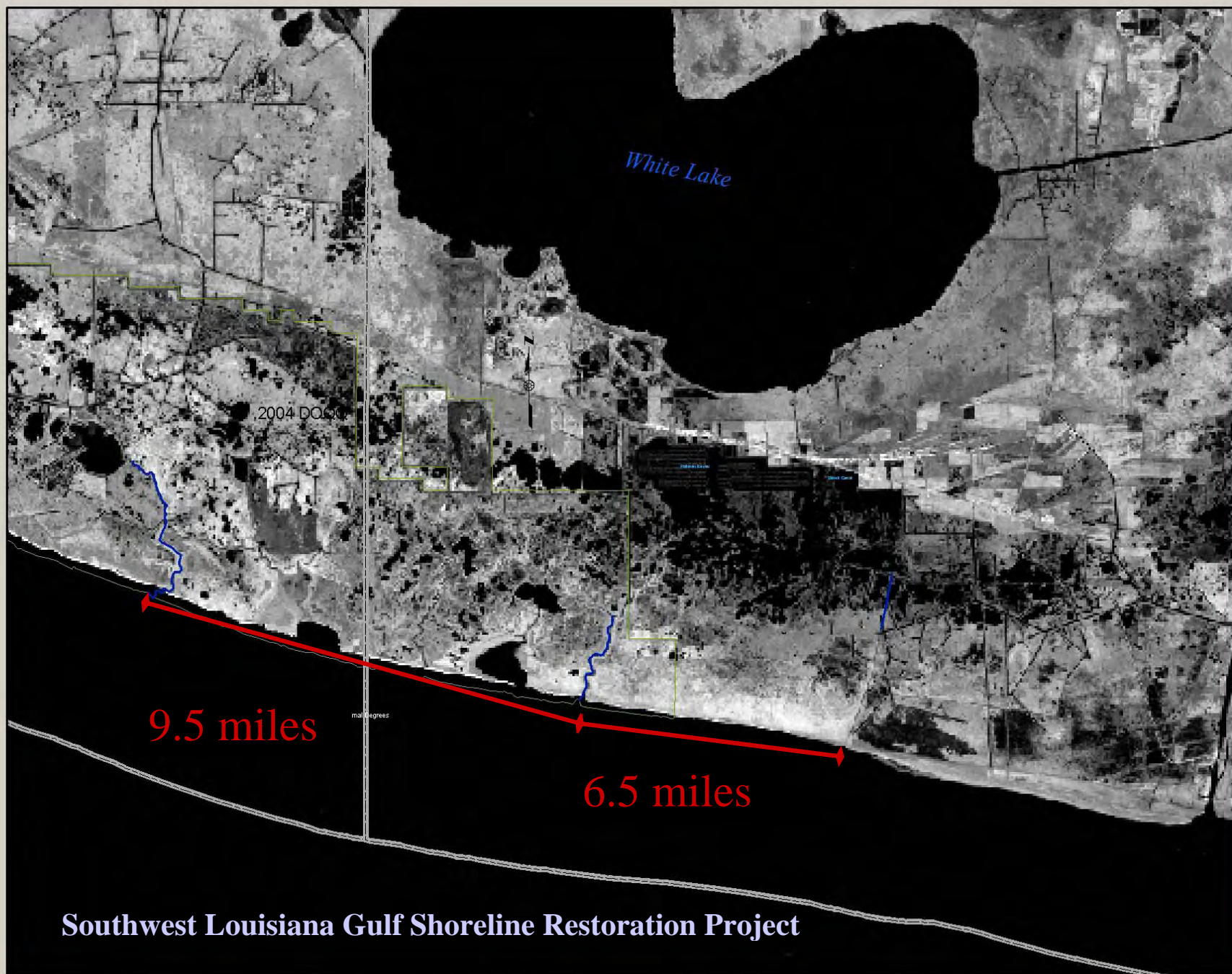
Approximately 806 acres along 9.5 miles of existing shoreline would be protected from eroding throughout the project life [35' x 20 yrs] as a direct result of the fill material/feeder berms.

- b. Secondary benefits are not currently being assessed for the project.
- 2) Number of Wetland Acres protected/created over project life: 806 acres.
 - 3) Anticipated loss rate reduction throughout the area of direct benefits over project life: The goal of the project is to mimic the prograding that is occurring west of Freshwater Bayou, which would reverse typical shoreline loss. Therefore, the loss rate reduction is aimed to be greater than 75%.
 - 4) Project features restore and maintain ecosystem structural components including beach and Cheniers.
 - 5) What is the net impact of the project on critical and non-critical infrastructure: The project would maintain the Gulf Shoreline facing the community of Pecan Island, the eastern side of Rockefeller Refuge and an important stretch of Louisiana Highway 82.
 - 6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? The project would work synergistically with Pecan Island Terracing Project (ME-14), Freshwater Introduction South of Highway 82 (ME-16), South White Lake Shoreline Protection Project (ME-22) (all constructed, under construction, or pending construction) and the Rockefeller Refuge Shoreline Stabilization Project (ME-18), which all contribute to protecting, restoring and enhancing the beaches, cheniers and marshes that separate the Gulf of Mexico from White Lake, in the Mermentau Basin.

Potential Issues: O&M and Pipelines.

Preliminary Construction Costs: The construction cost including 25% contingency is approximately \$13,175,000. This cost includes three separate dedicated dredging events in the Gulf of Mexico. The estimated fully funded cost range is \$15 - \$20 million.

Preparer of Fact Sheet: Melanie Goodman, U.S. Army Corps of Engineers, 504-862-1940, melanie.l.goodman@mvn02.usace.army.mil



Southwest Louisiana Gulf Shoreline Restoration Project

PPL 16 Demonstration Projects

Sediment Containment System for Marsh Creation Demo

PPL15 DEMONSTRATION PROJECT NOMINEE FACT SHEET

March 1, 2006

Demonstration Project Name

Sediment Containment System for Marsh Creation

Coast 2050 Strategy

Possible Demonstration Project Location(s)

Coastwide

Problem

Small and medium freshwater diversions that flow into broad areas lack confinement and trapping features and often the materials entering the area are too dilute or fine to result in any appreciable accumulation to form marsh. A method to delineate smaller areas to concentrate sediments flowing across an area would allow for accumulations to occur within a more timely manner. A sediment trapping mechanism would also allow for taking advantage of finer materials that would otherwise largely flow through the target area.

Goals:

The overall goal of the project is to demonstrate the effectiveness of a sediment trapping system to strategically define areas of accumulation and improve the efficiency of sediment accumulation in small and medium freshwater diversions.

Proposed Solution:

The project will demonstrate the effectiveness of a sediment trapping system designed for dredge containment to facilitate the sediment accumulation in freshwater diversion that are located in broad areas where sediment accumulation is dissipated over broad area. The project will demonstrate that by isolating areas where accumulation can be concentrated accretion rates will be greatly enhanced and speed up marsh creation.

Preliminary Construction Cost:

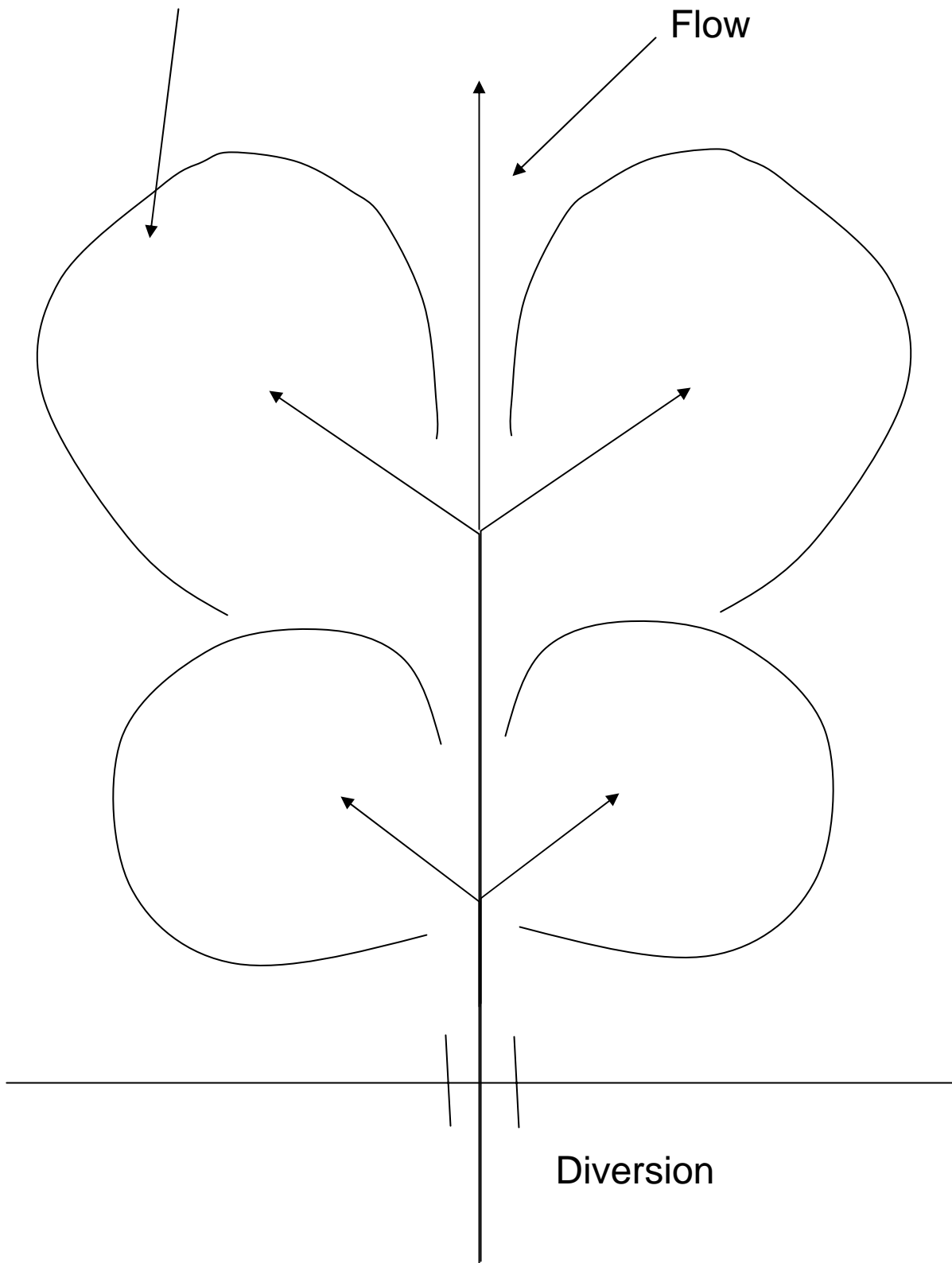
\$500,000

Preparer of Fact Sheet:

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Containment for sediment trapping

Flow



Barrier Island Sand Blowing Demo

Barrier Island Sand Blowing Demonstration Project

Coast 2050 Strategy:

- Region 1 – revised strategy 14 - restore and maintain barrier islands.

