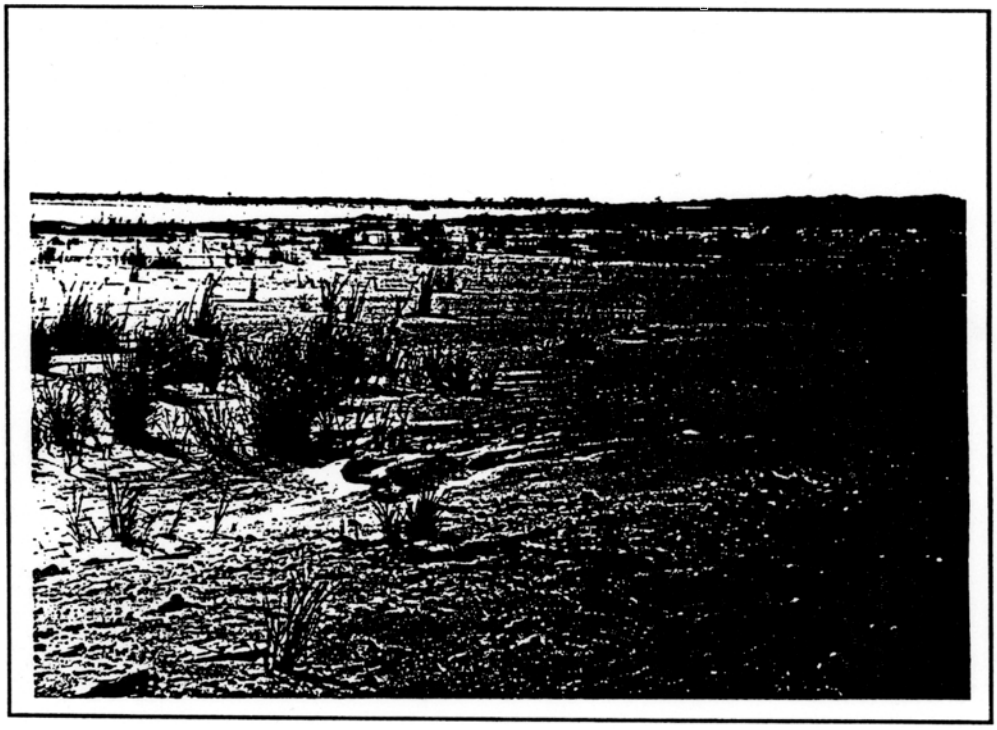
COASTAL-WETLANDS CONSERVATION AND RESTORATION PLAN

(Fiscal Year 1995-96)



Submitted to the
House and Senate Committees
on Natural Resources

April, 1995

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PREFACE

The Wetlands Conservation and Restoration Task Force is pleased to submit to the House and Senate Natural Resource Committees for their approval during the 1995 session of the Louisiana Legislature the Coastal Wetlands Conservation and Restoration Plan developed pursuant to R.S. 49:213.6, as amended, for conserving and restoring the state's coastal vegetated wetlands, consistent with legislative intent and with the policy developed by the Coastal Restoration Authority.

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ACKNOWLEDGEMENTS

The current plan incorporates recommendations from federal, state, and local government; representatives of various interest groups; and other individuals knowledgeable about Louisiana's coastal wetlands. The House and Senate Natural Resources Committees approved this Plan by resolution during the May, 1995, session of the legislature. The constructive review comments provided by state agencies, and the participation in the planning process of each coastal parish are also acknowledged.

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The report was produced by Coastal Environments, Inc., under contract to the Governor's Office of Coastal Activities.

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INTRODUCTION

Act 6 of the Second Extraordinary Session of the 1989 Louisiana Legislature created the Wetlands Conservation and Restoration Authority (Authority) within the Office of the Governor, and the Office of Coastal Restoration and Management (OCRM) within the Department of Natural Resources (DNR). In addition, it created the statutorily dedicated Wetlands Conservation and Restoration Fund (Wetlands Fund).

The Authority consists of the governor's Executive Assistant for Coastal Activities and the Wetlands Conservation and Restoration Task Force (Task Force). The Task Force is composed of the following members:

(1) Executive Assistant, Coastal Activities
(2) Secretary, Department of Natural Resources (DNR)
(3) Secretary, Department of Wildlife and Fisheries (DWF)
(4) Secretary, Department of Environmental Quality (DEQ)
(5) Secretary, Department of Transportation and Development (DOTD)
(6) Commissioner of Administration
(7) Director, State Soil and Water Conservation Committee

The Executive Assistant for Coastal Activities serves as chairman of the Task Force and is responsible for developing procedures for its operation.

The legislature placed responsibility for the direction and development of the state's annual Coastal Wetlands Conservation and Restoration Plan (Plan) within the Office of the Governor. The Authority also has the responsibility to develop a comprehensive policy (Policy) addressing the conservation and restoration of coastal wetlands resources. The Plan and Policy will serve as the state's overall strategy for conserving, enhancing, restoring, and creating coastal wetlands. Act 6 provides for implementation of the Plan through the Wetlands Conservation and Restoration Program within the Office of Coastal Restoration and Management of DNR.

Act 6 requires that the Plan, developed annually by the Authority, addresses coastal wetland loss problems from both short- and long-range perspectives; incorporates structural, management, and institutional components; and includes the following:

(1) A list of projects and programs required for the conservation and restoration of coastal wetlands.

(2) A schedule and estimated cost for the implementation of each project or program included in the Plan.

(3) The rationale for incorporation of each project or program and, in particular, a description of how each project or program advances the Plan's objectives with respect to the management, conservation, or enhancement of vegetated wetlands areas.

The Plan must be submitted to the House and Senate Natural Resources Committees of the Legislature before the first day of the regular legislative session of each year for their approval. If approved, the Plan is then submitted to the full legislature for approval by resolution adopted by a majority vote of the members of each house, provided that such resolution is adopted on or before June 1 of each calendar year. Upon approval,

the Coastal Restoration Division shall undertake project planning and programs in conformity with the order of priority contained in the Plan.

COASTAL WETLANDS CONSERVATION AND RESTORATION POLICY

The following policy statements are not rules or regulations, but rather are intended to generally guide the state's future coastal wetland conservation and restoration efforts, including structural, management, and institutional programs.

Coastal vegetated wetlands--by virtue of their value as the basis for present and future fish and wildlife productivity, and related economic and recreational benefits; as natural protection for coastal towns and cities against the effects of storm damages; and for other reasons pertaining to the public health and welfare--are deemed to be uniquely important to this state and deserving of special safeguards and efforts related to their conservation, enhancement, restoration, and creation. Accordingly, it is the policy of the state to elevate coastal vegetated wetland conservation, enhancement, restoration, and creation to a level of importance equal to flood control, navigation, or other development activities so that a proper balance is achieved.

It is the policy of the state to aggressively identify and implement projects and programs to offset coastal vegetated wetland losses that have resulted from past human activities and ongoing natural processes. To allow future permitted developments that adversely impact coastal vegetated wetlands to go unmitigated would, therefore, be inappropriate. Accordingly, this state has enacted legislation and is developing rules (via the Administrative Procedure Act process) that define and establish procedures needed to achieve, at a minimum, compensation for coastal wetland functional values lost due to future permitted activities. Overall losses of coastal wetland function, which result from future permitted activities, are to be offset concurrently by measures to restore these values to the state as required by permit conditions (pursuant to R.S. 49: 214.41). In this manner, public trust values (e.g., fish and wildlife values) lost as a result of permitted activities would be offset. Activities, currently exempt from the Coastal Use Permit process, will not be affected by these rules or legislation. These activities include: (1) agricultural, forestry, and aquacultural activities on lands consistently used in the past for such activities; (2) normal maintenance or repair of existing structures; (3) construction of a residence or camp; (4) activities that do not have a direct and significant impact on coastal waters, (5) activities occurring entirely on lands five ft or more above mean sea level or within fastlands, unless discharges or changes in existing water flow from such activities cause a direct and significant impact on coastal waters, and (6) activities that occur outside the state's designated coastal zone as defined in R.S. 49:214.24, unless such activities cause a direct and significant impact on coastal waters.

Expenditures from the state's Wetlands Conservation and Restoration Fund shall be made in accordance with priorities established primarily on the basis of the effectiveness of each expenditure in conserving, enhancing, restoring, and creating coastal vegetated wetlands. Projects that introduce freshwater and sediments into wetlands shall have a high priority. These projects will be

coordinated with the DEQ and the Department of Health and Hospitals (DHH) to assure that introduced water is of acceptable quality.

(4) The State of Louisiana recognizes the economic significance and importance of coastal activities such as navigation, including ports and waterways; seafood and wildlife-related industries; oil and gas exploration and production; chemical production; and agriculture, aquaculture, and silviculture. Accordingly, it is the policy of the state to consider the impacts of coastal wetland conservation and restoration programs and projects as they relate to these activities in our state's coastal area.

PLAN OBJECTIVES

(1) To plan, design, and complete in the near-term, projects and programs designed to conserve, enhance, restore, and create vegetated wetlands.

(2) To plan, evaluate, implement, or cost-share in implementation of long-range projects (with complex socio-economic interactions) designed to provide widespread and continuing long-term benefits to vegetated wetlands (e.g., large-scale freshwater and sediment diversions).

To make projects and programs within hydrologic basins mutually compatible and to make them collectively serve the coastal wetland resource base.

Through appropriate rule-making processes, develop policies and procedures that would provide, at a minimum, for replacement of functional coastal wetland values lost due to future activities for which a coastal use permit is issued (see Appendix A, Table 6.A.1, for specific recommended measures).

Take steps necessary to:

(a) improve predictability and efficiency of the Coastal Use Permit process; and

(b) make operation and implementation of federal water resources projects consistent with the policy of the state to elevate coastal vegetated wetland conservation, enhancement, restoration, and creation to a level of importance equal to flood control, navigation, or other development activities.

PLAN DEVELOPMENT AND CONTENTS

The current Plan was developed through a process that involved the integration of recommendations from federal, state, and local governmental entities; representatives of various interest groups; and other individuals knowledgeable about Louisiana's coastal processes and resources. Public participation was assured through state-wide public hearings. Recommendations from state agencies were obtained through Cabinet Secretaries serving on the Governor's Wetland Conservation and Restoration Task Force. Federal participation came through implementation of the Coastal Wetlands Planning, Protection and Restoration Act (PL 101-646). Project identification was further advanced through

coordination between the Governor's Office of Coastal Activities and local governments and interest groups. Meetings were held with coastal-parish representatives to determine whether support existed for projects recommended by the state and to solicit input concerning possible additional projects resulting from local recommendations.

Recommendations were subsequently evaluated and built upon through coordination between the Governor's Office of Coastal Activities and members of the Governor's Task Force or their representatives. This resulted in two groups of recommended measures. The first group consists of projects that can be implemented in a short time-frame at a comparatively moderate cost to the state, have local support, and would likely involve less than three years of planning and design. This group includes new projects, listed in Table 1, as well as those projects that were authorized under previous Plans. Projects in Table 1 are to be implemented under the Coastal Wetlands Planning, Protection, and Restoration Act (Public Law 101-646, Title III) and are listed also in Appendix A by hydrologic basin (Table 1) and by parish (Table 2). A description and location map for each project are presented in Appendix B. Projects authorized under previous state Plans are listed in Appendix A by basin (Table 3) and by parish (Table 4). These tables also summarize project status.

