COASTAL-WETLANDS CONSERVATION AND RESTORATION PLAN

(Fiscal Year 1994-95)

Submitted to the
House and Senate Committees
on
Natural Resources

April 1994

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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 1994 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.

Len Bahr
Executive Assistant,
Coastal Activities

John E. Ales
Secretary, Department of
Natural Resources

Joe L. Herring
Secretary, Department of
Wildlife and Fisheries

William A. Kucharski
Secretary, Department of
Environmental Quality

Jude W. P. Patin
Secretary,
Department of Transportation
and Development

Bradley E. Spicer
Assistant Commisioner,
Department of
Agriculture and Forestry

Raymond J. Laborde
Commissioner of
Administration

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, 1994, session of the legislature. The report also draws upon results of past and ongoing wetland investigations and comments by universities and consultants. Furthermore, the constructive review comments provided by state agencies, and the participation in the planning process of each coastal parish are also acknowledged.

The following persons contributed directly to this report:

Governor's Office of Coastal Activities
- Len Bahr, Executive Assistant
- Jim Stone, Special Assistant
- Karen Gautreaux, Special Assistant

Department of Natural Resources
- David Soileau, Assistant Secretary, OCRM
- Bill Good, Administrator, CRD
- James R. Buchtel, P.E., CRD

Department of Environmental Quality
- Dugan Sabins, Environmental Quality Coordinator, OWR

Department of Wildlife and Fisheries
- Philip Bowman, Program Manager for Coastal Restoration

Department of Transportation and Development
- Ed Preau, Deputy Director of Public Works and Flood Control

Department of Agriculture and Forestry
- Butch Stegall, Administrative Coordinator

Coastal Environments, Inc.
- Johannes van Beek, Project Manager
- Karolien Debusschere
- Curtis Latiolais, Laura Harkins

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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 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 has the responsibility to develop a comprehensive policy (Policy) addressing the conservation and restoration of coastal wetlands resources, and to annually develop the Coastal Wetlands Conservation and Restoration Plan. The Plan and Policy will serve as the state's overall strategy for conserving, enhancing, restoring, and creating coastal wetlands. Act 6 provides for the Office of Coastal Restoration and Management in DNR to perform the functions of the state relative to conservation, development, restoration, and enhancement of the state's coastal wetlands resources, and to serve as the primary state agency for implementation of the Plan. Within the Office, the Coastal Management Division has the responsibility of implementing the coastal zone management program, and the Coastal Restoration Division performs the functions of the state relating to conservation, restoration, creation, and enhancement of coastal wetlands in Louisiana.

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

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

(2) A schedule 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 objectives with respect to the management, conservation, or enhancement of vegetated wetland 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.

(1) 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.

(2) 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. It would be inappropriate, then, to allow future permitted developments that adversely impact coastal vegetated wetlands to go unmitigated. 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 functional coastal wetland value losses, which result from future permitted activities, are to be offset by concurrent measures required in a permit (pursuant to R.S. 49: 214.41) to restore these values to the state. In this manner, public trust values (e.g., fish and wildlife values) lost as a result of permitted activities would be offset. Certain activities, as a result of their current exemption from the coastal use permitting 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 5 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.

(3) 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 DEQ and 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 socioeconomic interactions) designed to provide widespread and continuing long-term benefits to vegetated wetlands (e.g., large-scale freshwater and sediment diversions).

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

(4) 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).

(5) Take steps necessary to:

(a) improve predictability and efficiency of the Coastal Use Permitting 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 a large number 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 built upon and evaluated 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 a 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 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, 1994" 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 Restoration and Management. The status is provided by the 1990/93 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 1994/95 are generally of four 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
- 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. An illustrated description of the new projects is provided in Appendix B of this report. A map of coastal Louisiana with project locations precedes that section of the report (Figures 1 and 2). 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 statewide in Table 1 and, with the exception of Project TE-29, constitute the 1993 Priority Project List that has been approved under PL 101-646, Title III, Section 303(a). The project list of Table 1 is composed of two groups. The first group contains those projects for which immediate implementation is recommended. Projects in the second group have been tentatively deferred unless they are advanced under authorization of a previous state Plan, through future priority lists, or as a result of deletion of one or more projects from the first group. Within group 1, 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 1993/94 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 1993/94 Plan documents.

Additionally recommended for new or continued funding from the Wetlands Fund during Fiscal Year 1994/95 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 Corps of Engineers 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.

Priorities and Implementation

The number of proposed projects and available funding make it necessary to establish a priority among the projects in order to guide project-related activities and expenditures.

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

State Number	Federal Number	Project Name	Lead Agency	Parish
		1. Projects recommended for the 1993/94 Priority Project List		
PO-19	(XPO-71)	MRGO Diked Marsh Protection	(ACE)	StBd
BA-4c	(BA-4c)	West Point a la Hache Outfall Management (A-90/91)	(SCS)	Plqs
MR-6	(XMR-10)	Armored Gap Crevasse	(ACE)	Plqs
T/V-4	(T/V-4)	Cote Blanche Hydrologic Restoration (A-91/92)	(SCS)	StMy
C/S-4a	(C/S-4a)	Cameron Creole Watershed Maintenance (A-90/91)	(SCS)	Camr
BA-21	(XBA-65a)	Bayou Perot/Rigolettes Marsh Restoration	(NMFS)	Jefn
MR-7	(MR-8, 9a)	Pass a Loutre Crevasse	(ACE)	Plqs
BA-15	(BA-15)	Lake Salvador Shore Protection Demonstration (A-91/92)	(NMFS)	StCs
TE-25	(XTE-67)	East Timbalier Island Restoration	(NMFS)	Lafr
C/S-23	(XCS-47+)	Sabine Refuge Water Control Structures	(FWS)	Camr
BS-4a	(BS-4a)	White's Ditch Outfall Management (A-90/91)	(SCS)	Plqs
TE-26	(PTE-23+)	Lake Chapeau Marsh Creation / Hydrologic Restoration	(NMFS)	Terb
TE-27	(PTE-15bi)	Isles Dernieres Restoration, Phase III (Whiskey Island)	(EPA)	Terb
TE-28	(PTE-26b)	Brady Canal Hydrologic Restoration	(SCS)	Terb
ME-12	(PME-6)	White Lake SW Shore Protection Demonstration	(SCS)	Vrml
PO-1c/9a	(PO-9a)	Violet Freshwater Distribution (A-90/91)	(SCS)	StBd
PO-20	(XTE-43)	Red Mud Demonstration Project (Modified)	(EPA)	StJm
		2.Projects recommended but tentatively deferred for action 2)		
BS-5	(BS-5)	Bayou Lamoque Outfall Management (A-90/91)	(SCS)	Plqs
TV-12	(PT/V-19)	Little Vermilion Bay Sediment Trapping	(NMFS)	Vrml
TE-29	(PTE-15vii)	Raccoon Island Segmented Breakwaters	(SCS/EPA)	Terb

1) All projects, except TE-29, are presently eligible for 75/25 % federal/state cost sharing under PL 101-646. Within group 1, projects are listed in order of decreasing cost effectiveness. Codes preceding each project name are those used for identification under the state and PL 101-646 (in parenthesis) programs respectively.

2) Action on projects within group 2 will be deferred unless they are pursued under the authorization of a previous state Plan, one of the projects of group 1 is delayed for some unforeseen reason, or they are advanced through future priority lists.

(A-) Authorized under a previous state Plan; numbers indicate the fiscal year in which the projects were authorized.

Sponsoring federal agency:
ACE = U.S. Army Corps of Engineers NMFS = National Marine Fisheries Service
EPA = U.S. Environmental Protection Agency SCS = U.S. Soil Conservation Service
FWS = U.S. Fish and Wildlife Service

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

Parishes:
Camr = Cameron Plqs = Plaquemines StJm = Saint James
St My= St. Mary Jefn = Jefferson StBd = St. Bernard
Terb = Terrebonne Lafr = Lafourche StCs = St. Charles
Vrml = Vermilion

That priority is provided for 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. For the federal/state cost-shared projects listed in Table 1 it is proposed that expenditures be made 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 Wetland Fund, cost is decreased and cost effectiveness increased if costs are shared by the local sponsor.

Evaluation for cost-effectiveness has been completed for projects contained in Table 1, and for the 1990/93 projects listed in Appendix A, Tables 3 and 4. All the 1990/93 projects for which funding has been provided 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 other than the division of the projects into the two groups discussed above. These projects 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 governmental mandates of state and federal agencies and because a number of projects were identified for which costs are to be shared by state, local, or federal government. Some parishes have indicated a willingness to share in the cost of design and construction of several projects, which would affect project ranking 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 the landowner 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 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 rather than a project 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:

1.	Project Implementation	$ 10,000,000
	(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	$ 4,000,000
3.	Measures Recommended for Action or Funding	$ 2,000,000
	Total	$ 16,000,000

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-19	MRGO Diked Marsh Protection	StBd
PO-1c/9a	Violet Freshwater Distribution (A-90/91)	StBd
PO-20	Red Mud Demonstration Project (Modified)	StJm
2. Breton Sound Basin		
BS-4a	White's Ditch Outfall Management (A-90/91)	Plqs
3. Mississippi River Delta		
MR-6	Armored Gap Crevasse	Plqs
MR-7	Pass a Loutre Crevasse	Plqs
4. Barataria Basin		
BA-4c	West Pointe a la Hache Outfall Management (A-90/91)	Plqs
BA-21	Bayou Perot/Rigolettes Marsh Restoration	Jefn
BA-15	Lake Salvador Shore Protection Demonstration (A-91/92)	StCs
5. Terrebonne Basin		
TE-25	East Timbalier Island Restoration	Lafr
TE-26	Lake Chapeau Marsh Creation / Hydrologic Restoration	Terb
TE-27	Isles Dernieres Restoration, Phase III (Whiskey Island)	Terb
TE-28	Brady Canal Hydrologic Restoration	Terb
6. Teche/Vermilion Basin		
T/V-4	Cote Blanche Hydrologic Restoration (A-91/92)	StMy
7. Mermentau Basin		
ME-12	White Lake SW Shore Protection Demonstration	Vrml
8. Calcasieu/Sabine Basin		
C/S-4a	Cameron Creole Watershed Maintenance (A-90/91)	Camr
C/S-23	Sabine Refuge Water Control Structures	Camr

(Table 1 continued)

Project		Parish
B. Projects recommended but tentatively deferred for action 2)		
1. Breton Sound Basin		
BS-5	Bayou Lamoque Outfall Management (A-90/91)	Plqs
2. Terrebonne Basin		
TE-29	Raccoon Island Segmented Breakwaters	Terb
3. Teche/Vermilion Basin		
T/V-12	Little Vermilion Bay Sediment Trapping	Vrml

1) All projects 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

2) Action on projects within group B will be deferred unless they are pursued under the authorization of a previous state Plan, one of the projects of group A is delayed for some unforeseen reason, or projects are advanced through future priority lists.

(A-) Authorized under a previous state Plan; numbers indicate the fiscal year in which the projects where authorized.

Basins:

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

Parishes:

Camr	=	Cameron	StBd	=	St. Bernard	St My	=	St. Mary
Jefn	=	Jefferson	StCs	=	St. Charles	Terb	=	Terrebonne
Lafr	=	Lafourche	StJm	=	Saint James	Vrml	=	Vermilion
Plqs	=	Plaquemines						

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-4a	Cameron Creole Watershed Maintenance (A-90/91)
C/S-23	Sabine Refuge Water Control Structures

2. **Jefferson Parish**

BA-21	Bayou Perot/Rigolettes Marsh Restoration

3. **Lafourche Parish**

TE-25	East Timbalier Island Restoration

4. **Plaquemines Parish**

BA-4c	West Pointe a la Hache Outfall Management (A-90/91)
MR-6	Armored Gap Crevasse
MR-7	Pass a Loutre Crevasse
BS-4a	White's Ditch Outfall Management (A-90/91)

5. **St. Bernard Parish**

PO-19	MRGO Diked Marsh Protection
PO-1c/9a	Violet Freshwater Distribution (A-90/91)

6. **St. Charles Parish**

BA-15	Lake Salvador Shore Protection Demonstration (A-91/92)

7. **St. James Parish**

PO-20	Red Mud Demonstration Project (Modified)

8. **St. Mary Parish**

T/V-4	Cote Blanche Hydrologic Restoration (A-91/92)

9. **Terrebonne Parish**

TE-26	Lake Chapeau Marsh Creation / Hydrologic Restoration
TE-27	Isles Dernieres Restoration, Phase III (Whiskey Island)
TE-28	Brady Canal Hydrologic Restoration

10. **Vermilion Parish**

ME-12	White Lake SW Shore Protection Demonstration

(Table 2 concluded)

B. Projects recommended but tentatively deferred for action. 2)

1. Plaquemines Parish

BS-5 Bayou Lamoque Outfall Management (A-90/91)

2. Terrebonne Parish

TE-29 Raccoon Island Segmented Breakwaters

2. Vermilion Parish

T/V-12 Little Vermilion Bay Sediment Trapping

1) All projects 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.

2) Action on projects within group B will be deferred unless they are pursued under the authorization of a previous state Plan, one of the projects of group A is delayed for some unforeseen reason, or projects are advanced through future priority lists.

(A-) Authorized under a previous state Plan; numbers indicate the fiscal year in which the projects where authorized.

Basins:

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

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		Orls
	b) Alligator Point - shore protection	F	
	c) Bayou Chevee Wetland - protection	C	
PO-3	La Branche Wetland - protection and enhancement		StCs
	a) Complete management plan	P,D	
	b) Stabilize critical reaches of shoreline	P,D	
PO-4	Bonnet Carré Freshwater Diversion - partial cost-sharing for portion of project to benefit wetlands	C	StCs
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	C	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)	C	StCs
PO-18	Bayou Sauvage Refuge Restoration (Phase II) * (P2)	P,D	Orls
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		Plqs
	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
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		Plqs
	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	C	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	P,D	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)	C	Jefn
BA-17	City Price Diversion	F	Plqs
	a) Home Place		
	b) Happy Jack		
BA-18	Fourchon Wetland Restoration * (P1)	F	Lafr
BA-19	Barataria Bay Waterway Wetland Creation * (P1)	P,D	Jefn
BA-20	Jonathan Davis Wetland Protection * (P2)	F	Jefn
5. Terrebonne Basin			
TE-1	Montegut Wetland-protection and enhancement	Z	Terb
TE-2	Falgout Canal Wetland-protection and enhancement	C	Terb
TE-3	Bayou la Cache Wetland-protection and enhancement	P,D	Terb

(Table 3 continued)

5. Terrebonne Basin (continued)			
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	F	
	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	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,D	Terb
TE-20	Eastern Isles Dernieres Restoration (Phase I) * (P1)	P,D	Terb
TE-21	Falgout Canal South Wetland Creation * (PD)		Terb
TE-22	Point au Fer Canal Plugs * (P2)	P,D	Terb
TE-23	West Belle Pass Headland Restoration * (P2)	P,D	Lafr
TE-24	Isles Dernieres Restoration (Phase II) * (P2)	P,D	Terb
6. Atchafalaya Basin			
AT-2	East Atchafalaya Delta Crevasse * (P2)	F	StMy
AT-3	Big Island Sediment Distribution * (P2)	F	StMy
7. Teche/Vermilion Basin			
T/V-1	Sediment trapping/vegetation planting/shore protection		Ibra
	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)	P	Vrml
T/V-4	Cote Blanche Hydrologic Restoration * (P3) †	F	StMy
T/V-5	Marsh Island Canal Backfilling	F	Ibra
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)	P,D	Vrml
T/V-10	Weeks Bay Shore Restoration	F	Ibra
T/V-11	Freshwater Bayou Bank Protection	Z	Vrml

(Table 3 continued)

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	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)	C	Vrml
ME-9	Cameron Prairie Refuge Protection * (P1)	C	Camr
ME-10	Sawmill Canal Water Management (PD)	P,D	Camr
ME-11	Humble Canal Water Management (PD)	P,D	Camr
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)	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)	C	Camr
C/S-19	West Hackberry Plantings * (P1)	Z	Camr
C/S-20	Mud Lake Wetland Management * (P2)	P,D	Camr
C/S-21	Hwy 384 Wetland Protection * (P2)	P,D	Camr
C/S-22	Clear Marais Wetland Protection * (P2)	P,D	Calc

(Table 3 concluded)

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

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Status:

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

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

	Project	Status
1.	**Calcasieu Parish**	
C/S-22	Clear Marais Wetland Protection * (P2)	P,D
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)	C
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)	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)	C
C/S-19	West Hackberry Plantings * (P1)	Z
C/S-20	Mud Lake Wetland Management * (P2)	P,D
C/S-21	Hwy 384 Wetland Protection * (P2)	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	C
BA-14	Little Lake Marsh Management	F
BA-16	Segnette Wetland (L. Salvador) Protection (P1D)	C
BA-19	Barataria Bay Waterway Wetland Creation * (P1)	P,D
BA-20	Jonathan Davis Wetland Protection * (P2)	F
5. Lafourche Parish		
BA-2	GIWW to Clovelly Wetland - protect/enhance * (P1)	C
BA-6	Highway 90 to GIWW Wetland - protection * (P1D)	F
BA-18	Fourchon Wetland Restoration * (P1)	F
TE-5	Grand Bayou Wetland - protection	F
TE-9	Bully Camp Marsh Management	F
TE-23	West Belle Pass Headland Restoration * (P2)	P,D
6. Orleans Parish		
PO-2	Sediment trapping/vegetation planting/shore protection	
	b) Alligator Point - shore protection	F
	c) Bayou Chevee Wetland - protection	C
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
MR-4	Tiger Pass Wetland Creation * (P1D)	F
MR-5	Pass a Loutre Sediment Mining * (PD)	F

(Table 4 continued)

6. Plaquemines Parish (continued)		
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
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	P,D
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)	C
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	P,D
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. 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	C
11.	**St. Mary Parish**	
AT-2	East Atchafalaya Delta Crevasse * (P2)	F
AT-3	Big Island Sediment Distribution * (P2)	F
T/V-2	Cote Blanche Wetland Protection	Z
T/V-4	Cote Blanche Hydrologic Restoration * (P3) †	F
12.	**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
13.	**Tangipahoa Parish**	
PO-13	Tangipahoa/Pontchartrain Shore Protection	F
14.	**Terrebonne Parish**	
TE-1	Montegut Wetland - protection and enhancement	Z
TE-2	Falgout Canal Wetland - protection and enhancement	C
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	F
	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,D
TE-20	Eastern Isles Dernieres Restoration (Phase I) * (P1)	P,D
TE-21	Falgout Canal South Wetland Creation * (PD)	

(Table 4 concluded)

14.	**Terrebonne Parish (continued)**	
TE-22	Point au Fer Canal Plugs * (P2)	P,D
TE-24	Isles Dernieres Restoration (Phase II) * (P2)	P,D
15.	**Vermilion Parish**	
T/V-3	Vermilion River Cutoff - protection/restoration * (P1)	P
T/V-8	Redfish Point Shore Protection	F
T/V-9	Boston Canal/Vermilion Bay Shore Protection * (P2)	P,D
T/V-11	Freshwater Bayou Bank Protection	Z
ME-1	Pecan Island Freshwater Introduction	
	a) Pecan Island Structure	Z
	b) Outfall management	Z
ME-4	Freshwater Bayou Wetlands * (P2)	P,D
ME-5	White Lake Shore Protection	P,D
ME-7	Deep Lake Marsh Protection	F
ME-8	DeWitt-Rollover Plantings * (P1)	C

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.