Project Location: It is recommended demonstrating this technology at Breton Island, although any other barrier island in Louisiana could be selected.

Problem: Barrier islands are rapidly disappearing as a result of tropical storm and hurricane activity. Storms cause surge that over-wash and often breach the islands. Many times breaches or gaps form in the island that continue to erode and eventually form large cuts in the island. Closing barrier island breaches quickly with high quality sediments is the easiest and least expensive strategy to maintain shoreline integrity. One of the challenges in barrier island restoration is finding the most cost effective and highest quality borrow source available. When a source of sand is found it is often times encumbered by pipeline networks and covered by layers of silts or organics and/or may be too far from the restoration site for cost effective mining and placement.

Goals:

1. To demonstrate the use of the sand blowing technology for the purposes of mining sand sites in the dry and placing (unloading) the sand in the dry.
2. To demonstrate the cost effectiveness of using confined upland disposal sites as a potential source of sand for barrier island restoration projects.
3. To demonstrate the effectiveness of using this placement method to close newly formed gaps (breaches) and/or over-wash areas resulting from Major Storm events such as tropical storms and hurricanes.
4. To demonstrate the effectiveness of using this placement method to place high quality sediments in precise areas, such as breaches or beaches, on eroding barrier islands

Proposed Solution: The demonstration project involves the mining of high quality sand (dry) from a USACE, Mobile District's upland confined disposal site using the sand blowing method. The sand will then be placed on a barge and towed to Breton Island. The sand will then be offloaded from the barges and placed on Breton Island using the sand blowing method. The sand will be used to close breaches or areas of over-wash on the island.

Project Benefits: This project allows use of material not being used beneficially, would decrease impacts to water quality at the disposal site, and avoid impacts resulting from containment dike construction.

Project Costs: The total fully funded cost for the project is \$1,919,343.

Preparer of Fact Sheet:

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Enhancement of Barrier Island Vegetation Demo

PPL16 DEMONSTRATION PROJECT NOMINEE FACT SHEET

March 1, 2006

Demonstration Project Name: Enhancement of Barrier Island and Salt Marsh Vegetation

Coast 2050 Strategy – Coastwide Common Ecosystem Strategy; Restore/Maintain Barrier Islands, Headlands, Shorelands

Region 1 Regional Ecosystem Strategy; Restore/Maintain Barrier Islands and Shorelines

Region 2 Regional Ecosystem Strategy; Restore/Maintain Barrier Islands

Region 2 Mapping Unit Strategy # 17 Caminada Bay – Maintain Shoreline Integrity e.g. vegetative plantings of mangroves or marsh

Region 3 Regional Ecosystem Strategy; Protect Bay/Lake Shorelines, #10 Maintain shoreline integrity and stabilize critical areas of Teche/Vermillion Bay Systems including the Gulf Shorelines (bay/lake/gulf)

Region 4 Regional Ecosystem Strategy; Restore/Maintain Barrier Islands and Shorelines

Possible Demonstration Project Location(s): There are multiple projects planned and ongoing that fit within the strategies listed above, most of which include use of vegetative plantings on barrier islands. This project will demonstrate various methods to enhance the establishment and growth of key barrier island and salt marsh plant species. The enhancement tools to be assessed can be utilized in either a new planting or an already planted project. One possible project site in Region 3 is the Timbalier Island Dune and Marsh Restoration project (TE-40) that installed nearly 110,000 plants, eight different species in 2005 and an additional 40,000 plants are planned in 2006. Additional project locations are available in Regions 2 and 3.

Problem – Barrier Islands provide critical habitat and are the first line of defense to not only day-to-day coastal erosion but also to the destructive forces of major storm events. Developing methodologies to enhance vegetation establishment and growth 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.

Goals - Test several technologies and/or products to enhance the establishment and growth of key barrier island and salt marsh vegetation. Specifically, we will focus on enhancing the establishment and growth of transplants of both dune vegetation (bitter panicum and sea oats) and marsh vegetation (smooth cordgrass and black mangrove). Additionally, we will demonstrate cost-effective establishment of woody vegetation (black mangrove in the high marsh and groundsel bush, *Baccharis halimifolia*, in the swale) via non-traditional techniques that do not use container-grown transplants.

Proposed Solution – Enhancement of transplant establishment and growth will be achieved through a combination of humic acid application and broadcast fertilization regimes. Humic acid benefits will be demonstrated in both intertidal and supratidal

plantings, whereas broadcast fertilization benefits will only be demonstrated in supratidal plantings. Humic acid is a natural product that forms in soils as they start to mature and accumulate organic matter. Humic acid is now commercially available in liquid form as a soil amendment. Application of humic acid has been shown to increase plant establishment and productivity of agricultural crops grown in marginal soils (see Chen and Aviad 1990; Varanini and Pinton 2001; Atiyeh et al. 2002; Nardi et al. 2002; Sharif et al. 2002; Pilanali and Kaplan 2003), yet peer-reviewed literature on the benefits of humic acid in coastal restoration planting projects is currently lacking. Some of the reported benefits of humic acid application include enhanced plant resistance to environmental stressors, such as physiological drought, salinity, and heat stress (see Zhang et al. 2003 and references therein). 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. Additionally, EPA has recently funded a greenhouse study that showed a beneficial response of smooth cordgrass to humic acid amendment (unpublished data). The need exists to build upon the greenhouse study and transfer this potentially important restoration technology to the field to optimize plant responses in various habitats and demonstrate potential synergies with other restoration tools, such as a broadcast fertilization regime, which is discussed below.

A broadcast fertilization regime has been used in other barrier island dune and swale restoration projects with tremendous success, especially in terms of accelerating plant vegetative spread and achieving rapid vegetative cover (see Broome et al. 1982; Mendelssohn and Hester 1988; Mendelssohn et al. 1991; Hester and Mendelssohn 1992). We believe that a broadcast fertilization regime can be demonstrated to enhance plant spread outward from the transplant units and result in a more rapid establishment of healthy vegetative cover when compared to the current practice of inserting a slow-release fertilization packet with the transplants at the time of planting, which may not encourage the same degree of outward expansion since the nutrients are physically released adjacent to the transplant. Therefore, there is a need to statistically assess and demonstrate the potential benefits of this technique versus the current practice. Additionally, the potential interactive benefits of a broadcast fertilization regime with humic acid amendment have not been assessed in a barrier island restoration project and will be an important component of this demonstration to identify beneficial synergistic effects between emerging restoration technologies.

We want to emphasize that the proposed techniques to enhance vegetative planting success are not designed to permanently modify/alter the natural barrier island environment or to necessarily require continued treatment application over long periods of time as a long-term maintenance component. Rather, our proposed humic acid amendment and broadcast fertilization regime techniques are intended to “jump start” and facilitate the rapid establishment and expansion of vegetation. Our goal is to enhance the success of transplant establishment and vegetative spread in this stressful environment during the critical first year after planting, after which existing management techniques may be utilized.

Enhancing the establishment of woody vegetation (black mangrove and groundsel bush) will be achieved via high-density dispersal techniques of propagule and seeds, respectively, as a cost-saving alternative to planting container-grown transplants of these trees. Black mangrove seeds germinate on the tree, and these propagules can cost-effectively be collected and dispersed into the higher elevations of a smooth cordgrass planting. Similarly, groundsel bush seeds are produced in high numbers, which can be collected and dispersed into a swale planting site once grasses, such as marshhay cordgrass, are established.

Reference areas will be established to determine the success of both the product application(s) and alternative vegetation establishment methods relative to current protocols. Each product (humic acid and fertilizer) will be commercially available and off-the-shelf. All enhancement treatments will be applied within a replicated experimental framework that will permit appropriate statistical analysis of both single treatment effects and multiple treatment interactions. All treatment test sections and reference planting areas will be visually inspected and sampled quarterly (plant and soil variables) and compared to the reference area to develop recommendations for future planting projects.

Demonstration Project Costs: The total fully funded cost for the project is \$850,000

Preparer of Fact Sheet

Patty Taylor, EPA Region 6, (214) 665-6403, taylor.patricia-a@epa.gov
(with major assistance from Dr. Mark Hester, UNO)

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**Nourishment of Permanently Flooded Cypress Swamps Through Dedicated
Dredging Demo**

PPL 16 DEMONSTRATION PROJECT NOMENEE FACT SHEET

Demonstration Project Name: Nourishment of Permanently Flooded Cypress Swamps Through Dedicated Dredging

Coast 2050 Strategy: Coastwide Common Strategy - Dedicated dredging for wetland creation

Possible Demonstration Project Location (s): Either side of the Houma Navigation Channel and multiple locations in Barataria Basin and Penchant Basin.

Problem: 1) Many cypress/tupelo swamps in coastal Louisiana have experienced altered hydrology either through the loss of sediments (i.e., flood control levees along the Mississippi river) causing increased subsidence rates or through impoundments (i.e., roads, levees, etc.). These swamps are also affected by saltwater intrusion (due to the construction of canals). These trees slowly die when they are exposed to prolonged, deep flooding (from both fresh and saline waters) for longer than normal duration and regeneration of new trees cannot occur under these flooded conditions. 2) Several State and Federal agencies have denied the possible use of dredged material to rehabilitate permanently flooded cypress/tupelo swamps because of the perception that it would harm those trees.

Goals: To demonstrate how the deposition of differing amounts (depths) of dredged material within a cypress/tupelo swamp would affect the growth of cypress trees and how that would affect the ability of those cypress trees to naturally regenerate. Several methods of planting small cypress trees in the newly deposited dredged material would be tested along with their survival rates.

