



# 12<sup>TH</sup> PRIORITY PROJECT LIST REPORT

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LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION  
TASK FORCE

DECEMBER 2003



# Breaux Act

## (Coastal Wetlands Planning, Protection and Restoration Act)

### 12<sup>th</sup> Priority Project List Report

#### Table of Contents

VOLUME 1                      MAIN REPORT  
VOLUME 2                      APPENDICES

#### MAIN REPORT – VOLUME 1

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
<b>I.</b>	<b>INTRODUCTION</b>	<b>1</b>
	STUDY AUTHORITY	1
	STUDY PURPOSE	2
	PROJECT AREA	2
	STUDY PROCESS	2
	The Interagency Planning Groups	2
	Involvement of the Academic Community	3
	Public Involvement	4
<b>II.</b>	<b>PLAN FORMULATION PROCESS FOR THE 12<sup>th</sup> PRIORITY PROJECT LIST</b>	<b>4</b>
	IDENTIFICATION & SELECTION OF CANDIDATE PROJECTS	4
	EVALUATION OF CANDIDATE PROJECTS	7
	Benefit Analysis (WVA)	7
	Designs and Cost Analysis	8
	Economic Analysis	9
<b>III.</b>	<b>DESCRIPTION OF CANDIDATE PROJECTS</b>	<b>11</b>
	Hydrologic Restoration in the Swamps West of Lake Maurepas	12
	Lake Borgne and MRGO Shoreline Protection	14
	Bayou Dupont Sediment Delivery System	16
	Shell Island Barrier Headland Restoration	18
	Shell Island Barrier Headland Restoration – Increment	20
	North Bully Camp Hydrologic Restoration	22
	Avoca Island Diversion and Land Building	24
	South White Lake Shoreline Protection	26
	Ground Improvement Demonstration Project (MRGO)	28
	Ecological Wave Buffer Demonstration Project (MRGO)	29
	Freshwater Floating Marsh Creation Demonstration Project	30
<b>IV.</b>	<b>PROJECT SELECTION</b>	<b>31</b>

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### Table of Contents

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
V.	<b>DESCRIPTION OF PROJECTS SELECTED FOR PHASE I FUNDING</b>	<b>33</b>
	South White Lake Shoreline Protection (ME-22)	34
	Bayou Dupont Sediment Delivery System (BA-39)	36
	Avoca Island Diversion and Land Building (TE-49)	38
	Lake Borgne and MRGO Shoreline Protection (PO-32)	40
	Freshwater Floating Marsh Creation Demonstration Project (LA-05)	41
	Mississippi River Sediment Trap Complex Project (MR-12)	42
VI.	<b>SUMMARY AND CONCLUSIONS</b>	<b>45</b>
VII.	<b>BIBLIOGRAPHY</b>	<b>47</b>
<b>MAIN REPORT – LIST OF TABLES AND FIGURES</b>		
TABLE 1	RPT Meetings for Prioritization of Coast 2050 Strategies	4
TABLE 2	Basin Subcommittee Meetings to Develop Projects	4
TABLE 3	12 <sup>th</sup> Priority Project List – Nominee Project Matrix by Basin	5
TABLE 4	12 <sup>th</sup> Priority Project List Candidate Selection Process – Agency Voting Record	7
TABLE 5	12 <sup>th</sup> Priority Project List	31
<b>MAIN REPORT – LIST OF PLATES</b>		
PLATE 1	Summary of Projects – 1 <sup>st</sup> thru 12 <sup>th</sup> Priority Project List	51
PLATE 2	Map of Coastal Louisiana – 1 <sup>st</sup> thru 12 <sup>th</sup> Priority Project List	55
<b>APPENDICES – VOLUME 2</b>		
A	Summary and Complete Text of the CWPPRA	
B	Wetland Value Assessment Methodology and Community Model	
C	Engineering Cost Estimates for Candidate Projects	
D	Economics Computational Summary for Candidate Projects	
E	Wetland Value Assessment for Candidate Projects	
F	Public Support for Candidate Projects	
G	Status of Previous Priority Project Lists	

## **Breaux Act**

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

#### **12<sup>th</sup> Priority Project List Report**

#### **Main Report – Volume 1**

### **I. INTRODUCTION**

Approximately 90 percent of the total coastal marsh loss within the lower 48 states occurs in the State of Louisiana. These losses are due to a combination of human and natural factors, including subsidence, shoreline erosion, freshwater and sediment deprivation, saltwater intrusion, oil and gas canals, navigation channels, and herbivory. Louisiana still contains 30 percent of all the coastal marshes and 45 percent of all intertidal coastal marshes in the lower 48 states. Dramatic annual wetland losses from 1990 to the present of 24 square miles per year in the state continue to threaten the resource. Concern over this loss exists because of the living resources and national economies dependent on Louisiana's coastal wetlands. These wetlands provide habitat for fisheries, waterfowl, neotropical birds, and furbearers; amenities for recreation and tourism; a buffer for coastal flooding; and a natural landscape for a culture unique to the world. Consequently, benefits go well beyond the local and state levels by providing positive economic impacts to the entire nation.

The coastal wetland loss problem in Louisiana is extensive and complex. Agencies of diverse purposes and missions that are involved with addressing the problem have proposed many alternative solutions. These proposals have had a wide spectrum of approaches for diminishing, neutralizing, or reversing these losses. A global observation of these efforts by federal, state and local governments and the public has led to the conclusion that a comprehensive approach is needed to address this significant environmental problem. In response to this, the Coastal Wetlands Planning, Protection and Restoration Act (Public Law 101-646) – also known as the Breaux Act – was signed into law by President Bush on November 29, 1990. This report documents the implementation of Section 303(a) of the cited legislation.

#### **STUDY AUTHORITY**

Section 303(a) of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA, or the Breaux Act), displayed in Appendix A, directs the Secretary of the Army to convene the Louisiana Coastal Wetlands Conservation and Restoration Task Force to:

. . . initiate a process to identify and prepare a list of coastal wetlands restoration projects in Louisiana to provide for the long-term conservation of such wetlands and dependent fish and wildlife populations in order of priority, based upon the cost-effectiveness of such projects in creating, restoring, protecting, or enhancing coastal wetlands, taking into account the quality of such coastal wetlands, with due allowance for small-scale projects necessary to

demonstrate the use of new techniques or materials for coastal wetlands restoration.

## STUDY PURPOSE

The purpose of this study effort was to prepare the 12<sup>th</sup> Priority Project List (PPL) and transmit the list to Congress, as specified in Section 303(a)(3) of the CWPPRA. Section 303(b) of the Act calls for preparation of a comprehensive restoration plan for coastal Louisiana. In November 1993, the Louisiana Coastal Wetlands Restoration Plan was submitted. In December 1998, *Coast 2050: Toward a Sustainable Coastal Louisiana* was signed by all federal and state Task Force members. This plan consisted of several regional ecosystem strategies, that if all implemented would achieve no net loss of coastal marsh in Louisiana by the year 2050. A broad coalition of federal, state, and local entities, landowners, environmentalists, and wetland scientists developed the plan. In addition, all 20 coastal parishes approved the Coast 2050 plan.

## PROJECT AREA

Plate 1 contains a listing of these project names, referenced by number and grouped by sponsoring agency, for each PPL. A map of the Louisiana coastal zone is presented in Plate 2, indicating project locations by number of Priority Project Lists 1 through 12. The entire coastal area, which comprises all or part of 20 Louisiana parishes, is considered to be the CWPPRA project area. To facilitate the study process, the coastal zone was divided into nine hydrologic basins (refer to Plate 2).

## STUDY PROCESS

The Interagency Planning Groups. Section 303(a)(1) of the CWPPRA directs the Secretary of the Army to convene the Louisiana Coastal Wetlands Conservation and Restoration Task Force, to consist of the following members:

- The Secretary of the Army (Chairman)
- The Administrator, Environmental Protection Agency
- The Governor, State of Louisiana
- The Secretary of the Interior
- The Secretary of Agriculture
- The Secretary of Commerce

The State of Louisiana is a full voting member of the Task Force, with the exception of budget matters, as stipulated in President Bush's November 29, 1990, signing statement (Appendix A). In addition, the State of Louisiana may not serve as a "lead" Task Force member for design and construction of wetlands projects of the Priority Project List.

In practice, the Task Force members named by the law have delegated their responsibilities to other members of their organizations. For instance, the Secretary of the Army authorized the commander of the Corps of Engineers New Orleans District to act in his place as chairman of the Task Force.

The Task Force established the Technical Committee and the Planning and Evaluation Subcommittee, to assist it in putting the CWPPRA into action. Each of these bodies contains the same representation as the Task Force – one member from each of the five federal agencies and one from the state. The Planning and Evaluation Subcommittee is responsible for the actual planning of projects, as well as the other details involved in the CWPPRA process (such as development of schedules, budgets, etc.). This subcommittee makes recommendations to the Technical Committee and lays the groundwork for decisions that will ultimately be made by the Task Force. The Technical Committee reviews all materials prepared by the subcommittee, makes appropriate revisions, and provides recommendations to the Task Force. The Technical Committee operates at an intermediate level between the planning details considered by the subcommittee and the policy matters dealt with by the Task Force, and often formalizes procedures and formulates policy for the Task Force.

The Planning and Evaluation Subcommittee established several working groups to evaluate projects for priority project lists. The Environmental Work Group was charged with estimating the benefits (in terms of wetlands created, protected, enhanced, or restored) associated with various projects. The Engineering Work Group reviewed project cost estimates for consistency. The Economic Work Group performed the economic analysis, which permitted comparison of projects on the basis of their cost effectiveness. The Monitoring Work Group established a standard procedure for monitoring of CWPPRA projects, developed a monitoring cost estimating procedure based on project type, and a review of all monitoring plans.

The Task Force also established a Citizen Participation Group to provide general input from the diverse interests across the coastal zone: local officials, landowners, farmers, sportsmen, commercial fishermen, oil and gas developers, navigation interests, and environmental organizations. The Citizen Participation Group was formed to promote citizen participation and involvement in formulating priority project lists and the restoration plan. The group meets at its own discretion, but may at times meet in conjunction with other CWPPRA elements, such as the Technical Committee. The purpose of the Citizen Participation Group is to maintain consistent public review and input into the plans and projects being considered by the Task Force and to assist and participate in the public involvement program.

Involvement of the Academic Community. While the agencies sitting on the Task Force possess considerable expertise regarding Louisiana's coastal wetlands problems, the Task Force recognized the need to incorporate another invaluable resource: the state's academic community. The Task Force therefore retained the services of the Louisiana Universities Marine Consortium (LUMCON) to provide scientific advisors to aid the Environmental Work Group in performing Wetland Value Assessments. This Academic Advisory Group also assists in carrying out feasibility studies authorized by the Task Force. These include:

- The Louisiana Barrier Shoreline study – March 1995 - March 1999 (managed by the Louisiana Department of Natural Resources), and
- The Mississippi River Sediment, Nutrient, and Freshwater Redistribution study – March 1995 – July 2000 (managed by the Corps of Engineers).

Public Involvement. Even with its widespread membership, the Citizen Participation Group cannot represent all of the diverse interests concerned about by Louisiana’s coastal wetlands. The CWPPRA public involvement program provides an opportunity for all interested parties to express their concerns and opinions and to submit their ideas concerning the problems facing Louisiana’s wetlands. The Task Force has held at least eight public meetings each of the last eight years to obtain input from the public. In addition, the Task Force distributes a quarterly newsletter (“Watermarks”) with information on the CWPPRA program and on individual projects.

## II. PLAN FORMULATION PROCESS FOR THE 12<sup>TH</sup> PRIORITY PROJECT LIST

### IDENTIFICATION & SELECTION OF CANDIDATE PROJECTS

Regional meetings were held February 25-28, 2002 to provide a forum for the public and their local government representatives to identify potential projects for implementation under the priority list process. Regional Planning Teams (RPTs) met during this period to choose no more than three areas of need/wetland restoration opportunities per basin. A schedule of meetings is shown in Table 1.