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ME	=	Mermentau			

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) Rebuild and protect back-barrier marsh platform of barrier islands from Sandy Point to Raccoon Point through dredged material placement, structural measures, or combinations as appropriate.

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

Status: ongoing.

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.

(Table 5 continued)

3. Land Loss and Marsh Creation Study (federal/state)*

Objective: Identify, evaluate, and implement measures to create marsh using diversion of sediment from the Mississippi River and dredged material.
Status: Terminated, superceded by Section 303.

4. 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.

5. National Estuary Program (EPA/State)*

Objective: To develop and implement plans to protect the integrity of the Barataria-Terrebonne estuaries.
Status: ongoing.

6. 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.
Status: ongoing.

(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.

7. Governor's Office of Coastal Activities

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

8. DNR Coastal Restoration Division / Executive Division

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

(Table 5 concluded)

9. 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. For State Action

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: 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 Corps 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 in progress; 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: initiated and 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: new, 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: ongoing.

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.
Status: ongoing.

(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.

(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 Corps 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 in progress; 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.

10. **Grand - White Lakes Area.**

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

(Table 6 continued)

11. 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.

12. Teche-Vermilion Diversion.

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

13. 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 not required for 12 a.

Status: ongoing (* project authorized or initiated).

14. Gulf Intracoastal Waterway.

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

15. (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.

(Table 6 concluded)

16.	**Cost-Sharing.** **Objective:** Match federal funding on projects to create, restore, enhance, or conserve coastal vegetated wetlands. **Status:** initiated and continuing.

APPENDIX B

PROJECT DESCRIPTIONS

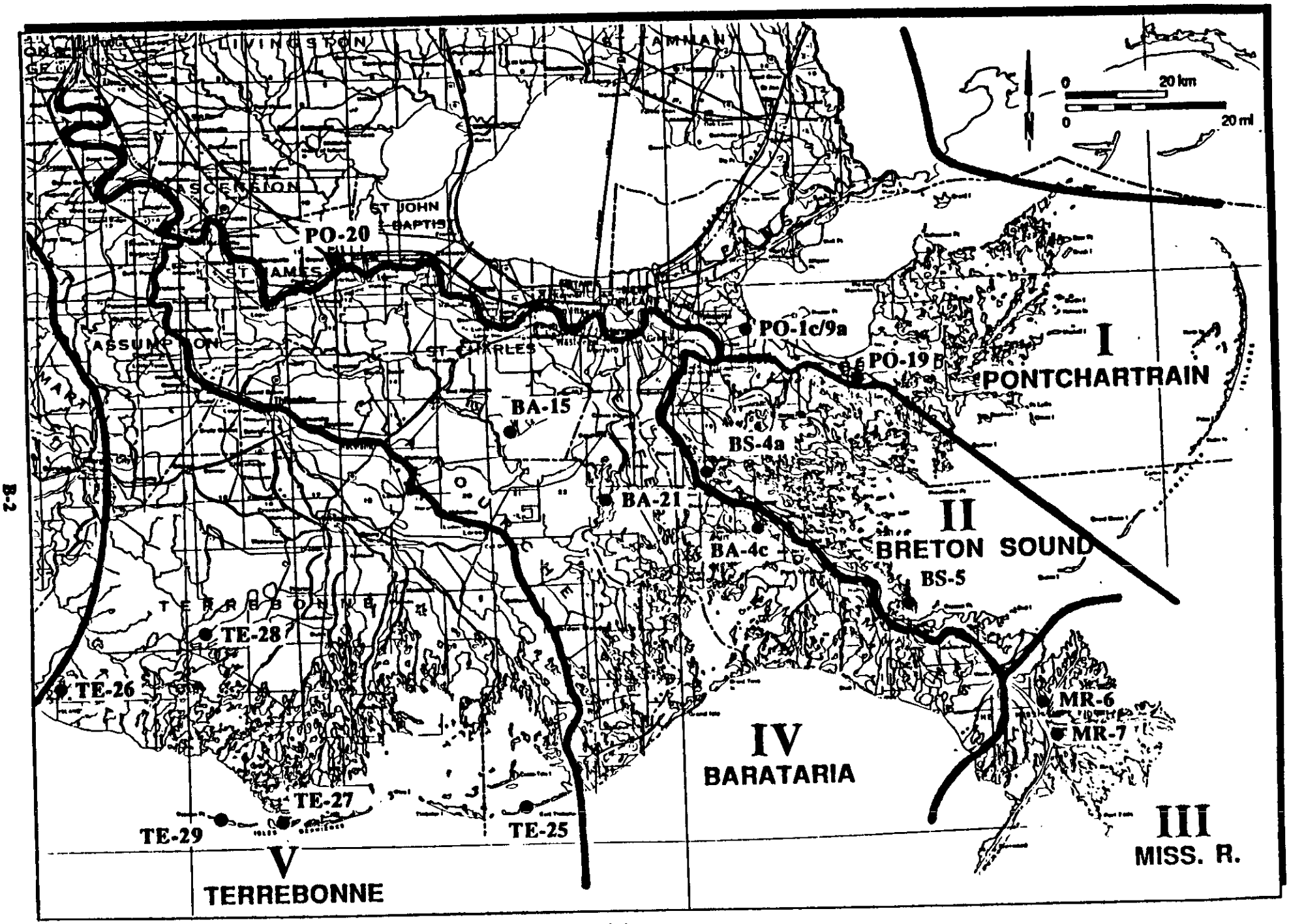


Figure 1. Location of proposed projects in eastern Louisiana.

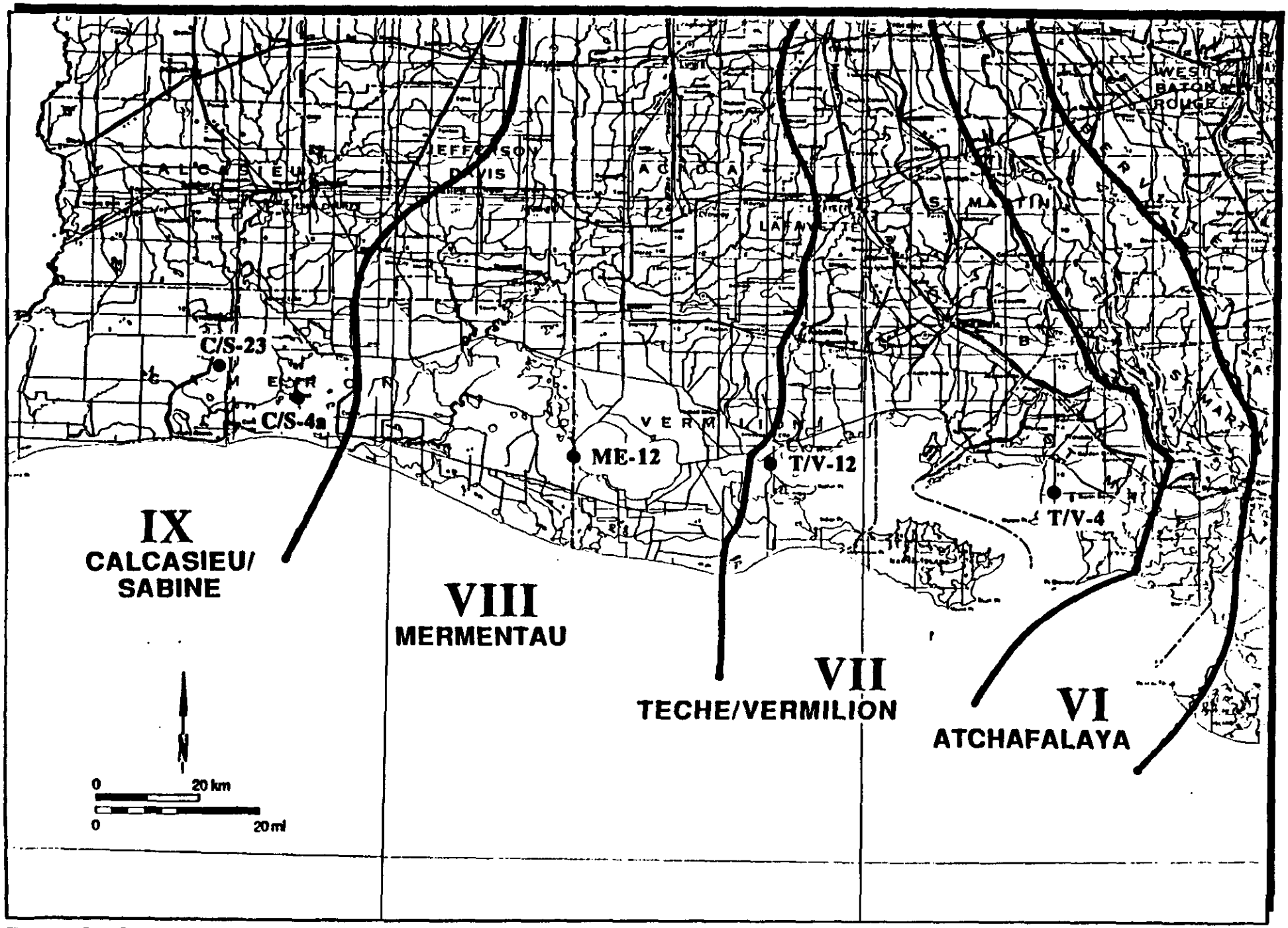


Figure 2. Location of proposed projects in western Louisiana.

PONTCHARTRAIN BASIN

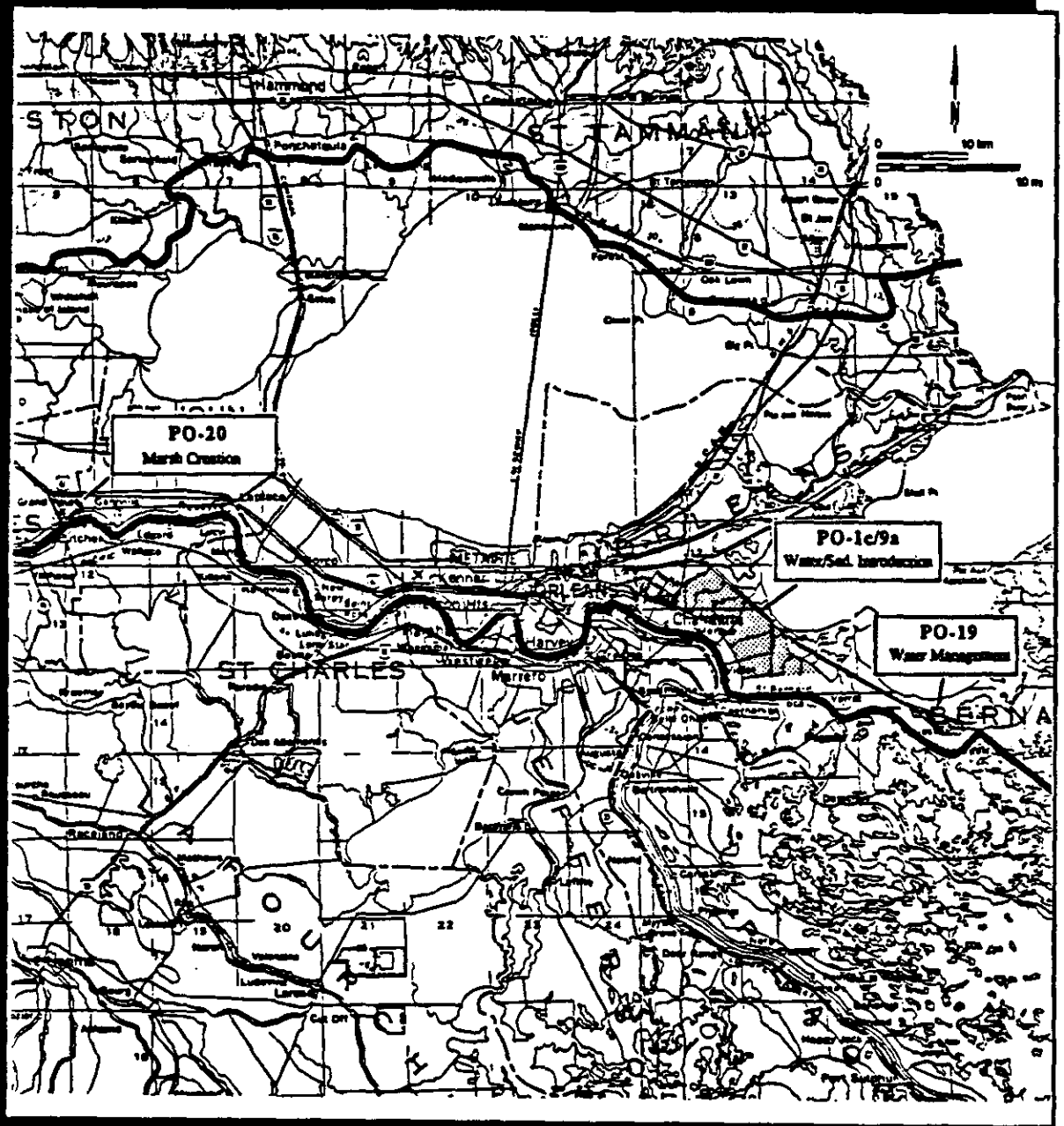
PONTCHARTRAIN BASIN

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 .