Proposed Solution:

- 1) Containment dikes at each of 3 study sites will be constructed to provide 3 contiguous 3-acre blocks (27 acres) with similar pre-project hydrology. Each study site will have 1 control block consisting of 3 acres (9 acres total). To the greatest degree possible dredge disposal areas will be chosen to include a range of baldcypress size classes (and hopefully age classes) in both stressed and healthy conditions within each block. At each study site the 3 blocks will be filled with 1 ft (30 cm), 2 ft (60 cm) and 3 ft (90 cm) of sediment. Only 1 sediment treatment per block will be used due to the cost of dike construction.
- 2) Certain physiological as well as certain morphological measurements would be performed pre and post sediment placement on selected mature trees within each plot to document the effects of sediment placement of differing depths on mature trees (see attachment). Also, a detailed soil analysis will be carried out within each plot (see attachment).
- 3) Areas within these units with very little tree cover would be used to test three methods of tree planting. Selected areas with mature will be designated to determine the effect of addition of soil to natural regeneration.

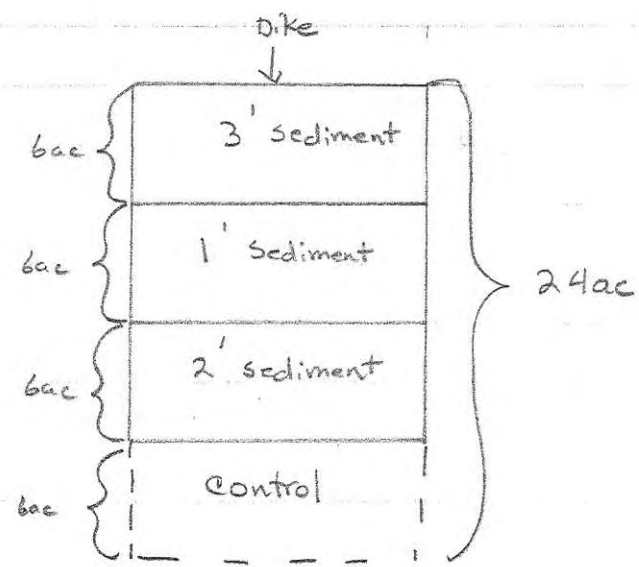
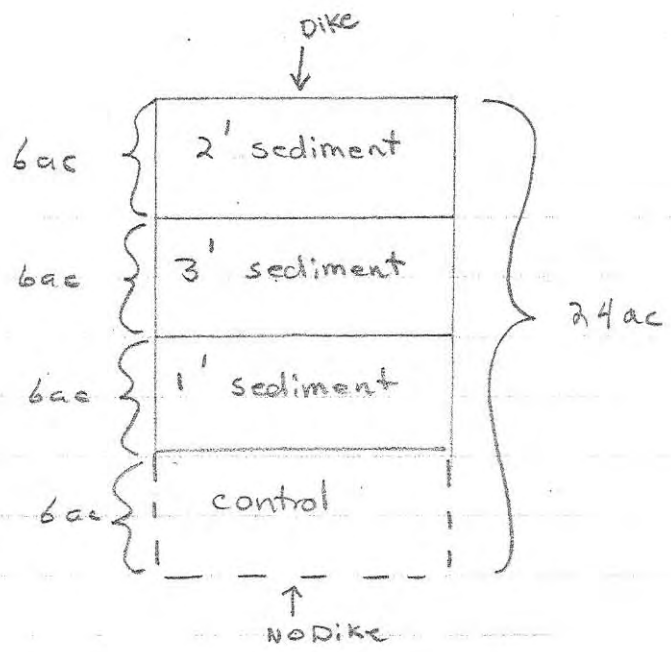
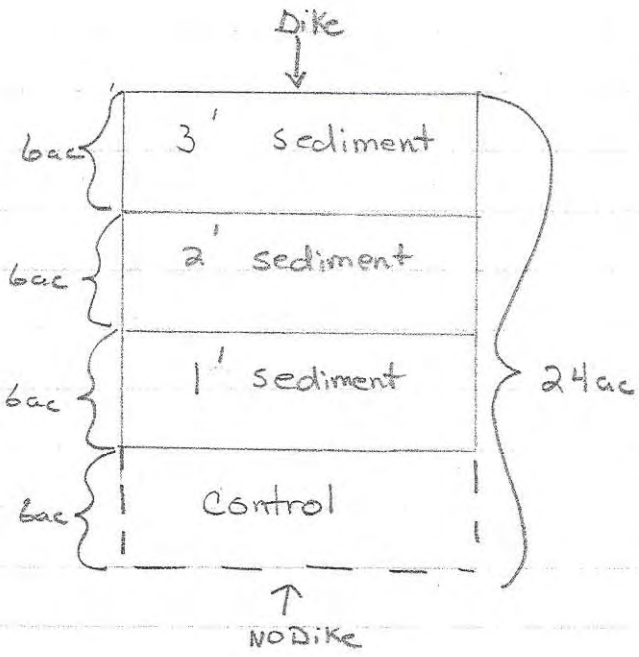
Demonstration Project Costs:

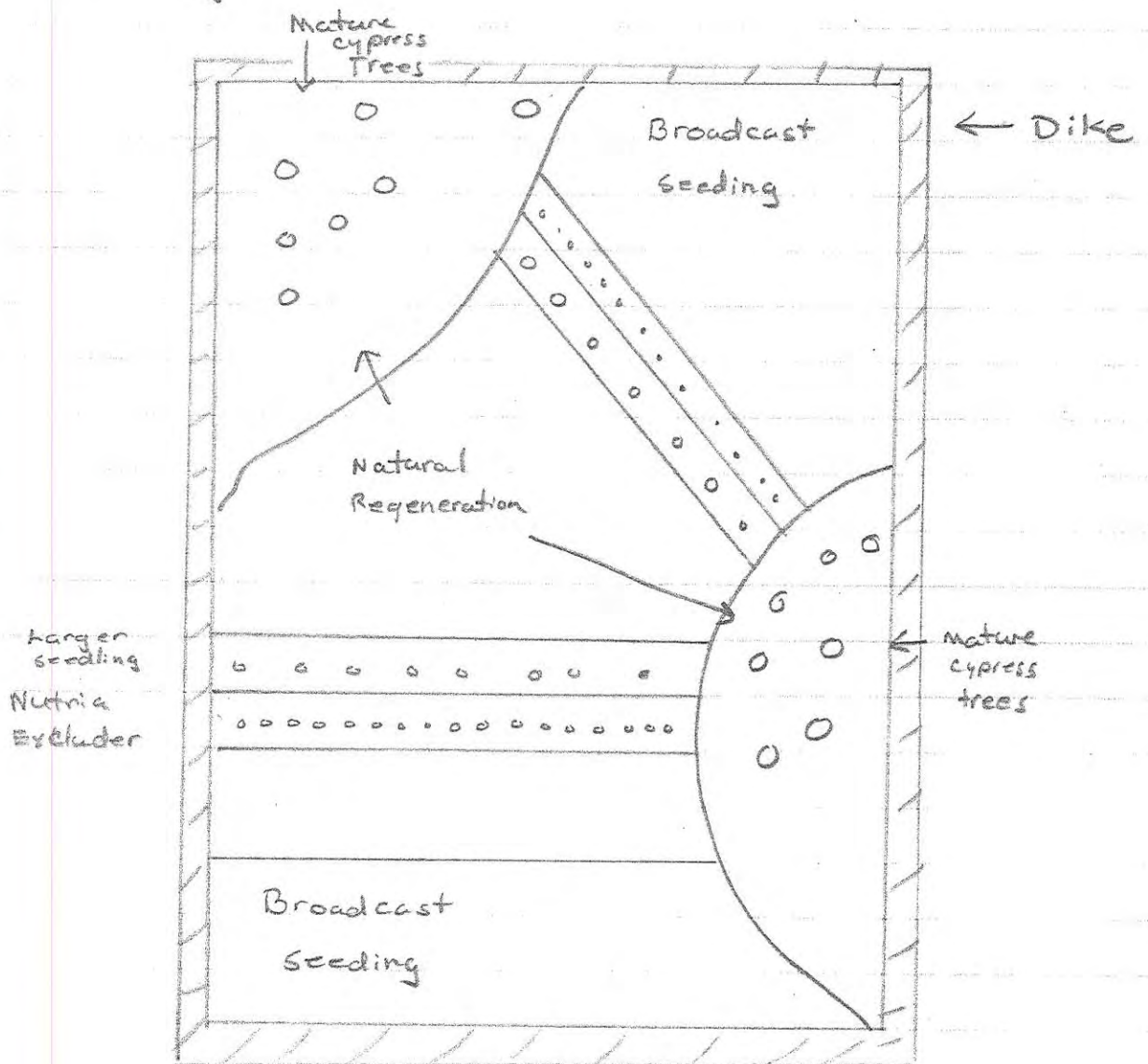
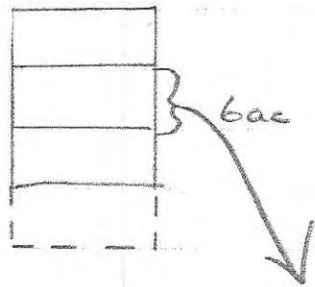
The construction cost including 25% contingency is approximately \$687,313. The estimated fully funded cost range is \$ 500,000 - \$ 1 million.

Preparer of Fact Sheet:

Robert Dubois (337)291-3127
U.S. Fish and Wildlife Service
Robert_dubois@fws.gov

Water way





Evaluation of Bioengineered Reefs Performing as Submerged Breakwaters Demo

Evaluation of Bioengineered Reefs Performing as Submerged Breakwaters, PPL 16 Demonstration

Coast 2050 Strategy

- Stabilize Gulf of Mexico shoreline from old Mermentau River to Dewitt Canal, preserve and stabilize the gulf shoreline, maintain integrity of Gulf of Mexico shoreline where needed.