**Table 1: RPT Meetings for Prioritization of Coast 2050 Strategies**

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Region 1: New Orleans, Louisiana	February 25, 2002
Region 2: New Orleans, Louisiana	February 26, 2002
Region 3: Morgan City, Louisiana	February 27, 2002
Region 4: Rockefeller Refuge, Louisiana	February 28, 2002

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The CWPPRA Technical Committee met on March 6, 2002 to review, adjust, and approve the strategies submitted by the RPT.

The RPTs re-convened during the period spanning April 22-25, 2002 to develop the projects for the selected areas of need/opportunity. The selection criteria for projects included: 1) must support one of more Coast 2050 strategies; 2) must address an area of need/opportunity; 3) will receive credit for benefiting crucial infrastructure; 4) must be fundable under CWPPRA (projects whose expected cost was greater than \$40 million were not likely to be nominated by the Technical Committee for Phase 0 analysis). Each region was allowed to nominate up to three projects. A schedule of meetings is shown in Table 2. Following the meetings, preliminary maps and brief fact sheets were prepared.

**Table 2: Basin Subcommittee Meetings to Develop Projects**

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Region 1: Pontchartrain Basin	April 22, 2002
Region 2: Breton Sound, Mississippi River Delta and Barataria Basins	April 23, 2002
Region 3: Teche/Vermilion, Terrebonne and Atchafalaya Basins	April 24, 2002
Region 4: Mermentau and Calcasieu/Sabine Basins	April 25, 2002

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On May 7-8, 2002, the CWPPRA Engineering Work Group calculated fully-funded cost ranges for each project, based upon engineering judgment and historical costs. On May 9, 2002, the Environmental/ Engineering Work Groups applied the Coast 2050 Criteria to each project to achieve a consensus score. This information, along with the maps and fact sheets prepared by the agencies, was used by the CWPPRA Planning and Engineering (P&E) Subcommittee to prepare a matrix of projects by basin that listed cost ranges and Coast 2050 Criteria score. This matrix was furnished to the CWPPRA Technical Committee and the State Wetlands Authority on May 16, 2002. The matrix is included as Table 3.

**Table 3: 12<sup>th</sup> Priority Project List – Nominee Project Matrix by Basin**

Region-Project	Type	Project	Coast 2050 Score	Preliminary Fully Funded Cost Range	Potential Issues			
					Oysters	Land Rights	Pipelines /Utilities	O&M
1-1	HR	Hydrologic Restoration in the Swamps West of Lake Maurepas	36	\$5 – 10M		X		Low
1-2	SP/MC	Goose Pointe/Pointe Platte Shoreline Protection/Marsh Creation	39	\$20 – 30M			X	Low
1-3	SP/MC	Lake Borgne and MRGO Shoreline Protection	40	\$30 – 40M	X			High
2-1	MC	Bayou Dupont Sediment Delivery System	43	\$20 – 30M		X		Low
2-2	MC	Shell Island Barrier Headland Restoration	53	\$30 – 40M	X	X	X	Moderate
2-3	BI	East Fourchon Marsh Creation/Terracing	35	\$20 – 30M	X	X		Low
3-1	HR/MC	North Bully Camp Hydrologic Restoration	56	\$20 – 30M	X		X	High
3-2	FD/MC	Avoca Island Diversion and Land Building	48	\$20 – 30M				Moderate
3-3	SP	Bayou Sale Ridge Protection	47	\$10 – 20M				Moderate
4-1	HR/MC	Oyster Bayou Hydrologic Restoration	32	\$10 – 20M			X	Moderate
4-2	SP	Gulf of Mexico Shoreline Protection (Joseph's Harbor East)	32	\$30 – 40M			X	Moderate
4-3	SP	South White Lake Shoreline Protection	40	\$20 – 30M		X	X	Moderate

The CWPPRA Technical Committee met publicly on May 23, 2002 to consider the preliminary costs and Coast 2050 Criteria score of the projects. They selected seven projects as Phase 0 candidates for further analysis. The seven projects are shown in Table 4.

Phase 0 analysis of the candidates took place from June 2002 through November 2002. Interagency field visits were conducted at each project site/area with members of

the Engineering and Environmental Work Groups, academics, and Louisiana Department of Natural Resources (LDNR) monitoring staff. The Environmental/Engineering Work Groups and academics met to refine the projects and develop boundaries on July 11, 2002, based on site visits. Detailed Project Information Sheets were developed by evaluating agencies, using the standard format developed by the Economics and Environmental/Engineering Work Groups. These sheets included addressing “compatibility with Coast 2050” and Phase I and II engineering and design, and cost estimates. The Engineering Work Group met to review/approve the Phase I and II cost estimates developed by the agencies on September 17-18, 2002. The Environmental Work Group finalized Wetland Value Assessments (WVAs) for each project. The Environmental/Engineering Work Group reviewed and revised the Coast 2050 Criteria score previously developed, considering all new information, during a meeting on September 19, 2002. The Economics Work Group reviewed the cost estimates, added monitoring, Operations and Maintenance (O&M), etc. and developed annualized costs.

The CWPPRA P&E Subcommittee prepared a candidate project information package for the CWPPRA Technical Committee and State Wetlands Authority, consisting of: updated Project Information Sheets and matrix for each basin (listing projects in order of ranked strategies). The matrix included cost, WVA results (acres created, restored, and/or protected), Risk/Uncertainty, Longevity/Sustainability, and Coast 2050 Criteria. Supporting Partnerships and Public Support were discussed qualitatively. Two public meetings were held in Abbeville, LA and New Orleans, LA, respectively, November 19-20, 2002 to present projects to the public for comment.

The CWPPRA Technical Committee met publicly on December 10, 2002 to select projects for recommendation to the CWPPRA Task Force for Phase I funding. Each agency received a total of 5 weighted votes, used to rank the 7 candidate projects. The top 4 projects were selected for recommendation to the CWPPRA Task Force for final Phase I funding approval on January 16, 2003. The Technical Committee also recommended one demonstration project for funding. Each agency received one vote. The results of the CWPPRA Technical Committee vote are outlined in Table 4.

Complex projects were approved by the Task Force on October 7, 1999 as part of the FY 2000 CWPPRA Planning Budget. Projects designated as “complex projects” are recognized by CWPPRA as requiring in-depth study to address site-specific questions in support of estimating project effects and benefits, project location and sizing and other issues of project design and evaluation. One complex project, Beneficial Use Sediment Trap in the Mississippi River Above Head of Passes, has been included in this PPL 12 report. It was approved by the Task Force on August 7, 2002 for Phase I funding.

**Table 4: 12<sup>th</sup> Priority Project List Candidate Selection Process – Agency Voting Record**

*Project No.	Nominee Project Name	Coast 2050 Region	EPA	COE	FWS	DNR	NRCS	NMFS	Total
ME-22	South White Lake Shoreline Protection	R4	2	4	5	4	5	4	24
BA-39	Bayou Dupont Sediment Delivery System	R2	4	2	3	5	2	5	21
TE-49	Avoca Island Diversion and Land Building	R3	3	5	4	1	3	3	19
+PO-32	Lake Borgne and MRGO Shoreline Protection	R1	1	3		3	1	2	10
	Hydrologic Restoration in the Swamps West of Lake Maurepas	R1	5		2	2		1	10
	Shell Island Barrier Headland Restoration	R2		1			4		5
	North Bully Camp Hydrologic Restoration	R3			1				1
	Shell Island Barrier Headland Restoration - Increment	R2							0

**Demonstration Projects**

+LA-05	Freshwater Floating Marsh Creation Demonstration Project (MRGO)	N/A			1		1	1	3
	Ecological Wave Buffer Demonstration Project (MRGO)	N/A	1			1			2
	Ground Improvement Demonstration Project (MRGO)	N/A		1					1

\* Each selected project received a two-letter code to identify its basin; these codes are: PO-Ponchartrain, BS-Breton Sound, MR-Mississippi River Delta, BA-Barataria, TE-Terrebonne, AT-Atchafalaya, TV-Teche/Vermilion, ME-Mermentau, CS-Calcasieu-Sabine.

† Projects below this line were not selected for funding.

**EVALUATION OF CANDIDATE PROJECTS**

**Benefit Analysis (WVA).** The WVA is a quantitative, habitat-based assessment methodology developed for use in prioritizing project proposals submitted for funding under the Breaux Act. The WVA quantifies changes in fish and wildlife habitat quality and quantity that are projected to emerge or develop as a result of a proposed wetland enhancement project. The results of the WVA, measured in Average Annual Habitat Units (AAHUs), can be combined with economic data to provide a measure of the effectiveness of a proposed project in terms of annualized cost per AAHU protected and/or gained.

The Environmental Work Group developed a WVA for each project. The WVA has been developed strictly for use in ranking proposed CWPPRA projects; it is not intended to provide a detailed, comprehensive methodology for establishing baseline conditions within a project area. It is a modification of the Habitat Evaluation Procedures (HEP) developed by the U.S. Fish and Wildlife Service (FWS) (U.S. Fish and Wildlife Service, 1980). HEP is widely used by the FWS and other federal and state agencies in evaluating the impacts of development projects on fish and wildlife resources. A notable difference exists between the two methodologies. The HEP generally uses a species-oriented approach, whereas the WVA uses a community approach.

The following coastal Louisiana wetland types can be evaluated using WVA models: fresh marsh (including intermediate marsh), brackish marsh, saline marsh, and cypress-tupelo swamp. Future reference in this document to "wetland" or "wetland type" refers to one or more of these four communities.

These models operate under the assumption that optimal conditions for fish and wildlife habitat within a given coastal wetland type can be characterized, and that existing or predicted conditions can be compared to that optimum to provide an index of habitat quality. Habitat quality is estimated or expressed through the use of a mathematical model developed specifically for each wetland type. Each model consists of the following components:

1. A list of variables that are considered important in characterizing fish and wildlife habitat:
  - a.  $V_1$ --percent of wetland covered by emergent vegetation,
  - b.  $V_2$ --percent open water dominated by submerged aquatic vegetation,
  - c.  $V_3$ --marsh edge and interspersion,
  - d.  $V_4$ --percent open water less than or equal to 1.5 feet deep,
  - e.  $V_5$ --salinity, and
  - f.  $V_6$ --aquatic organism access.
2. A Suitability Index graph for each variable, which defines the assumed relationship between habitat quality (Suitability Index) and different variable values; and
3. A mathematical formula that combines the Suitability Index for each variable into a single value for wetland habitat quality; that single value is referred to as the Habitat Suitability Index, or HSI.

The WVA models have been developed for determining the suitability of Louisiana coastal wetlands for providing resting, foraging, breeding and nursery habitat to a diverse assemblage of fish and wildlife species. Models have been designed to function at a community level and therefore attempt to define an optimum combination of habitat conditions for all fish and wildlife species utilizing a given marsh type over a year or longer.

The output of each model (the HSI) is assumed to have a linear relationship with the suitability of a coastal wetland system in providing fish and wildlife habitat.

A comprehensive discussion of the WVA methodology is presented in Appendix B.

Designs and Cost Analysis. During the plan formulation process, each of the Task Force agencies assumed responsibility for developing designs, and estimates of costs and benefits for a number of candidate projects. The cost estimates for the projects were to be itemized as follows:

1. Construction Cost
2. Contingencies Cost (25%)
3. Engineering and Design
4. Environmental Compliance
5. Supervision and Administration (Corps [\$500/yr administrative and \$30,000 minimum, up to 6% of construction per project for project management], and the LDNR Project Management [2% of construction])

6. Supervision and Inspection (Construction Contract)
7. Real Estate
8. Operations and Maintenance
9. Monitoring

In addition, each lead agency provided a detailed itemized construction cost estimate for each project. These estimates are shown in Appendix C.

An Engineering Work Group was established by the P&E Subcommittee, with each federal agency and the State of Louisiana represented. The work group reviewed each estimate for accuracy and consistency.

When reviewing the construction cost estimates, the work group verified that each project feature had an associated cost and that the quantity and unit prices for those items were reasonable. In addition, the work group reviewed the design of the projects to determine whether the method of construction was appropriate and the design was feasible.