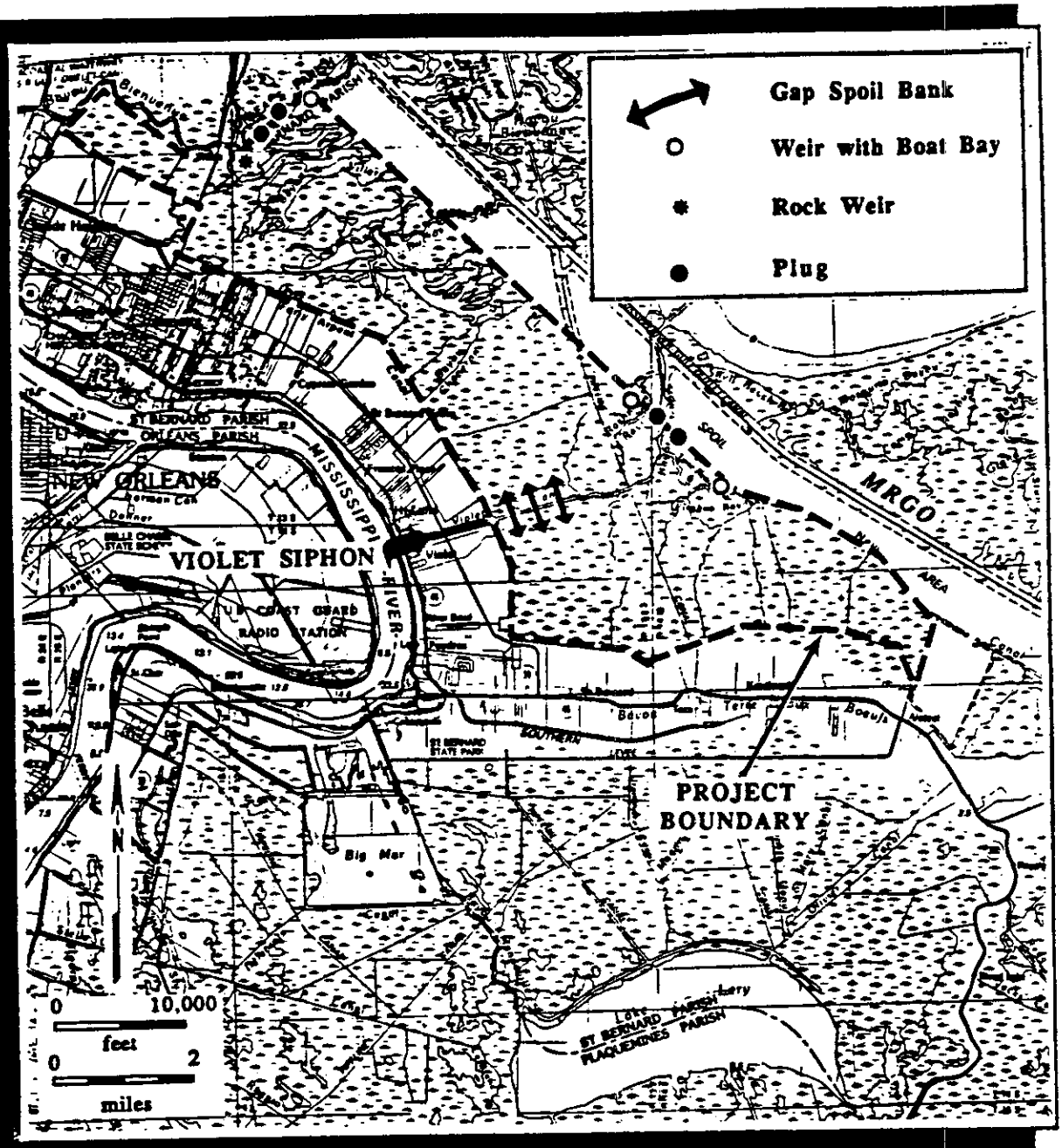
PROTECTION, RESTORATION, ENHANCEMENT OBJECTIVES

- 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.



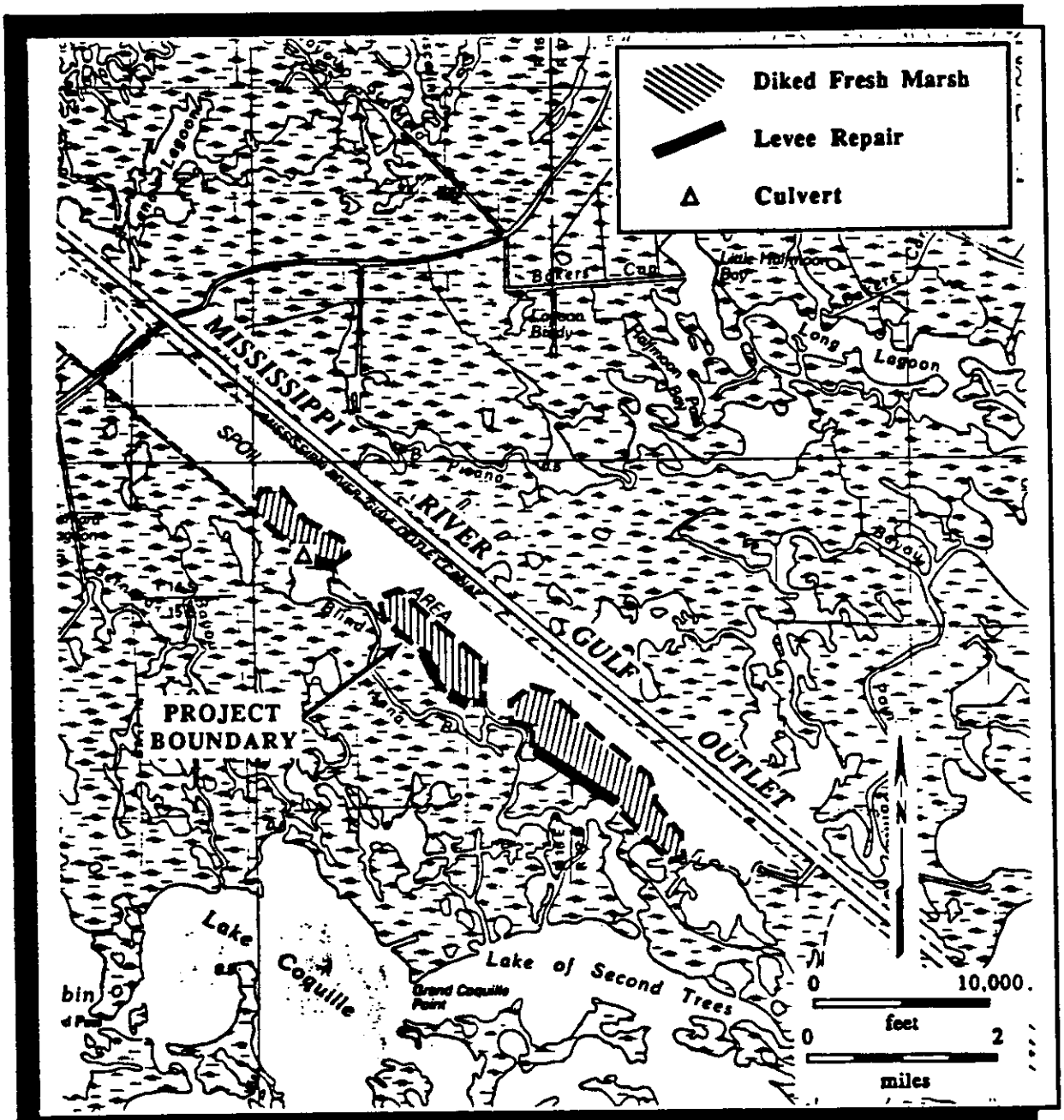
PROJECTS IN THE PONTCHARTRAIN BASIN

PO-1c/9a	Violet Freshwater Distribution
PO-19	MRGO Diked Marsh Protection
PO-20	Red Mud Demonstration Project (Modified)



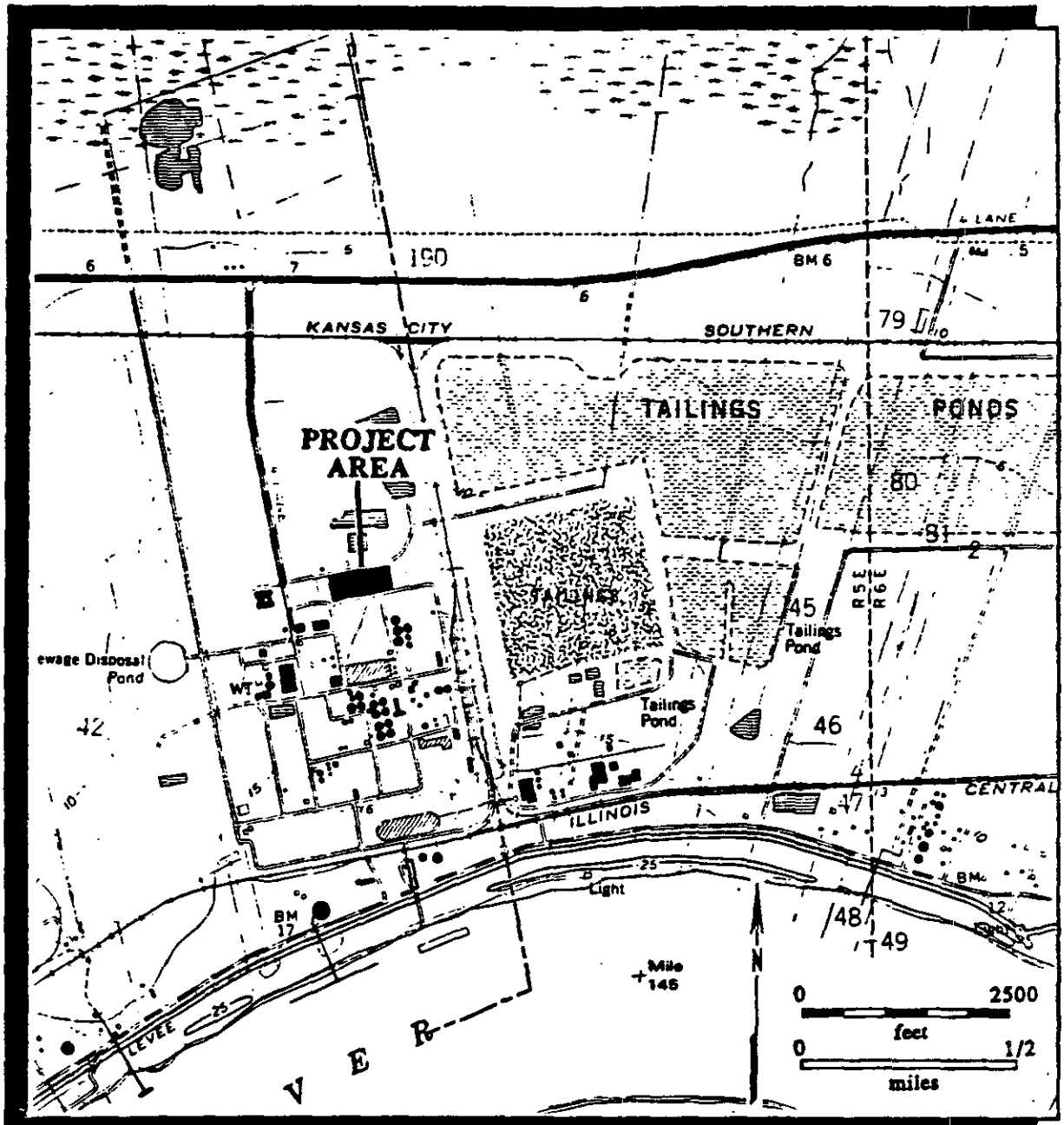
PO-1c/9a. VIOLET FRESHWATER DISTRIBUTION

The Central Wetlands in St. Bernard Parish were converted from swamp and intermediate marsh to brackish marsh and open water as a result of saltwater intrusion from the MRGO. Freshwater is introduced into the area by the existing Violet siphon but remains insufficiently distributed. Freshwater flow and distribution into the marsh will be improved by gapping the banks of the Violet Canal and constructing weirs with boat bays in the back levee canal, a rock weir and two plugs along Bayou Bienvenue, and two earthen plugs in the pipeline canal paralleling the back levee canal near Bayou Dupre. The project is expected to benefit 1,062 acres at an estimated cost of $1,821,438.



PO-19. MRGO DIKED MARSH PROTECTION

Fresh marsh exists within the dredged material disposal area along the south bank of the MRGO. The marsh is maintained as a result of freshwater ponding between spoil containment dikes and is extremely valuable to waterfowl. Without maintenance and repair of the dikes the marsh will drain and convert to upland vegetation. The back dike of the MRGO disposal area will be repaired south of the La Loutre ridge, and containment dikes will be repaired or built at right angles to the waterway to create small units. Culverts will be placed in the dikes to control water levels within the units. The project is expected to benefit 1,500 acres of marsh at an estimated cost of $512,198.



PO-20. RED MUD DEMONSTRATION PROJECT (MODIFIED)

The project will evaluate the feasibility of using residual sediments (red mud), derived from the processing of Bauxite, as a source of material for the creation of new wetlands. The objectives of this project are to demonstrate that residual sediments from processed Bauxite can sustain wetland biota and to evaluate environmental aspects prior to placing red mud in a controlled or natural estuarine setting. Testing will be done in a controlled upland environment, on a 3-acre site within the Kaiser Aluminum facility at Gramercy. The site will be surrounded by an earthen ring levee for the purpose of water level control and simulation of a wetland environment. The estimated cost of the project is $350,000, not including the $183,000 cost share of the Kaiser Aluminum and Chemical Corporation.

BRETON SOUND BASIN

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

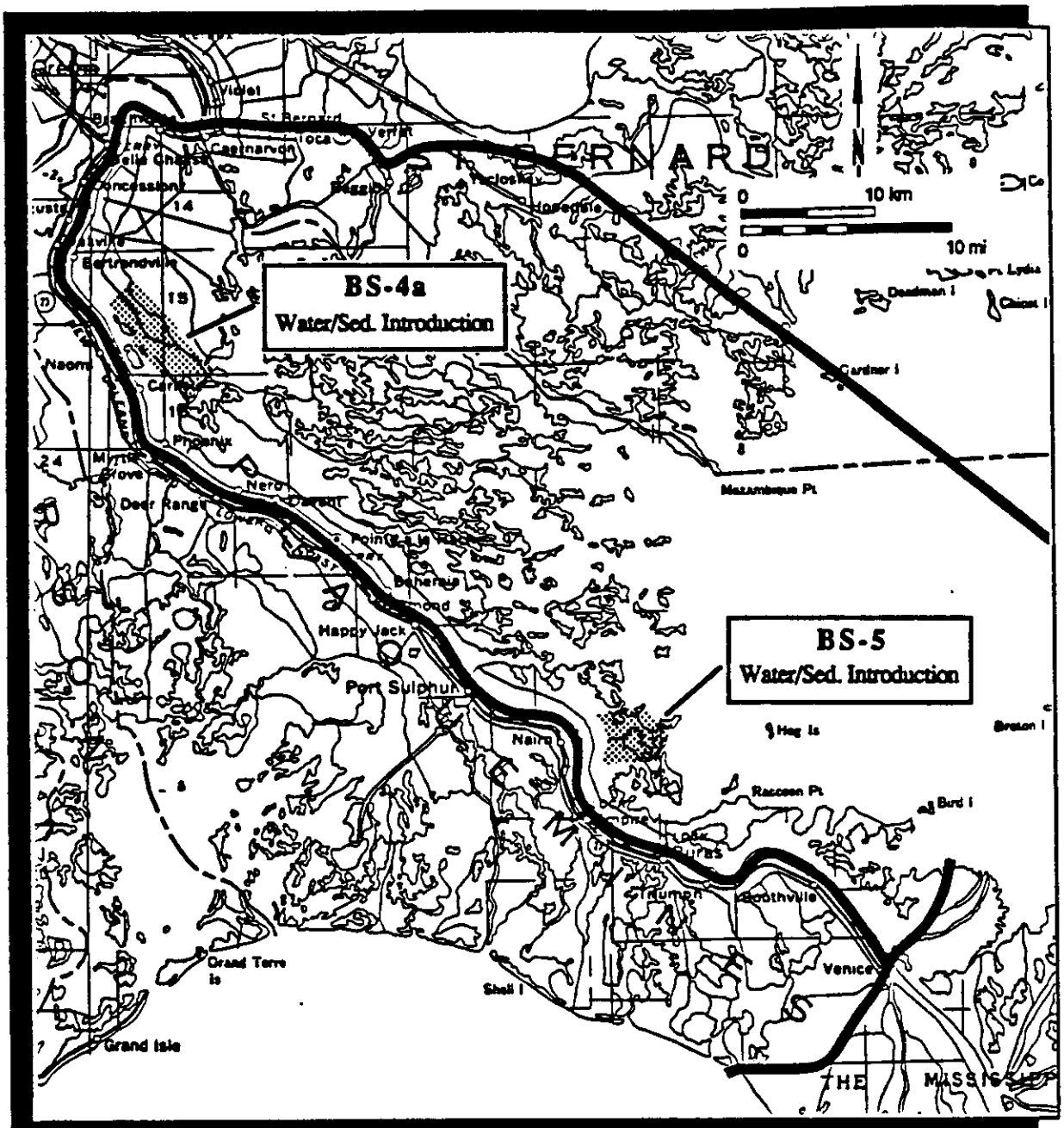
- Optimize utilization of existing freshwater diversions for wetland maintenance.

- 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.