A total of 147 projects or major project elements have been approved since the first annual Plan in 1992. Of these, 31 projects (21%) have been completed, 19 projects (13%) are under construction, 21 projects (14%) are in the permitting and design stage, and 75 projects (51%) remain to be funded and initiated. A more detailed description of the status of these projects is presented in a document entitled "Status Report for Coastal Wetlands Conservation and Restoration Program, as of March 1, 1995" and submitted under separate cover.

The second group of recommended measures consists of programs and measures that are general in nature or require extensive public and legislative review because of their social ramifications, are dependent on federal participation because of high cost or federal responsibilities, or are long-range and complex in nature. They are incorporated in Appendix A, Tables 5 and 6, which list all such programs and measures presently being undertaken by the Office of Coastal Activities and the Office of Coastal Restoration and Management. Their status is provided in the 1990/95 status report.

All of the measures described above are recommended under the Wetlands Fund. Those listed in Table 1 would be implemented under PL 101-646 with 75% of the cost to be borne by the federal government and 25% by the State or other non-federal entity. Many projects listed in Tables 3 and 4 of Appendix A are also funded through 75/25 federal/state cost-sharing, with the state's match being provided from the Wetlands Fund, except in those cases where costs are shared by local government or the landowner.

Projects and Programs

Projects recommended for funding from the Wetland Funds during Fiscal Year 1995/96 are generally of five types:

Introduction of freshwater, mineral sediments (including dredged material), and nutrients to conserve, enhance, restore, and create vegetated wetlands.

Management of surface water to protect vegetated wetlands from saltwater intrusion and erosion by tidal currents and to enhance their value to fish and wildlife.

Marsh restoration, sedimentation, and low-cost shore protection to maintain and enhance physical integrity of vegetated wetlands.

Gulf shore protection along critical areas.

Demonstration and evaluation of new technologies for vegetated wetland creation, restoration, protection, or enhancement.

Each individual project is identified by a letter/number combination, the letters representing the name of the hydrologic basin in which the project is located (e.g. PO-1). The numbers are unique, and those for new projects are sequential relative to numbers used for projects contained in Plans of previous years. A map of coastal Louisiana with project locations (Figures 1 and 2) and an illustrated description of the new projects is provided in Appendix B of this report. Individual project descriptions are grouped according to the hydrologic unit in which they are located (Appendix A, Table 1). A statement of problems and objectives, and a basin map showing the location and general area of benefit for each project, precedes the project descriptions for each basin.

The new projects are listed state-wide in Table 1 and, with the exception of T/V-13, constitute the 1994 Priority Project List that has been approved under PL 101-646, Title III, Section 303(a) and for which immediate implementation is recommended. Projects are listed in order of decreasing cost-effectiveness, as determined by the federal/state Coastal Wetlands Conservation and Restoration Task Force. To facilitate project review, the same projects are listed by hydrologic basin and by parish in Appendix A, Table 1 and Table 2 respectively.

Authorization is also requested to continue expenditures for completion of 1990/91 through 1994/95 projects approved under previous Plans and listed in Appendix A, Tables 3 and 4. Depending on the status of the project, contractual agreements for project implementation may presently be in place requiring no additional appropriations. However, the Authority is required to allow the Department of Natural Resources to expend funds on these projects to ensure their successful completion. The description of the projects contained in Appendix A, Tables 3 and 4, can be found in the 1990/91 through 1994/95 Plan documents.

Additionally recommended for new or continued funding from the Wetlands Fund during Fiscal Year 1995/96 are certain programs and measures. The programs include both long- and short-range programs and are listed in Appendix A, Table 5, with a short description of their objective and status. It is recommended also that a number of institutional and structural measures be advanced for state and federal action, or efforts on them continued, for the purpose of conservation, restoration, and creation of wetlands. These are identified in Appendix A, Table 6, with funding requested for: (1) matching federal or local monies for various dredged material disposal or other programs to create, restore, enhance, or protect vegetated coastal wetlands; (2) assisting local governments in rerouting runoff waters through wetlands; (3) cost-sharing in the restoration of back-barrier wetlands by the U.S. Army Corps of Engineers (COE) during navigation channel dredging; and (4) operation of various structures, if needed, to offset saltwater intrusion, retain freshwater, or to remove excess water from marsh areas.

Table 1. New Projects (to be implemented under PL 101-646) 1)

State Number	Project Name	Cost in $1,000	Lead Agency	Parish
1. Projects recommended for 1995/96 approval				
PO-21	Eden Isles East Marsh Restoration	$5,019	(NMFS)	StTm
C/S-24	Perry Ridge Bank Protection	$2,224	(NRCS)	Calc
BA-22	Bayou l'Ours Ridge Hydrologic Restoration	$2,419	(NRCS)	Lafr
BS-7	Grand Bay Crevasse	$2,469	(COE)	Plqs
BA-23	Barataria Waterway Bank Protection (West)	$2,195	(NRCS)	Jefn
TE-30	East Timbalier Barrier Island Restoration (Phase II)	$5,752	(NMFS)	Lafr
T/V-13	Oaks Canal/Vermilion Bay Shore Protection	$500	(DNR)	Ibra/Vrml
MR-8	Beneficial Use of Hopper-Dredge Material Demonstration	$300	(COE)	Plqs
C/S-25	Plowed Terrace Demonstration	$300	(NRCS)	Camr
TE-31	Flotant Marsh Fencing Demonstration	$367	(NRCS)	Terb
C/S-26	Compost Demonstration	$371	(EPA)	Camr

1) All projects, except T/V-13, are presently eligible for 75/25 % federal/state cost-sharing under PL 101-646. Projects are listed in order of decreasing cost-effectiveness. Codes preceding each project name are those used for identification under the state program.

Sponsoring agency:
COE = U.S. Army Corps of Engineers
DNR = Louisiana Department of Natural Resources
EPA = U.S. Environmental Protection Agency
NMFS = National Marine Fisheries Service
NRCS = U.S. Natural Resource Conservation Service (formerly U.S. SCS)

Basins:
BA = Barataria
BS = Breton Sound
C/S = Calcasieu/Sabine
MR = Mississippi River
PO = Pontchartrain
TE = Terrebonne
T/V = Teche/Vermilion

Parishes:
Camr = Cameron
Calc = Calcasieu
Ibra = Iberia
Jefn = Jefferson
Lafr = Lafourche
Plqs = Plaquemines
StTm = St. Tammany
Terb = Terrebonne
Vrml = Vermilion

Priorities and Implementation

The high number of proposed projects and limited funding make it necessary to establish a priority among the projects in order to guide project-related activities and expenditures. That priority is governed by LAC 43:1.805. The Code calls for the coastal restoration projects in Tables 3 and 4 that are not cost-shared by the federal and state government to be constructed in accordance with their cost-effectiveness ranking. Projects with a higher cost-effectiveness rank have a correspondingly higher construction priority. The cost-effectiveness rank of each project is determined primarily by the anticipated habitat benefits per Wetland Fund dollar expended over the project life. This is the same criterion used for project evaluation and implementation under PL 101-646. It is proposed that priority is given to expenditures for the federal/state cost-shared projects listed in Table 1 in accordance with the need to expedite project implementation while federal funding is available.

Habitat benefits for each project are determined through the Wetland Value Assessment (WVA), a standardized procedure that was developed jointly by the federal and state agency representatives involved in the evaluation of PL101-646 projects. The WVA quantifies changes in the quality and areal extent of fish and wildlife habitat that are projected to result from a proposed wetland restoration, protection, or enhancement project. The same is done for changes that are expected to occur in the absence of the proposed project. Conditions with and without the project, respectively, are then compared to determine the average annual benefit that is attributable to the proposed project over the project life. Habitat quality is generally measured in terms of suitability for various fish and wildlife species that are characteristic for a particular wetland type. Wetland characteristics that are taken into consideration also may vary according to wetland type, and include such variables as the areas of emergent and aquatic vegetation, extent and depth of associated water bodies, water salinity, aquatic organism access, and others.

Cost-effectiveness of a proposed project is expressed by the ratio of average annual benefits and average annual costs. Categories of costs include planning and permitting, engineering and design, construction, operation and maintenance, and monitoring. Because cost pertains to dollars to be expended from the Wetlands Fund, cost is decreased and cost-effectiveness increased if costs are shared by a local sponsor.

Evaluation for cost-effectiveness has been completed for projects contained in Table 1, and for the 1990/94 projects listed in Appendix A, Tables 3 and 4. All the 1990/94 projects for which funding has been provided but that have not yet been completed continue to be advanced for permitting, engineering, and design in accordance with their rank. Highest priority is placed on completion of projects that are currently in the permitting, engineering, design, or construction phase, and on advancing projects to these phases where analysis has shown a project to be feasible and beneficial.

A priority for implementation has not been established for the newly proposed projects listed in Table 1 of the present Plan. These projects, except T/V-13, will be administered by the various federal agencies sponsoring each project, and implementation is expected to proceed simultaneously, although projects may advance at different rates depending on land rights and permit issues.

Coordination with various entities will be a significant aspect of all phases of project development, implementation, and operation. This coordination is a requirement partly because of state and federal agency mandates and because a number of projects were identified for which costs are to be shared by state, local, or federal government. Where parishes share in the cost of design and construction of projects, project ranking is

improved as governed by LAC 43:1.801 through 807. Equally important, however, public hearings and associated comments by private citizens and elected officials have pointed out three major issues of concern in the efforts of wetland conservation and restoration. These are the rights of landowners and leaseholders, and the associated need for early coordination of project features; the need to assure that conservation-management programs serve both the fisheries and the wetland restoration and conservation needs; and the assurance that long-term operation and management of projects is provided for. It is the intention of the State to fully deal with these concerns during the analysis phase that is required prior to implementation of each project. Landowners and leaseholders will be contacted at the earliest possible time and meetings will be scheduled with elected officials as representatives of the public interest to discuss both public and private resource uses and access that may be affected.

FUNDING

It is proposed that state funding be provided for project implementation on a priority basis, and that such funding includes necessary expenditures for projects in Table 1 to take advantage of the 3:1 federal cost-sharing available for those projects. Under this funding provision, project initiation will continue to occur according to the established and legislatively approved priority and will not be adversely affected by uncertainties about feasibility, permitting, and other project elements. After feasibility analysis, projects will be reevaluated according to their cost-effectiveness, that is, cost per acre of wetlands to be created, restored, or maintained throughout the project life. This reevaluation will be made after obtaining the necessary feasibility information, and will determine the implementation order of projects, unless problems arise that delay project implementation. In that case, work will begin on the project with the next highest priority.

Line-item funding is requested for the Plan components detailed in Table 1 and in Appendix A, Tables 4, 5, and 6 according to the following three categories:

	Project Implementation	$ 5,000,000
	(a) 1990/91 state projects remaining to be funded	
	(b) 1991/92 state projects remaining to be funded	
	(c) 1992/93 state/federal projects to be cost-shared under PL 101-646	
	(d) 1993/94 state/federal projects to be cost-shared under PL 101-646	
	(e) 1994/95 state/federal projects to be cost-shared under PL 101-646	
2.	Long- and Short-Range Programs	$ 3,000,000
3.	Measures Recommended for Action or Funding	$ 2,000,000
	Total	$ 10,000,000

Approval is also requested to transfer up to 20% of allocated funds from any one category to other categories as needed to prevent undesirable and costly delays in project planning and implementation.