All of the projects were assigned a contingency cost of 25 percent because detailed information such as soil borings, surveys, and – to a major extent – hydrologic data were not available, in addition to allowing for variations in unit prices.

Engineering and design, environmental compliance, supervision and administration, and supervision and inspection costs were reviewed for consistency, but ordinarily were not changed from what was presented by the lead agency.

Economic Analysis. The Breaux Act directed the Task Force to develop a prioritized list of wetland projects "based on the cost-effectiveness of such projects in creating, restoring, protecting, or enhancing coastal wetlands, taking into account the quality of such coastal wetlands." The Task Force satisfied this requirement through the integration of a traditional time-value analysis of life-cycle project costs and other economic impacts and an evaluation of wetlands benefits using the WVA. The product of these two analyses was an Average Annual Cost per AAHU figure for each project. These values are used as the primary ranking criterion. The method permits incremental analysis of varying scales of investment and also accommodates the varying salinity types and habitat quality characteristics of projected wetland outputs.

The major inputs to the cost effectiveness analysis are the products of the lead Task Force agencies and the Engineering and Environmental Work Groups. The various plans were refined into estimates of annual implementation costs and respective AAHUs.

Financial costs chiefly consist of the resources needed to plan, design, construct, operate, monitor, and maintain the project. These are the costs, when adjusted for inflation, which the Task Force uses in budgeting decisions. The economic costs include, in addition to the financial cost, monetary indirect impacts of the plans not accounted for in the financial costs. Examples would include impacts on dredging in nearby commercial navigation channels, effects on water supplies, and effects on nearby facilities and structures not reflected in right-of-way and acquisition costs.

The stream of costs for each project was brought to present value and annualized at the current discount rate, based on a 20 year project life. Beneficial environmental outputs were annualized at a zero discount rate and expressed as AAHUs. These data were then used to rank each plan based on cost per AAHU produced. Annual costs were also calculated on a per acre basis. Costs were adjusted to account for projected levels of inflation and used to monitor overall budgeting and any future cost escalations in accordance with rules established by the Task Force.

Following the review by the Engineering Work Group, costs were expressed as first costs, fully funded costs, present worth costs, and average annual costs. The Cost per Habitat Unit criterion was derived by dividing the average annual cost for each wetland project by the AAHU for each wetland project. The average annual cost figures are based on price levels for the current year, the most current published discount rate, and a project life of 20 years. The fully funded cost estimates include operation and maintenance and other compensated financial costs. The fully funded cost estimates developed for each project were used to determine how many projects could be supported by the funds expected to be available in the current fiscal year.

### **III. DESCRIPTION OF CANDIDATE PROJECTS**

This section provides a concise narrative of each candidate project. The project details provided include the Coast 2050 strategy, project location, strategy, problem, goals, solution, benefits, cost, risk/uncertainty and longevity/sustainability, sponsoring agency and contact persons, and a map identifying the project area and features if applicable.

**Project Name:** Hydrologic Restoration in the Swamps West of Lake Maurepas

**Coast 2050 Strategies:** 1) Offshore and riverine sand and sediment sources; 2) Diversions and riverine discharge; 3) Management of diversion outfall for wetland benefits.

**Project Location:** Region 1 - Lake Pontchartrain Basin, Livingston Parish in cypress/tupelo swamps west of Lake Maurepas, north and south of the Amite River Diversion Canal.

**Problem:** Swamps north and south of the Amite River Diversion Canal are highly stressed by a lack of Mississippi River inflow and the impounding effects of the spoil bank along the canal. The Amite River Diversion Canal could compensate for the lack of Mississippi River water, but the spoil banks prohibit input of sediment- and nutrient-laden water from the canal into the swamps during high water, and they prohibit draining of the swamps during low water periods.

**Goals:** 1) Increase productivity and regeneration of cypress and tupelo swamp; 2) Increase sediment accretion and nutrient loading in swamp; 3) Decrease frequency, intensity, and duration of salinity spikes in swamp; 4) Increase water flows through swamp; 5) Increase the frequency and duration of periods when the swamp surface is not flooded to promote regeneration; 6) Increase frequency and duration of periods when water depths in the swamp < 1ft to support survival of new cypress and tupelo recruits; 7) Decrease nutrient loading to Lake Maurepas from Amite River.

**Proposed Solution:** Construct four 40'-wide cuts in the spoil banks on each side (north and south) of the Amite River Diversion Canal to facilitate water exchange. The two northwestern-most cuts would include bridge crossings, while others would not. Each cut would be approximately 250' long, to a depth of -1.0' NAVD. Gaps in the old railroad grade, which traverses north-south across the project boundary, would be cut to facilitate better hydrologic connectivity within the project area.

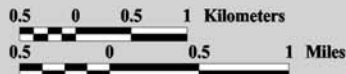
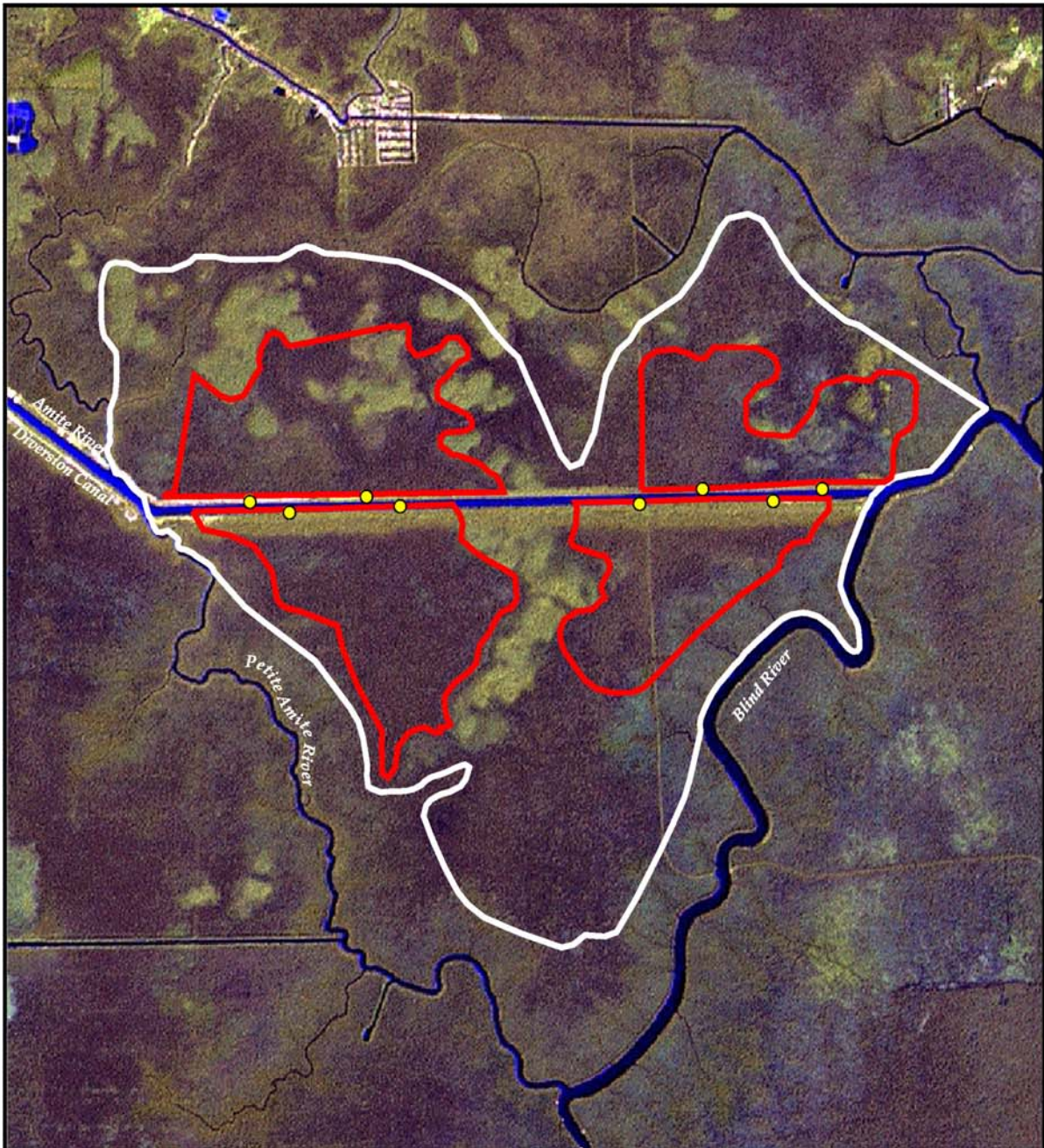
**Project Benefits:** This project would benefit 6,458 acres of cypress-tupelo swamp, however it is not expected to directly create additional forested wetland acreage. WVA attributed 1,878 AAHUs to the project due to improvements in vegetative cover and growth, hydrology, and reduced salinities.

**Project Costs:** Total fully funded cost = \$5,833,400. Fully funded first cost = \$4,655,600.

**Risk/Uncertainty and Longevity/Sustainability:** The joint Environmental/Engineering Work Group considered this project to have a high degree of risk/uncertainty because of uncertainty at this stage of planning as to whether project features and conditions would elicit the desired effects as proposed. The project is expected to continue providing wetland benefits 30-40 years after construction because project features are simple and should be durable over time.




**Sponsoring Agency/Contact Persons:** U.S. Environmental Protection Agency  
Ken Teague (214) 665-6687; [teague.kenneth@epa.gov](mailto:teague.kenneth@epa.gov)  
Tim Landers (214) 665-7533; [landers.timothy@epa.gov](mailto:landers.timothy@epa.gov)  
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## Hydrologic Restoration of the Swamps West of Lake Maurepas

### PPL12 Project Candidate

-  Proposed Spoil Bank Cuts\*
-  Project Boundary Subarea
-  Project Boundary

\*Denotes proposed features.



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

Background Imagery:  
Thematic Mapper Satellite Imagery 2000

Map Date: November 5, 2003, 2002  
Map ID: USGS-NWRC 2004-11-0037  
Data accurate as of: November 5, 2002

**Project Name:** Lake Borgne and MRGO Shoreline Protection

**Coast 2050 Strategies:** Maintain Lake Borgne shoreline integrity; stabilize the entire north bank of the MRGO.

**Project Location:** Region 1 - Pontchartrain Basin, St. Bernard Parish. Along the Lake Borgne shoreline between Doullut's Canal and Jahncke's Ditch and along the north bank of the Mississippi River Gulf Outlet (MRGO) between Doullut's Canal and Lena Lagoon.

**Problem:** Shoreline erosion rates along Lake Borgne were estimated at 9 ft/yr along Lake Borgne and 24 ft/yr along the MRGO.

**Goals:** This project would help preserve marsh between Lake Borgne and the MRGO by preventing shoreline erosion.

**Proposed Solution:** Two features will be constructed: 1) An 18,500 linear foot rock dike along the Lake Borgne shoreline from Doullut's Canal to Jahncke's Ditch. The dike will be 4 feet high, with a 5-foot crown and side slopes of 1V on 2H; 2) A 14,250 linear foot rock dike along the north bank of the MRGO from Doullut's Canal to Lena Lagoon. The dike will be 6 feet high, with a 5-foot crown and side slopes of 1V on 1.25H. Both dikes will have a 3-foot layer of armor stone placed on top of a crushed stone core resting on a layer of geotextile. Any flotation channel needed will be excavated with the spoil being placed behind the rock dikes. Fish dips will be constructed so as to allow organism and water exchange.

**Project Benefits:** The project would benefit about 465 acres of estuarine marsh. Approximately 266 acres of marsh would be created/protected over the 20-year project life.

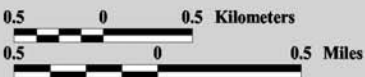
**Project Costs:** Total fully funded cost = \$25,062,900. Fully funded first cost = \$13,489,600.

**Risk/Uncertainty and Longevity/Sustainability:** There is a low degree of risk associated with this project because rocks are effective at stopping shoreline erosion. The project should continue providing benefits 20-30 years after construction because adequate O&M funds are budgeted.