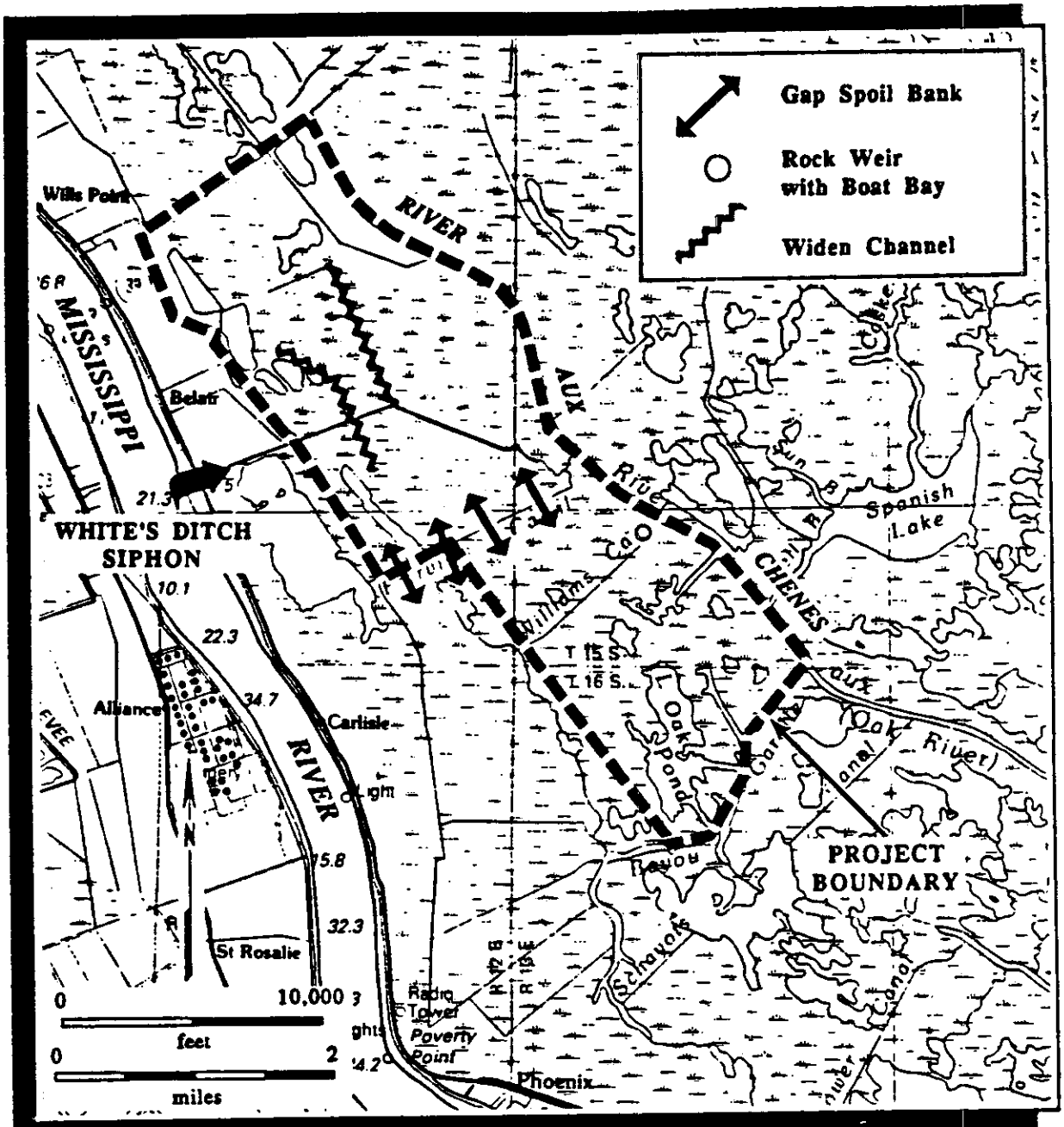
- Utilization of dredged material from the MRGO to create wetlands and to provide protection from wave erosion along Breton Sound.

- Address critical, localized wetland loss.



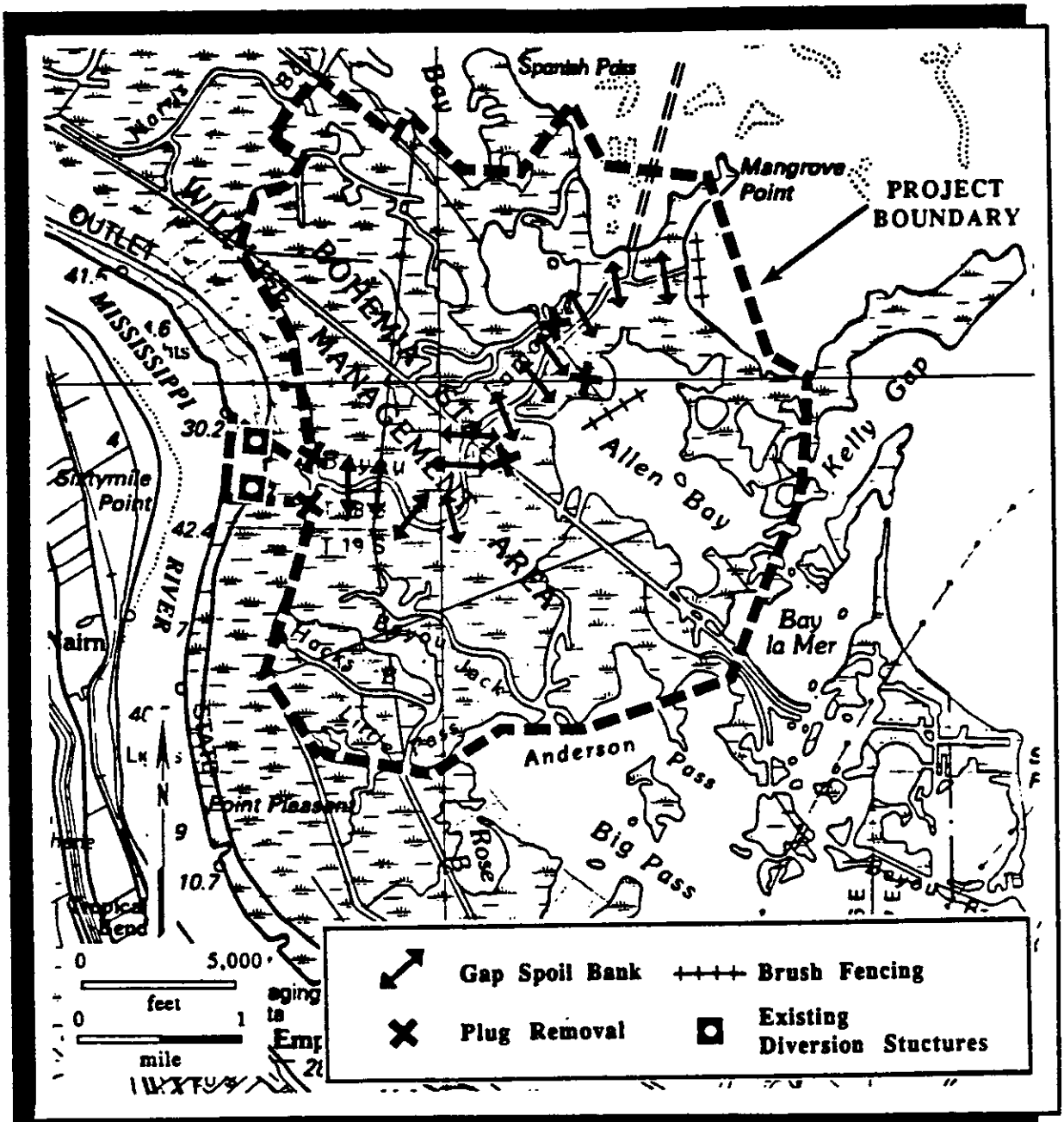
PROJECTS IN THE BRETON SOUND BASIN

BS-4a	White's Ditch Outfall Mangagement
BS-5	Bayou LaMoque Outfall Management



BS-4a. WHITE'S DITCH OUTFALL MANAGEMENT

Two 50-inch siphons with a total capacity of 220 cfs currently divert Mississippi River water into the River aux Chenes area. Much of the freshwater and associated sediments bypass the marsh, and are lost directly to River aux Chenes and adjacent bays. Outfall management will increase the residence time of the diverted water and the retention of suspended sediments in the marsh. This will benefit the marsh by reducing salinities, introducing plant nutrients, and reducing subsidence. Outfall management, including reduced flow loss to River aux Chenes, will be accomplished through canal closures and variable-crest weirs. The project will benefit 940 acres at an estimated cost of $756,134.



BS-5. BAYOU LAMOQUE OUTFALL MANAGEMENT

Two diversion structures currently divert a maximum of 10,800 cfs of Mississippi River water into Bayou Lamoque and California Bay. The structures were built to reduce water salinities for oyster production purposes. Sediments introduced with the diverted water could be utilized for marsh maintenance and creation. The outflow distribution would be managed and sediment trapping devices constructed to improve retention of the sediments for wetland benefit purposes. The project is expected to benefit 555 acres at an estimated cost of $533,700.

MISSISSIPPI RIVER DELTA

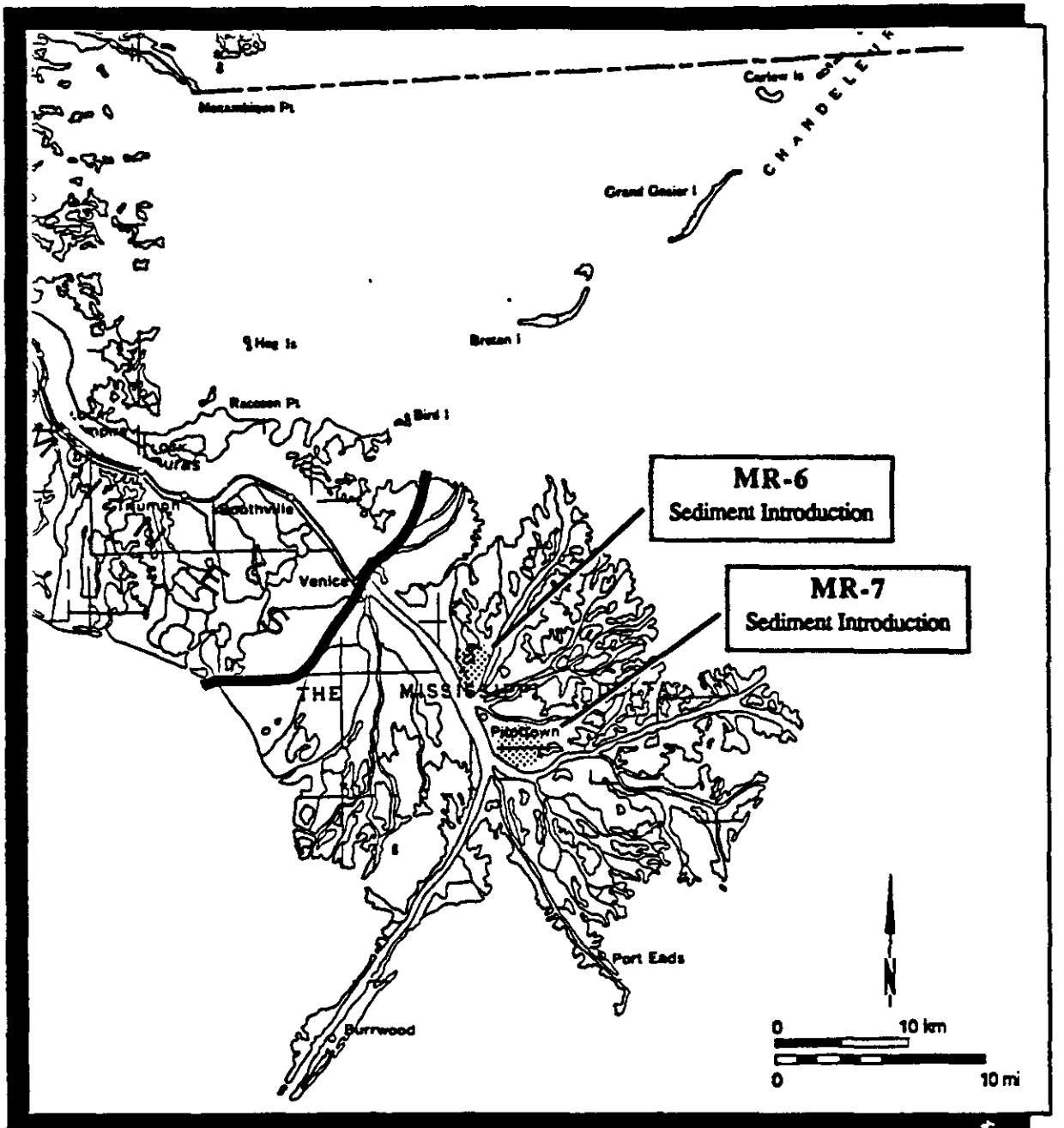
MISSISSIPPI RIVER DELTA

MAJOR PROBLEMS

- Development and maintenance of the navigation channel through the Mississippi River Delta adversely affects 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 has become limited.

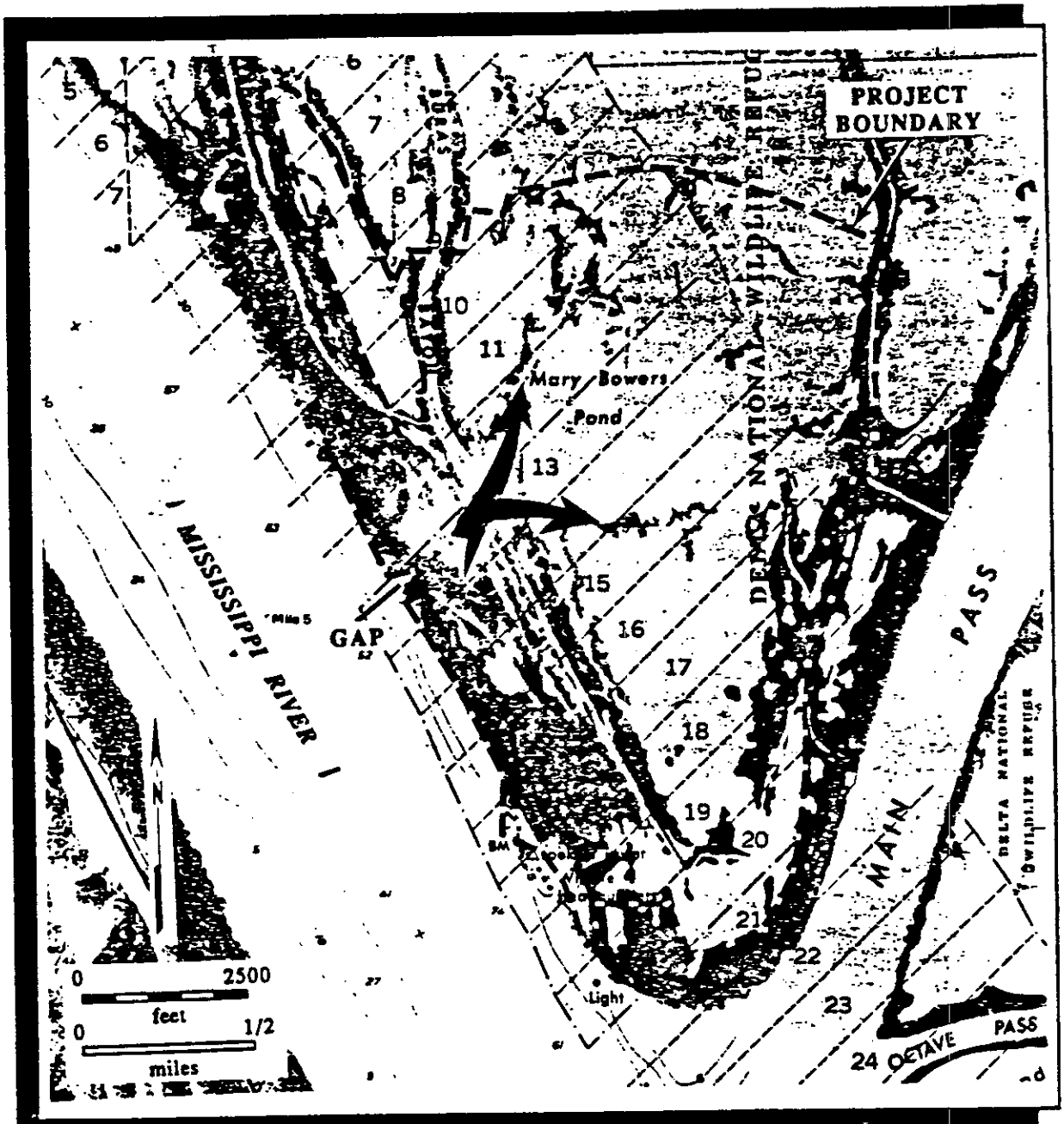
PROTECTION, RESTORATION, ENHANCEMENT OBJECTIVES

- 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 BASIN

MR-6	Armored Gap Crevasse
MR-7	Pass a Loutre Crevasse



MR-6. ARMORED GAP CREVASSE

Much of the Mississippi River sediments bypass the active delta. To improve sediment retention, one of a number of existing gaps in the Mississippi River channel bank armor will be deepened to -4.0 feet NGVD. Presently, these gaps have rock armored bottoms at an approximate elevation of 0.0 NGVD. The gap is located along the left descending bank at river mile 4.9. To enhance sediment transport, the existing outflow channel will be deepened and extended into open water. The average flow of the crevasse is expected to be 2,500 cfs. The project is expected to benefit 1,188 acres in the Delta National Wildlife Refuge at an estimated cost of $808,397.

MR-7. PASS-A-LOUTRE CREVASSE

Much of the Mississippi River sediments bypass the active delta. To improve sediment retention, a crevasse channel will be dredged across the north bank of Pass a Loutre. This channel will provide an average flow of 2,500 cfs into shallow open water areas. Approximately 550,000 cubic yards of material will be dredged hydraulically from Pass a Loutre and the adjacent bank, and placed in an unconfined disposal site. The material will be placed at an elevation of no higher than 2.5 feet NGVD and will result in an initial creation of 86 acres of emergent wetlands. The project is expected to benefit 1,750 acres of marsh at an estimated cost of $2,857,790.