APPENDIX A

LISTS OF PROJECTS AND MEASURES RECOMMENDED FOR FUNDING

Table 1. New Projects (to be implemented under PL 101-646), Listed by Hydrologic Basin. 1)

	Project	Parish
A. Projects recommended for immediate implementation		
1. Pontchartrain Basin		
PO-21	Eden Isles East Marsh Restoration	
2. Breton Sound Basin		
BS-7	Grand Bay Crevasse	
3. Mississippi River Delta		
MR-8	Beneficial Use of Hopper-Dredge Material Demonstration	
4. Barataria Basin		
BA-22	Bayou l'Ours Ridge Hydrologic Restoration	Lafr
BA-23	Barataria Waterway Bank Protection (West)	Jefn
5. Terrebonne Basin		
TE-30	East Timbalier Barrier Island Restoration (Phase II)	Lafr
TE-31	Flotant Marsh Fencing Demonstration	Terb
6. Teche/Vermilion Basin		
T/V-13	Oaks Canal/Vermilion Bay Shore Protection	Ibra/Vrml
7 Calcasieu/Sabine Basin		
C/S-24	Perry Ridge Bank Protection	Calc
C/S-25	Plowed Terrace Demonstration	Camr
C/S-26	Compost Demonstration	Camr

1) All projects, except T/V-13, are eligible for 75/25 percent federal/state cost-sharing under PL 101-646. Within each Basin, projects are listed in order of decreasing cost effectiveness

Basins:

BA	= Barataria	MR	= Mississippi River	TE	= Terrebonne
BS	= Breton Sound	PO	= Pontchartrain	T/V	= Teche/Vermilion
C/S	= Calcasieu/Sabine				

Parishes:

Camr	= Cameron	Jefn	= Jefferson	StTm	= St. Tammany
Calc	= Calcasieu	Lafr	= Lafourche	Terb	= Terrebonne
Ibra	= Iberia	Plqs	= Plaquemines	Vrml	= Vermilion

Table 2. New Projects (to be implemented under PL 101-646), Listed by Parish. 1)

A. Projects recommended for immediate implementation.

1. **Cameron Parish**

C/S-25	Plowed Terrace Demonstration
C/S-26	Compost Demonstration

2. **Calcasieu Parish**

C/S-24	Perry Ridge Bank Protection

3. **Iberia Parish**

T/V-13	Oaks Canal/Vermilion Bay Shore Protection

4. **Jefferson Parish**

BA-23	Barataria Waterway Bank Protection (West)

5. **Lafourche Parish**

BA-22	Bayou l'Ours Ridge Hydrologic Restoration
TE-30	East Timbalier Barrier Island Restoration (Phase II)

6. **Plaquemines Parish**

BS-7	Grand Bay Crevasse
MR-8	Beneficial Use of Hopper-Dredge Material Demonstration

7. **St. Tammany Parish**

PO-21	Eden Isles East Marsh Restoration

8. **Terrebonne Parish**

TE-31	Flotant Marsh Fencing Demonstration

9. **Vermilion Parish**

T/V-13	Oaks Canal/Vermilion Bay Shore Protection

1) All projects, except T?V-13, are eligible for 75/25 percent federal/state cost-sharing under PL 101-646.
Within each parish, projects are listed in order of decreasing cost-effectiveness.

Basins:

BA	= Barataria	MR	= Mississippi River	TE	= Terrebonne
BS	= Breton Sound	PO	= Pontchartrain	T/V	= Teche/Vermilion
C/S	= Calcasieu/Sabine				

Table 3. Currently Approved Projects, Listed by Hydrologic Basin [1].

	Project	Status	Parish
1. Pontchartrain Basin			
PO-1	Violet Siphon Diversion		StBd
	a) Diversion operation	Z	
	b) Enlargement	F	
	c) Outfall management * (P3)	F	
PO-2	Sediment trapping/vegetation planting/shore protection		
	b) Alligator Point - shore protection	F	
	c) Bayou Chevee Wetland - protection	Z	
PO-3	La Branche Wetland - protection and enhancement		
	a) Complete management plan	P,D	
	b) Stabilize critical reaches of shoreline	C	
PO-4	Bonnet Carré Freshwater Diversion - partial cost-sharing for portion of project to benefit wetlands	C	
PO-5	Southeast Lake Maurepas Wetland		StJn
	a) Reduce ponding of water	F	
	b) Small diversion of Mississippi River water	F	
PO-6	Fritchie Wetland - marsh restoration * (P2)	P,D	StTm
PO-7	North Shore Wetland - marsh restoration	F	StTm
PO-8	Central Wetlands Pump Outfall - enhancement	Z	StBd
PO-9	Violet Freshwater Distribution - enhancement * (P3)	F	StBd
PO-10	Turtle Cove Shore Protection	Z	StJn
PO-11	Cutoff Bayou Marsh Management	F	Orls
PO-12	West LaBranche Wetland Management	F	StCs
PO-13	Tangipahoa/Pontchartrain Shore Protection	F	Tang
PO-14	Green Pt./Goose Pt. Marsh Restoration	F	StTm
PO-15	Alligator Point Marsh Restoration	F	Orls
PO-16	Bayou Sauvage Refuge Restoration (Phase I) * (P1)	C	Orls
PO-17	Bayou La Branche Wetland Creation * (P1)	Z	StCs
PO-18	Bayou Sauvage Refuge Restoration (Phase II) * (P2)	P,D	Orls
PO-19	MRGO Diked Marsh Protection * (P3)	F	StBd
PO-20	Red Mud Demonstration Project (Modified) * (P3)	F,P	StJm
2. Breton Sound Basin			
BS-1	Bohemia Diversion Structure		Plqs
	a) Achieve operation of existing structure	Z	
	b) Outfall management	F	
BS-3	Caernarvon Diversion Outfall Management * (P2)	F	Plqs/StBd
BS-4	White's Ditch Diversion Siphon		Plqs
	a) Outfall management * (P3)	F	
	b) Enlargement	F	
BS-5	Bayou LaMoque Diversion Outfall Management (PD)	F	Plqs
BS-6	Violet Freshwater Distribution (Lake Lery)	F	StBd

(Table 3 continued)

3. Mississippi River Delta			
MR-1	Small Sediment Diversions		
	a) Pass a Loutre State Management Area	Z	
	b) Delta National Wildlife Refuge	Z	
MR-2	Pass a Loutre Sediment Fencing	F	Plqs
MR-3	West Bay Sediment Diversion * (P1)	F	Plqs
MR-4	Tiger Pass Wetland Creation (PD)	F	Plqs
MR-5	Pass a Loutre Sediment Mining (PD)	F	Plqs
MR-6	Armored Gap Crevasse * (P3)	P,D	Plqs
MR-7	Pass a Loutre Crevasse * (P3)	F	Plqs
4. Barataria Basin			
BA-1	Davis Pond Freshwater Diversion *	C	StCs
BA-2	GIWW to Clovelly Wetland - protection/enhancement * (P1)	C	Lafr
BA-3	Naomi (LaReussite) Diversion Siphon		Plqs/Jefn
	a) Siphon construction	Z	
	b) Enlargement of diversion capacity	F	
	c) Outfall management	F	
BA-4	West Pointe a la Hache Diversion Siphon		
	a) Siphon Construction	Z	
	b) Enlargement of diversion capacity	F	
	c) Outfall management * (P3)	F	
BA-5	Sediment trapping/vegetation planting/shoreline protection		
	b) Queen Bess Island-habitat restoration	Z	Jefn
	c) Baie de Chactas - shoreline protection	Z	StCs
BA-6	Highway 90 to GIWW Wetland - protection (PD)	F	Lafr
BA-7	Couba Island - restore canal closure	C	StCs
BA-8	Lake Cataouatche Shore Protection	F	StCs
BA-9	Salvador WMA Gulf Canal Project	F	StCs
BA-10	Davis Pond Diversion Outfall Management	F	StCs
BA-11	Tiger/Red Pass Diversion and Outfall Management	F	Plqs
BA-12	Grand/Spanish Pass Diversion	F	Plqs
BA-13	Hero Canal Diversion	F	Plqs
BA-14	Little Lake Marsh Management	F	Jefn
BA-15	Lake Salvador Shore Protection * (P3)	F	StCs
BA-16	Segnette Wetland (L. Salvador) Protection (PD)	Z	Jefn
BA-17	City Price Diversion	F	Plqs
	a) Home Place		
	b) Happy Jack		
BA-18	Fourchon Wetland Restoration * (P1)	X	Lafr
BA-19	Barataria Bay Waterway Wetland Creation * (P1)	P,D,C	Jefn
BA-20	Jonathan Davis Wetland Protection * (P2)	P,D	Jefn
BA-21	Bayou Perot/Rigolettes Marsh Restoration * (P3)	F	Jefn

(Table 3 continued)

5. Terrebonne Basin

TE-1	Montegut Wetland-protection and enhancement	Z	Terb
TE-2	Falgout Canal Wetland-protection and enhancement	Z	Terb
TE-3	Bayou la Cache Wetland-protection and enhancement	P,D	Terb
TE-4	Sediment trapping/vegetation planting		Terb
	b) Barrier Islands-sediment protection	Z	
TE-5	Grand Bayou Wetland - protection	F	Lafr
TE-6	Pointe au Chene Wetland - protection and enhancement	F	Terb
TE-7	Lake Boudreaux Wetland - protection		Terb
	a) Upper Petit Caillou management area	F	
	b) Lower Petit Caillou management area	C	
	c) Bayou Grand Caillou management area	C	
	d) Water management Lake Boudreaux sub-basin	F	
TE-8	Bayou Pelton Wetland - protection	F	Terb
TE-9	Bully Camp Marsh Management	F	Lafr
TE-10	Grand Bayou/GIWW Division	F	Lafr/Terb
TE-11	Isle Dernieres Cut Closure (part of TE-20)	P,D	Terb
TE-12	Bird Island Restoration	F	Terb
TE-13	Trinity Bayou Pilot Project	F	Terb
TE-14	Pt. Farm Refuge Planting	Z	Terb
TE-15	GIWW Levee Planting	F	Terb
TE-16	St. Louis Wetland Restoration	F	Terb
TE-17	Falgout Canal Plantings * (P1)	Z	Terb
TE-18	Timbalier Island Plantings * (P1)	C	Terb
TE-19	Lower Bayou La Cache Wetland Restoration * (P1)	P	Terb
TE-20	Eastern Isles Dernieres Restoration (Phase I) * (P1)	C	Terb
TE-21	Falgout Canal South Wetland Creation (PD)		Terb
TE-22	Point au Fer Canal Plugs * (P2)	C	Terb
TE-23	West Belle Pass Headland Restoration * (P2)	P,D	Lafr
TE-24	Isles Dernieres Restoration (Phase II) * (P2)	C	Terb
TE-25	East Timbalier Island Rest., Phase I (Trinity Isl.) * (P3)	F	Lafr
TE-26	Lake Chapeau Marsh Creation / Hydrologic Rest. * (P3)	F	Terb
TE-27	Isles Dernieres Restoration, Phase III (Whiskey Isl.) * (P3)	P,D	Terb
TE-28	Brady Canal Hydrologic Restoration * (P3)	F	Terb
TE-29	Raccoon Island Segmented Breakwaters	F	Terb

6. Atchafalaya Basin

AT-2	East Atchafalaya Delta Crevasse * (P2)	P,D	
AT-3	Big Island Sediment Distribution * (P2)	P,D	

7. Teche/Vermilion Basin

T/V-1	Sediment trapping/vegetation planting/shore protection		
	b) Shark Island/Weeks Bay - protection	F	
T/V-2	Cote Blanche Wetlands Protection	Z	StMy
T/V-3	Vermilion River Cutoff - protection/restoration * (P1)	C	Vrml
T/V-4	Cote Blanche Hydrologic Restoration * (P3)	P,D	StMy
T/V-5	Marsh Island Canal Backfilling	F	Ibra

(Table 3 continued)