**Sponsoring Agency/Contact Persons:** U.S. Army, Corps of Engineers, New Orleans District



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### Lake Borgne and MRGO Shoreline Protection

#### PPL12 Project Candidate

	Rock Dike*
	Project Boundary
*Denotes proposed feature.	



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

Background Imagery:  
1998 Digital Orthophoto Quarter  
Quadrangle (DOQQs)

Map Date: November 5, 2003  
Map ID: USGS-NWRC 2004-11-0046  
Data accurate as of: November 5, 2002

**Project Name:** Bayou Dupont Sediment Delivery System

**Coast 2050 Strategies:** Coastwide: Dedicated dredging; Vegetative planting.

**Project Location:** Region 2, Barataria Basin. In the vicinity of Bayou Dupont (north of Bayou Dupont) and southeast of Cheniere Traverse Bayou to the Mississippi River in the vicinity of Ironton in Plaquemines Parish, and the Town of Jean Lafitte in Jefferson Parish.

**Problem:** The proposed project would dredge sediment for marsh creation from the Mississippi River, and deliver it to an adjacent area within the Barataria Basin. Project area marshes have degraded to almost entirely open water, due to a combination of causes including lack of natural freshwater and sediment input, subsidence, and the dredging of oil and gas canals. The proximity to the Mississippi River is an excellent opportunity to design a sediment delivery system that will utilize sediment from the river to restore and create wetlands in this area of critical need. Unlike most marsh creation projects, this project will not borrow material from existing shallow bay bottoms, which may have implications for surrounding sediment dynamics and water quality at the borrow area. Ideally this sediment would be transported into areas of need using freshwater/sediment diversions. However, it is difficult to divert large sediment loads using diversion structures in most locations, since smaller structures don't typically capture bedload, and sedimentation in diversion channels is a problem. Dedicated dredging of Mississippi River sediments is one way around this dilemma.

**Goals:** 1) Create 538 acres of brackish marsh using sediment dredged from the Mississippi River; 2) provide features that would facilitate future marsh creation efforts in surrounding open areas.

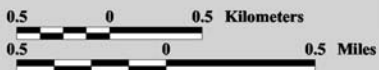
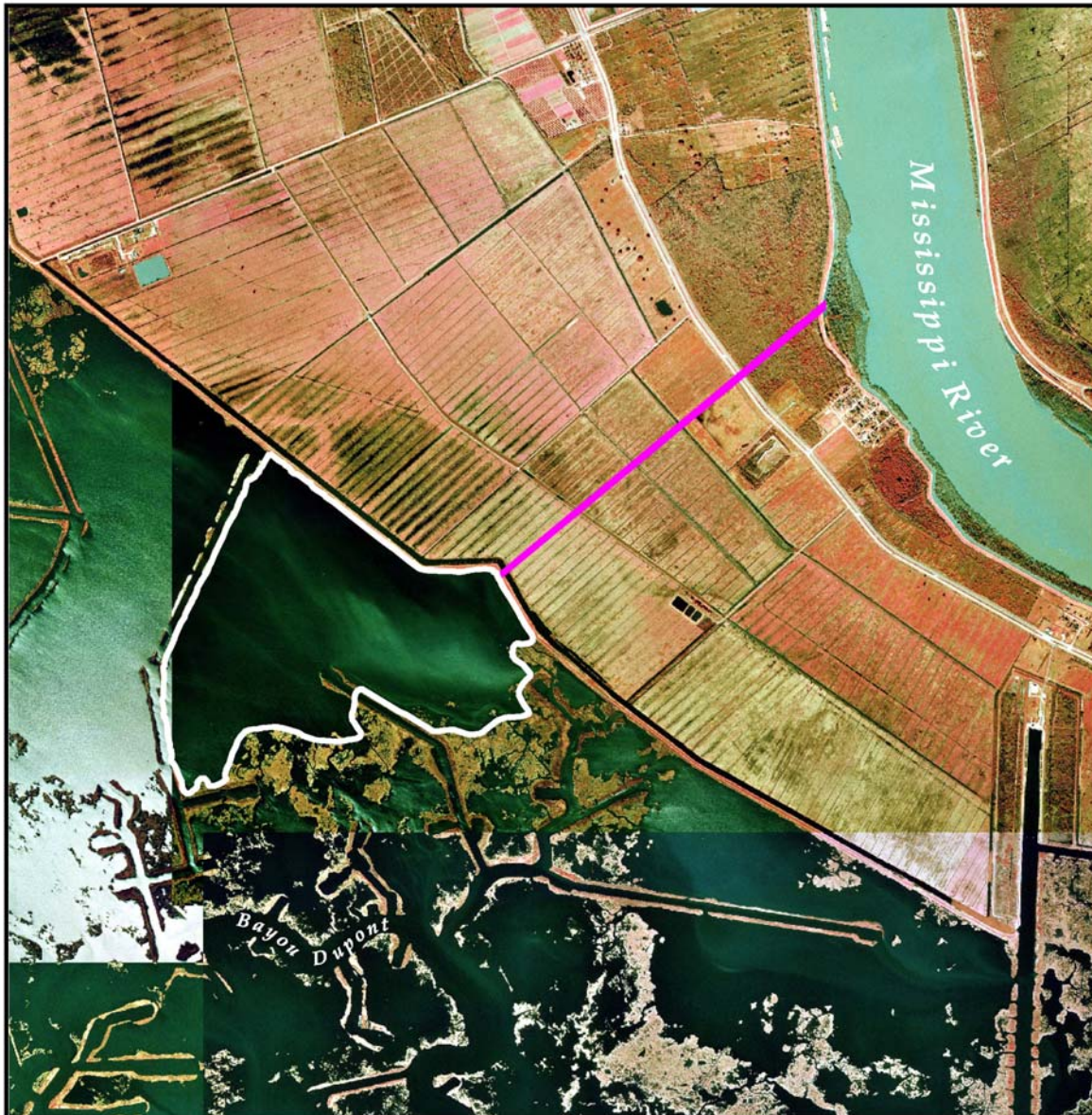
**Proposed Solution:** Creation/restoration of approximately 538 acres of brackish marsh by delivering sediments dredged from the Mississippi River via pipeline, and planting appropriate marsh vegetation.

**Project Benefits:** The project would benefit 538 acres of estuarine marsh. Approximately 400 acres of marsh would be created/protected over the 20-year project life.

**Project Costs:** Total fully funded cost = \$24,727,100. Fully funded first cost = \$24,231,000.



**Risk/Uncertainty and Longevity/Sustainability:** There is a low degree of risk and uncertainty associated with this project because the methods are reasonably simple and in fairly wide use. The project should continue providing benefits 30-40 years after construction because sufficient sediment will have been delivered to maintain marshes beyond the 20-year project life. Created wetlands may also benefit from the planned Myrtle Grove freshwater diversion.

**Sponsoring Agency/Contact Persons:** U.S. Environmental Protection Agency  
Ken Teague (214) 665-6687; [teague.kenneth@epa.gov](mailto:teague.kenneth@epa.gov)  
Tim Landers (214) 665-7533; [landers.timothy@epa.gov](mailto:landers.timothy@epa.gov)  
Brad Crawford (214) 665-7255; [crawford.brad@epa.gov](mailto:crawford.brad@epa.gov)



## Bayou Dupont Sediment Delivery System

### PPL12 Project Candidate

-  Proposed Delivery System\*
-  Project Boundary

\*Denotes proposed feature.



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

Background Imagery:  
1998 Digital Orthophoto Quarter  
Quadrangle (DOQQs)

Map Date: November 5, 2003  
Map ID: USGS-NWRC 2004-11-0045  
Data accurate as of: November 5, 2003

**Project Name:** Shell Island Barrier Headland Restoration

**Coast 2050 Strategy:** Regional Strategy #21 - Restore/maintain barrier headlands, islands and shorelines; Coastwide - Beneficial use of dredged material; dedicated dredging.

**Project Location:** Region 2, Barataria Basin, Plaquemines Parish, west of Empire Waterway.

**Problem:** Historic and predicted future loss is high (erosion rate of 115.4 ft/yr). Historically the island protected interior bays and marsh when it was whole. (Plaquemines Parish voted this as the highest CWPPRA priority).

**Goals:** Reestablish historic barrier separating bay from gulf, thereby adding protection to interior areas.

**Proposed Solution:** Reestablish barrier through rock breakwater and marsh creation using pumped material (sand and overburden) as indicated on attached map with appropriate maintenance for 20-year project life. Areas will also be planted with appropriate woody and herbaceous vegetation for nesting and resting habitat while leaving some sections barren for nesting habitat desirable for other avian species.

**Project Benefits:** Restore almost 4 miles of barrier protection benefiting 1,294 acres and create/protect 297 acres of marsh and barrier island habitat (including all three subaerial types).

**Project Costs:** Total fully funded cost = \$98,456,700. Fully funded first cost = \$84,387,400 for total project area.

**Risk/Uncertainty and Longevity/Sustainability:** There is a moderate degree of risk associated with this project because the project uses time-tested materials, but in a high-risk area. The project should continue providing benefits 20-30 years after construction because sufficient maintenance is built into the project.

**Sponsoring Agency/Contact Persons:** USDA, Natural Resources Conservation Service  
Marty Floyd, Biologist (318) 473-7690; [marty.floyd@la.usda.gov](mailto:marty.floyd@la.usda.gov)  
John Jurgensen, PE (318) 473-7694; [john.jurgensen@la.usda.gov](mailto:john.jurgensen@la.usda.gov)



**Shell Island Barrier  
Headland Restoration  
PPL12 Project Candidate**

	Foreshore Dike*		Dune
	Internal Containment Dikes*		Sub-tidal
	Secondary Benefit Area		Supra-tidal
	Existing Land (2002)		Inter-tidal

\*Denotes proposed features.



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

Background Imagery:  
Thematic Mapper Satellite Imagery 2000

Map Date: November 6, 2003  
Map ID: USGS-NWR-C 2004-11-0050  
Data accurate as of: November 6, 2003

**Project Name:** Shell Island Barrier Headland Restoration - Increment

**Coast 2050 Strategy:** Regional Strategy #21 - Restore/maintain barrier headlands, islands and shorelines. Coastwide - Beneficial use of dredged material; dedicated dredging.

**Project Location:** Region 2, Barataria Basin, Plaquemines Parish, west of Empire Waterway.

**Problem:** Historic and predicted future loss is high (erosion rate of 115.4 ft/yr). Historically, the island protected interior bays and marsh when it was whole. (Plaquemines Parish voted this as the highest CWPPRA priority).

**Goals:** Reestablish historic barrier separating bay from gulf, thereby adding protection to interior areas.

**Proposed Solution:** Reestablish barrier through rock breakwater and marsh creation using pumped material (sand and overburden) as indicated on attached map with appropriate maintenance for 20-year project life. Areas will also be planted with appropriate woody and herbaceous vegetation for nesting and resting habitat while leaving some sections barren for nesting habitat desirable for other avian species.

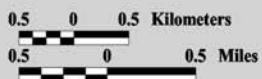
**Project Benefits:** The project would benefit 1,114 acres of barrier island habitat. Approximately 223 acres of marsh and barrier island habitat would be created/protected over the 20-year project life.

**Project Costs:** Total fully funded cost = \$81,916,200. Fully funded first cost = \$68,284,500.

**Risk/Uncertainty and Longevity/Sustainability:** There is a moderate degree of risk associated with this project because the project uses time-tested materials, but in a high-risk area. The project should continue providing benefits 20-30 years after construction because sufficient maintenance is built into the project.

**Sponsoring Agency/Contact Persons:** USDA, Natural Resources Conservation Service  
Marty Floyd, Biologist (318) 473-7690; [marty.floyd@la.usda.gov](mailto:marty.floyd@la.usda.gov)  
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### Shell Island Barrier Headland Restoration Increment PPL12 Project Candidate

- |                             |             |
|-----------------------------|-------------|
| Foreshore Dike*             | Dune        |
| Internal Containment Dikes* | Sub-tidal   |
| Secondary Benefit Area      | Supra-tidal |
| Existing Land (2002)        | Inter-tidal |

\*Denotes proposed features.