BARATARIA BASIN

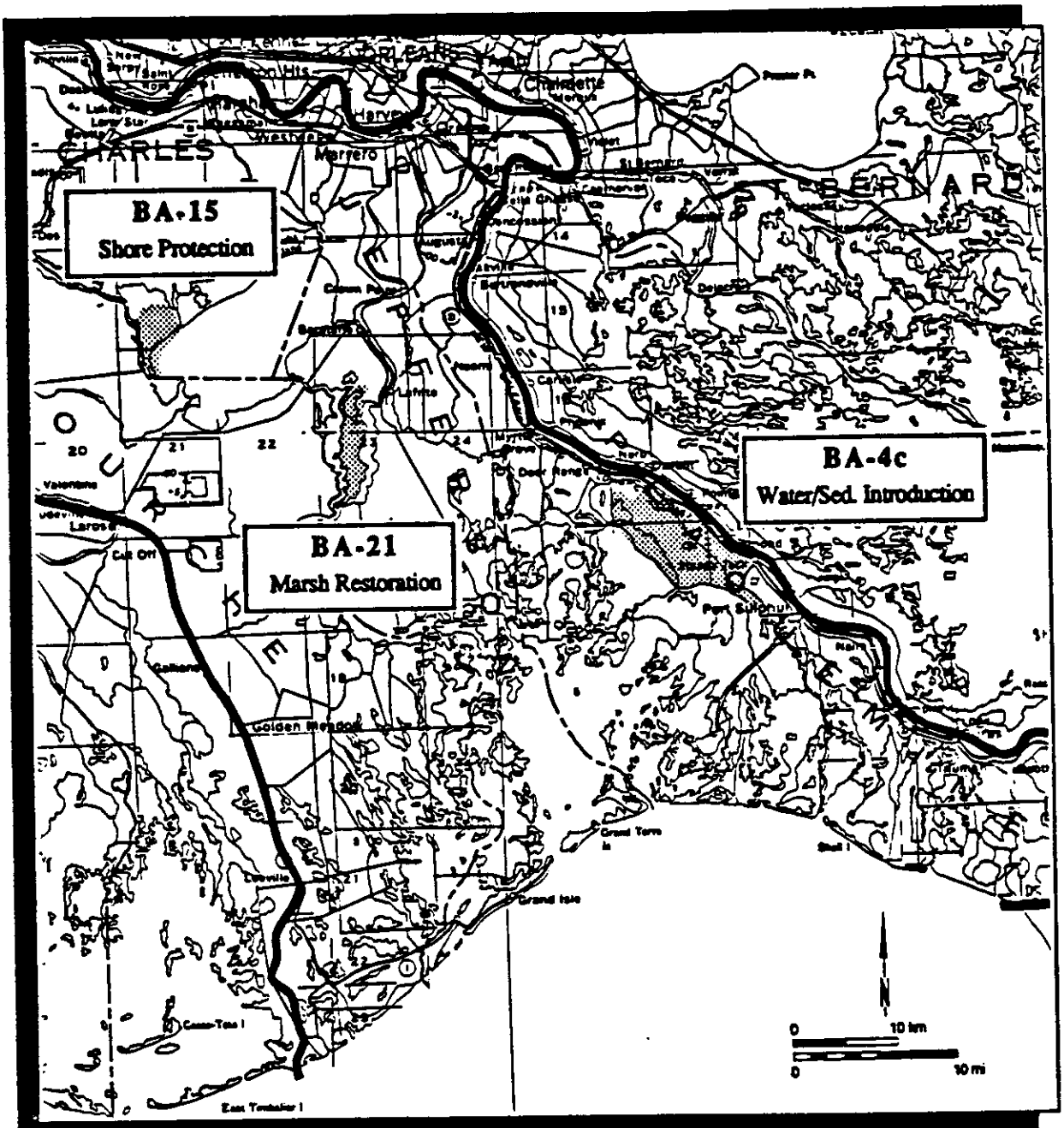
BARATARIA BASIN

MAJOR PROBLEMS

- Subsidence, wave erosion, tidal processes, and a lack of sediments continue to cause wetland loss in much of the Basin.
- Wetland loss continues to progress inland and threatens freshwater and low salinity brackish marshes in the central Basin.
- Extensive hydrologic changes have led to rapid exchange of freshwater and saltwater between the Gulf and the estuary and beteen water bodies and wetlands.
- Integrity of the barrier island and beach system that shelters the estuary from the Gulf of Mexico is rapidly diminishing.
- Wetland loss along major navigation channels.

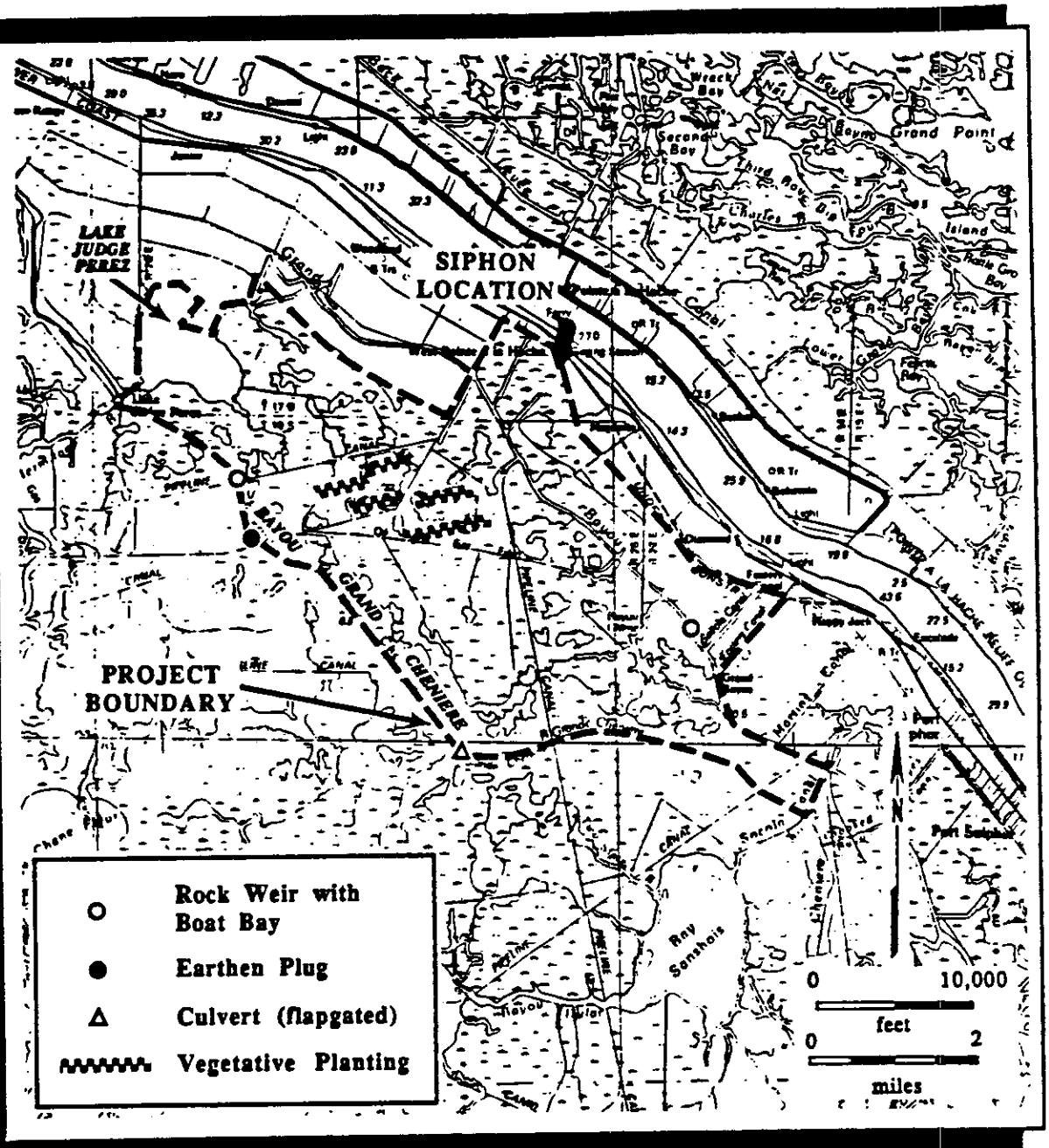
PROTECTION, RESTORATION, ENHANCEMENT OBJECTIVES

- Introduce freshwater and sediments from the Mississippi River where feasible to create and maintain wetlands.
- Optimize use of freshwater and nutrient resources within the Basin.
- Maintain and restore the marsh belt across the central Basin as a hydrologic buffer.
- Address adverse hydrolgic effects associated with major navigation channels.
- Maintain critical barrier beach and island systems and manage losses where unavoidable.
- Address critical, localized wetland loss.



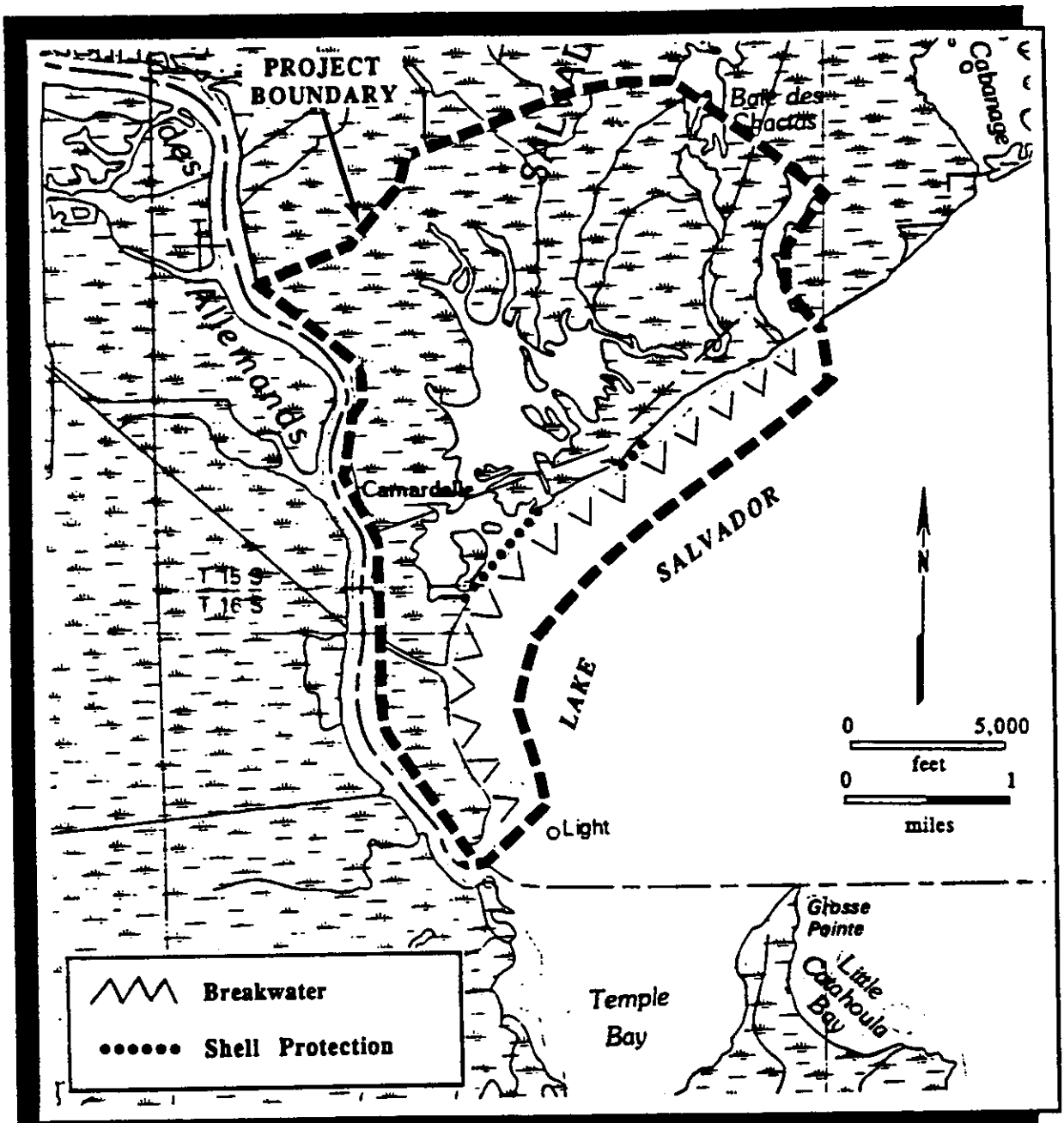
PROJECTS IN THE BARATARIA BASIN

BA-4c	West Pointe a La Hache Outfall Management
BA-15	Lake Salvador Shore Protection Demonstration
BA-21	Bayou Perot/Rigolettes Marsh Restoration



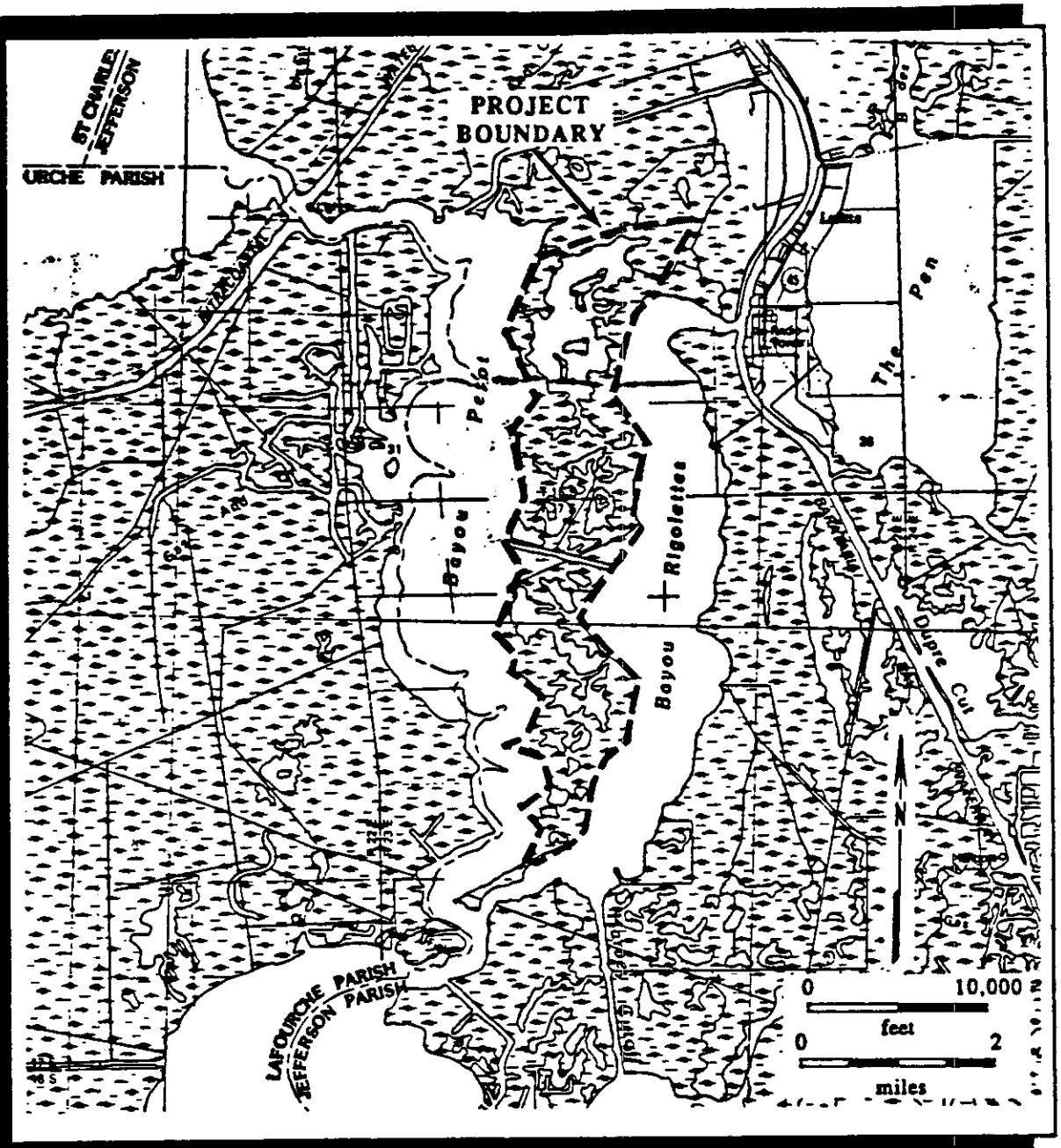
BA-4c. WEST POINTE A LA HACHE OUTFALL MANAGEMENT

The West Point a la Hache siphons were constructed in 1992 to divert Mississippi River water into the Barataria Basin. Part of this water and associated sediments bypass the wetlands and are lost through canals that cross the Bayou Grande Cheniere ridge system. Management of the siphon outfall will increase the residence time of the introduced water in the marsh/pond system and optimize sediment retention. This will be done within the constraints of access needs, including small boat access through Lake Judge Perez and mineral industry access. The project is expected to benefit 2,724 acres of wetlands at an estimated cost of $881,148.