7. Teche/Vermilion Basin (continued)			
T/V-6	Marsh Island Control Structures	Z	Ibra
T/V-7	Marsh Island Sediment Fencing	F	Ibra
T/V-8	Redfish Point Shore Protection	F	Vrml
T/V-9	Boston Canal/Vermilion Bay Shore Protection * (P2)	Z	Vrml
T/V-10	Weeks Bay Shore Restoration	F	Ibra
T/V-11	Freshwater Bayou Bank Protection	Z	Vrml
T/V-12	Little Vermilion Bay Sediment Trapping (PD)		Vrml
8. Mermentau Basin			
ME-1	Pecan Island Freshwater Introduction		Vrml
	a) Pecan Island Structure	Z	
	b) Outfall management	Z	
ME-2	Hog Bayou Wetland - restoration and enhancement	P	Camr
ME-4	Freshwater Bayou Wetlands * (P2)	P,D,C	Vrml
ME-5	White Lake Shore Protection	P,D	Vrml
ME-6	Big Burn Marsh Management	F	Camr
ME-7	Deep Lake Marsh Protection	F	Vrml
ME-8	DeWitt-Rollover Plantings * (P1)	Z	Vrml
ME-9	Cameron Prairie Refuge Protection * (P1)	Z	Camr
ME-10	Sawmill Canal Water Management (PD)	P,D	Camr
ME-11	Humble Canal Water Management (PD)	P,D	Camr
ME-12	White Lake SW Shore Protection Demonstration * (P3)	F	Vrml
9. Calcasieu/Sabine Basin			
C/S-1	Calcasieu-Sabine Wetland - Gulf shore protection from		Camr
	a) Peveto Beach to Holly Beach	Z	
	b) Holly Beach to Calcasieu	F	
	c) Constance Beach to Ocean View	Z	
C/S-2	Rycade Canal - closure to Black Lake	Z	Camr
C/S-4	Cameron-Creole Watershed		Camr
	a) Operation of control structure * (P1/P3)	C	
	b) Freshwater introduction from GIWW	F	
C/S-5	Sabine Freshwater Introduction - divert Sabine R. water	F	Camr
C/S-6	Black Lake South Shore Protection	F	Camr
C/S-7	Black Lake West Shore Protection	F	Camr
C/S-8	Black Lake North Marsh Management	F	Camr
C/S-9	Brown Lake Wetland Restoration * (P2)	P,D	Camr
C/S-10	Grand Lake Ridge Marsh Management	F	Camr
C/S-11	Sweet Lake/GIWW Bank Restoration	F	Camr
C/S-12	Black Bayou Marsh Management	F	Camr
C/S-13	Back Ridge Freshwater Introduction	F	Camr
C/S-14	Tripod Bayou Control Structure	F	Camr
C/S-15	Boudreaux/Broussard Marsh Protection	F	Camr
C/S-16	Black Bayou Culverts	F	Camr
C/S-17	Cameron Creole Watershed Protection * (P1)	C	Camr
C/S-18	Sabine Refuge Protection * (P1)	Z	Camr

(Table 3 concluded)

9. Calcasieu/Sabine Basin (continued)

C/S-19	West Hackberry Plantings * (P1)	Z	Camr
C/S-20	Mud Lake Wetland Management * (P2)	C	Camr
C/S-21	Hwy 384 Wetland Protection * (P2)	P,D	Camr
C/S-22	Clear Marais Wetland Protection * (P2)	C	Calc
C/S-23	Sabine Refuge Water Control Structures * (P3)	P,D	Camr

1) Within each Basin projects are listed in numerical order; the order of implementation is determined by the results of the feasibility analysis as authorized.

† Design modification presented in Appendix B.

* Federal and state cost-sharing

(P1) To be implemented under PL101-646, 1st List, with 75/25 federal/state cost-sharing
(P2) To be implemented under PL101-646, 2nd List, with 75/25 federal/state cost-sharing
(P3) To be implemented under PL101-646, 3rd List, with 75/25 federal/state cost-sharing
(P4) To be implemented under PL101-646, 4th List, with 75/25 federal/state cost-sharing
(PD) Implementation under PL101-646 deferred

Status:
F = Feasibility Study in progress
P = Permitting in progress
D = Design in progress
C = Land rights/Contracting/Construction in progress
Z = All steps completed.
X = Deauthorized

Basins:

AT	=	Atchafalaya	MR	=	Mississippi River Delta
BA	=	Barataria	PO	=	Pontchartrain
BS	=	Breton Sound	TE	=	Terrebonne
C/S	=	Calcasieu/Sabine	T/V	=	Teche/Vermilion
ME	=	Mermentau			

Parishes:

Calc	=	Calcasieu	Plqs	=	Plaquemines	St My	=	St. Mary
Camr	=	Cameron	StBd	=	St. Bernard	StTm	=	Saint Tammany
Ibra	=	Iberia	StCs	=	St. Charles	Tang	=	Tangipahoa
Jefn	=	Jefferson	StJm	=	St. James	Terb	=	Terrebonne
Lafr	=	Lafourche	StJn	=	St. John the Baptist	Vrml	=	Vermilion
Orl	=	Orleans						

Table 4. Currently Approved Projects, Listed by Parish [1].

	Project	Status
1. Calcasieu Parish		
C/S-22	Clear Marais Wetland Protection * (P2)	C
2. Cameron Parish		
ME-2	Hog Bayou Wetland - restoration and enhancement	P
ME-6	Big Burn Marsh Management	F
ME-9	Cameron Prairie Refuge Protection * (P1)	Z
ME-10	Sawmill Canal Water Management (PD)	P,D
ME-11	Humble Canal Water Management (PD)	P,D
C/S-1	Calcasieu-Sabine Wetland - Gulf shore protection from	
	a) Peveto Beach to Holly Beach	Z
	b) Holly Beach to Calcasieu	F
	c) Constance Beach to Ocean View	Z
C/S-2	Rycade Canal - closure to Black Lake	Z
C/S-4	Cameron-Creole Watershed	
	a) Operation control structure * (P1/P3)	C
	b) Freshwater introduction from GIWW	F
C/S-5	Sabine Freshwater Introduction - divert Sabine R. water	F
C/S-6	Black Lake South Shore Protection	F
C/S-7	Black Lake West Shore Protection	F
C/S-8	Black Lake North Marsh Management	F
C/S-9	Brown Lake Wetland Restoration * (P2)	P,D
C/S-10	Grand Lake Ridge Marsh Management	F
C/S-11	Sweet Lake/GIWW Bank Restoration	F
C/S-12	Black Bayou Marsh Management	F
C/S-13	Back Ridge Freshwater Introduction	F
C/S-14	Tripod Bayou Control Structure	F
C/S-15	Boudreaux/Broussard Marsh Protection	F
C/S-16	Black Bayou Culverts	F
C/S-17	Cameron Creole Watershed Protection * (P1)	C
C/S-18	Sabine Refuge Protection * (P1)	Z
C/S-19	West Hackberry Plantings * (P1)	Z
C/S-20	Mud Lake Wetland Management * (P2)	P,D,C
C/S-21	Hwy 384 Wetland Protection * (P2)	P,D
C/S-23	Sabine Refuge Water Control Structures * (P3)	P,D
3. Iberia Parish		
T/V-1	Sediment trapping/vegetation planting/shore protection	
	b) Shark Island/Weeks Bay - protection	F
T/V-5	Marsh Island Canal Backfilling	F
T/V-6	Marsh Island Control Structures	Z
T/V-7	Marsh Island Sediment Fencing	F
T/V-10	Weeks Bay Shore Restoration	F

(Table 4 continued)

4. Jefferson Parish		
BA-3	Naomi (LaReussite) Diversion Siphon	
	a) Siphon construction	Z
	b) Enlargement of diversion capacity	F
	c) Outfall management	F
BA-5	Sediment trapping/vegetation planting/shoreline protection	
	b) Queen Bess Island-habitat restoration	Z
BA-14	Little Lake Marsh Management	F
BA-16	Segnette Wetland (L. Salvador) Protection (PD)	Z
BA-19	Barataria Bay Waterway Wetland Creation * (P1)	P,D,C
BA-20	Jonathan Davis Wetland Protection * (P2)	P,D
BA-21	Bayou Perot/Rigolettes Marsh Restoration * (P3)	F
5. Lafourche Parish		
BA-2	GIWW to Clovelly Wetland - protect/enhance * (P1)	C
BA-6	Highway 90 to GIWW Wetland - protection (PD)	F
BA-18	Fourchon Wetland Restoration * (P1)	X
TE-5	Grand Bayou Wetland - protection	F
TE-9	Bully Camp Marsh Management	F
TE-10	Grand Bayou/GIWW Division	F
TE-23	West Belle Pass Headland Restoration * (P2)	P,D
TE-25	East Timbalier Island Restoration (Phase I) * (P3)	F
6. Orleans Parish		
PO-2	Sediment trapping/vegetation planting/shore protection	
	b) Alligator Point - shore protection	F
	c) Bayou Chevee Wetland - protection	Z
PO-11	Cutoff Bayou Marsh Management	F
PO-15	Alligator Point Marsh Restoration	F
PO-16	Bayou Sauvage Refuge Restoration (Phase I) * (P1)	C
PO-18	Bayou Sauvage Refuge Restoration (Phase II) * (P2)	P,D
7. Plaquemines Parish		
BS-1	Bohemia Diversion Structure	
	a) Achieve operation of existing structure	Z
	b) Outfall management	F
BS-3	Caernarvon Diversion Outfall Management * (P2)	F
BS-4	White's Ditch Diversion Siphon	
	a) Outfall management * (P3)	F
	b) Enlargement	F
BS-5	Bayou LaMoque Outfall Management (PD)	F
MR-1	Small Sediment Diversions	
	a) Pass a Loutre State Management Area	Z
	b) Delta National Wildlife Refuge	Z
MR-2	Pass a Loutre Sediment Fencing	F
MR-3	West Bay Sediment Diversion * (P1)	F

(Table 4 continued)

7. Plaquemines Parish (continued)		
MR-4	Tiger Pass Wetland Creation (PD)	F
MR-5	Pass a Loutre Sediment Mining (PD)	F
MR-6	Armored Gap Crevasse * (P3)	P,D
MR-7	Pass a Loutre Crevasse * (P3)	F
BA-3	Naomi (LaReussite) Diversion Siphon	
	a) Siphon construction	Z
	b) Enlargement of diversion capacity	F
	c) Outfall management	F
BA-4	West Pointe a la Hache Diversion Siphon	
	a) Siphon construction	Z
	b) Enlargement of diversion capacity	F
	c) Outfall management * (P3)	F
BA-11	Tiger/Red Pass Diversion and Outfall Management	F
BA-12	Grand/Spanish Pass Diversion	F
BA-13	Hero Canal Diversion	F
BA-17	City Price Diversion	F
	a) Home Place	
	b) Happy Jack	
8. St. Bernard Parish		
PO-1	Violet Siphon Diversion	
	a) Diversion operation	Z
	b) Enlargement	F
	c) Outfall management * (P3)	F
PO-8	Central Wetlands Pump Outfall - enhancement	Z
PO-9	Violet Freshwater Distribution - enhancement * (P3)	F
PO-19	MRGO Diked Marsh Protection * (P3)	F
BS-3	Caernarvon Diversion Outfall Management * (P2)	F
BS-6	Violet Freshwater Distribution (Lake Lery)	F
9. St. Charles Parish		
PO-3	La Branche Wetland - protection and enhancement	
	a) Complete management plan	P,D
	b) Stabilize critical reaches of shoreline	C
PO-4	Bonnet Carré Freshwater Diversion - partial cost-sharing for portion of project to benefit wetlands	C
PO-12	West LaBranche Wetland Management	F
PO-17	Bayou La Branche Wetland Creation * (P1)	Z
BA-1	Davis Pond Freshwater Diversion *	C
BA-5	Sediment trapping/vegetation planting/shore protection	
	c) Baie de Chactas - shoreline protection	Z
BA-7	Couba Island - restore canal closure	C
BA-8	Lake Cataouatche Shore Protection	F
BA-9	Salvador WMA Gulf Canal Project	F
BA-10	Davis Pond Diversion Outfall Management	F
BA-15	Lake Salvador Shore Protection * (P3)	F