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

Background Imagery:  
Thematic Mapper Satellite Imagery 2000

Map Date: November 6, 2003  
Map ID: USGS-NWRC 2004-11-0049  
Data accurate as of: November 6, 2003

**Project Name:** North Bully Camp Hydrologic Restoration

**Coast 2050 Strategy:** Coastwide Regional Ecosystem Strategy 10 – Restore historic hydrologic conditions of major tidal exchange points or prevent adverse tidal exchange points between the gulf/lake, lake/marsh, bay/marsh, gulf/bay and marsh /navigation channel locations.

**Project Location:** Region 3, Lafourche Parish, Grand Bayou Blue watershed, near Catfish Lake.

**Problem:** Oilfield canals and marsh deterioration are allowing excessive northward saltwater intrusion as evidenced by the rapid conversion of project area intermediate marshes to deteriorating brackish marshes. This problem is most evident in flows and channel depths showing that a substantial segment of lower Grand Bayou Blue has been short-circuited to Bay Courant and the lower reaches of the bayou are nearly non-functional. This short-circuiting is also allowing increased tidal exchange to occur in interior marshes.

**Goals:** The project hopes to reduce saltwater intrusion and excessive tidal exchange in northern area marshes by building a land bridge across the basin at the twin pipelines and by restoring flow patterns within Grand Bayou Blue.

**Proposed Solution:** Project features would include:

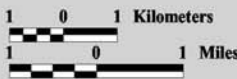
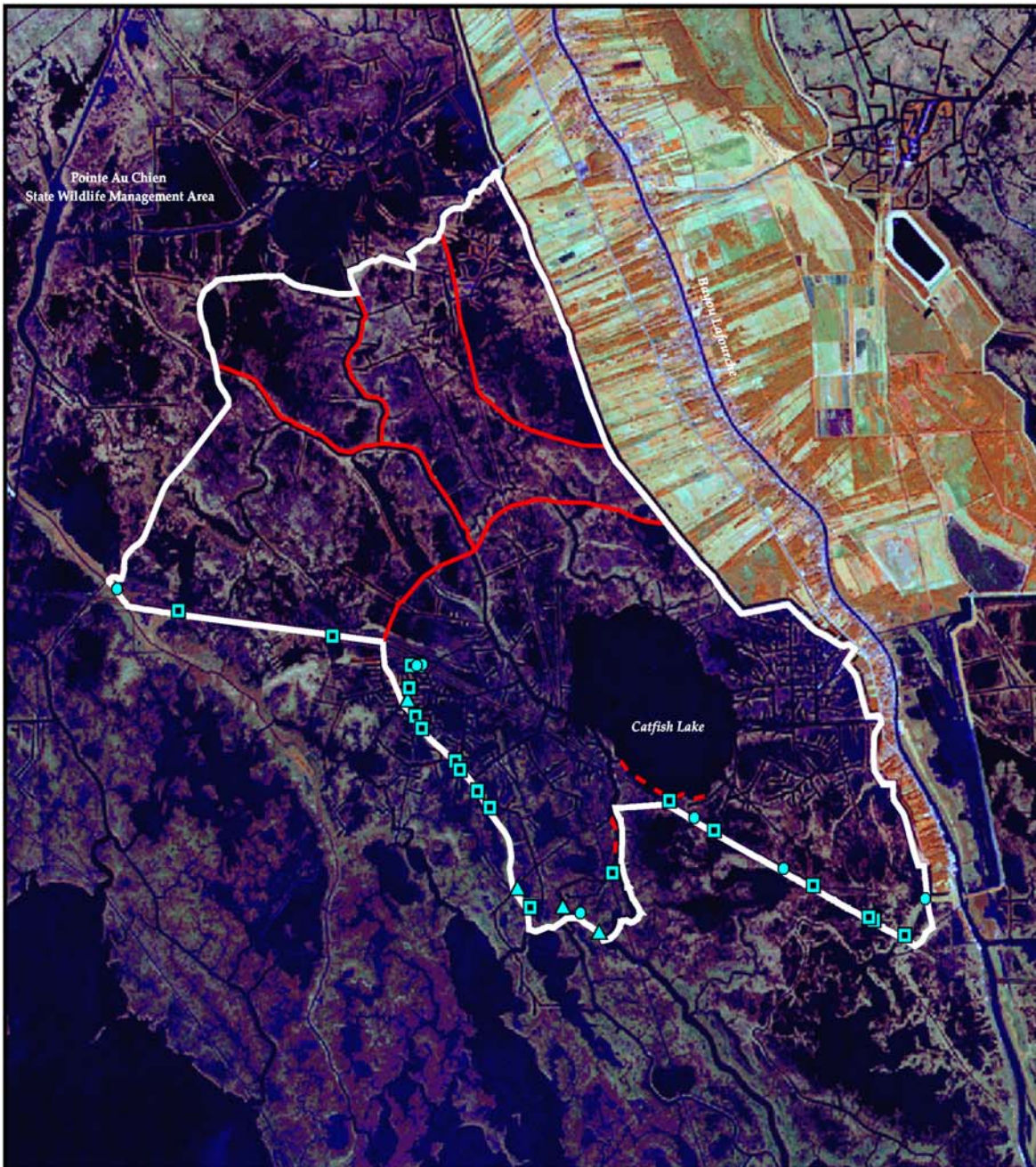
- a) 6,720 feet of foreshore armored dike along portions of the south bank of Catfish Lake
- b) 13 rock riprap canal plugs
- c) 4 earthen plug closures
- d) 2 sheetpile bulkhead closures across twin pipelines
- e) repair wingwalls of 1 existing fixed crested weir
- f) repair 6 spoil bank breaks along the twin pipelines
- g) 4 rock channel liners to prevent channel scouring
- g) 3,400 feet of embankment restoration along Grand Bayou Blue

**Project Benefits:** The project area encompasses 26,377 acres of brackish and saline marsh and would prevent the loss of 125 marsh acres over the course of the 20-year project life.

**Project Costs:** Total fully funded cost = \$18,468,300. Fully funded first cost = \$13,529,500.

**Risk/Uncertainty and Longevity/Sustainability:** There is a high degree of risk/uncertainty associated with this project because it is not known if the features will reduce saltwater intrusion. Hydrologic modeling has been included in the project design and would be completed prior to project implementation. The project should continue providing benefits for at least 20 years after construction because maintenance of all features has also been included in the project costs.

**Sponsoring Agency/Contact Persons:** U.S. Fish and Wildlife Service and USDA, Natural Resources Conservation Service  
Ronny Paille, USFWS, (337) 291-3117; [ronald\\_paille@fws.gov](mailto:ronald_paille@fws.gov)  
Loland Broussard, NRCS, (337) 291-3069; [loland.broussard@la.usda.gov](mailto:loland.broussard@la.usda.gov)



## North Bully Camp Hydrologic Restoration

### PPL12 Project Candidate

- Small Plug\*
  - Large Plug\*
  - ▲ Channel Liner\*
  - - - Shoreline Protection\*
  - ~ Subunit Boundaries
  - Project Boundary
- \*Denotes proposed features.



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

Background Imagery:  
 Thematic Mapper Satellite Imagery 2000

Map Date: November 6, 2003  
 Map ID: USGS-NWRC 2004-11-0048  
 Data accurate as of: November 6, 2003

**Project Name:** Avoca Island Diversion and Land Building

**Coast 2050 Strategies:** Diversions and riverine discharge; stabilize banks; beneficial use of dredged material; protect lake shoreline.

**Project Location:** Region 3 - Terrebonne and Atchafalaya Basins, St. Mary Parish, Avoca Island.

**Problem:** The Coast 2050 Plan reported that the Avoca Island mapping unit lost ~5,000 acres of marsh between 1932 and 1990. Natural overbank flooding into the Avoca Island area has been eliminated by channelization and construction of flood protection levees.

**Goals:** Rebuild eroded wetlands through the diversion of freshwater, sediment and nutrients.

**Proposed Solution:** A diversion structure would be installed through the Avoca levee to allow fresh water, sediment, and nutrients from Bayou Schaffer to enter Avoca Lake. The projected diversion design volume is 1,000 cfs. A natural bayou would be used as the primary outfall channel for the diversion. Outfall management measures will be evaluated and incorporated to increase benefits to aquatic habitats in the island system.

**Project Benefits:** The project would benefit about 7,233 acres of fresh marsh, cypress forest, and open water. Approximately 143 acres of marsh would be created/protected over the 20-year project life.

**Project Costs:** Total fully funded cost = \$19,157,200. Fully funded first cost = \$17,206,200.

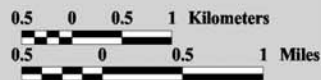
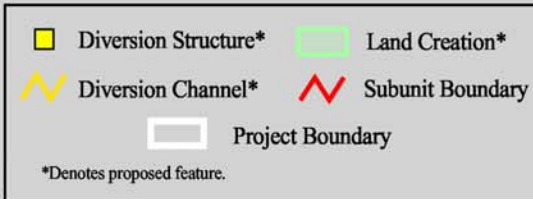
**Risk/Uncertainty and Longevity/Sustainability:** There is a low degree of risk associated with this project because river diversions are an effective wetlands restoration technique. The project should continue providing benefits 30-40 years after construction.

**Sponsoring Agency/Contact Persons:** U.S. Army, Corps of Engineers, New Orleans District  
Gregory Miller, USACE (504) 862-2310; [gregory.b.miller@mvn02.usace.army.mil](mailto:gregory.b.miller@mvn02.usace.army.mil)



## Avoca Island Diversion and Land Building

PPL12 Project Candidate



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

Background Imagery:  
 1998 Digital Orthophoto Quarter  
 Quadrangle (DOQQs)

Map Date: November 5, 2003  
 Map ID: USGS-NWRC 2004-11-0038  
 Data accurate as of: November 5, 2002

**Project Name:** South White Lake Shoreline Protection

**Coast 2050 Strategy:** Stabilize Grand Lake and White Lake shorelines.

**Project Location:** Region 4, Mermentau Basin, Vermilion Parish, along the southern shoreline of White Lake from Will's Point to the western shore of Bear Lake.

**Problem:** The south shoreline of White Lake is retreating at an estimated average rate of 15 feet per year as a result of wind-induced wave energy. As the shoreline erodes, it could breach low marsh management levees and increase interior marsh loss rates in the area.

**Goals:** The goal of this project is to stop shoreline erosion and to promote accretion of marsh between the breakwater and the existing shoreline.

**Proposed Solution:** This project would construct segmented breakwaters along 55,000 feet of shoreline. The breakwaters would be built along the -2-foot contour with a 5-foot wide crown at an elevation of +2 NGVD. The segmented breakwaters would be constructed in 200-foot sections with 50-foot gaps between each section. The gaps will allow organism and water exchange. An estimated 270,000 tons of stone would be placed on geotextile fabric. A flotation channel would be required for construction access and material dredged to build the access channel would be cast either in front of or behind the breakwater.

**Project Benefits:** The project would benefit about 5,222 acres of fresh marsh and open water. Approximately 702 acres of marsh would be created/protected over the 20-year project life.

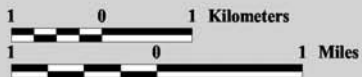
**Project Costs:** Total fully funded cost = \$25,042,300. Fully funded first cost = \$16,052,500.

**Risk/Uncertainty and Longevity/Sustainability:** There is a low degree of risk associated with this project because rock dikes are an effective technique for stopping shoreline erosion. The project should continue providing benefits 20-30 years after construction because adequate O&M funds are budgeted.

**Sponsoring Agency/Contact Persons:** U.S. Army, Corps of Engineers, New Orleans District

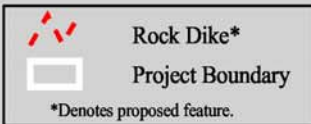
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## South White Lake Shoreline Protection

### PPL12 Project Candidate



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

Background Imagery:  
 Thematic Mapper Satellite Imagery 2000

Map Date: November 6, 2003,  
 Map ID: USGS-NWRC 2004-11-0051  
 Data accurate as of: November 6, 2003

**Project Name:** Ground Improvement Demonstration Project (MRGO)

**Coast 2050 Strategy:** N/A

**Project Location:** N/A

**Problem:** Poor soil conditions in coastal Louisiana limit the effectiveness of shoreline protection dikes because of high rates of subsidence. High subsidence requires frequent and expensive project maintenance lowering overall project cost effectiveness.