BA-15. LAKE SALVADOR SHORE PROTECTION DEMONSTRATION

This project will test the effectiveness of a shell armored berm and two types of segmented timber-pylon breakwaters in protecting, from erosion, a lake shore composed of highly organic and unconsolidated sediments. The site selected for testing is the north shore of Lake Salvador near Bayou des Allemands. Stabilization of the Lake Salvador shore would protect interior marshes from further erosion caused by waves and currents, and improve freshwater retention. The project, if successful, is expected to benefit 1,003 acres at an estimated cost of $1,444,628.



BA-21. BAYOU PEROT/RIGOLETTES MARSH RESTORATION

The marsh between Bayou Perot and Bayou Rigolettes is rapidly eroding. Continued erosion will result in a merging of the two greatly widened bayous into a single, large water body connecting Lake Salvador and Little Lake. Wetland loss occurs through both shoreline erosion and breakup of the interior marsh. Approximately 600,000 cubic yards of sediments will be dredged from Bayous Perot and Rigolettes and used to restore the interior marsh. Sediments will be hydraulically dredged and sprayed onto the marsh. The project is expected to benefit 780 acres at an estimated cost of $1,835,047.

TERREBONNE BASIN

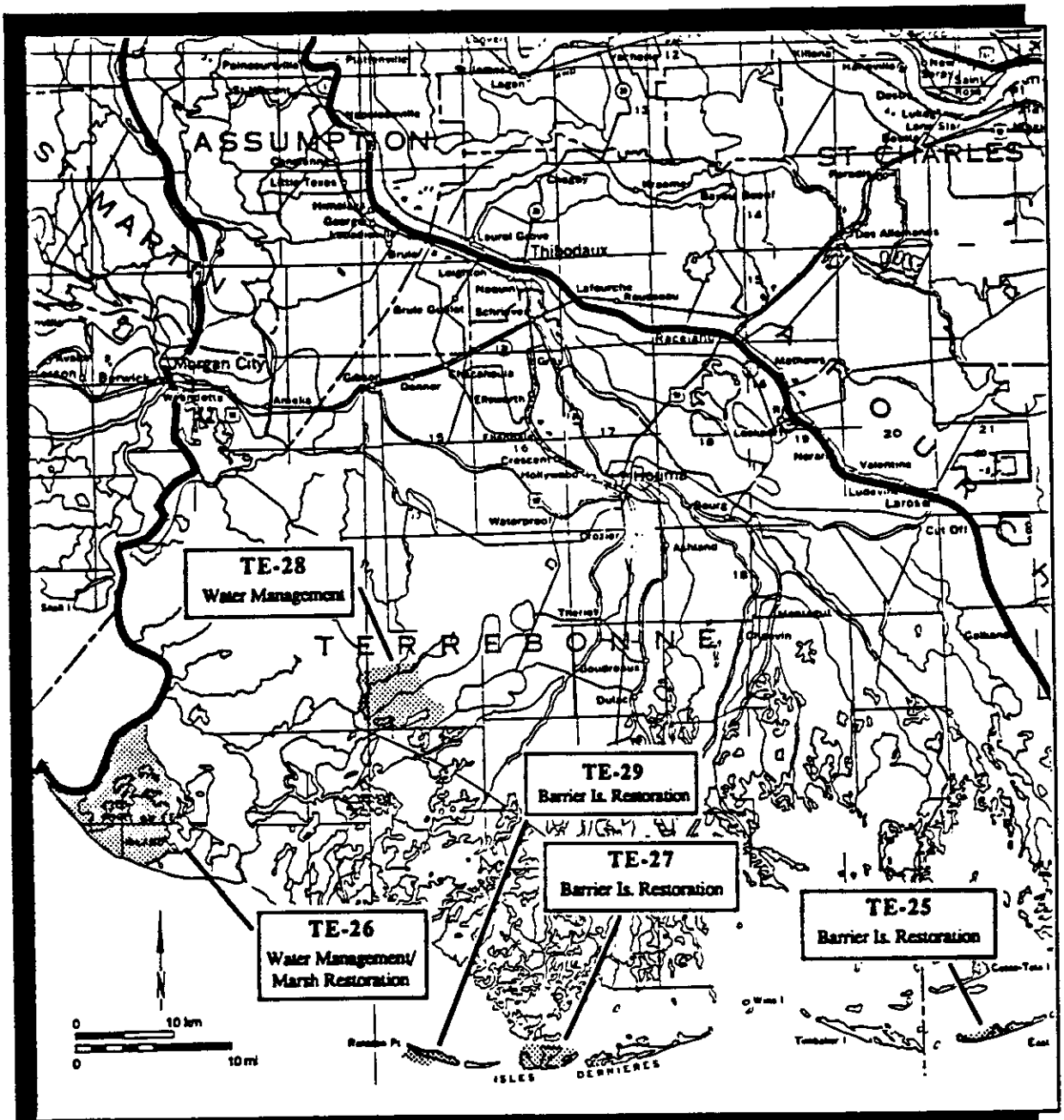
TERREBONNE BASIN

MAJOR PROBLEMS

- Subsidence, wave erosion, tidal processes, and a lack of sediments continue to cause wetland loss in the southeastern part of the Basin.
- Impaired drainage, subsidence, and lack of sediments limit regeneration of swamp forests in the upper (Verret) Basin
- Extensive hydrologic changes have led to rapid exchange of freshwater and saltwater between the Gulf and the estuaries and between water bodies and wetlands.
- Integrity of the barrier island system that shelters the estuary from the Gulf of Mexico has greatly diminished.
- Backwater conditions adversely affect sediment supply and drainage of marshes in the western (Penchant) Basin.
- Wetland loss from bank erosion along major navigation channels.

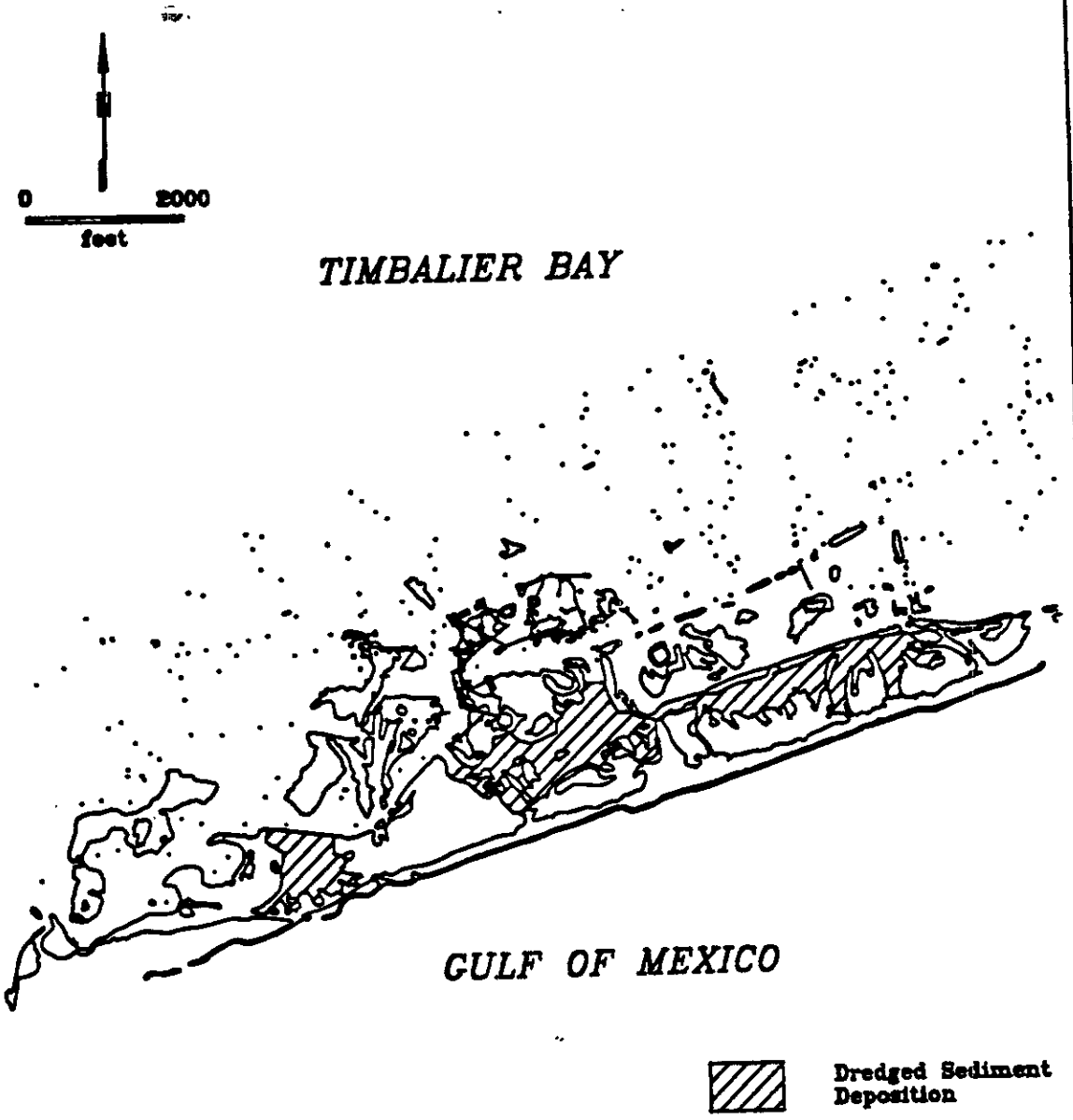
PROTECTION, RESTORATION, ENHANCEMENT OBJECTIVES

- Reduce the rate of unavoidable loss by maintenance of protective features such a strategic barrier island segments, ridges, and critical flood protection features.
- Optimize use of Atchafalaya River water and sediment to maintain marshes in the southwestern (Penchant) Basin.
- Optimize use of freshwater and nutrient resources and reduce saltwater intrusion within the eastern (Terrebonne/Timbalier) Basin through water management.
- Reduce saltwater intrusion through Houma Navigation Canal.
- Address critical, localized wetland loss.



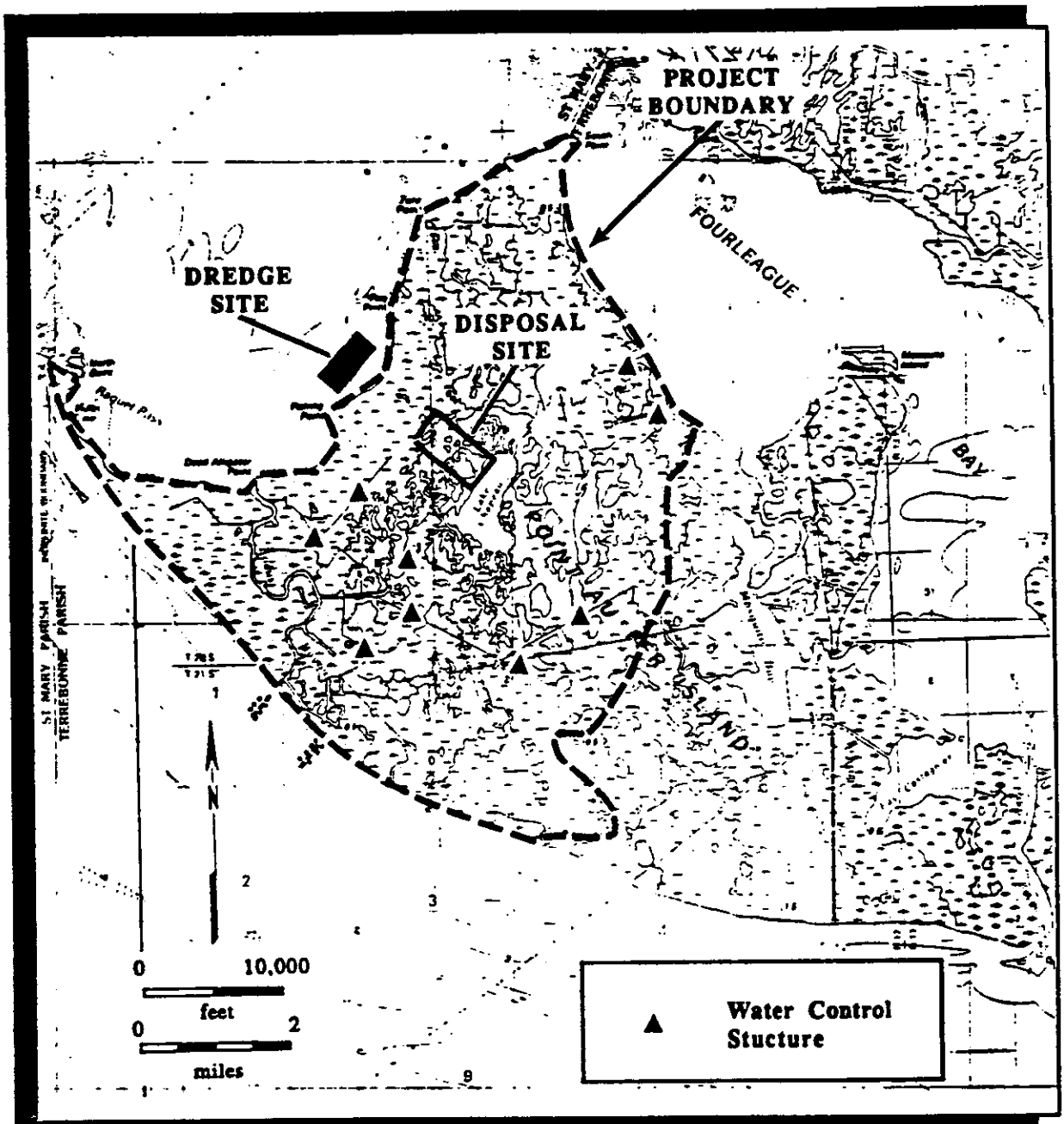
PROJECTS IN THE TERREBONNE BASIN

TE-25	East Timbalier Island Restoration
TE-26	Lake Chapeau Marsh Creation/Hydrologic Restoration
TE-27	Isle Dernieres Restoration, Phase III (Whiskey Island)
TE-28	Brady Canal Hydrologic Restoration
TE-29	Raccoon Island Segmented Breakwaters



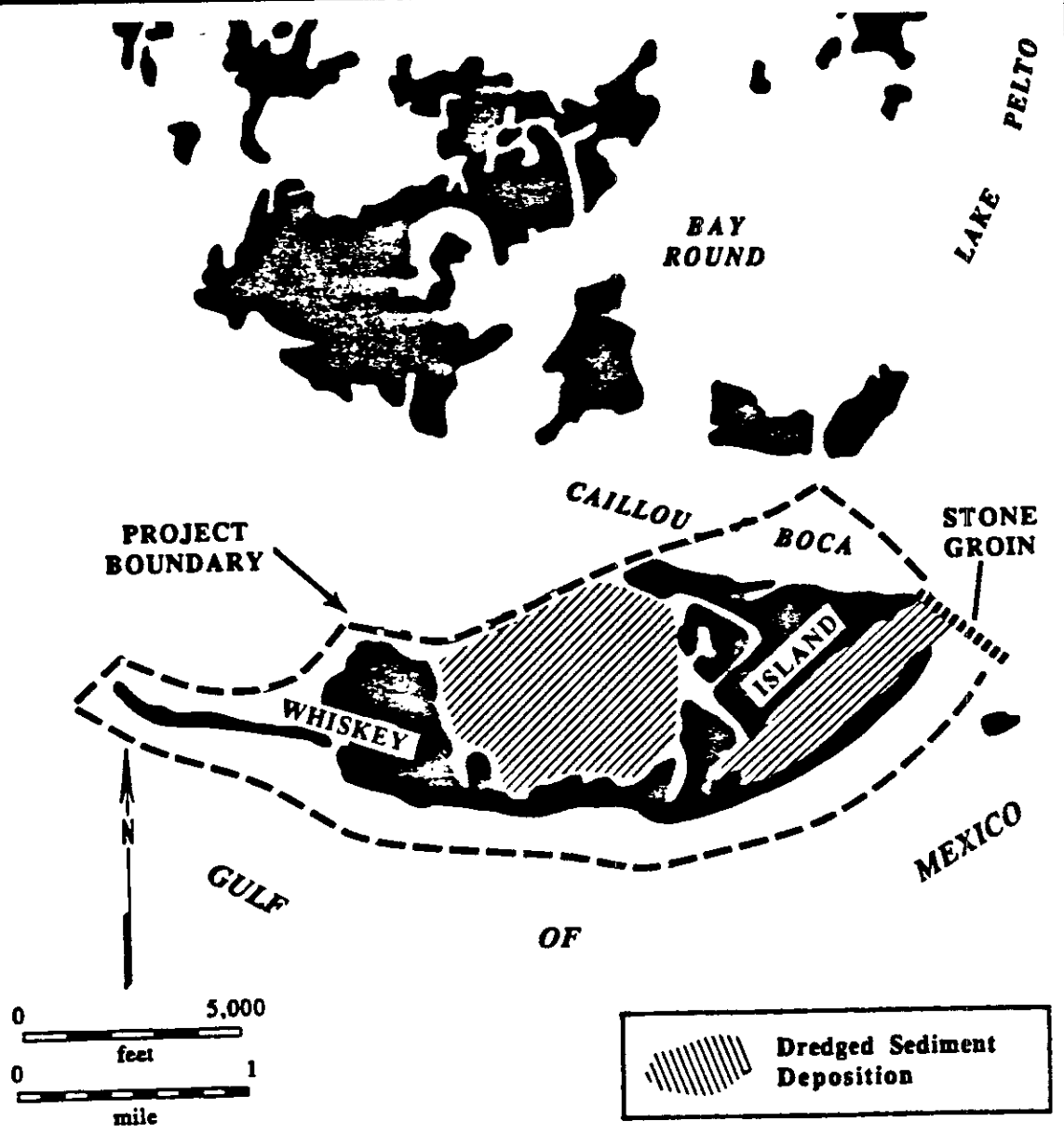
TE-25. EAST TIMBALIER ISLAND RESTORATION

Hurricane Andrew created two major breaches across the western portion of East Timbalier Island. To restore physical integrity and prolong the life of this portion of the island, dredged material will be used to seal these breaches and restore marsh in a number of shallow embayments and between an existing rock breakwater on the Gulf side and a segmented protection levee on the Timbalier Bay side. Dredged material would be obtained from Timbalier Bay and from maintenance dredging of existing access channels. The project is expected to create134 acres of marsh at an estimated cost of $2,046,971.