(Table 4 continued)

10.	**St. James Parish**	
PO-20	Red Mud Demonstration Project (Modified) * (P3)	F,P
	St. John the Baptist Parish	
PO-5	Southeast Lake Maurepas Wetland	
	a) Reduce ponding of water	F
	b) Small diversion of Mississippi River water	F
PO-10	Turtle Cove Shore protection	Z
	St. Mary Parish	
AT-2	East Atchafalaya Delta Crevasse * (P2)	P,D
AT-3	Big Island Sediment Distribution * (P2)	P,D
T/V-2	Cote Blanche Wetland Protection	Z
T/V-4	Cote Blanche Hydrologic Restoration * (P3)	P,D
	St. Tammany Parish	
PO-6	Fritchie Wetland - marsh restoration * (P2)	P,D
PO-7	North Shore Wetland - marsh restoration	F
PO-14	Green Pt./Goose Pt. Marsh Restoration	F
	Tangipahoa Parish	
PO-13	Tangipahoa/Pontchartrain Shore Protection	F
	Terrebonne Parish	
TE-1	Montegut Wetland - protection and enhancement	Z
TE-2	Falgout Canal Wetland - protection and enhancement	Z
TE-3	Bayou la Cache Wetland - protection and enhancement	P,D
TE-4	Sediment trapping/vegetation planting	
	b) Barrier island - sediment protection	Z
TE-6	Pointe au Chene Wetland - protection and enhancement	F
TE-7	Lake Boudreaux Wetland - protection	
	a) Upper Petit Caillou management area	F
	b) Lower Petit Caillou management area	C
	c) Bayou Grand Caillou management area	C
	d) Water management Lake Boudreaux sub-basin	F
TE-8	Bayou Pelton Wetland - protection	F
TE-10	Grand Bayou/GIWW Division	F
TE-11	Isle Dernieres Cut Closure (part of TE-20)	P,D
TE-12	Bird Island Restoration	F
TE-13	Trinity Bayou Pilot Project	F
TE-14	Pt. Farm Refuge Planting	Z
TE-15	GIWW Levee Planting	F
TE-16	St. Louis Wetland Restoration	F
TE-17	Falgout Canal Plantings * (P1)	Z
TE-18	Timbalier Island Plantings * (P1)	C
TE-19	Lower Bayou La Cache Wetland Restoration * (P1)	P

(Table 4 concluded)

Terrebonne Parish (continued)		
TE-20	Eastern Isles Dernieres Restoration (Phase I) * (P1)	C
TE-21	Falgout Canal South Wetland Creation (PD)	
TE-22	Point au Fer Canal Plugs * (P2)	C
TE-24	Isles Dernieres Restoration (Phase II) * (P2)	C
TE-26	Lake Chapeau Marsh Creation/Hydrologic Rest. * (P3)	F
TE-27	Isles Dernieres Restoration, Pahse III (Whiskey Isl.) * (P3)	P,D
TE-28	Brady Canal Hydrologic Restoration * (P3)	F
TE-29	Raccoon Island Segmented Breakwaters	
Vermilion Parish		
T/V-3	Vermilion River Cutoff - protection/restoration * (P1)	C
T/V-8	Redfish Point Shore Protection	F
T/V-9	Boston Canal/Vermilion Bay Shore Protection * (P2)	Z
T/V-11	Freshwater Bayou Bank Protection	Z
T/V-12	Little Vermilion Bay Sediment Trapping (PD)	
ME-1	Pecan Island Freshwater Introduction	
	a) Pecan Island Structure	Z
	b) Outfall management	Z
ME-4	Freshwater Bayou Wetlands * (P2)	P,D,C
ME-5	White Lake Shore Protection	P,D
ME-7	Deep Lake Marsh Protection	F
ME-8	DeWitt-Rollover Plantings * (P1)	Z
ME-12	White Lake SW Shore Protection * (P3)	F

1) Within each Parish projects are listed in numerical order by hydrologic basin; the order of implementation is determined by the results of feasibility analyses as authorized.

* Federal and state cost-sharing

(P1) To be implemented under PL 101-646, 1st List, with 75/25 federal/state cost-sharing
(P2) To be implemented under PL 101-646, 2nd List, with 75/25 federal/state cost-sharing
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(PD) Implementation under PL 101-646 deferred

Status:
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Basins:

AT = Atchafalaya	C/S = Calcasieu/Sabine	PO = Pontchartrain
BA = Barataria	ME = Mermentau	TE = Terrebonne
BS = Breton Sound	MR = Mississippi River Delta	T/V =Teche/Vermilion

Table 5. Long- and Short-range Programs to be Funded.

Objective: Investigate potential measures requiring further evaluation as part of comprehensive planning efforts to maximize the use of available water and sediment resources to restore and enhance coastal vegetated wetlands. Some of these measures will be implemented through federal/state programs under the Coastal Wetlands Planning, Protection, and Restoration Act (PL 101-646, Title III)

1. Section 303. Priority Louisiana Coastal Wetlands Restoration Projects (federal/state)*

303a. Priority Project List (federal/state)*

Objective: 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.

Status: ongoing.

303b. Federal and State Project Planning and Implementation (federal/state)*

Objective: To develop and implement a comprehensive coastal wetlands restoration plan that addresses large-scale and long-term requirements for the conservation, restoration, and enhancement of Louisiana's coastal wetlands with federal participation. The plan would contain projects in order of priority.

(a) Develop and implement a plan to allocate water and sediments of the Atchafalaya and Mississippi Rivers, including major diversions and increased sediment delivery through the Atchafalaya River, in order to maximize maintenance, restoration, enhancement, and creation of vegetated wetlands.

(b) Develop and implement, in three phases, a plan to restore and develop barrier islands and barrier shores to provide long-term protection for significant coastal resources along- all of Louisiana's Gulf coast using non-structural measures. Phases: 1) Barataria-Terrebonne; 2) Mermentau-Calcasieu/Sabine, 3) Mississippi River Delta-Breton Sound-Pontchartrain.

(c) Modify major navigation channels to retard saltwater intrusion and reduce erosion of adjacent wetlands.

Status: ongoing.

(Table 5 continued)

2. Section 304. Louisiana Coastal Wetlands Conservation Planning (federal/state)*

304 a. Development of Conservation Plan (federal/state)*

Objective: Develop a wetlands conservation plan that has a goal of achieving no net loss of wetlands in Louisiana as a result of development activities, exclusive of any wetlands gains achieved through implementation of Secs. 303a and 303b.

Status: ongoing.

3. Project Operation/Maintenance/Rehabilitation/Monitoring

Objective: To provide for (1) operation, maintenance, and monitoring, and (2) emergency repairs for projects that have been implemented under the authorized Plan.

Status: ongoing.

4. Vegetation, Sedimentation, and Demonstration Program (CRD-DNR)

Objective: To plan and implement marsh restoration and conservation using vegetation planting, sediment trapping, low-cost shore protection, or approved demonstration technology.

(a) Sediment Trapping and Outfall Management in the Mississippi River and Atchafalaya Deltas.

(b) Sediment trapping, vegetation planting, and other low-cost protection along shorelines of coastal bays and lakes.

(c) Demonstration of new wetland conservation and restoration technology through projects approved by the Task Force.

(d) Herbivore control.

Status: ongoing.

5. Governor's Office of Coastal Activities

Objective: To execute powers and duties as provided by Act 6.

Status: ongoing.

6. DNR Coastal Restoration Division / Executive Division

Objective: To execute powers and duties as provided by Act 6.

Status: ongoing.

(Table 5 concluded)

7. Match federal, state, and local funding on coastal vegetated wetlands projects (federal/state) *

Objective: To provide for timely use of federal, state and local funding when available.

Status: ongoing.

* Federal and state cost-sharing

Table 6. Measures Recommended for State and Federal Action or Funding.

A. <u>For State Action</u>

1. **Replacement of the loss of functional coastal wetland values.**

   Objective: Develop rules and regulations to provide, at a minimum, for replacement of the loss of functional coastal wetland values which result from permitted activities in the coastal zone and to help ensure that federal activities are undertaken in a manner that is consistent with the federally approved Louisiana Coastal Resources Program.

   Status: legislation enacted, rule-making in progress.

2. **Mitigation banking.**

   Objective: Develop rules for mitigation banking.

   Status: legislation enacted, rulemaking in progress.

3. **Verret Basin - Southwest Terrebonne Parish.**

   Objective: Request congressional authorization for a comprehensive flood control and wetland restoration and enhancement plan to protect industries and residences that desire protection from backwater flooding and to provide maximum benefits to the wetlands in western Terrebonne Parish and in the Verret Basin. The plan should include provisions by the COE for federally-maintained forced drainage of the Verret Basin and for an appropriately-sized freshwater and sediment diversion in the existing levee south of Morgan City. The plan should provide increased flood protection to the Morgan City - Amelia - Verret Basin area, while still protecting, restoring, and enhancing wetlands.

   Status: U.S. Congress included area in Mississippi River and Tributaries (MR&T) Project in 1992; COE reconaissance completed; state cost-sharing being negotiated.

4. **Atchafalaya River Delta.**

   Objective: Recommend that measures be implemented to enhance growth of the Lower Atchafalaya River Delta within the constraints of flood protection for the Morgan City - Amelia - Verret Basin area. These measures should reduce the capture of flow (and sediment) by the navigation channel to the minimum volume required to maintain the presently-authorized channel dimensions, and increase diversion of flow and sediment through distributary channels so as to promote growth of the emergent delta within Atchafalaya Bay. All materials dredged for maintenance and development of the navigation channel should be used toward this end in order to be consistent with the federally approved Louisiana Coastal Resources Program and State Water Quality Certification.

   Status: initiated under PL 101-404 and continuing.

(Table 6 continued)

5. **Non-point source discharges.**

Objective: Route non-point source discharges and, where appropriate, point source discharges through wetlands to offset saltwater intrusion, enhance vegetation growth, and improve water quality.

Status: continuing.

6. **Vegetated Wetland Mitigation Program.**

Objective: To implement vegetated wetland restoration, protection, or enhancement projects funded by Coastal Use Permit applicants as compensatory mitigation for permitted activities.

Status: legislation enacted, rule making in progress.

B. <u>For Federal Action.</u>

1. **Atchafalaya Delta.**

Objective: Increase delivery of sediment through the Atchafalaya River for marsh building in the Atchafalaya Delta complex, in a manner that will produce no additional flooding of Morgan City and other coastal communities.

Status: ongoing.

2. **Wax Lake Outlet.**

Objective: Maintain at least 30% of total Atchafalaya River flow through Wax Lake Outlet during normal flows.

Status: completed.

3. **Atchafalaya Delta.**

Objective: Implement a management plan for maximizing growth of the Atchafalaya Delta complex within the constraints of flood protection and navigation requirements.