Possible Demonstration Project Location(s):

Region 4, Mermentau Basin, Cameron/Vermilion Parish, Rockefeller Refuge west of Rollover Bayou

Problem

Louisiana's coastline has received national attention for the past 2-3 decades due to its rapid erosion rates. Although erosion may occur on any coastline, Louisiana suffers from some of the highest erosion rates due partly to subsidence and frequent hurricanes. Efforts addressed at limiting erosion have included a variety of solutions. These include constructed breakwaters as well as diversion spillways providing additional sediment. Poor soil load bearing capacities is one example that could limit the use of more traditional restoration techniques along many areas of coastal Louisiana. Cost associated with project sustainability is a factor weighted in the decision for restoration project selection that could eliminate a potential project from consideration.

Goals

The goal of this project is to investigate specific designs of bioengineered reefs and their ability to mitigate erosion. Additional goals focus on environmental benefits both at the time of installation and over the development life of the oysterbreak; and investigation of stability and growth of the structures over time.

Proposed Solution

Many locations in coastal Louisiana would be appropriate. Because this is intended to be a biologically dominated engineered structure, there is a need for sufficient oyster spat and appropriate growing conditions. The coastal area of Cameron Parish may be an appropriate site for this project. There are already other structures in the area which could be compared under similar conditions to this technology. It is expected that the oysterbreak will be deployed in shallow water off the coast, but could also be used in similar conditions in coastal bays or other waters. Data collected to date suggest that the mature structure will be comparable to traditional breakwaters, but likely much more biologically diverse. Maturity will be influenced by oyster growth rates. Thus, areas of high oyster growth would be preferred. The technology termed an "oysterbreak" (figure 1) is designed to stimulate the growth of biological structures in the shape of submerged breakwaters. Oyster reefs can form immense structures that can protect shorelines and coastal communities from storms. One principle behind the oysterbreak is to provide a support structure with maximum surface area for oyster establishment while maintaining its lightweight characteristics. In contrast to other artificial oyster reefs that simply provide cultch for oyster attachment, the oysterbreak is engineered to stimulate oyster growth in a configuration that will effectively dissipate wave energy. As oysters grow on

the structure, the oysterbreak will become primarily composed of biologically created material. Another technology, termed Reef Ball™, has been used in Florida and the Bahamas as a way to establish coral reefs. Investigation on their wave dissipating effects was conducted at the U.S. Army Corps of Engineers Coastal & Hydraulic Engineering Lab. Preliminary data on the oysterbreak technology indicates that the structures dissipate somewhat less energy than a traditional breakwater when installed, but at maturity (expected to occur between month 6 and 36) would provide erosion reduction or reversal properties similar to traditional breakwaters. Materials used are environmentally friendly (e.g. concrete, agricultural residues, oyster shell). Furthermore, because the bulk of the mature structure is biologically derived, much less initial material (and hence environmental impact due to heavy equipment, etc.) is needed, driving costs down. Thus, this technology is a low cost, environmentally friendly and sustainable alternative to traditional breakwaters.

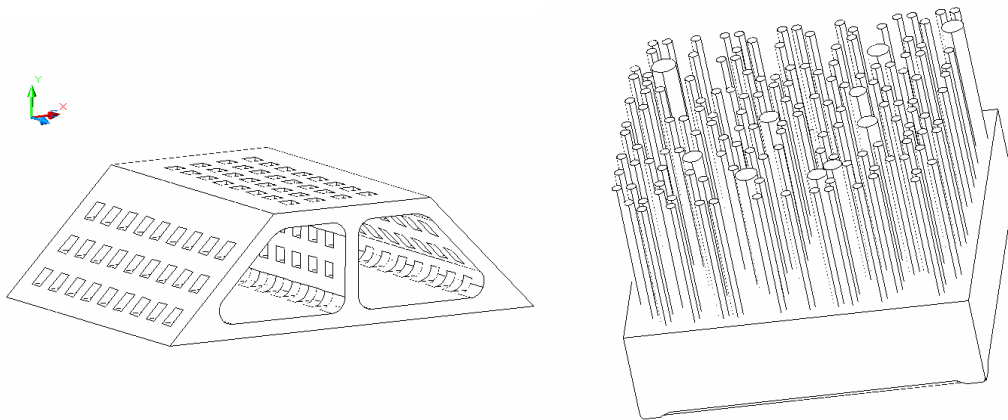


Figure 1: Modular units proposed for lightweight biologically dominated breakwater. Both are constructed from biologically active resources and provide surface area for oysters to attach. The structural characteristics are conducive to wave dissipation.

This demonstration project will proceed in two parts. Part 1 will include the first year of study, which will be on a small scale. In year 1, testing of two modular designs, shown in figure 1, will be carried out at the selected site. This will be done to prove out the construction, deployment, and applicability of these types of structures in the study site. Once the concept is proven on the small scale, a large-scale operation, Part 2, will be implemented. A composite structure will be constructed and deployed in the same scale as adjacent submerged rock breakwaters. One 50' x 600' structure will be constructed from the modular units tested in Part 1 of the project.

The key objectives of the monitoring plan are:

- Collect data that will increase the engineering and biological knowledge of bioengineered submerged breakwaters performance in Louisiana coastal protection applications
- Determine performance characteristics of each alternative tested

The monitoring plan will consist of land-based and aerial photography, wave and tide gauging, bathymetric and topographical surveying. In addition, measurement of settlement and rotation of units will be quantified by surveying settlement plates attached

to the individual structures. Oyster recruitment and survival will also be measured. The monitoring will be initiated during construction of the test sections and last for 5 years.

Monitoring Components

Surveying (6 Trips, 7 surveys each trip)

A total of 7 transects will be taken for each section and should be surveyed pre-construction, post-construction, and the following years at the same time of year for a total of 6 surveys. Transects should be surveyed in the center and ends of each section. Also, each section will have 3 transects at 100 ft, 300 ft, and 500 ft beyond each side of the section to evaluate updrift and downdrift impacts.

Surveying profiles will be used to determine the effectiveness of the bioengineered submerged breakwaters in reducing shoreline erosion and their effect on the adjacent shoreline. Structure surveys will be used to determine settlement, scour and structure stability. The surveys provide a direct comparison of alternatives and the control section to determine the effectiveness of each alternative and its relative effectiveness to the other alternatives.

Aerial Photography (5 trips, 1 per year)

Aerial photography will provide a view of the effectiveness of the structures ability to reduce erosion rates found in the area of deployment. Although less accurate than surveys, the aerial photography will provide a larger scale evaluation for the test section.

Ground Photography (6 trips)

Ground-level photography will be collected during each survey. The photography will help document shoreline change, integrity of the structures, wave attenuation, and other aspects of the project. At a minimum, photographs will be taken at each transect, the ends of each alternative, the adjacent shoreline, and the control site. Every attempt will be made to collect the photos from set locations.

Ground-level photography will provide cost effective small-scale evaluations that may be missed in the surveys or aerial photos. Shifting of units, small scale shoreline changes, and local slumps due to scour or soil failure are some of the examples of additional information from ground-based photography.

Wave Gauging (4 gages, 5 trips)

Four wave gauges will be installed to measure wave attenuation at the bioengineered breakwater. One wave gauge will be installed offshore of the structures to collect the incident waves. A gauge will also be located leeward of the section. A third and fourth gauge will be located to the side of the section on the same contour as the two in the lee of the structures to determine the non-affected incident wave. Wave data should be collected for six hours, on each visit that the oyster growth is measured. Wave gauges should be highly accurate pressure transducers that are capable of capturing wave height and period as well as providing water depth. Sampling bursts should be frequent (minimum every 20 minutes) and long enough to capture several wave passages from one

sensor to the next. Tide readings must be referenced to NAVD'88 and be accurate to within 0.1 ft.

The wave data, in addition to tide data, will be applied to evaluate design estimates of wave transmission at each breakwater. This information will be used to calibrate the predicting equations. In combination with the beach profile survey data, the wave data can be applied towards predictions of erosion thresholds for with- and without-project conditions. This data will also give relationships of energy required to erode muddy shorelines.

Tide Gauge (2 gages, 5 trips)

A tide gauge will be installed and operated concurrent with the offshore wave gauge to measure water surface elevations. The tide data could then be correlated to data from other stations along the Louisiana coast (such as at Calcasieu Pass) for which long-term records exist. Tide data are critical to understand the measured transmission characteristics for each of the alternatives. Combined with wave data, the tide data will provide refinement of the transmission coefficient for the structures and their performance.

Settlement Plates (5 plates)

Settlement plates will be installed to measure the magnitude and rate of settlement of each structure. They will also determine any rotation of the individual units. The settlement plates will be installed during construction and surveyed by the contractor. Settlement of the plates will be measured during each monitoring survey over the next 5 years. A total of 5 settlement plates will be installed by the construction contractor

Biological Analysis (5 trips)

During each monitoring period, a biological assessment will be conducted. The growth and health of the oysters will be measured and statistically compared. Samples of the oysters can be taken to the lab for gut content testing as well as other tests. Water temperature and salinity will also be taken at each visit. This data can be compared to nearby gages to analyze trends.

Project Benefits:

This project is anticipated to benefit 2.4 acres of saline marsh (600 ln ft X 35 ft/yr X 5 yrs).

Demonstration Project Costs

A preliminary fully funded first cost is \$896,860.

Preparer of Fact Sheet

John Foret, NOAA Fisheries, 337/291-2107; john.foret@noaa.gov

Summary of the Public Support Letters prior to the Feb. coast wide voting meeting

The Corps received numerous letters of support prior to the Feb. coast wide voting meeting. These letters/emails of support from members of the local community and local elected government officials include the following projects:

<u>Project</u>	<u># letters of support</u>
Alligator Bend Marsh Restoration and Shoreline Protection Project	61
Mississippi River Reintroduction at Violet (Violet Siphon Enlargement) and Marsh Creation Project	1
Breton Landbridge Marsh Creation and Shoreline Protection Project	1
Madison Bay Marsh Creation and Terracing	1
Falgout Canal Freshwater Enhancement Project	1
West Belle Pass Barrier Headland Restoration Project	2
Wisner Wildlife Management Area Marsh Creation and Terracing Project	1
Jean Lafitte Shoreline Protection and Marsh Creation Project	2
Southwest LA Gulf Shoreline Restoration Project	2

All letters received after the Feb. coast wide voting meeting are include in binder.