**Goals:** Investigate sub-surface ground improvement methods to reduce subsidence rates at shoreline protection sites.

**Proposed Solution:** This project would (1) test multiple foundation treatment options and try to select sub-surface conditions to minimize geo-variability, or (2) select a reach with known and quantified geo-variability in sub-surface (multiple sub-surface conditions) and one treatment option. Up to five different techniques would be tested including: dry-mix options for soil mixing; variations on a sand base; using near surface grouting of very soft clays; and using pre-formed low weight components and underground buoyancy methods. Post-construction monitoring data would be analyzed to evaluate structure performance for test cases and reference sections.

**Project Benefits:** Develop one or more ground improvement technologies for application in coastal Louisiana to demonstrate alternative means to achieve bearing capacity and consolidation settlement design tolerances to lessen 20-year project life cycle costs.

**Project Costs:** Total fully funded cost = \$1,212,000. Fully funded first cost = \$1,191,200.

**Sponsoring Agency/Contact Persons:** U.S. Army, Corps of Engineers, New Orleans District

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**Project Name:** Ecological Wave Buffer Demonstration Project (MRGO)

**Coast 2050 Strategy:** N/A

**Project Location:** N/A

**Problem:** Vessel wake erosion is occurring along the wetland fringes of the MRGO. Area soils have poor erosive resistance to relatively high water velocities. Soil loss from around plant root masses eventually leads to successive loosening, dislodgement, and retreat of the wetland fringe. If these deteriorating processes remain unaddressed, the area's existing wetlands are threatened with conversion to shallow open water bottoms.

**Goals:** This project is proposed to demonstrate the merit of using temporary wave buffer schemes for establishment of vegetation to protect existing fringe wetlands that are exposed to and suffering loss from vessel-induced wave action.

**Proposed Solution:** A combination of mats, prepared from locally abundant- and weathering-resistant vegetation (e.g. willow, reed, or coconut 'coir'), and a selection of suitable wetland plant species and/or ecotypes, with or without clay-layer strengthened slope-feet, would be placed at several locations along the MRGO South Bank, using the mats as temporary wave buffers and medium for planting with the intent to attenuate wave action and establish vegetation for erosion reduction, concomitant with clay deposition for slope support. The mats would be expected to degrade as plants establish and become more resistant to wave action. Clay deposition is expected to reduce the erosion process initiated at the foot of slopes due to wave action from navigation. Each treatment would include a minimum shoreline length of 1,000 ft., 3 replicates per treatment, and a distance of 6 ft. between treatments for a total shoreline length of approximately 28,000 ft. In the event the total number of treatments exceeds available funding and/or suitable shoreline sites, the project would be resized to fit budget and site availability. The performance of the project will be evaluated through a monitoring plan. The short-term component will involve observation and description of the treatments after one year (growth season) and rating for success in abating retreat of existing wetland fringes.

**Project Benefits:** Develop low cost, soft armoring systems that would allow wetland vegetation to establish in high erosion areas.

**Project Costs:** Total fully funded cost = \$1,332,300. Fully funded first cost = \$1,231,800.

**Sponsoring Agency/Contact Persons:** U.S. Army, Corps of Engineers, New Orleans District

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Chris Monnerjahn (504) 862-2415; [christopher.j.monnerjahn@mvn02.usace.army.mil](mailto:christopher.j.monnerjahn@mvn02.usace.army.mil)

**Project Name:** Freshwater Floating Marsh Creation Demonstration Project

**Coast 2050 Strategy:** N/A

**Project Location:** N/A

**Problem:** Within the fresh and intermediate zones of Barataria and Terrebonne Basins tens of thousands of acres of marsh have converted to open water between 1968 and 1990. Within these basins, large areas of fresh and intermediate open water exist in marsh interior, presenting opportunities for re-establishment/creation. These open water areas are not well-suited for typical projects such as sediment diversions, beneficial use of dredged material, or dedicated dredging.

**Goals:** Develop and test unique, previously untested technologies for creating floating marsh for potential use in fresh and intermediate zones.

**Proposed Solution:** Develop and test buoyant vegetated mats/article islands in controlled environment (Year 1) followed by deployment into open water marsh or abandoned canals (Year 2). Various combinations of plant species, planting methods and substrates will be tested to determine best mat-producing technique.

**Project Benefits:** Provide needed technology that is transferable.

**Project Costs:** Total fully funded cost = \$1,080,900. Fully funded first cost = \$868,200.

**Sponsoring Agency/Contact Persons:** USDA, Natural Resources Conservation Service  
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## IV. PROJECT SELECTION

On January 16, 2003, the Louisiana Coastal Wetlands Conservation and Restoration Task Force made its selection for the 12<sup>th</sup> Priority Project List. The Task Force selection for the 12<sup>th</sup> Priority Project List is shown in Table 5.

One demonstration project, Freshwater Floating Marsh Creation, was also approved on January 16, 2003.

There was one complex project that was approved for Phase I funding that has been included in this PPL 12 report. The Mississippi River Sediment Trap Complex project was approved by the Task Force on August 7, 2002. The complex project is included in Table 5.

**Table 5: The 12<sup>th</sup> Priority Project List**

1	2	3	4	5	6	7	8	9	10	11	12
Project Number	Project Name	Physical Type	Sponsoring Agency	Fully Funded Total Cost	Fully Funded Phase I Total Cost	Cumulative Fully Funded Phase I Total Cost	Fully Funded Phase II Total Cost	Cumulative Fully Funded Phase II Total Cost	Fully Funded Phase II Total Cost (3 yr C+O&M+M)	Cumulative Fully Funded Phase II Total Cost (3 yr C+O&M+M)	Average Annual Habitat Units (AAHUs)
ME-22	South White Lake Shoreline Protection	SP	COE	\$25,042,300	\$1,588,085	\$1,588,085	\$23,454,215	\$23,454,215	\$14,494,099	\$14,494,099	172
BA-39	Bayou Dupont Sediment Delivery System	MC	EPA	\$24,727,100	\$2,192,735	\$3,780,820	\$22,534,365	\$45,988,580	\$22,096,488	\$36,590,587	189
TE-49	Avoca Island Diversion and Land Building	FD	COE	\$19,157,200	\$2,229,876	\$6,010,696	\$16,927,324	\$62,915,904	\$15,059,531	\$51,650,118	132
PO-32	Lake Borgne and MRGO Shoreline Protection	SP	COE	\$25,062,900	\$1,348,345	\$7,359,041	\$23,714,555	\$86,630,459	\$16,122,708	\$67,772,826	70

**Demonstration Project**

LA-05	Freshwater Floating Marsh Creation Demonstration Project	MC/VP	NRCS	\$1,080,900	\$338,063		\$742,837		\$742,828		N/A
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**Complex Project**

MR-12	Mississippi River Sediment Trap Complex Project	SNT	COE	\$52,357,100	\$1,880,376		\$50,476,724		\$50,308,586		4,839
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<b>TOTALS</b>							\$9,577,480		\$137,850,020		\$118,824,240	5,402
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Project Physical Type:

FD=Freshwater Diversion  
 HR=Hydrologic Restoration  
 HC=Herbivore Control  
 MC=Marsh Creation  
 SD=Sediment Diversion  
 SP=Shoreline Protection  
 TR=Terracing  
 BI=Barrier Island  
 SNT=Sediment Trap  
 VP=Vegetative Planting

Sponsoring Agencies:

COE=US Army Corps of Engineers  
 EPA=Environmental Protection Agency  
 NMFS=National Marine Fisheries Service  
 NRCS=Natural Resources Conservation Service  
 FWS=US Fish and Wildlife Service



## **V. DESCRIPTION OF PROJECTS SELECTED FOR PHASE I FUNDING**

This section provides a concise narrative of each selected project that was funded for Phase I. The project details provided include the Coast 2050 strategy, project location, strategy, problem, goals, solution, benefits, cost, risk/uncertainty and longevity/sustainability, sponsoring agency and contact persons, and a map identifying the project area and features if applicable.

**Project Name:** South White Lake Shoreline Protection (ME-22)

**Coast 2050 Strategy:** Stabilize Grand Lake and White Lake shorelines

**Project Location:** Region 4, Mermentau Basin, Vermilion Parish, along the southern shoreline of White Lake from Will's Point to the western shore of Bear Lake.

**Problem:** The south shoreline of White Lake is retreating at an estimated average rate of 15 feet per year as a result of wind-induced wave energy. As the shoreline erodes, it could breach low marsh management levees and increase interior marsh loss rates in the area.

**Goals:** The goal of this project is to stop shoreline erosion and to promote accretion of marsh between the breakwater and the existing shoreline.

**Proposed Solution:** This project would construct segmented breakwaters along 55,000 feet of shoreline. The breakwaters would be built along the -2-foot contour with a 5-foot wide crown at an elevation of +2 NGVD. The segmented breakwaters would be constructed in 200-foot sections with 50-foot gaps between each section. The gaps will allow organism and water exchange. An estimated 270,000 tons of stone would be placed on geotextile fabric. A flotation channel would be required for construction access and material dredged to build the access channel would be cast either in front of or behind the breakwater.

**Project Benefits:** The project would benefit about 5,222 acres of fresh marsh and open water. Approximately 702 acres of marsh would be created/protected over the 20-year project life.

**Project Costs:** Total fully funded cost = \$25,042,300. Fully funded first cost = \$16,052,500.

**Risk/Uncertainty and Longevity/Sustainability:** There is a low degree of risk associated with this project because rock dikes are an effective technique for stopping shoreline erosion. The project should continue providing benefits 20-30 years after construction because adequate O&M funds are budgeted.

**Sponsoring Agency/Contact Persons:** U.S. Army, Corps of Engineers, New Orleans District

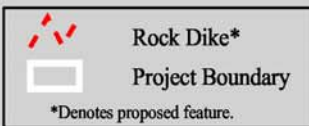
Gregory Miller (504) 862-2310; [gregory.b.miller@mvn02.usace.army.mil](mailto:gregory.b.miller@mvn02.usace.army.mil)

Chris Monnerjahn (504) 862-2415; [christopher.j.monnerjahn@mvn02.usace.army.mil](mailto:christopher.j.monnerjahn@mvn02.usace.army.mil)



## South White Lake Shoreline Protection

### PPL12 Project Candidate



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

Background Imagery:  
 Thematic Mapper Satellite Imagery 2000

Map Date: November 6, 2003,  
 Map ID: USGS-NWRC 2004-11-0051  
 Data accurate as of: November 6, 2003

**Project Name:** Bayou Dupont Sediment Delivery System (BA-39)

**Coast 2050 Strategies:** Coastwide: Dedicated dredging; Vegetative planting

**Project Location:** Region 2, Barataria Basin. In the vicinity of Bayou Dupont (north of Bayou Dupont) and southeast of Cheniere Traverse Bayou to the Mississippi River in the vicinity of Ironton in Plaquemines Parish, and the Town of Jean Lafitte in Jefferson Parish.

**Problem:** The proposed project would dredge sediment for marsh creation from the Mississippi River, and deliver it to an adjacent area within the Barataria Basin. Project area marshes have degraded to almost entirely open water, due to a combination of causes including lack of natural freshwater and sediment input, subsidence, and the dredging of oil and gas canals. The proximity to the Mississippi River is an excellent opportunity to design a sediment delivery system that will utilize sediment from the river to restore and create wetlands in this area of critical need. Unlike most marsh creation projects, this project will not borrow material from existing shallow bay bottoms, which may have implications for surrounding sediment dynamics and water quality at the borrow area. Ideally this sediment would be transported into areas of need using freshwater/sediment diversions. However, it is difficult to divert large sediment loads using diversion structures in most locations, since smaller structures don't typically capture bedload, and sedimentation in diversion channels is a problem. Dedicated dredging of Mississippi River sediments is one way around this dilemma.