(a) Use dredged material: (1) to expand the area of wetlands, (2) to manage flows so that flow requirements for navigation and flood control are reduced and diversion through distributary channels is increased, and (3) in a manner consistent with the Louisiana Coastal Resources Program and State Water Quality Certification.

(b) Improve efficiency of distributary channels for marsh creation through selective dredging and enhance diversion of flow and sediments into distributaries by restricting further discharge increases of the lower navigation channel.

(c) Enhance sedimentation through the use of sediment fencing.

Status: ongoing.

(Table 6 continued)

4. **Mississippi River Gulf Outlet.**

Objective: Implement structural measures along the Mississippi River Gulf Outlet to reduce saltwater intrusion into the Pontchartrain Basin.

Status: being evaluated under the PL 101-404, Section 303 (b), Comprehensive Plan.

5. **Verret Basin - Southwestern Terrebonne Parish.**

Objective: Request congressional authorization for a comprehensive flood control and wetland restoration and enhancement plan to protect industries and residences that desire protection from backwater flooding and to provide maximum benefits to the wetlands in western Terrebonne Parish and in the Verret Basin. The plan should include provisions by the COE for federally-maintained forced drainage of the Verret Basin and for an appropriately-sized freshwater and sediment diversion in the existing levee south of Morgan City. The plan should provide increased flood protection to the Morgan City - Amelia - Verret Basin area, while still protecting, restoring, and enhancing wetlands.

Status: U.S. Congress included area in MR&T Project in 1992; COE reconaissance completed; state cost-sharing being negotiated.

6. **Bonnet Carré Floodway.**

Objective: Operate Bonnet Carré Floodway for freshwater diversion when feasible and needed.

Status: ongoing.

7. **Freshwater Bayou Structure.**

Objective: Operate Freshwater Bayou Structure to remove excess water from marshes in eastern Vermilion Parish.

Status: ongoing.

8. **Algiers Lock.**

Objective: Operate Algiers Lock for freshwater diversion.

Status: ongoing.

9. **Violet Floodgate.**

Objective: Operate Violet Floodgate for freshwater retention and water-level control.

Status: ongoing.

(Table 6 continued)

Grand - White Lakes Area.

Objective: Reduce Mean Water Levels in the Grand-White Lakes impoundment.

Status: ongoing.

Cameron Creole Watershed.

Objective: Assure continued operation of the Cameron Creole Watershed Project in accordance with both fisheries and wetland restoration and conservation needs.

Status: ongoing.

Teche-Vermilion Diversion.

Objective: Achieve full design capacity of the Teche-Vermilion Diversion Project.

Status: ongoing.

Navigation-Channel Banks

Objective: Bank stabilization and dredged material use from federally maintained navigation channels.

(a) Stabilize and maintain banks of navigation channels in Louisiana where necessary to prevent wetlands loss.

- Mississippi River
- Mississippi River Gulf Outlet *
- Freshwater Bayou *
- Gulf Intracoastal Waterway *
- Barataria Waterway
- Vermilion River Cutoff *
- Calcasieu Ship Channel
- Mermentau Ship Channel
- Bayou Lafourche *
- Houma Navigation Channel

(b) Create marsh and nourish beaches with dredged materials from federally-maintained channels where sediment is not required for navigation channels listed in 13 a.

Status: ongoing (* project authorized or initiated).

14. Gulf Intracoastal Waterway.

Objective: Oppose plans for enlargement of the Gulf Intracoastal Waterway.

Status: ongoing.

(Table 6 concluded)

(Non)-Point-Source Discharges.

Objective: Route non-point source discharges and, where appropriate, point source discharges through wetlands to offset saltwater intrusion, enhance vegetation growth, and improve water quality.

Status: ongoing.

Cost-Sharing.

Objective: Provide federal funding on projects to create, restore, enhance, or conserve coastal vegetated wetlands.

Status: continuing.

APPENDIX B

PROJECT DESCRIPTIONS

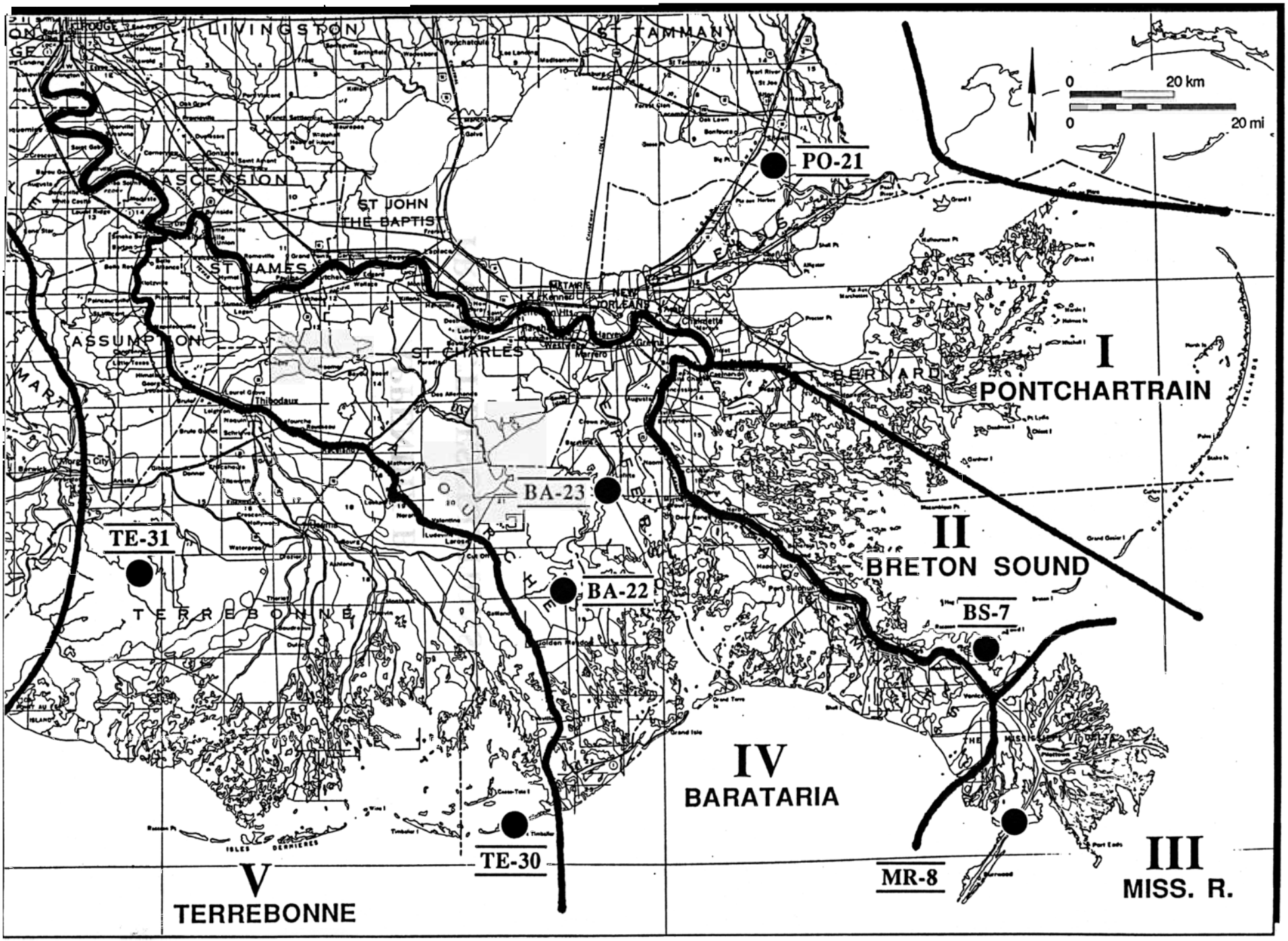


Figure 1 Location of proposed projects in eastern Louisiana.

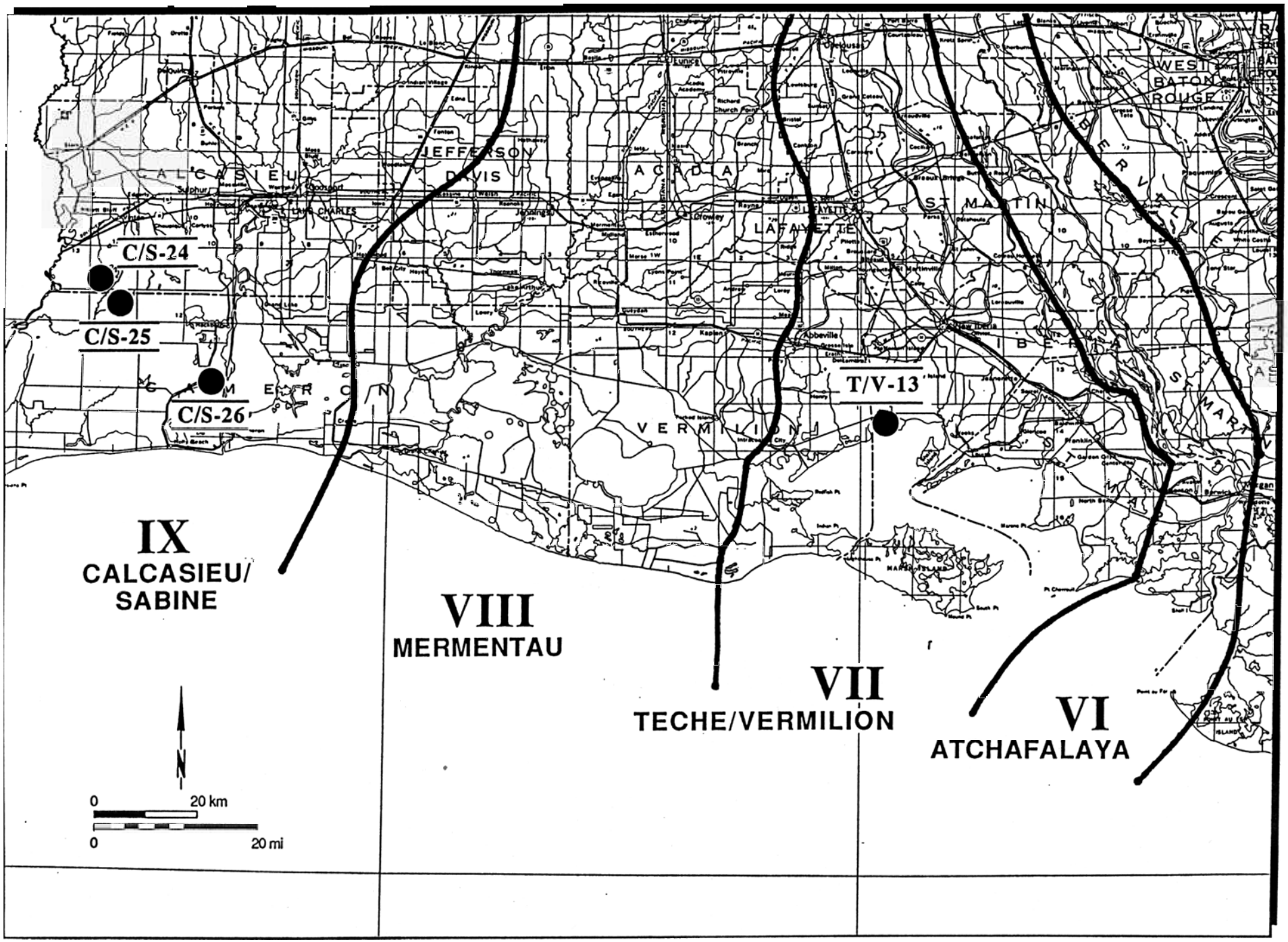


Figure 2. Location of proposed projects in western Louisiana.