*Senate
State of Louisiana*

P.O. Box 94183
Baton Rouge, Louisiana 70804
(225) 342-2040

January 30, 2006

U.S. Army Corps of Engineers
CWPPRA Restoration Projects/Programs
Attn: Julie LeBlanc, Director
7400 Leake Avenue
New Orleans, LA 70118

By Fax & U.S. Mail
[(504) 862-1892]

Dear Ms. LeBlanc:

As the state senator representing District 26, I would like to take this opportunity to express my full support and request approval for the CWPPRA Southwest Gulfshore restoration project located in Region 4 (the Mermentau Basin), as well as for Region 3's Chenier Au Tigre Project located in the Teche/Vermillion Basin.

The approval *and* completion of these projects are extremely critical and are so vital to the protection and safety of these coastal areas. Understandably, the concerns surrounding the survival of my district and the nearby communities are of even more concern resulting from the recent natural disasters which severely hit our state. It is crucial that all actions are taken promptly to prevent or lessen future tragedies such as those caused by Hurricanes Katrina and Rita.

Respectfully representing my constituents and my state, I strongly request the serious consideration that these projects deserve, and offer my full support accordingly.

Sincerely,

A handwritten signature in black ink, appearing to read "Nick Gautreaux".

Nick Gautreaux
State Senator
District 26

NG/dl

cc: District file



DON SCHWAB
PARISH PRESIDENT

OFFICE OF THE PARISH PRESIDENT
TERREBONNE PARISH CONSOLIDATED GOVERNMENT
P. O. Box 6097
HOUMA, LOUISIANA 70361



(985) 873-6401
FAX: (985) 873-6409

March 1, 2006

Mr. Greg Breerwood, Chairman
CWPPRA Technical Committee
U.S. Army Corps of Engineers
New Orleans, Louisiana

VIA Facsimile

Re: South Terrebonne Terracing Project, PPL 15

Dear Mr. Breerwood:

It is my understanding that the above captioned project will be among those projects considered for additional investigation at the upcoming Technical Committee meeting on March 15, 2006. You will recall that this project, a holdover from PPL 15, scored the lowest of any projects from PPL 15 considered for Phase I funding in December of 2005.

Because of its low ranking among the CWPPRA agencies and because the project area, particularly Madison Bay, is an area of tremendous need, Terrebonne Parish and representatives of the National Marine Fisheries Services worked diligently to redefine the project for presentation during the PPL16 planning. This new project, the Madison Bay Marsh Creation and Terracing Project, will address the restoration needs of the area, and alleviate many of the concerns of the federal agencies associated with the PPL 15 project.

As a result of our ability to submit an improved project, and to avoid any confusion in voting on March 15, 2006, it is the wish of Terrebonne Parish Consolidated Government to withdraw the PPL 15 project "South Terrebonne Terracing Project" from consideration as an eligible project. We ask that you consider only our two PPL 16 projects, Madison Bay Marsh Creation and Terracing, and the Falgout Canal Freshwater Enhancement Project when voting at this meeting.

Should you have any questions or require additional information, please feel free to contact Leslie Suazo, Director of Coastal Restoration and Preservation, at 985-873-6889.

Sincerely,

A handwritten signature in cursive script that reads "Don Schwab".

Don Schwab
Parish President

Creel, Travis J MVN-Contractor

From: Piers [pchapman@lsu.edu]
Sent: Friday, March 03, 2006 4:37 PM
To: LeBlanc, Julie Z MVN
Subject: New Orleans land bridge

Dear Ms. LeBlanc,

I am writing to advise you of my unqualified support for the efforts of Orleans Parish to prevent further loss of fragile marshlands on the south side of the Orleans Landbridge. Last year the Lake Catherine Civic Association pointed out during the PLL-15 process that parts of it were deteriorating at an alarming rate. They continued to do so and Hurricane Katrina accelerated the process.

As the Lake Pontchartrain Basin Foundation has recently pointed out, the Orleans Landbridge functions as a critical Line of Defense for New Orleans against storm surges. It is the ultimate barrier island that holds back the Gulf of Mexico from the lake.

Substantial marshland loss on the south side of the landbridge due to Katrina has created the very real possibility of opening a new pathway for storm surge to easily flow from Lake Borgne across Lake Catherine and into Lake Pontchartrain. That situation will increase the risks of more serious flooding in all of the lake's communities. In addition, the Intra Coastal Waterway, the CSX RR line, Hwy 90 and the Lake Catherine community are threatened by the loss of this protective marshland.

Given the millions of dollars that have been spent in the past few years on dredging channels that have allowed saltwater to encroach on the wetland systems of southern Louisiana, it is good to see a project that proposes directly to try to restore some of the damaged areas. I urge you to give the Orleans Landbridge Marshland Restoration Project favorable consideration throughout the review process.

Sincerely
Piers Chapman Piers Chapman, Ph.D.
Director, CREST Office
SC&E
3153 Energy, Coast and Environment Bldg
Louisiana State University
Baton Rouge, LA 70803

Tel: 225-578-0069
Fax: 225-578-0102
Email: pchapman@lsu.edu

SCIASouth
Central
Industrial
Association

March 1, 2006

Chet Morrison
President
Chet Morrison
ContractorsKenneth Smith
Exec. Vice President
T. Baker Smith & SonDon Hingle
Vice President
Whitney BankTony Boudreaux
Secretary
Superior Labor
ServicesCharles Theriot
Treasurer
Charles Theriot, CPALeland Robichaux
Past President &
Advisor
Oil States
Skagit/SmatecoNeil Suard
Past President &
Advisor
Suard CompaniesC.J. Domangue
Director
Domangue Lafont
InvestmentsStephanie Hebert
Director
Stephanie Hebert
Insurance AgencyKirk Meche
Director
Gulf Island FabricationOtis T. Logue
Past President &
Managing Director
Southern Technology
& ServicesJane Arnette
SCIA
Executive DirectorMr. Greg Breerwood, Chairman
CWPPRA Technical Committee
U.S. Army Corps of Engineers
New Orleans, Louisiana

VIA Facsimile 504-862-1892

Re: CWPPRA Technical Committee Vote, March 15, 2006

Dear Mr. Breerwood:

South Central Industrial Association (SCIA) is an organized group of industrial businesses committed to supporting an improved business climate for south central Louisiana. We represent over 200 member firms and more than 35,000 employees in Terrebonne, Lafourche, and St. Mary parishes.

The Board of Directors of SCIA supports the recommendations of the Terrebonne Parish Coastal Zone Management and Restoration Advisory Committee concerning the CWPPRA PPL 16 projects proposed in Terrebonne Parish.

The projects supported are in priority order:

- 1) Madison Bay Marsh Creation and Terracing
- 2) Falgout Canal Freshwater Enhancement Project.

We hope the voting of the Technical Committee members will reflect the wishes of Terrebonne Parish and its coastal advocates.

Sincerely,



Chet Morrison, SCIA President



6133 Hwy. 311
Houma, LA 70360

Phone: (985)876-5600
Fax: (985)876-5611

www.houmachamber.com

March 1, 2006

Mr. Greg Breerwood, Chairman
CWPPRA Technical Committee
U.S. Army Corps of Engineers
New Orleans, Louisiana

VIA Facsimile 504-862-1892

Re: CWPPRA Technical Committee Vote, March 15, 2006

Dear Mr. Breerwood:

The Houma Terrebonne Chamber of Commerce supports the recommendations of the Terrebonne Parish Coastal Zone Management and Restoration Advisory Committee in regard to the CWPPRA PPL 16 projects proposed in Terrebonne Parish.

The projects supported are in priority order:

- 1) Madison Bay Marsh Creation and Terracing
- 2) Falgout Canal Freshwater Enhancement Project.

We hope that the voting of the Technical Committee members will reflect the wishes of Terrebonne Parish and its coastal advocates.

Sincerely,

Kandy Theriot
President/CEO

Julie Z. LeBlanc, P.E.
Sr. Project Manager
CWPPRA Project Management Branch
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA

Date 1/29/06

Re: CWPPRA / PLL 16
Alligator Bend Marsh Restoration Project
Orleans Landbridge

This letter is to advise you of my unqualified support for the efforts of Orleans Parish to prevent further loss of fragile marshlands on the south side of the Orleans Landbridge. Last year the Lake Catherine Civic Association pointed out during the PLL-15 process that parts of it were deteriorating at an alarming rate. They continued to do so and Hurricane Katrina accelerated the process.

As the Lake Pontchartrain Basin Foundation has recently pointed out, the Orleans Landbridge functions as a critical Line of Defense for New Orleans against storm surges. It is the ultimate barrier island that holds back the Gulf of Mexico.

Substantial marshland loss on the south side of the landbridge due to Katrina has created the very real possibility of opening a new pathway for storm surge to easily flow from Lake Borgne across Lake Catherine and into Lake Pontchartrain. That situation will increase the risks of more serious flooding in all of the lake's communities. In addition, the Intra Coastal Waterway, the CSX RR line, Hwy 90 and the Lake Catherine community are threatened by the loss of this protective marshland.

I urge you to give the Orleans Landbridge Marshland Restoration Project favorable consideration throughout the review process.

Sincerely

Name *Denis R. Ancelet*
Address *235339 Chef / Larry*
Telephone *888-6065*
new phone number

Chef Menteur Land Company, Limited

857 Brownsitch Road

PMB 243

Slidell, LA 70458

(985)764-8549

January 25, 2006

Julie Z. LeBlanc, P.E.
Sr. Project Manager
CWPPRA Project Management Branch
U.S. Army Corps of Engineers
Via email julie.z.leblanc@mvn02.usace.army.mil

Re: CWPPRA / PLL 16
Alligator Bend Marsh Restoration Project
Orleans Landbridge

Dear Ms. LeBlanc:

This correspondence is to advise you of our strong support for the Alligator Bend Marsh Restoration Project. The Orleans Landbridge and surrounding marshlands are critical Lines of Defense against storm surges and were substantially damaged by Hurricane Katrina. We all know the property damage caused by Katrina and we cannot allow another storm to cause the same or worse devastation.

The project to restore marshland along the Orleans Landbridge is vital to not only Orleans Parish but all the surrounding parishes. Hundreds of thousands of people on both the south and north shores can either benefit if this project is funded or lose everything again with the next storm if the project is not funded.