**Goals:** 1) Create 538 acres of brackish marsh using sediment dredged from the Mississippi River; 2) provide features that would facilitate future marsh creation efforts in surrounding open areas.

**Proposed Solution:** Creation/restoration of approximately 538 acres of brackish marsh by delivering sediments dredged from the Mississippi River via pipeline, and planting appropriate marsh vegetation.

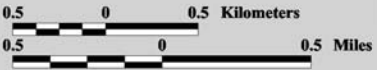
**Project Benefits:** The project would benefit 538 acres of estuarine marsh. Approximately 400 acres of marsh would be created/protected over the 20-year project life.

**Project Costs:** Total fully funded cost = \$24,727,100. Fully funded first cost = \$24,231,000.

**Risk/Uncertainty and Longevity/Sustainability:** There is a low degree of risk and uncertainty associated with this project because the methods are reasonably simple and in fairly wide use. The project should continue providing benefits 30-40 years after construction because sufficient sediment will have been delivered to maintain marshes beyond the 20-year project life. Created wetlands may also benefit from the planned Myrtle Grove freshwater diversion.



**Sponsoring Agency/Contact Persons:** U.S. Environmental Protection Agency  
Tim Landers (214) 665-7533; [landers.timothy@epa.gov](mailto:landers.timothy@epa.gov)  
Brad Crawford (214) 665-7255; [crawford.brad@epa.gov](mailto:crawford.brad@epa.gov)  
Ken Teague (214) 665-6687; [teague.kenneth@epa.gov](mailto:teague.kenneth@epa.gov)





**Bayou Dupont  
Sediment Delivery System**

**PPL12 Project Candidate**

-  Proposed Delivery System\*
  -  Project Boundary
- \*Denotes proposed feature.



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

Background Imagery:  
1998 Digital Orthophoto Quarter  
Quadrangle (DOQQs)

Map Date: November 5, 2003  
Map ID: USGS-NWRC 2004-11-0045  
Data accurate as of: November 5, 2003

**Project Name:** Avoca Island Diversion and Land Building (TE-49)

**Coast 2050 Strategies:** Diversions and riverine discharge; stabilize banks; beneficial use of dredged material; protect lake shoreline.

**Project Location:** Region 3 - Terrebonne and Atchafalaya Basins, St. Mary Parish, Avoca Island.

**Problem:** The Coast 2050 Plan reported that the Avoca Island mapping unit lost ~5,000 acres of marsh between 1932 and 1990. Natural overbank flooding into the Avoca Island area has been eliminated by channelization and construction of flood protection levees.

**Goals:** Rebuild eroded wetlands through the diversion of freshwater, sediment and nutrients.

**Proposed Solution:** A diversion structure would be installed through the Avoca levee to allow fresh water, sediment, and nutrients from Bayou Schaffer to enter Avoca Lake. The projected diversion design volume is 1,000 cfs. A natural bayou would be used as the primary outfall channel for the diversion. Outfall management measures will be evaluated and incorporated to increase benefits to aquatic habitats in the island system.

**Project Benefits:** The project would benefit about 7,233 acres of fresh marsh, cypress forest, and open water. Approximately 143 acres of marsh would be created/protected over the 20-year project life.

**Project Costs:** Total fully funded cost = \$19,157,200. Fully funded first cost = \$17,206,200.

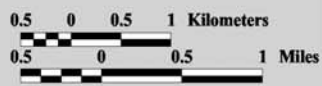
**Risk/Uncertainty and Longevity/Sustainability:** There is a low degree of risk associated with this project because river diversions are an effective wetlands restoration technique. The project should continue providing benefits 30-40 years after construction.

**Sponsoring Agency and Contact Persons:** U.S. Army, Corps of Engineers, New Orleans District

Gregory Miller (504) 862-2310; [gregory.b.miller@mvn02.usace.army.mil](mailto:gregory.b.miller@mvn02.usace.army.mil)

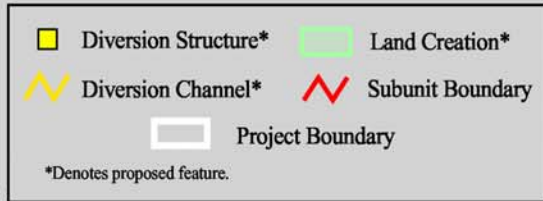
Chris Monnerjahn (504) 862-2415; [christopher.j.monnerjahn@mvn02.usace.army.mil](mailto:christopher.j.monnerjahn@mvn02.usace.army.mil)

Richard Boe (504) 862-1505; [richard.e.boe@MVN02.usace.army.mil](mailto:richard.e.boe@MVN02.usace.army.mil)



## Avoca Island Diversion and Land Building

PPL12 Project Candidate



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

Background Imagery:  
 1998 Digital Orthophoto Quarter  
 Quadrangle (DOQQs)

Map Date: November 5, 2003  
 Map ID: USGS-NWRC 2004-11-0038  
 Data accurate as of: November 5, 2002

**Project Name:** Lake Borgne and MRGO Shoreline Protection (PO-32)

**Coast 2050 Strategies:** Maintain Lake Borgne shoreline integrity; stabilize the entire north bank of the MRGO.

**Project Location:** Region 1 - Pontchartrain Basin; St. Bernard Parish. Along the Lake Borgne shoreline between Doullut's Canal and Jahncke's Ditch and along the north bank of the Mississippi River Gulf Outlet (MRGO) between Doullut's Canal and Lena Lagoon.

**Problem:** Shoreline erosion rates along Lake Borgne were estimated at 9 ft/yr along Lake Borgne and 24 ft/yr along the MRGO.

**Goals:** This project would help preserve marsh between Lake Borgne and the MRGO by preventing shoreline erosion.

**Proposed Solution:** Two features will be constructed. 1) An 18,500 linear foot rock dike along the Lake Borgne shoreline from Doullut's Canal to Jahncke's Ditch. The dike will be 4 feet high, with a 5-foot crown and side slopes of 1V on 2H. 2) A 14,250 linear foot rock dike along the north bank of the MRGO from Doullut's Canal to Lena Lagoon. The dike will be 6 feet high, with a 5-foot crown and side slopes of 1V on 1.25H. Both dikes will have a 3-foot layer of armor stone placed on top of a crushed stone core resting on a layer of geotextile. Any flotation channel needed will be excavated with the spoil being placed behind the rock dikes. Fish dips will be constructed so as to allow organism and water exchange.

**Project Benefits:** The project would benefit about 465 acres of estuarine marsh. Approximately 266 acres of marsh would be created/protected over the 20-year project life.

**Project Costs:** Total fully funded cost = \$25,062,900. Fully funded first cost = \$13,489,600.

**Risk/Uncertainty and Longevity/Sustainability:** There is a low degree of risk associated with this project because rocks are effective at stopping shoreline erosion. The project should continue providing benefits 20-30 years after construction because adequate O&M funds are budgeted.

**Sponsoring Agency and Contact Persons:** U.S. Army, Corps of Engineers, New Orleans District

Gregory Miller (504) 862-2310; [gregory.b.miller@mvn02.usace.army.mil](mailto:gregory.b.miller@mvn02.usace.army.mil)

Chris Monnerjahn (504) 862-2415; [christopher.j.monnerjahn@mvn02.usace.army.mil](mailto:christopher.j.monnerjahn@mvn02.usace.army.mil)

**Project Name:** Freshwater Floating Marsh Creation Demonstration Project (LA-05)

**Coast 2050 Strategy:** N/A

**Project Location:** N/A

**Problem:** Within the fresh and intermediate zones of Barataria and Terrebonne Basins, tens of thousands of acres of marsh have converted to open water between 1968 and 1990. Within these basins, large areas of fresh and intermediate open water exist in marsh interior, presenting opportunities for re-establishment/creation. These open water areas are not well-suited for typical projects such as sediment diversions, beneficial use of dredged material, or dedicated dredging.

**Goals:** Develop and test unique, previously untested technologies for creating floating marsh for potential use in fresh and intermediate zones.

**Proposed Solution:** Develop and test buoyant vegetated mats/article islands in controlled environment (Year 1) followed by deployment into open water marsh or abandoned canals (Year 2). Various combinations of plant species, planting methods and substrates will be tested to determine best mat-producing technique.

**Project Benefits:** Provide needed technology that is transferable.

**Project Costs:** Total fully funded cost = \$1,080,900. Fully funded first cost = \$868,200.

**Sponsoring Agency/Contact Persons:** USDA, Natural Resources Conservation Service  
Quin Kinler (225) 382-2047; [quin.kinler@la.usda.gov](mailto:quin.kinler@la.usda.gov)  
John Jurgensen, PE (318) 473-7694; [john.jurgensen@la.usda.gov](mailto:john.jurgensen@la.usda.gov)

**Project Name:** Mississippi River Sediment Trap Complex Project (MR-12)

**Coast 2050 Strategy:** N/A

**Project Location:** In the Mississippi River between Venice and Head of Passes in Plaquemines Parish.

**Problem:** The wetlands in the Mississippi River delta are deteriorating from erosion, subsidence, and insufficient sediment input. More than 116,500 acres of marsh were lost in the area between 1932 and 1990.

**Goals:** The goal of this project is to create/restore marshlands along the Mississippi River through dedicated dredging, coordinating annual deep draft navigation channel maintenance operations with a large-scale restoration effort.

**Proposed Solution:** The proposed sediment trap would consist of an area dredged out of the riverbed that would force sediment deposition. The sediment deposited into the trap would then be mined to create marsh. Hydrologic modeling suggests that a trap four miles long, 1,500 feet wide and 65 feet deep would optimize the deposition of sediment.

**Project Benefits:** Initial construction of the sediment trap would create an estimated 1,440 acres of new wetlands in the western project area and 440 acres in the eastern project area. The net benefit after 20 years would be the creation of 24,065 acres of wetlands.

**Project Costs:** Total fully funded cost = \$52,357,100. Fully funded first cost = \$1,880,376.

**Sponsoring Agency/Contact Persons:** U.S. Army, Corps of Engineers, New Orleans District



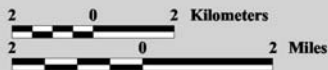
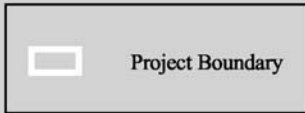
### Mississippi River Sediment Trap Complex Project



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

Background Imagery:  
 Thematic Mapper Satellite Imagery 2000

Map Date: November 13, 2003  
 Map ID: USGS-NWRC 2004-11-0052  
 Data accurate as of: November 13, 2003







## VI. SUMMARY AND CONCLUSIONS

The 12<sup>th</sup> Priority Project List consists of 4 projects, for a Phase I cost of \$7,359,041 and a Phase II cost of \$86,630,459, which will be funded as these projects mature. The total benefits of the projects are estimated to be 563 AAHUs, based on a comparison of future with and without-project conditions over the 20 year project life. The 12<sup>th</sup> Priority Project List also includes one demonstration project with a fully funded cost of \$1,080,900.

The 12<sup>th</sup> Priority Project List includes one complex project that was added during the Task Force meeting on August 7, 2002, with a Phase I cost of \$1,880,376, and a Phase II cost of \$50,476,724. The total benefit of this project is estimated to be 4,839 AAHUs, based on a comparison of future with and without-project conditions over the 20 year project life.

The total Phase I cost for the 4 projects and the one complex project on the 12<sup>th</sup> Priority Project List is \$9,239,417 and the total Phase II cost is \$137,107,183, plus \$1,080,900 for the one demonstration project. The total benefits of the projects are estimated to be 5,402 AAHUs, based on a comparison of future with and without-project conditions over the 20-year project life.

The Task Force believes the recommended projects represent the best strategy for addressing the immediate needs of Louisiana's coastal wetlands. The Task Force will conduct a final review of the plans and specifications for each project prior to the award of construction contracts by the lead Task Force agency and the allocation of construction funds by the Task Force chairman.