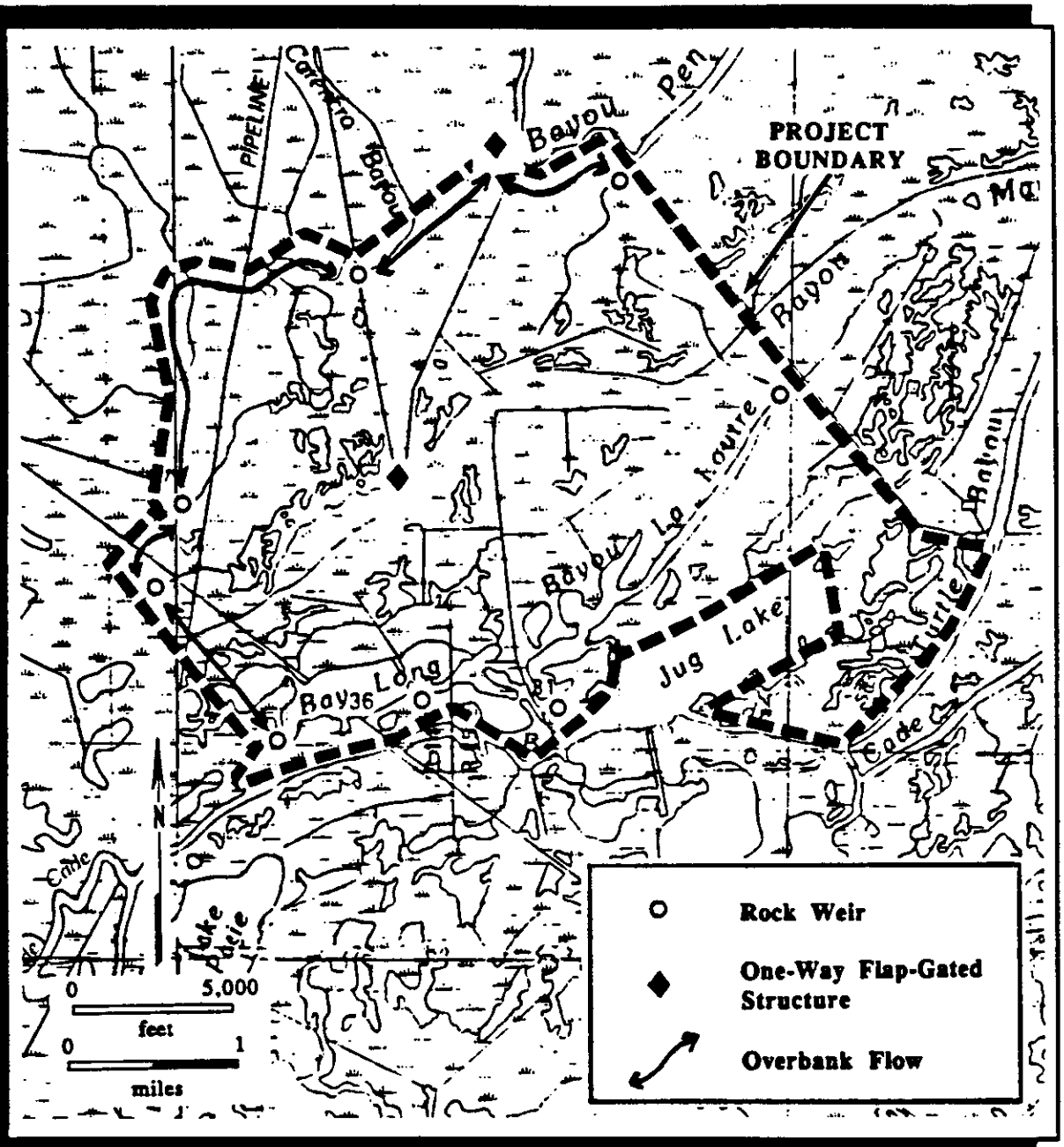
TE-26. LAKE CHAPEAU MARSH CREATION/ HYDROLOGIC RESTORATION

Interior marsh on Point au Fer Island is being lost, in part, as a result of erosion caused by excessive tidal water exchange. The project will re-establish hydrologic control through the construction and repair of weirs, plugs, and a sill across a number of canals and waterways, and through the restoration of about 250 acres of marsh. To re-establish a land bridge, approximately 500,000 cubic yards of sediment will be hydraulically dredged and conveyed from the Atchafalaya Bay to the broken marsh area adjacent to Lake Chapeau. Spraying will be used as a means of sediment distribution. The project is expected to benefit 3,735 acres at an estimated cost of $4,149,182.



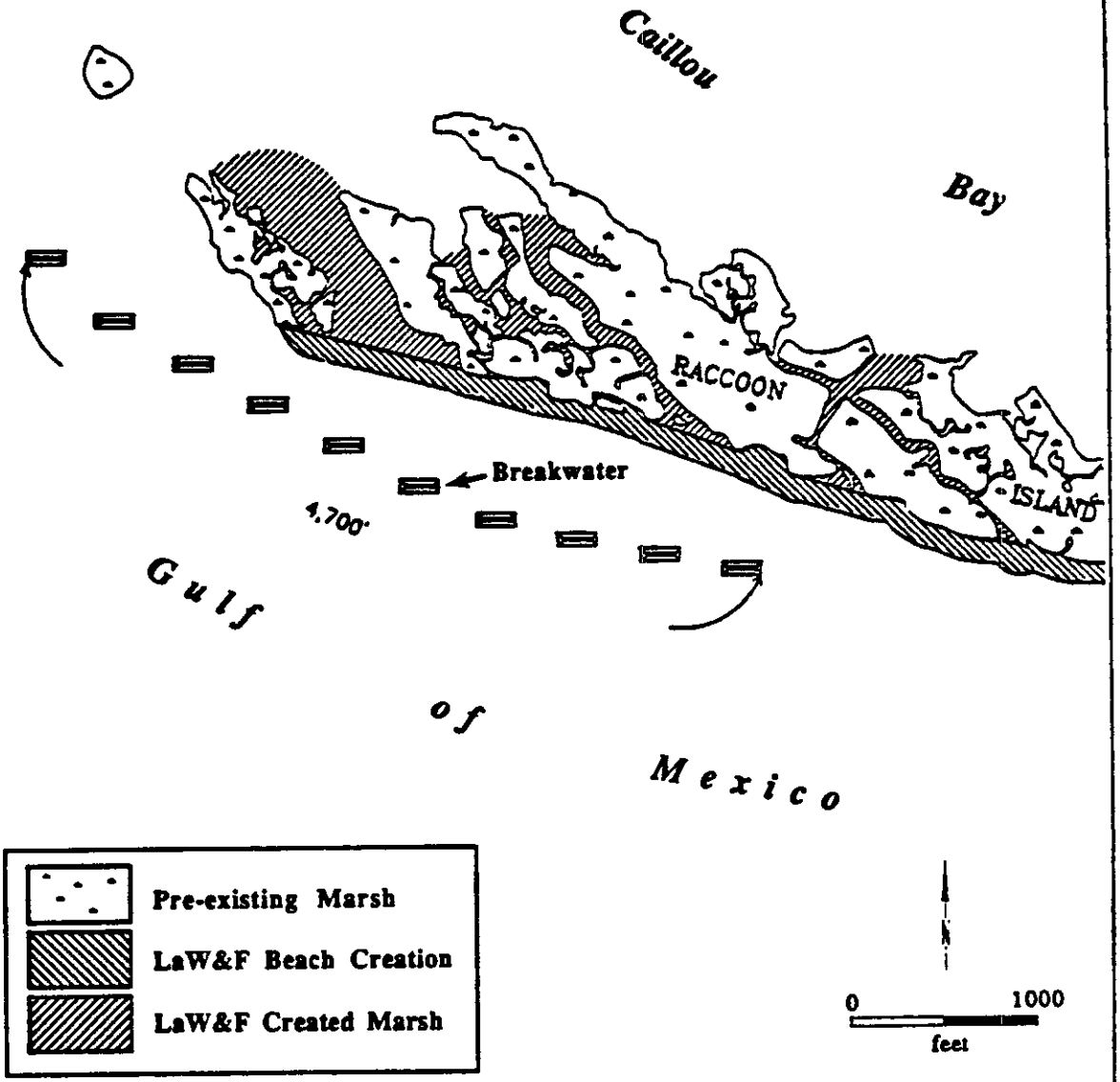
TE-27. ISLES DERNIERES RESTORATION, PHASE III (Whiskey Island)

This project will restore the physical integrity of the Whiskey Island portion of the Isles Dernieres. Restoration of the island is required to shelter the Lake Pelto estuary and associated vegetated wetlands from direct exposure to the Gulf of Mexico. Resistance of the island to wave erosion will be increased by increasing the elevation of dunes on the Gulf side and by increasing the width and elevation of marshes along the bay side using dredged material. A 2,400-foot stone groin will be constructed at the east end of the island. The estimated cost for this third phase of the Isles Dernieres restoration is $4,844,274.



TE-28. BRADY CANAL HYDROLOGIC RESTORATION

Marshes in the central portion of the Bayou Penchant area receive only limited benefits of Atchafalaya River discharges and are in a transition to open water. Enhancing the delivery of freshwater, sediment, and nutrient into these fragile, highly fragmented areas will help maintain these marshes. Improved water movement will be provided through the construction of water control structures, including flapgated culverts and weirs, bank modification to allow overbank flow and freshwater introduction, and bank restoration. Included are provisions for oil field access and tidal water exchange. The project is expected to benefit 1,123 acres at an estimated cost of $4,717,938.



TE-29. RACCOON ISLAND SEGMENTED BREAKWATERS

As part of the ongoing restoration of the Isles Dernieres, this project will provide added protection to the marshes of the western-most Terrebonne Parish barrier island. Greater resistance of the island to wave erosion, and improved sand retention are to be achieved through the construction of segmented breakwaters along the western half of the island. The breakwaters complement the recent dune and marsh restoration of Raccoon Island by the Louisiana Department of Wildlife and Fisheries in response to damages caused by hurricane Andrew. The breakwaters will provide protection to approximately 72 acres of wetland at an estimated construction cost of $2,500,000.

TECHE / VERMILION BASIN

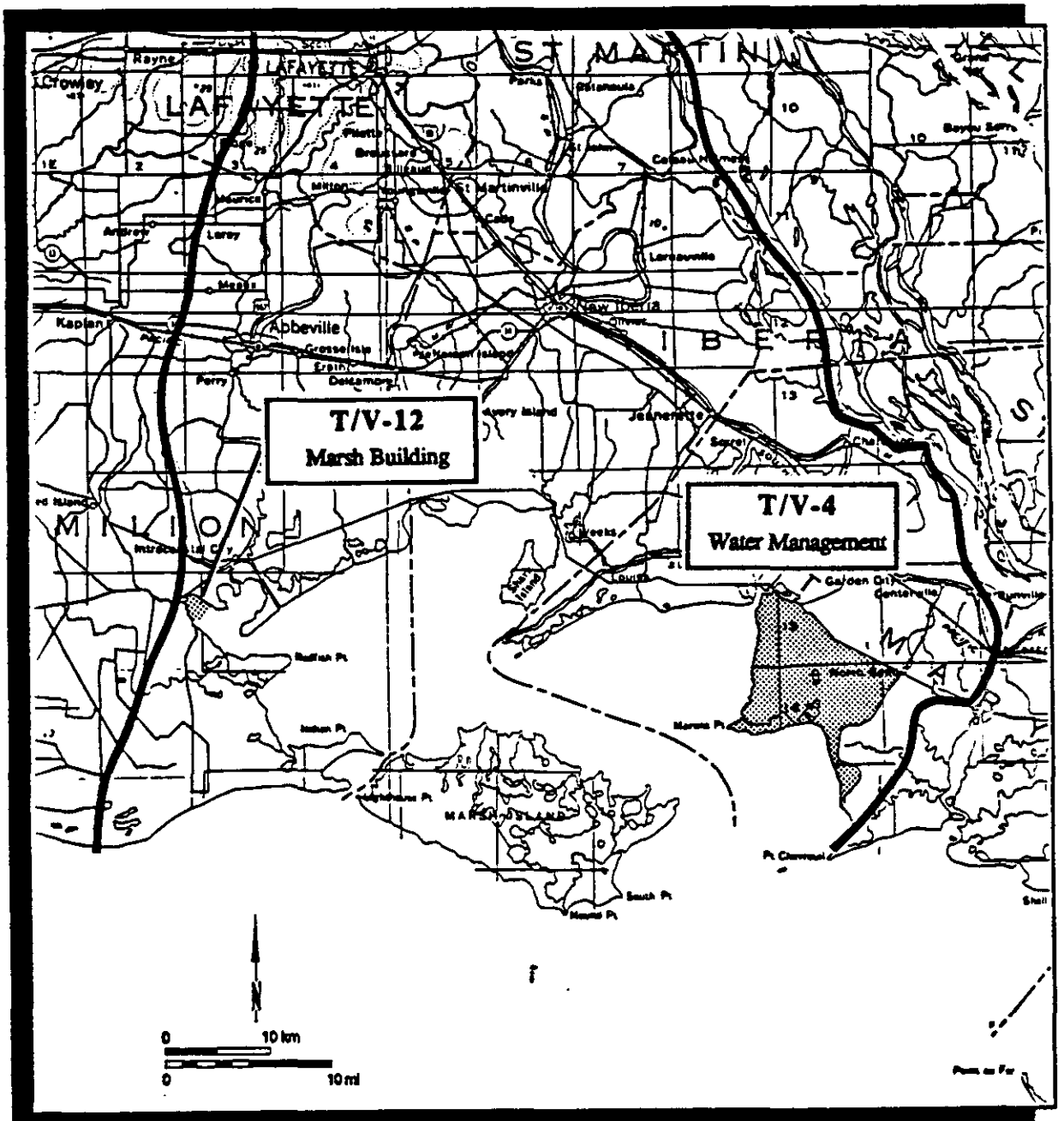
TECHE / VERMILION BASIN

MAJOR PROBLEMS

- Erosion along bay shores and navigation channels.
- Localized wetland losses resulting form human-made changes in hydrology.