We strongly urge you to give the Alligator Bend Marsh Restoration Project favorable consideration throughout the review process.

Sincerely,

Chef Menteur Land Company, Limited

Steve Trice, President
Barbara McArthur, Vice-President
Kathleen Fos, Secretary/Treasurer

Creel, Travis J MVN-Contractor

From: Sue Hurley [slhurley14@hotmail.com]
Sent: Thursday, February 02, 2006 4:28 PM
To: LeBlanc, Julie Z MVN
Subject: re: PPL-16 Alligator Bend Marsh Restoration Project

Julie Z. LeBlanc, P.E.
Sr. Project Manager
U.S. Army Corps of Engineers

Re: PPL-16 Alligator Bend Marsh Restoration Project

Please register my support for the Orleans Parish project to restore wetlands on the Orleans Land Bridge. According to the Lake Pontchartrain Basin Foundation, it is a vital line of defense for the protection of all of the Lake Pontchartrain communities against storm surge and flooding. It must not be allowed to deteriorate.

Sincerely,

Sue Hurley
5606 Boxborough Ct.
Greensboro, NC 27407

Creel, Travis J MVN-Contractor

From: Michael Rolufs [michael_rolufs@yahoo.com]
Sent: Friday, February 03, 2006 2:32 AM
To: LeBlanc, Julie Z MVN
Subject: support for Alligator Bend Marsh Restoration Project

*Julie Z. LeBlanc, P.E.
Sr. Project Manager
U.S. Army Corps of Engineers*

*Re: PPL-16 Alligator Bend Marsh Restoration Project
Please register my support for the Orleans Parish project to restore wetlands on the Orleans Land Bridge. According to the Lake Pontchartrain Basin Foundation, it is a vital line of defense for the protection of all of the Lake Pontchartrain communities against storm surge and flooding. It must not be allowed to deteriorate.
Sincerely,*

*Michael Rolufs
Rebuilding Louisiana Coalition Web-Master
6046 Kuebel Drive
NO LA 70126
current telephone: 011 43 69910911332
www.rebuildinglouisianacoalition.org*

Brings words and photos together (easily) with [PhotoMail](#) - it's free and works with Yahoo! Mail.

Julie Z. LeBlanc, P.E.
Sr. Project Manager
CWPPRA Project Management Branch
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA

Date 1/31/06

Re: CWPPRA / PLL 16
Alligator Bend Marsh Restoration Project
Orleans Landbridge

This letter is to advise you of my unqualified support for the efforts of Orleans Parish to prevent further loss of fragile marshlands on the south side of the Orleans Landbridge. Last year the Lake Catherine Civic Association pointed out during the PLL-15 process that parts of it were deteriorating at an alarming rate. They continued to do so and Hurricane Katrina accelerated the process.

As the Lake Pontchartrain Basin Foundation has recently pointed out, the Orleans Landbridge functions as a critical Line of Defense for New Orleans against storm surges. It is the ultimate barrier island that holds back the Gulf of Mexico.

Substantial marshland loss on the south side of the landbridge due to Katrina has created the very real possibility of opening a new pathway for storm surge to easily flow from Lake Borgne across Lake Catherine and into Lake Pontchartrain. That situation will increase the risks of more serious flooding in all of the lake's communities. In addition, the Intra Coastal Waterway, the CSX RR line, Hwy 90 and the Lake Catherine community are threatened by the loss of this protective marshland.

I urge you to give the Orleans Landbridge Marshland Restoration Project favorable consideration throughout the review process.

Sincerely

Name ANNA C. MARGIOTTA
Address 24627 Chet Mentore Hwy
Telephone 504-421-0909

Present Mailing Address:
1060 Live Oak Loop
Mandeville, LA 70448



Lake Pontchartrain Basin Foundation – Coastal Sustainability Program

Lake Pontchartrain Basin Foundation, P.O. Box 6965 Metairie, LA 70009-6965

(See the Coastal Sustainability Program webpage at SaveOurLake.org for documentation)

March 2006

RE: PPL 16 Candidate Recommendations

TO: CWPPRA voting agencies and parishes

The Lake Pontchartrain Basin Foundation requests that federal, state and parish officials strongly consider voting in favor of the following nomination projects at the March 15, 2006 CWPPRA meeting. *These projects comply with LPBF's Comprehensive Habitat Management Plan and the Pontchartrain Coastal Lines of Defense Program recently endorsed by the Coalition to Restore Coastal Louisiana and the Louisiana Wildlife Federation.*

The Pontchartrain Lines of Defense Program consists of ten priority project areas within the region east of the Mississippi River (Figure 1). These ten coastal restoration project areas were chosen from the Comprehensive Habitat Management Plan, because of their importance to the regional habitat restoration and because they may provide important regional flood protection to residents and infrastructure.

In reviewing the twenty CWPPRA PPL 16 list of potential candidate projects, only three clearly fall within the Pontchartrain Lines of Defense Program (Figure 1). *It is important to note that the area east of the Mississippi River had 67% (79 square miles) of the recent unprecedented wetland loss due to the 2005 hurricane season (Pontchartrain & Breton Basins). We respectfully suggest this warrants further evaluation of these promising projects.*

Recommendations:

Pontchartrain Basin:

Alligator Bend Marsh Restoration (East Orleans Landbridge)
Mississippi River Reintroduction at Violet, LA.

Breton Basin:

Breton Landbridge Marsh Restoration

If you have any questions, please call or email.

Regards,

A handwritten signature in black ink, appearing to read "John A. Lopez".

John A. Lopez, Ph.D.

Director – Coastal Sustainability Program, Lake Pontchartrain Basin Foundation

225 294-4998

504 421-7348

johnlopez@pobox.com

Recommended PPL 16 Candidate Projects

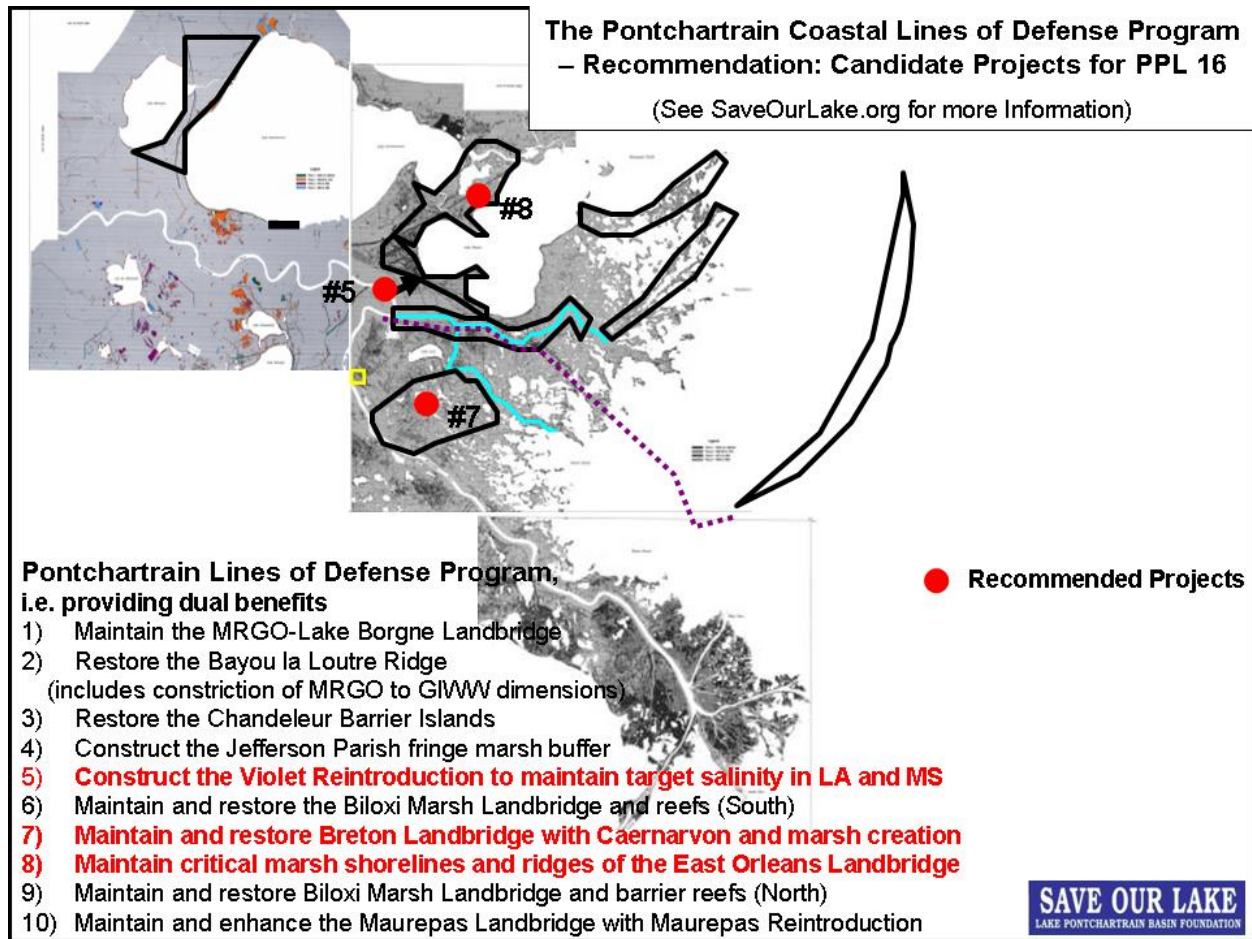


Figure 1: Nine Lines of Defense identified for restoration and the Mississippi River Reintroduction at Violet compose the Pontchartrain Lines of Defense Program. PPL 16 nominees within the program are requested to be selected for candidate evaluation. These are shown with red dots.

Creel, Travis J MVN-Contractor

From: LeBlanc, Julie Z MVN
Sent: Tuesday, March 14, 2006 2:54 PM
To: Creel, Travis J MVN-Contractor
Subject: FW: Alligator Bend Marsh Restoration Project

[One more to add to the letters of support documentation...](#)

-----Original Message-----

From: Doran, Raymond C [mailto:rdoran@whitneybank.com]
Sent: Tuesday, March 14, 2006 2:50 PM
To: LeBlanc, Julie Z MVN
Cc: giardinar@bellsouth.net
Subject: Alligator Bend Marsh Restoration Project

Dear Ms. Leblanc,

I am writing you to express my support for the Alligator Bend Marsh Restoration Project. It is vital to the protection of Orleans, Jefferson, and St. Tammany Parishes that the marshes that protect the land bridge between Lake Borgn and Lake Pontchartrain be restored. I ask that you highly consider the importance of this project, and ask that you also pledge your support.