PONTCHARTRAIN BASIN

PONTCHARTRAIN BASIN

MAJOR PROBLEMS

Impaired drainage, subsidence, human-made features, and lack of sediment introduction limit regeneration of swamp forests.

Increased water salinities, development, and diminished wetland acreage around Lake Pontchartrain limit water quality.

Wetland loss threatens the two land bridges separating Lakes Maurepas and Pontchartrain, and Lakes Pontchartrain and Borgne respectively.

Bank erosion and saltwater intrusion associated with the Mississippi River Gulf Outlet.

Subsidence and shoreline erosion of St. Bernard Delta marshes.

PROTECTION, RESTORATION, ENHANCEMENT OBJECTIVES

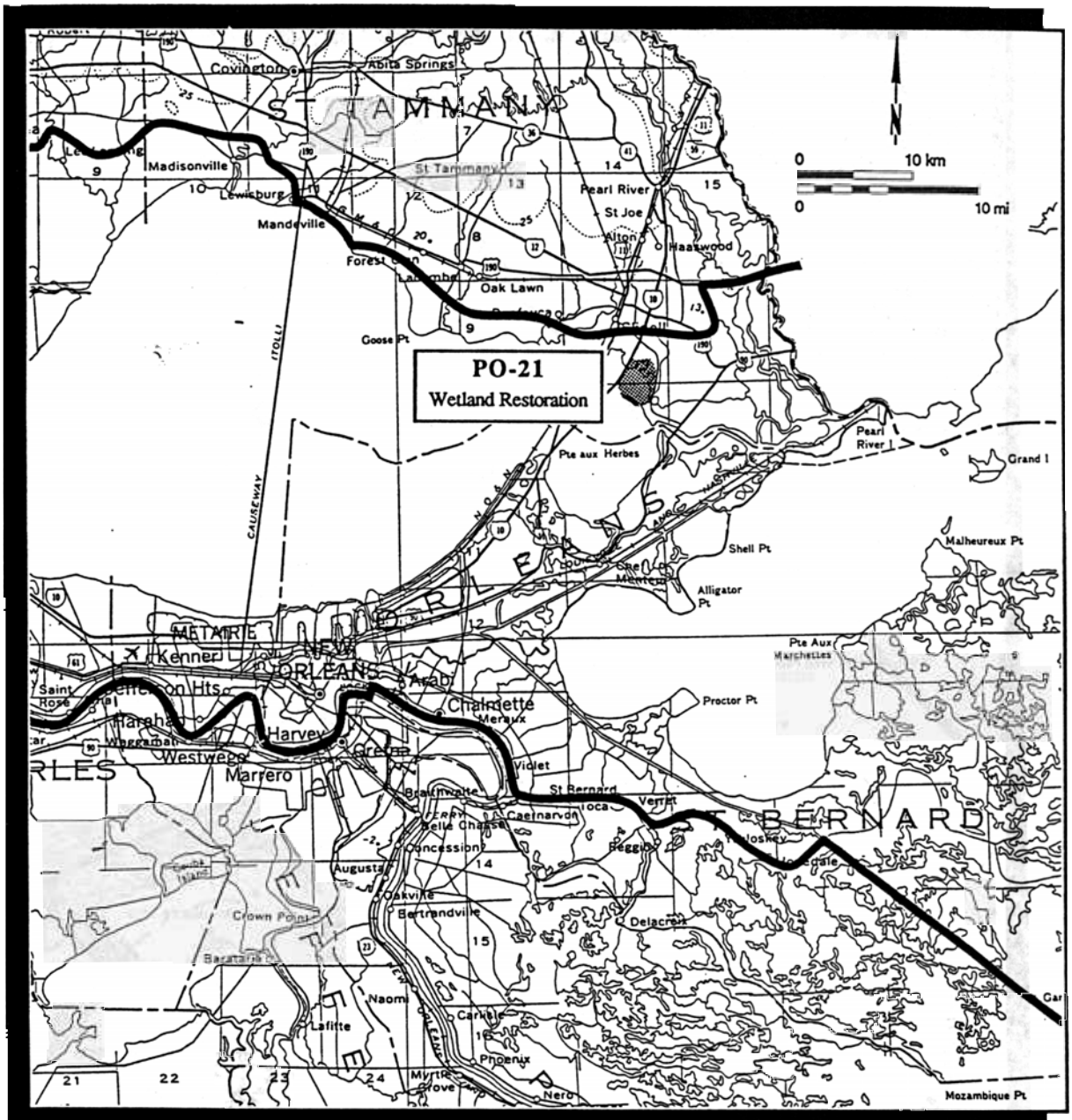
Improve seasonal dewatering of swamps in upper basin.

Enhance water quality of Lake Pontchartrain.

Protection of Lake Borgne and Lake Maurepas land bridges.

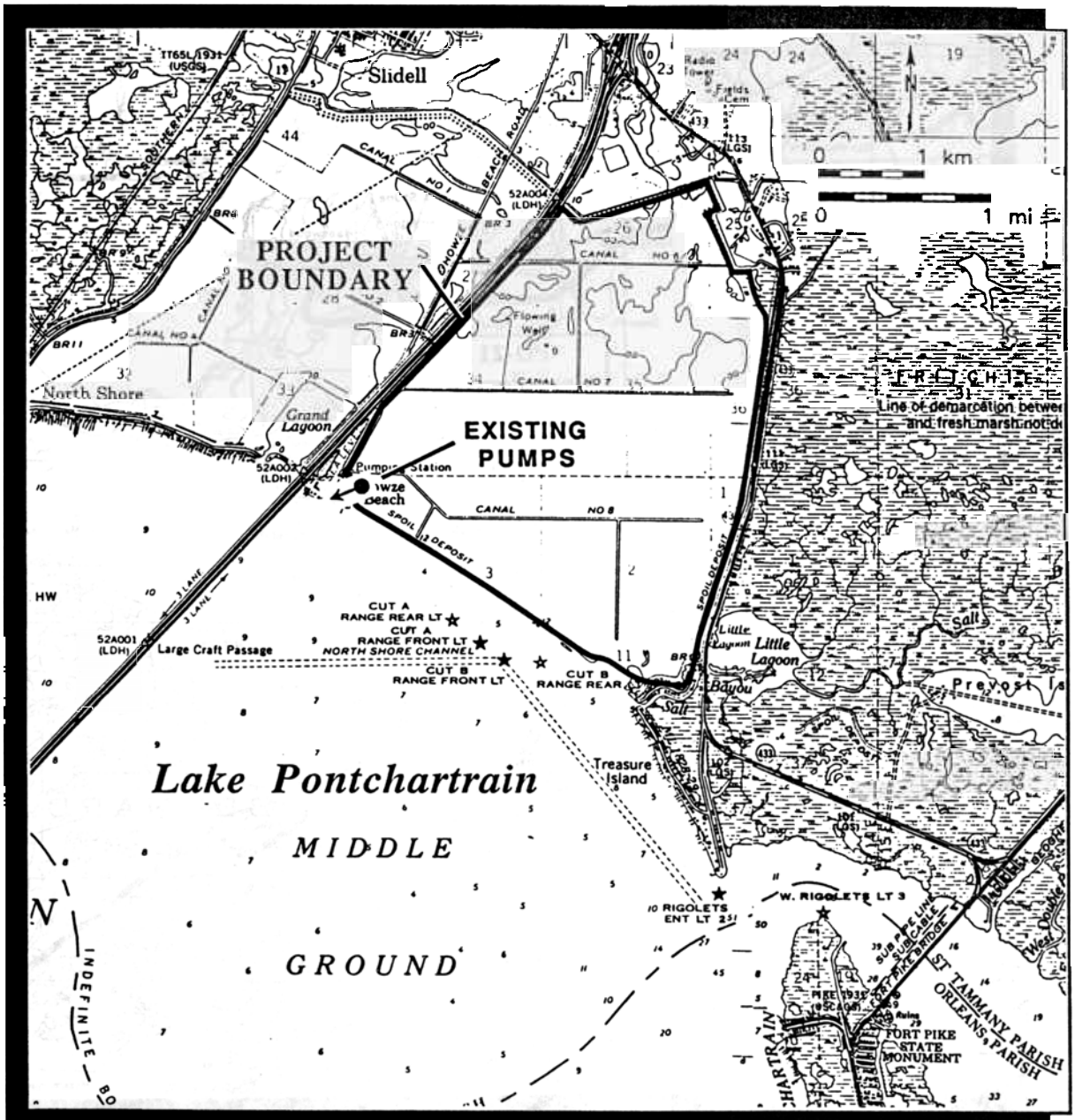
Protection of critical areas in the St. Bernard area.

Address critical, localized wetland loss.



PROJECTS IN THE PONTCHARTRAIN BASIN

PO-21 Eden Isles East Marsh Restoration



PO-21. EDEN ISLES EAST MARSH RESTORATION

Development and natural setting have limited the occurrence of marshes along the margins of Lake Pontchartrain. Wetlands of the Eden Isles East area were converted to fastland for agricultural purposes in the 1920's and placed under forced drainage in the 1970's for anticipated but unrealized development. Purchase of the area will allow restoration of 2,536 ac of wetlands and shallow water bodies through water level management, using the existing pumping station. The estimated cost is $5,019,000.

BRETON SOUND BASIN

MAJOR PROBLEMS

Gradual loss of wetlands as a result of reduced sediment introduction and natural causes including subsidence and wave erosion.

Breaching of flow barriers such as natural levee ridges has caused saltwater intrusion and erosive tidal flows in the upper basin.

Resource management conflicts and lack of outfall management prevent optimum use of freshwater and sediments provided by the Caernarvon Diversion Structure and other diversion features.