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## PLATE I. SUMMARY OF PROJECTS 1-12 PRORITY PROJECT LIST

### 1<sup>st</sup> Priority Project List (deauthorized = underlined)

#### Environmental Protection Agency

TE-20 Eastern Isle Derniers Barrier Island Restoration Demonstration

#### U.S. Department of the Army

MR-3 West Bay Sediment Diversion

PPO-10 Bayou LaBranche Wetland Marsh Creation

BA-19 Barataria Bay Waterway Marsh Creation

FTV-3 Vermillion River Cutoff Wetland Creation

#### U.S. Department of Commerce

BA-18 Fouchon Hydrologic Restoration

TE-19 Lower Bayou La Cache Wetland Hydrologic Restoration

#### U.S. Department of Agriculture

BA-2 G.I.W.W. to Clovelly Hydrologic Restoration Coastal Vegetation Program

TE-18 Timbalier Island Planting Demonstration

TE-17 Falgout Canal Planting Demonstration

FCS-19 West Hackberry Vegetative Planting

ME-8 Dewitt-Rollover Shore Protection Demo (Vegetative Planting de-authorized)

#### U.S. Department of the Interior

XPO-52a Bayou Sauvage NWR Hydrologic Restoration

ME-9 Cameron Prairie Refuge NWR Erosion Prevention

FCS-18 Sabine Refuge Pool 3 Unit Protection

FCS-17 Cameron-Creole Watershed Project Borrow Canal Plug

### 2<sup>nd</sup> Priority Project List

#### Environmental Protection Agency

XTE-41 Isle Derniers Island Restoration

#### U.S. Department of the Army

PTE-27 West Belle Pass Headland Restoration

PCS-27 Clear Marais Shore Protection

#### U.S. Department of Commerce

PAT-2 East Atchafalaya Crevasse Creation

PTE-2/24 Pointe Au Fer Canal Plugs

XAT-7 Big Island Sediment Distribution

#### U.S. Department of Agriculture

CS-9 Brown Lake Hydrologic Restoration

ME-4/XME-21 Freshwater Bayou Wetlands and Shore Protection

PBA-35 Jonathon Davis Wetlands Protection

PCS-24 East Mud Lake Hydrologic Restoration

PCS-25 Hwy. 384 Hydrologic Restoration

PO-6 Fritchie Marsh Creation

PTV-18/TV-9 Vermillion Bay / Boston Canal Shoreline Stabilization

BS-3a Caernarvon Diversion Outfall Management

#### U.S. Department of the Interior

XPO-52b Bavou Sauvage NWR Hvdroloic Restoration

### 3<sup>rd</sup> Priority Project List (deauthorized = underlined)

#### Environmental Protection Agency

PTE-15bi Whiskey Island Restoration

XTE-43 Modified Red Mud Demonstration

#### U.S. Department of the Army

XPO-71 M.R.G.O. Disposal Area Marsh Protection

XMR-10 Channel Armor Gap Crevasse

MR-8/9a Pass-a-Loutre Crevasse

#### U.S. Department of Commerce

XBA-65a Restoration of Bayou Perot / Bayou Rigolettes Marsh

XTE-67 East Timabalier Sediment Restoration

PTE-23 Lake Chapeau Marsh Creation and Hydrologic Restoration, Pointe au Fer Isl

BA-15 Lake Salvador Shoreline Protection Demonstration

#### U.S. Department of Agriculture

BA-4c West Pointe-a-la-Hache Outfall Management

TV-4 Cote Blanche Marsh Management

CS4a Cameron – Creole Maintenance

BS-4a White's Ditch Diversion Outfall Management

PTE-26b Brady Canal Hydrologic Restoration

PO-9a Violet Freshwater Distribution, Central Wetlands

PME-6 Southwest Shore White Lake Shore Protection Demonstration

#### U.S. Department of the Interior

XCS-47 / 481 Replace Hog Island, West Cove and Headquarters Canal at Sabine  
Refuge Water Control Structures

**4<sup>th</sup> Priority Project List** (deauthorized = underlined)

**Environmental Protection Agency**

XCS-36 Compost Demonstration

**U.S. Department of the Army**

PBS-9 Grand Bay Crevasse

XMR-12 Beneficial Use of Hopper Dredged Material Demonstration

**U.S. Department of Commerce**

PPO-4 Eden Isles Marsh Sediment Restoration

XTE-45 / 67b East Timbalier Barrier Island Sediment Restoration

**U.S. Department of Agriculture**

PCS-26 Perry Ridge Shore Protection

PBA-34 Bayou L'Ours Ridge Hydrologic Restoration

PBA-12a Barataria Bay Waterway Bank Protection (west)

XCS-56 Plowed Terraces Demonstration

XTE-54b Flotant Marsh Fencing Demonstration

**5<sup>th</sup> Priority Project List**

**Environmental Protection Agency**

PBA-20 Bayou Lafourche Siphon Inc. (w/o cutoff structure)

**U.S. Department of the Army**

XPO-69 Marsh Creation at Bayou Chevee

**U.S. Department of Commerce**

PTV-19 Little Vermillion Bay Sediment Trapping

XBA-48a Siphon at Myrtle Grove

**U.S. Department of Agriculture**

BA-3c Naomi Outfall Management

CS-11b Sweet Lake / Willow Lake Hydrologic Restoration

PTE-15bii Raccoon Island Breakwater Demonstration

XME-29 Freshwater Bayou Bank Stabilization

**U.S. Department of the Interior**

TE-10/XTE-49 Grand Bayou / GIWW freshwater diversion

**6<sup>th</sup> Priority Project List** (deauthorized = underlined)

**Environmental Protection Agency**

XTE-321 Bayou Boeuf Pump Station Increment 1

**U.S. Department of the Army**

TV-5/7 Marsh Island Hydrologic Restoration

CW-5i Marsh Creation E. of the Atchafalaya River – Avoca Island (increment II)

XMR-12b Flexible Dustpan (DEMO) Dredging for Marsh Creation the Miss. Delta Region

**U.S. Department of Commerce**

XCS- 48 Black Bayou Hydrologic Restoration

PMR-10 Delta-Wide Crevasses

PTV-19b Sediment Trapping at the Jaws

**U.S. Department of Agriculture**

PTE-261 Penchant Natural Resources Plan Increment I

XTV-251 Oaks/Avery Canals Hydrologic Restoration Increment I (Bank stabilization)

PBA-12b Barataria Bay Waterway "Dupre Cut" Bank Protection (east)

PTV-5 Cheniere au Tigre Sediment Trapping Device

**U.S. Department of the Interior**

TE-7f Lake Boudreaux Basin Freshwater Introduction and Hydrologic Management – Alternative B

CW-7 Nutria Harvest for Wetland Restoration

**7<sup>th</sup> Priority Project List**

**U.S. Department of Commerce**

XBA-1a Vegetative Planting of Dredged Material Disposal Site on Grande Terre Isl.

XME-22 Pecan Island Terracing Project

**U.S. Department of Agriculture**

XBA-63 Barataria Basin Landbridge, Shoreline Stabilization – Phase 1

Te-36 Thin Mat Flotant Marsh (DEMO)



### 8<sup>th</sup> Priority Project List (deauthorized = underlined)

#### Environmental Protection Agency

##### U.S. Department of the Army

XCS-48 Sabine Refuge Marsh Creation (Alternative 1)

##### U.S. Department of Commerce

XPO-74a Bayou Bienvenue Pump Outfall Management and Marsh Creation

PPO-38 Hopedale Hydrologic Restoration

##### U.S. Department of Agriculture

XBA-63ii Barataria Basin Land Bridge, Shore line Protection, Phase 2 Increment A

XBA-63ii Barataria Basin Land Bridge, Shore line Protection, Phase 2 Increment B

XBA-63ii Barataria Basin Land Bridge, Shore line Protection, Phase 2 Increment C

(These projects were merged with XBA-63 after PPL 8 approval and are subsequently numbered as XBA-63)

PME-15 Humble Canal Hydrologic Restoration

PBS-1 Upper Oak River Freshwater Introduction Siphon

PTV-20 Lake Portage Land Bridge Phase 1

### 9<sup>th</sup> Priority Project List

#### Environmental Protection Agency

BA-32a LA Highway 1 Marsh Creation

XTE-45a Timbalier Island Dune/Marsh Restoration

TE-11a New Cut Dune / Marsh Restoration

##### U.S. Department of the Army

XPO-55a Opportunistic Use of the Bonnet Carre Spillway

XTV-27 Freshwater Bayou Canal HR/Sp – Belle Isle to Lock

MR-Demo Periodic Introduction of Sediment and Nutrients at Selected Diversion Sites

PTV-13 Weeks Bay / Commercial Canal / GIWW

##### U.S. Department of Commerce

XPO-95 Chandeleur Islands Restoration

XTV-30 Four-Mile Cut/Little Vermillion Bay HR

XAT-11 Castille Pass Sediment Delivery

PPO-7a LaBranche Wetlands Terracing/Plantings

XBA-1 East/West Grand Terre Islands Restoration

##### U.S. Department of Agriculture

PTE-28 South Lake DeCade/Atch. Freshwater Introduction

CS-16 Black Bayou Bypass Culverts

PCS-26ii GIWW Bank Stabilization (Perry Ridge to Texas)

XME-42a Little Pecan Bayou Control Structure

XBA-63iii Barataria Basin Land Bridge Shore Protection Phase 3

##### U.S. Department of the Interior

PME-7a FW Introduction South of HWY. 82

XTE-DEMO Mandalay Bank Protection Demonstration

### 10<sup>th</sup> Priority Project List

#### Environmental Protection Agency

PO-30 Shore Prot./Marsh Restoration in Lake Borgne at Shell Beach

BA-34 Small Freshwater Diversion to the NW Barataria Basin

##### U.S. Department of the Army

MR-13 Benny's Bay 50,000 cfs Diversion

BA-33 Delta Building Diversion at Myrtle Grove

BS-10 Delta Building Diversion North of Fort ST. Phillip

##### U.S. Department of Commerce

ME-18 Rockefeller Refuge Gulf Shoreline Stabilization

##### U.S. Department of Agriculture

TE-43 GIWW Bank Restoration of Critical Areas in Terrebonne

##### U.S. Department of the Interior

ME-19 Grand-White Lake Land Bridge Protection Project

TE-44 North Lake Mechant Land Bridge Restoration

BS-11 Delta Management at Fort St. Phillip

CS-32 East Sabine Lake Hydrologic Restoration (with Terraces)

### 11th Priority Project List

#### **Environmental Protection Agency**

- PO-29 Diversion into Maurepas Swamp
- PO-31 or PO-11-1 Lake Borgne Shoreline Protection at Bayou Dupre  
(This project was merged with PO-30 after PPL 11 approval and is subsequently numbered as PO-30)
- TE-47 Ship Shoal: West Flank Restoration

#### **U.S. Department of the Army**

- ME-21 Grand Lake Shore Protection

#### **U.S. Department of Commerce**

- BA-35 Pass Chaland to Grand Bayou Pass Barrier Island Restoration
- BA-37 Little Lake Shoreline Protection/Dedicated Dredging near Round Lake
- BA-38 Barataria Barrier Island Complex Project: Pelican Island and Pass La Mer to Chaland Pass

#### **U.S. Department of Agriculture**

- BA-27d Barataria Basin Land Bridge Shoreline Protection (northeast only)
- LA-03b Coastwide Nutria Control Program
- CS-31 Holly Beach Sand Management
- TE-48 Raccoon Island Shoreline Protection/Marsh Creation

#### **U.S. Department of the Interior**

- BA-36 Dedicated Dredging on the Barataria Basin Landbridge
- ME-20 South Grand Chenier Hydrologic Restoration
- TE-46 W. Lake Boudreaux Shoreline Protection and Marsh Creation

### 12th Priority Project List

#### **Environmental Protection Agency**

- BA-39 Bayou Dupont Marsh Creation

#### **U.S. Department of the Army**

- TE-49 Avoca Island Diversion and Land Building
- PO-32 Lake Borgne and MRGO Shoreline Protection
- ME-22 South White Lake Shoreline Protection
- MR-12 Mississippi River Sediment Trap

#### **U.S. Department of Agriculture**

- LA-05 Freshwater Floating Marsh Demonstration