Thank You,

Raymond C. Doran, Jr.

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PETER RHODES, CHAIRMAN

ALVIN TILLMAN, SR., VICE-CHAIRMAN

DISTRICT 1
ALVIN TILLMAN, SR.

DISTRICT 2
WAYNE THIBODEAUX

DISTRICT 3
KIM ELFERT

DISTRICT 4
TERI G. CAVALIER

PARISH COUNCIL
PARISH OF TERREBONNE

POST OFFICE BOX 2768 - HOUMA, LOUISIANA 70361

Government Towers, 8026 Main Street, Suite 600
Houma, Louisiana 70360

PHONE (985) 873-6519 - FAX (985) 873-6521

plabat@tpcg.org www.tpcg.org

PAUL A. LABAT, CLERK

- DISTRICT 5
CHRISTA M. DUPLANTIS, R.N.
- DISTRICT 6
HAROLD LAPEYRE
- DISTRICT 7
CLAYTON J. VOISIN
- DISTRICT 8
PETER RHODES
- DISTRICT 9
PETE LAMBERT

March 9, 2006

Mr. Greg Breerwood, Chairman
CWPPRA Technical Committee
U.S. Army Corps of Engineers
P. O. Box 60267
New Orleans, LA. 70160-0267

RE: Madison Bay Marsh Creation/Falgout Canal Projects

Dear Mr. Breerwood:

The Terrebonne Parish Coastal Zone Management and Restoration Advisory Committee has studied the many projects that are being proposed for CWPPRA funding and have identified the Madison Bay Marsh Creation and Terracing Project and the Falgout Canal Freshwater Enhancement Project as two that are important to Terrebonne Parish and warrant funding. Their evaluation of the projects was recommended to the Terrebonne Parish Council.

At a March 6 committee meeting, the Council adopted the attached resolution expressing its support for the two above mentioned projects and respectfully requesting the CWPPRA Technical Committee to look favorably upon these two projects for funding.

As always, your favorable consideration of the Council's request will be greatly appreciated. Thank you.

Sincerely,


PAUL A. LABAT

PAL

Attachment

- cc: Hon. Reggie Dupre, Jr., Senator (with attachment)
- Hon. Damon Baldone, Representative (with attachment)
- Hon. Gordon Dove, Representative (with attachment)
- Mrs. Leslie Suazo, (with attachment)

OFFERED BY: Mr. C. Voisin.
SECONDED BY: Mr. P. Lambert.

RESOLUTION NO. 06-096

WHEREAS, the Terrebonne Parish Consolidated Government is committed to providing aggressive leadership, direction and consonance in the development and implementation of comprehensive policies, plans and programs which encourage multiple uses of the coastal zone and achieve a proper balance between the multiple needs of coastal resources in Terrebonne Parish, and

WHEREAS, Terrebonne Parish currently experiences one of the highest rates of coastal land loss in Louisiana, and is in urgent need of projects to restore our wetlands, and

WHEREAS, the Coastal Zone Management and Restoration Advisory Committee has ranked, by priority, projects for the Project Priority List 16 (PPL 16) of the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA), the following two projects:

- 1) Madison Bay March Creation and Terracing
- 2) Falgout Canal Freshwater Enhancement

And,

WHEREAS, the CWPPRA Technical Committee will now decide whether to continue to investigate these projects for possible funding.

NOW, THEREFORE BE IT RESOLVED that the Terrebonne Parish Council (Public Services Committee), does urge and request that the CWPPRA Technical Committee does recommend these two projects for continued investigation during this preliminary phase; and,

BE IT FURTHER RESOLVED that these comments be directed to the Chairman of the CWPPRA Technical Committee, Mr. Greg Breerwood, USACOE, via facsimile prior to the CWPPRA Technical Committee Meeting on March 15, 2006.

THERE WAS RECORDED:

YEAS: T. Cavalier, C. Duplantis, K. Elfert, P. Lambert, H. Lapeyre, P. Rhodes, W. Thibodeaux, A. Tillman and C. Voisin.

NAYS: None.

ABSTAINING: None.

ABSENT: None.

The Chairman declared the resolution adopted on this, the 6th day of March, 2006.

GIVEN UNDER MY OFFICIAL SIGNATURE AND SEAL OF OFFICE THIS 2nd DAY OF MARCH, 2006.


PAUL A. LABAT, COUNCIL CLERK
TERREBONNE PARISH COUNCIL

I, PAUL A. LABAT, Clerk of the Terrebonne Parish Council, do hereby certify that the foregoing is a true and correct copy of a resolution adopted by the Public Services Committee on March 6, 2006 and subsequently ratified by the Assembled Council in Regular Session on March 8, 2006 at which meeting a quorum was present.

Report: Mississippi River Reintroduction into Bayou Lafourche

Mississippi River Reintroduction into Bayou Lafourche

(BA-25b)

Tech Committee Update
March 15, 2006

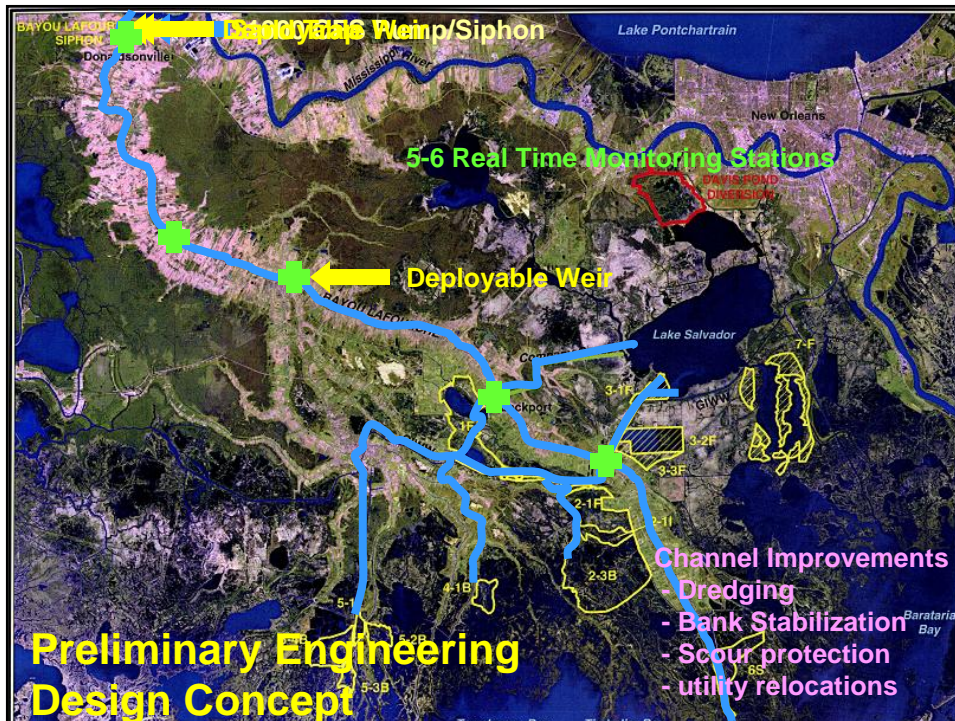


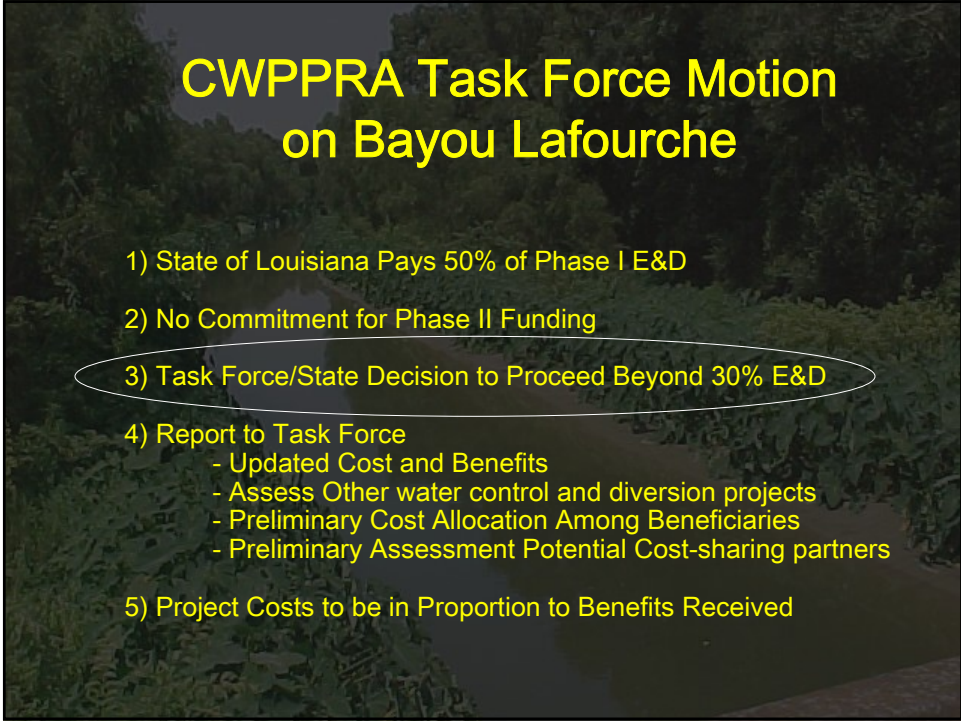
Brief History

- Originally Proposed on PPL5
- 1998 Report
- April 2001 Update
- Phase 1 Approved by TF in 2001

Project Purpose

Nourish and protect the marshes of the Barataria-Terrebonne Basins through the reintroduction of freshwater, sediments, and nutrients from the Mississippi River





CWPPRA Task Force Motion on Bayou Lafourche

- 1) State of Louisiana Pays 50% of Phase I E&D
- 2) No Commitment for Phase II Funding
- 3) Task Force/State Decision to Proceed Beyond 30% E&D
- 4) Report to Task Force
 - Updated Cost and Benefits
 - Assess Other water control and diversion projects
 - Preliminary Cost Allocation Among Beneficiaries
 - Preliminary Assessment Potential Cost-sharing partners
- 5) Project Costs to be in Proportion to Benefits Received



Current Status

- Feasibility Completed
- 30% E&D Drafted
- NEPA progressing

Schedule

- 30% E&D Documents – March 2006
- 30% E&D Review– April 2006
- TF Approval to Proceed
- Phase 1 Funding Adjustment
- 95% E&D in 18 – 24 months

The Mississippi River Reintroduction into Bayou Lafourche

Current Project Efforts

- Water Quality
- Engineering and Design
- Legislative Overview
- Outreach Events
- Bayou History

Anticipated Project Benefits

- Freshwater
- Recreation
- Wetlands

Welcome to the Official Page for the Project to Reintroduce Freshwater into Bayou Lafourche.