PROTECTION, RESTORATION, ENHANCEMENT OBJECTIVES

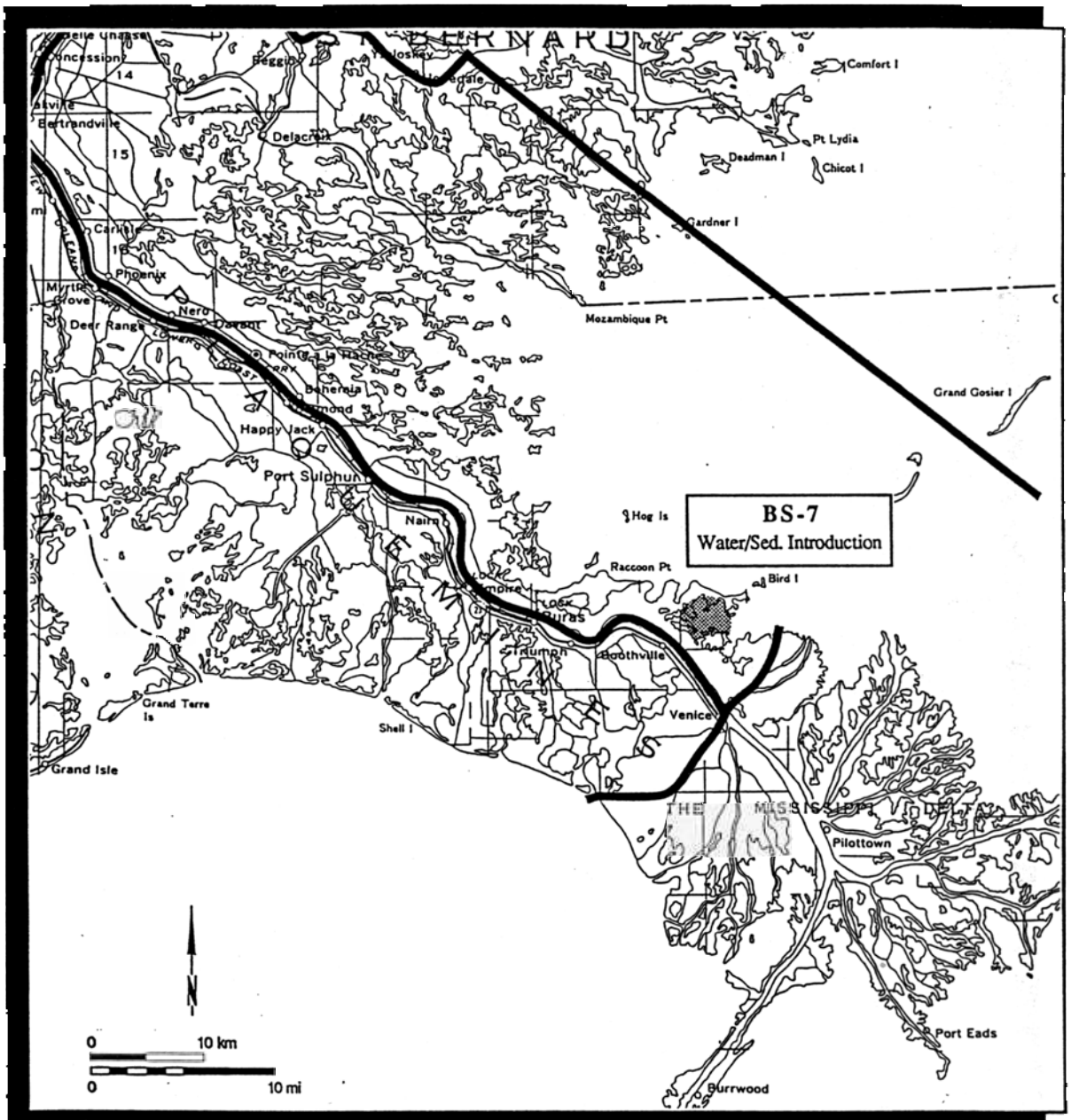
Optimize utilization of existing freshwater diversions for wetland maintenance.

Diversion of freshwater and sediment from the Mississippi River into the lower Basin below Bohemia to create wetlands.

Restore natural hydrologic barriers to buffer incursions of saline water.

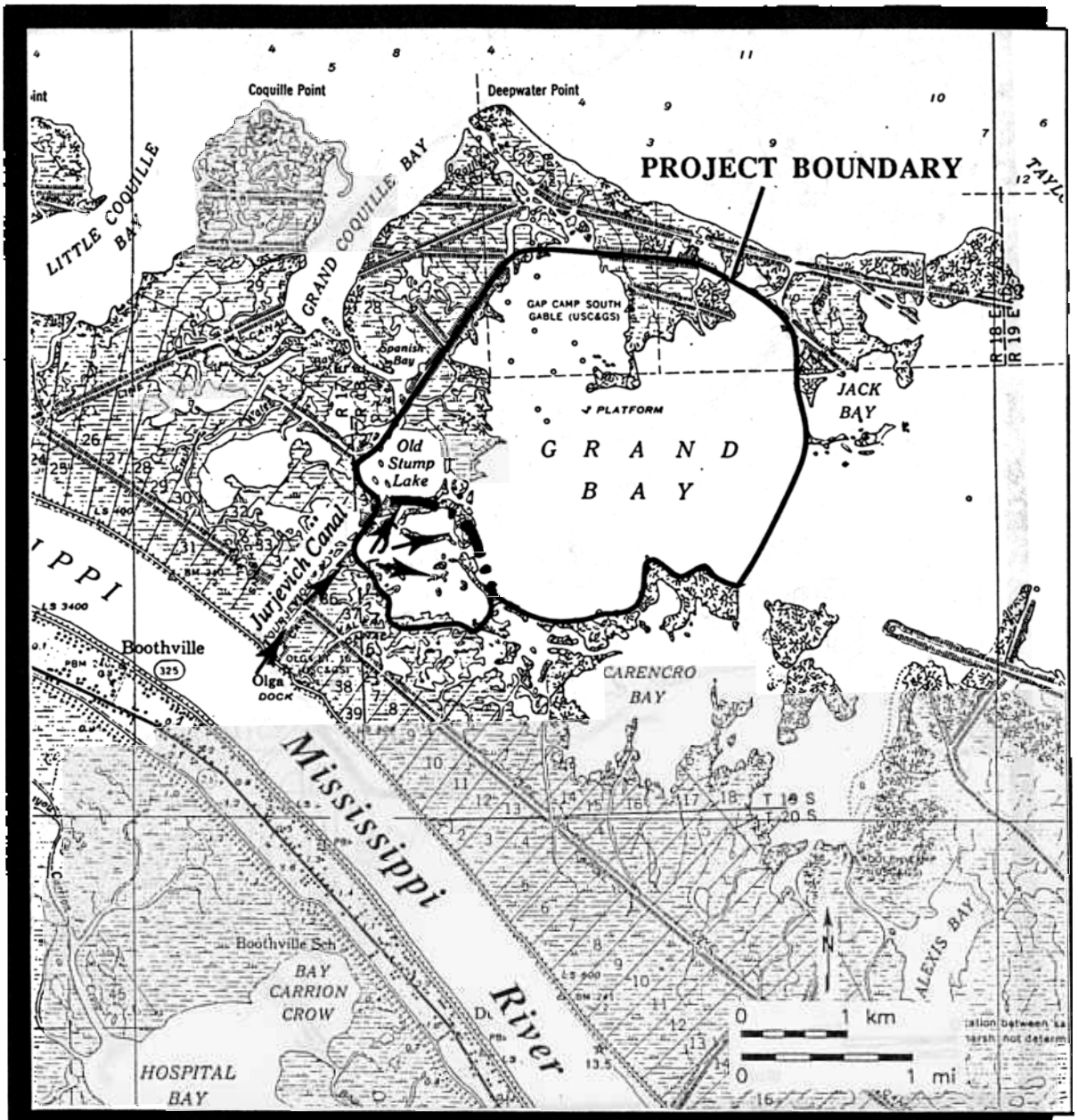
Utilization of dredged material from the MRGO to create wetlands and to provide protection from wave erosion along Breton Sound.

Address critical, localized wetland loss.



PROJECTS IN THE BRETON SOUND BASIN

BS-7 Grand Bay Crevasse



BS-7. GRAND BAY CREVASSE

Little of the Mississippi River sediments currently contribute to maintenance of the coastal wetlands. To improve sediment introduction into the lower Breton Sound wetlands, a rock-lined connection will be established between the Mississippi River and the Jurjevich Canal by modifying the existing bank stabilization works. During high-water stages, this opening will provide for a 20,000 cfs introduction of sediment-laden river water into Grand Bay and adjacent wetlands. The artificial crevasse is expected to create 160 acres of wetlands in Grand Bay and benefit 1,585 acres of existing brackish and saline marsh. The estimated project cost is $2,469,000.

MISSISSIPPI RIVER DELTA

MISSISSIPPI RIVER DELTA

MAJOR PROBLEMS

Development and maintenance of the navigation channel through the Mississippi River Delta adversely affect delta growth and wetland creation.

Rapid subsidence and low sediment retention limit effectiveness of sediment deposition in maintaining wetlands.

Diversion and retention of coarse sediments into basins between distributaries have become limited.

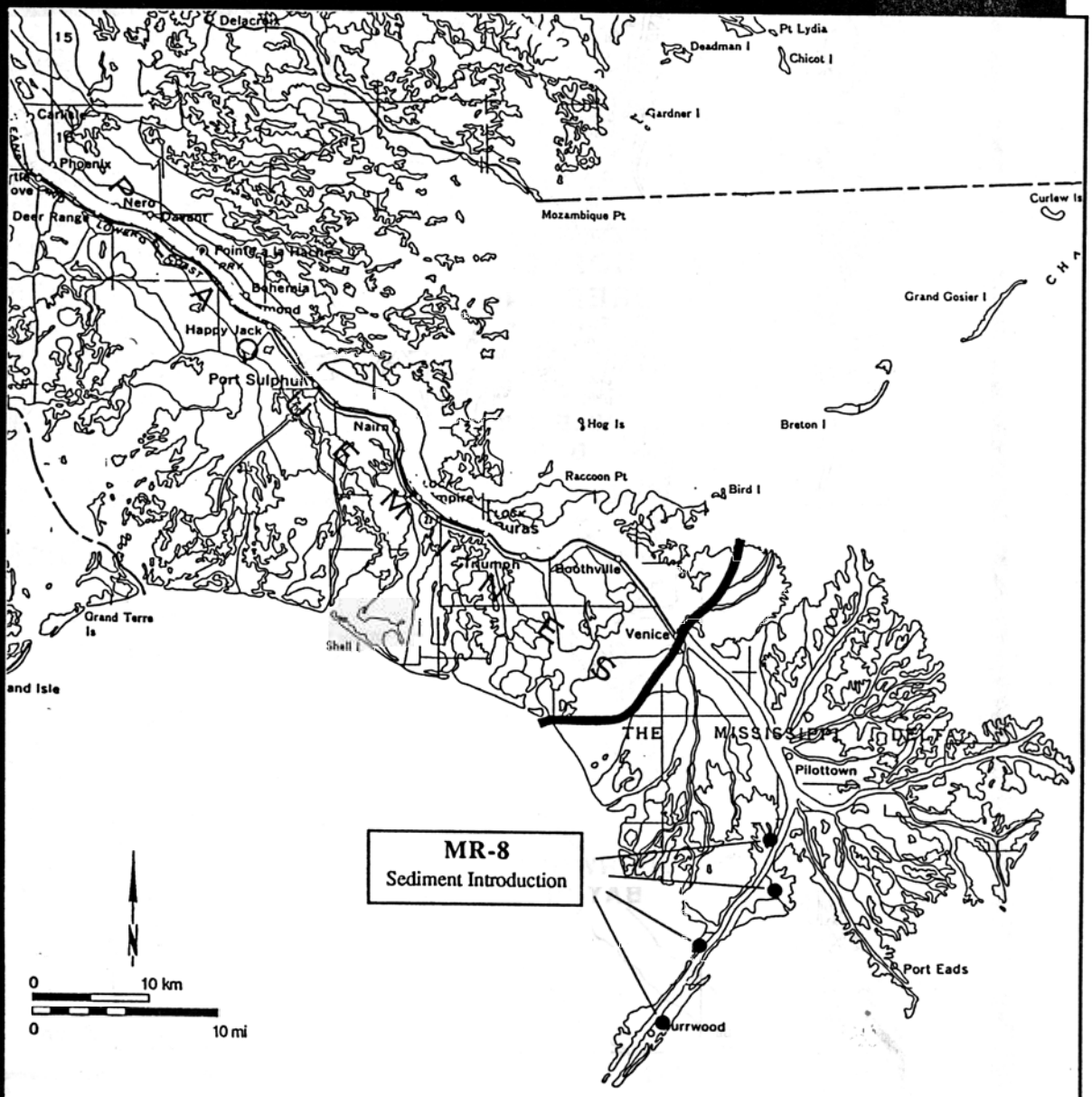
PROTECTION, RESTORATION, ENHANCEMENT OBJECTIVES

Optimize use of available freshwater and sediment resources.

Induce development of crevasses where hydraulic efficiency and sedimentary environments are conducive to delta growth.

Optimize beneficial use of dredged material.

Increase sediment retention in sheltered areas.



PROJECTS IN THE MISSISSIPPI RIVER DELTA

MR-8 Beneficial Use of Hopper-Dredge Material Demonstration