In the mid 1800s Bayou Lafourche distributed roughly 12 percent (over 40,000 cubic feet per second) of Mississippi River into south Louisiana coastal marshes. In 1955, a control structure was built on the Mississippi River at Donaldsonville to regulate water flow into Bayou Lafourche for flood control. Currently, only a quarter of one percent (200 cubic feet per second) of Mississippi River water flows into Bayou Lafourche.

This web site supports a new project to increase the Mississippi River flow from 200 cubic feet to 1,000 cubic feet into Bayou Lafourche. Water quality studies and the designs under consideration will be posted at this site for public view.

[ENTER SITE HERE](#)

BAYOU LAFOURCHE

Mississippi-Terrebonne National Estuary Program

www.bayoulafourche.org

Discussion: Initial Discussion Regarding FY07 Budget Development (Process, Size, Funding, etc)

Coastal Wetlands Planning, Protection, and Restoration Act
Fiscal Year 2007 Planning Schedule and Budget
P&E Committee Recommendation,
Tech Committee Recommendation,
Approved by Task Force,

Task Category	Task No.	Task	Start Date	End Date	CWP/PRA COSTS										Total
					USACE	USFWS	NWRC	USGS BR	DNR	DWIF	Gov. Ofc.	EPA	USDA	USDC	
PPL 17 TASKS															
PL	17200	Development and Nomination of Projects													
PL	17210	DNR/USGS prepares base maps of project areas, location of completed projects and projected loss by 2050. Develop a comprehensive coastal LA map showing all water resource and restoration projects (CWP/PRA, state, WRDA projects, etc.) NWRC costs captured under SPE 16400.	10/13/06	1/19/07											0
PL	17220	Sponsoring agencies prepare fact sheets (for projects and demos) and maps prior to and following RPT nomination meetings.	10/13/06	1/9/07											0
PL	17230	RPT's meet to formulate and combine projects. Each basin nominates no more than 2 project, with exception of 3 in Barataria and Terrebonne [20 nominees] and up to 6 demos (3 meetings)	1/10/07	1/12/07											0
PL	17240	RPT Voting meeting (20 nominees and up to 6 demos)	2/1/07	2/1/07											0
PL	17300	Ranking of Nominated Projects													
PL	17320	Engr Work Group prepares preliminary fully funded cost ranges for nominees.	3/1/07	3/2/07											0
PL	17330	Environ/Engr Work Groups review nominees	3/1/07	3/2/07											0
PL	17340	WGs develop and P&E distributes project matrix	3/3/07	3/3/07											0
PL	17350	TC selection of PPL16 candidates (6) and demo candidates (up to 3)	3/15/07	3/15/07											0

NOTE: Number shown in parentheses in line item tasks represents the number of meetings for that task.

Coastal Wetlands Planning, Protection, and Restoration Act
Fiscal Year 2007 Planning Schedule and Budget
 P&E Committee Recommendation,
 Tech Committee Recommendation,
 Approved by Task Force,

Task Category	Task No.	Task	Start Date	End Date	CWP/PRA COSTS										Total
					USACE	USFWS	NWRC	USGS BR	DNR	DWIF	Gov. Ofc.	EPA	USDA	USDC	
Project and Program Management Tasks															
PM	17100	Program Management--Coordination	10/1/06	9/30/07											0
PM	17110	Program Management--Correspondence	10/1/06	9/30/07											0
PM	17120	Prog Mgmt--Budget Development and Oversight	10/1/06	9/30/07											0
PM	17130	Program and Project Management--Financial Management of Non-Cash Flow Projects	10/1/06	9/30/07											0
PM	17200	P&E Meetings (3 meetings preparation and attendance)	10/1/06	9/30/07											0
PM	17210	Tech Com Mtns (5 mtns; prep and attend)	10/1/06	9/30/07											0
PM	17220	Task Force mtns (4 mtns; prep and attend)	10/1/06	9/30/07											0
PM	17300	Prepare Evaluation Report (Report to Congress) NOTE: next update in FY08 budget	10/1/06	9/30/07											0
PM	17400	Agency Participation, Review 30% and 95% Design for Phase 1 Projects	10/1/06	9/30/07											0
PM	17410	Engineering & Environmental Work Groups review Phase II funding of approved Phase I projects (Needed for adequate review of Phase I). [Assume 8 projects requesting Ph II funding in FY06 (present schedule indicates more projects). Assume 3 will require Eng or Env WG review; 2 labor days for each.]	10/1/06	9/30/07											0
PM	17500	Helicopter Support: Helicopter usage for the PPL process.	10/1/06	9/30/07											0
PM	17600	Miscellaneous Technical Support	10/1/06	9/30/07											0
FY07 Subtotal Project Management Tasks					0	0	0	0	0	0	0	0	0	0	0
FY07 Total for PPL Tasks					0	0	0	0	0	0	0	0	0	0	0

NOTE: Number shown in parentheses in line item tasks represents the number of meetings for that task.

Coastal Wetlands Planning, Protection, and Restoration Act
Fiscal Year 2007 Planning Schedule and Budget
P&E Committee Recommendation,
Tech Committee Recommendation,
Approved by Task Force,

Task Category	Task No.	Task	Start Date	End Date	CWP/PRA COSTS										Total
					USACE	USFWS	NWRC	USGS BR	DNR	DWIF	Gov. Ofc.	EPA	USDA	USDC	
SUPPLEMENTAL PLANNING AND EVALUATION TASKS															
SPE	17100	Academic Advisory Group [NOTE: MOA between sponsoring agency and LUMCON available through FY 10.] [Prospectus, page 7-8]	10/1/06	9/30/07											0
SPE	17200	Maintenance of web-based project reports and website project fact sheets. [NWRP Prospectus, pg 9] [Corps Prospectus pg 10] [LDNR Prospectus, pg 11]	10/1/06	9/30/07									0		0
SPE	17400	Core GIS Support for CWP/PRA Task Force Planning Activities. [NWRP Prospectus, pg 12] [LDNR Prospectus, page 13]	10/1/06	9/30/07									0		0
SPE	17500	Phase 0 analyze of impacts to oyster leases for PPL project development [NWRP prospectus, pg 14] [DNR Prospectus, pg 15]	10/1/06	9/30/07									0		0
SPE	17900	Update Land Loss Maps (\$62,500 in FY04, \$63,250 in FY05, \$63,250 FY06) [Del Britsch] [Prospectus, page 16]	10/1/06	9/30/07									0		0
SPE	17950	Storm Recovery Procedures (2 events) [Prospectus, page 17-19]	10/1/06	9/30/07									0		0
FY07 Total Supplemental Planning & Evaluation Tasks					0	0	0	0	0	0	0	0	0	0	0
FY07 Agency Tasks Grand Total					0	0	0	0	0	0	0	0	0	0	0

NOTE: Number shown in parentheses in line item tasks represents the number of meetings for that task.

Coastal Wetlands Planning, Protection, and Restoration Act
Fiscal Year 2007 Planning Schedule and Budget
P&E Committee Recommendation,
Tech Committee Recommendation,
Approved by Task Force,

CWPRA COSTS																
State of Louisiana																
Dept. of Interior																
Task Category	Task No.	Task	Start Date	End Date	USACE	USFWS	NWRC	USGS BR	DNR	DWF	Gov. Ofc.	EPA	USDA	USDC	Other	Total
Orch	17100	Outreach - Committee Funding	10/1/06	9/30/07												0
Orch	17200	Outreach - Agency	10/1/06	9/30/07												0
																0
FY07 Total Outreach					0	0	0	0	0	0	0	0	0	0	0	0
Grand Total FY07					0	0	0	0	0	0	0	0	0	0	0	0

NOTE: Number shown in parentheses in line item tasks represents the number of meetings for that task.

Additional Agenda Items

Date of Upcoming Task Force Meeting

The spring Task Force meeting will be held April 12, 2006 in Lafayette, Louisiana.

Dates of Future Program Meetings

2006

April 12, 2006	9:30 a.m.	Task Force	Lafayette
June 14, 2006	9:30 a.m.	Technical Committee	Baton Rouge
July 12, 2006	9:30 a.m.	Task Force	Baton Rouge
August 30, 2006	7:00 p.m.	PPL 16 Public Meeting	Abbeville
August 31, 2006	7:00 p.m.	PPL 16 Public Meeting	New Orleans
September 13, 2006	9:30 a.m.	Technical Committee	New Orleans
October 18, 2006	9:30 a.m.	Task Force	New Orleans
December 6, 2006	9:30 a.m.	Technical Committee	Baton Rouge

2007

January 31, 2007	9:30 a.m.	Task Force	Baton Rouge
March 14, 2007	9:30 a.m.	Technical Committee	New Orleans
April 11, 2007	9:30 a.m.	Task Force	Lafayette
June 13, 2007	9:30 a.m.	Technical Committee	Baton Rouge
July 11, 2007	9:30 a.m.	Task Force	New Orleans
August 29, 2007	7:00 p.m.	PPL17 Public Meeting	Abbeville
August 30, 2007	7:00 p.m.	PPL17 Public Meeting	New Orleans
September 12, 2007	9:30 a.m.	Technical Committee	New Orleans
October 17, 2007	9:30 a.m.	Task Force	New Orleans
December 5, 2007	9:30 a.m.	Technical Committee	Baton Rouge

2008

January 30, 2008	9:30 a.m.	Task Force	Baton Rouge
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