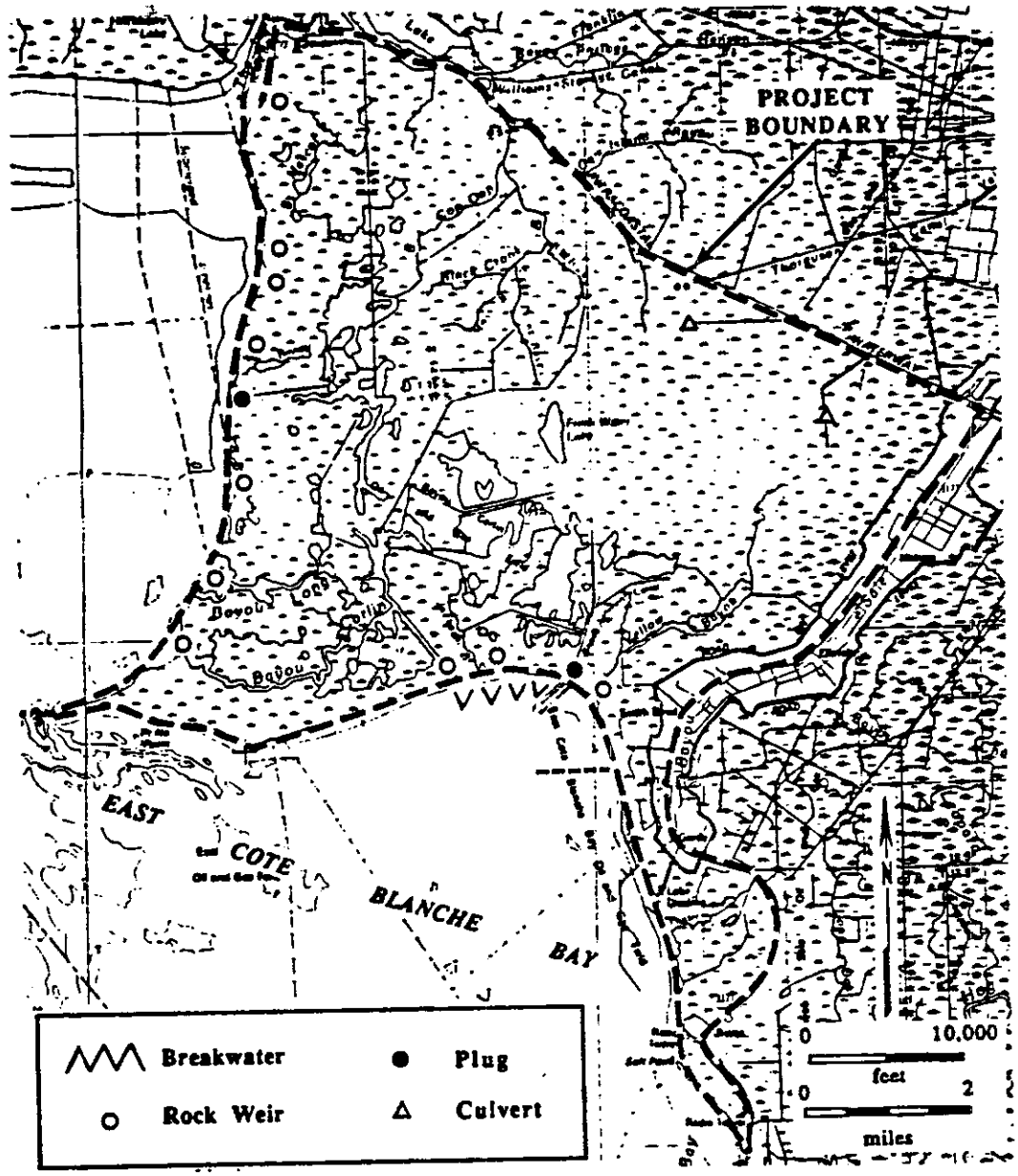
PROTECTION, RESTORATION, ENHANCEMENT OBJECTIVES

- Full utilization of available sediment resources.
- Increase sediment retention in sheltered areas.
- Address critical, localized wetland loss.



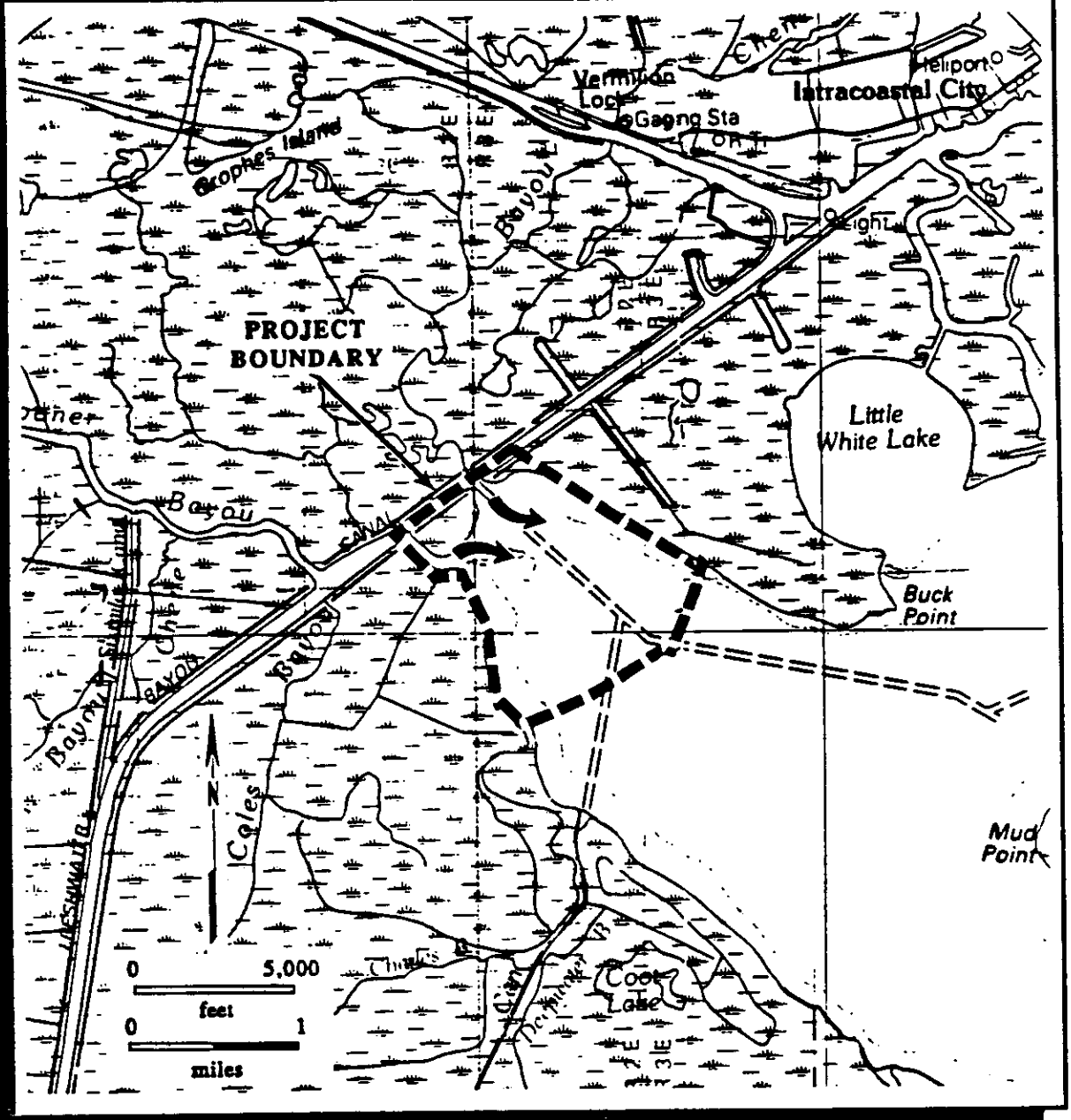
PROJECTS IN THE TECHE/VERMILION BASIN

T/V-4	Cote Blanche Hydrologic Restoration
T/V-12	Little Vermilion Bay Sediment Trapping



T/V-4. COTE BLANCHE HYDROLOGIC RESTORATION

Current water exchange through canals connected to the GIWW and Cote Blanche Bays has an adverse effect on interior wetlands. Additional wetland loss results from wave erosion. The project will moderate water exchange with the bays through construction of rock weirs in major tidal channels and provide control of freshwater and sediment introduction from the GIWW by means of flapgated water control structures. Armoring about 10,000 ft of shoreline along East Cote Blanche Bay will provide protection from wave erosion. The project is expected to benefit 4,744 acres at an estimated cost of $5,173,062.



T/V-12. LITTLE VERMILION BAY SEDIMENT TRAPPING

Much of the sediment load introduced annually into water bodies such as the Cote Blanche and Vermilion bays is deposited in deep water or transported out of the bays. This project intends to improve distribution and retention of Atchafalaya River sediments that are introduced through the Gulf Intracoastal Waterway into Little Vermilion Bay. Sediment trapping will be enhanced by creating sheltered areas through the construction of bars along newly dredged distributary channels. The project is expected to benefit 455 acres at an estimated cost of $1,515,483.

MERMENTAU BASIN

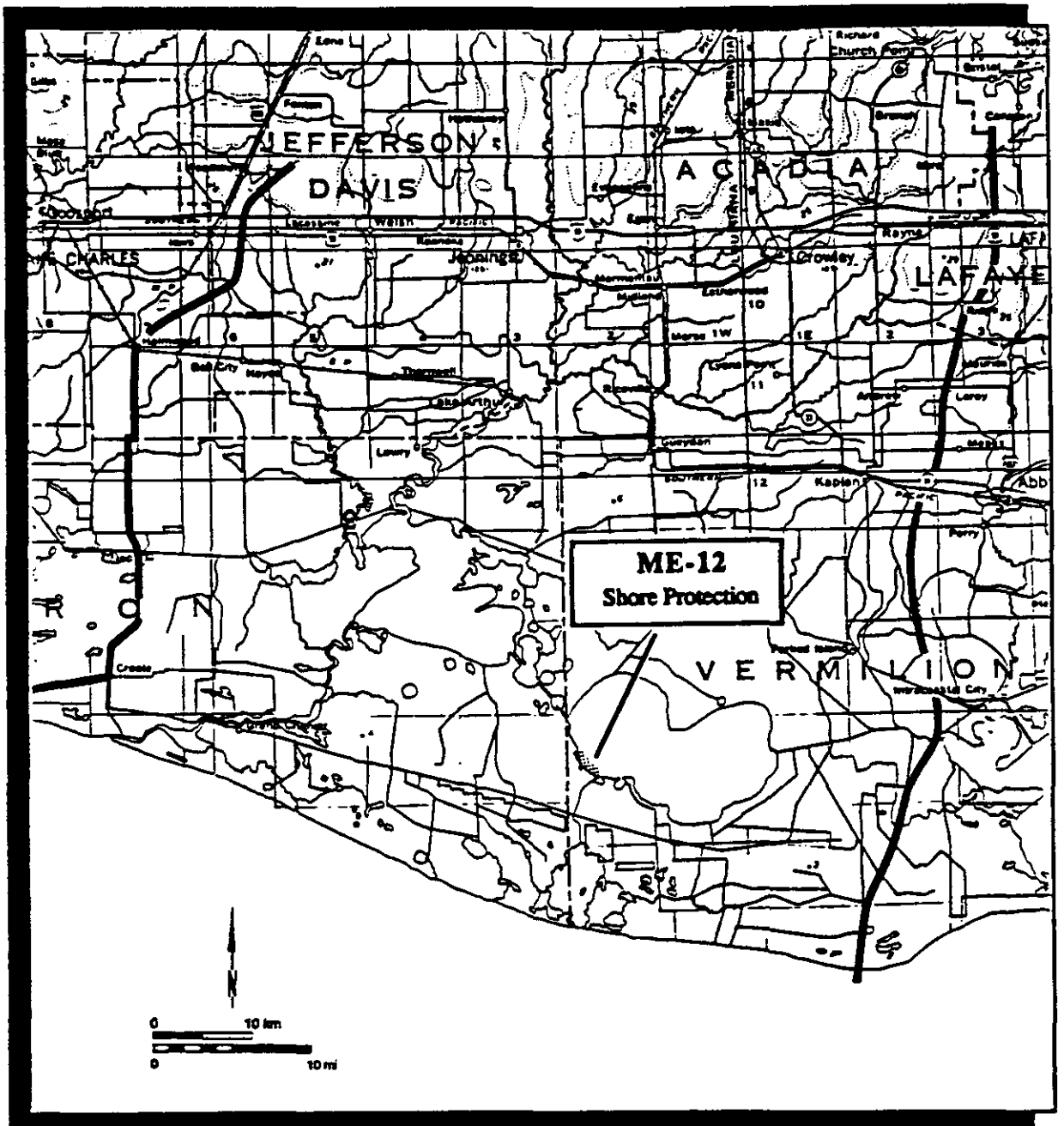
MERMENTAU BASIN

MAJOR PROBLEMS

- Subsidence, impaired drainage, and water management conflicts cause excessive water levels in White Lake - Grand Lake portion of the Basin.
- Limited freshwater introduction, loss of freshwater retention, and increased saltwater exchange in Chenier portion of the Basin.
- Wetland loss caused by erosion along lake shores and navigation channel banks.
- Saltwater introduction through the Mermentau Ship Channel.

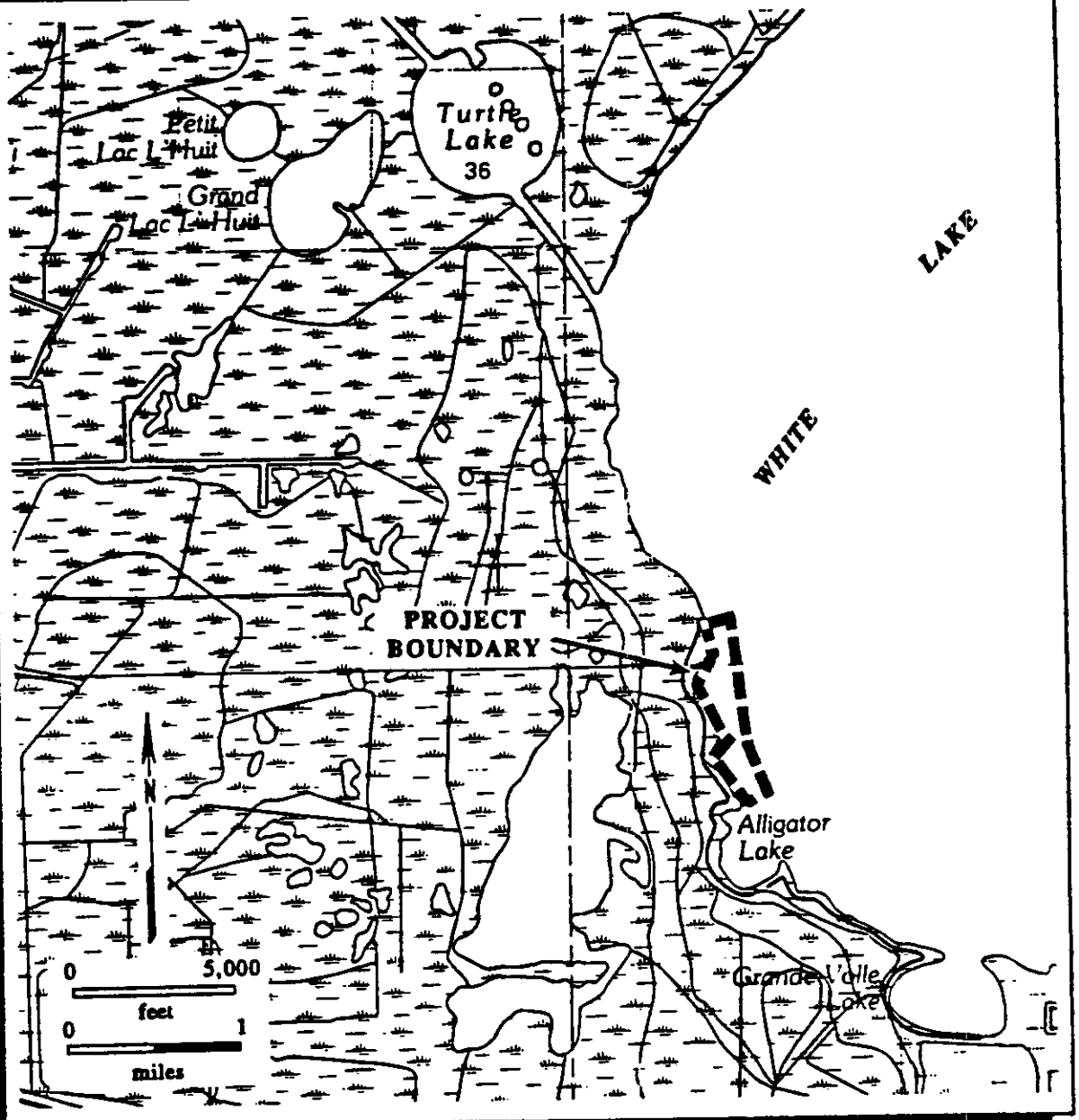
PROTECTION, RESTORATION, ENHANCEMENT OBJECTIVES

- Maintain integrity of present water management system.
- Transfer of freshwater across Grand Chenier Ridge.
- Optimize water management for multi-purpose objectives.
- Full utilization of available sediment resources, including dredged material.
- Address critical, localized wetland loss.



PROJECTS IN THE MERMENTAU BASIN

ME-12 White Lake SW Shore Protection Demonstration



ME-12. WHITE LAKE SW SHORE PROTECTION DEMONSTRATION

This project will test the effectiveness of California bulrush in reducing wave energy and wave erosion along a shore composed of highly organic, unconsolidated sediments. The site selected for testing is a one mile segment of the southwest shore of White Lake between Alligator Lake and the Old Intracoastal Waterway. The project is estimated to cost $126,062 and, if successful, is expected to directly benefit 16 acres of fresh marsh and provide a vegetative protection measure with coastwide applicability.

CALCASIEU / SABINE BASIN

CALCASIEU / SABINE BASIN

MAJOR PROBLEMS

- Extensive hydrologic changes have led to rapid exchange of freshwater and saltwater between the Gulf and Calcasieu Lake and between water bodies and wetlands in the central Basin.

- Reduced freshwater retention and increased salinity variation continue to result in wetland loss.

- Large scale conversion of marsh to open water has increased water turbidities and wave erosion.

- Shore erosion along the Gulf of Mexico threatens physical integrity of the entire Basin by breaching of protective barrier.

- Wetland loss along major navigation channels.

PROTECTION, RESTORATION, ENHANCEMENT OBJECTIVES

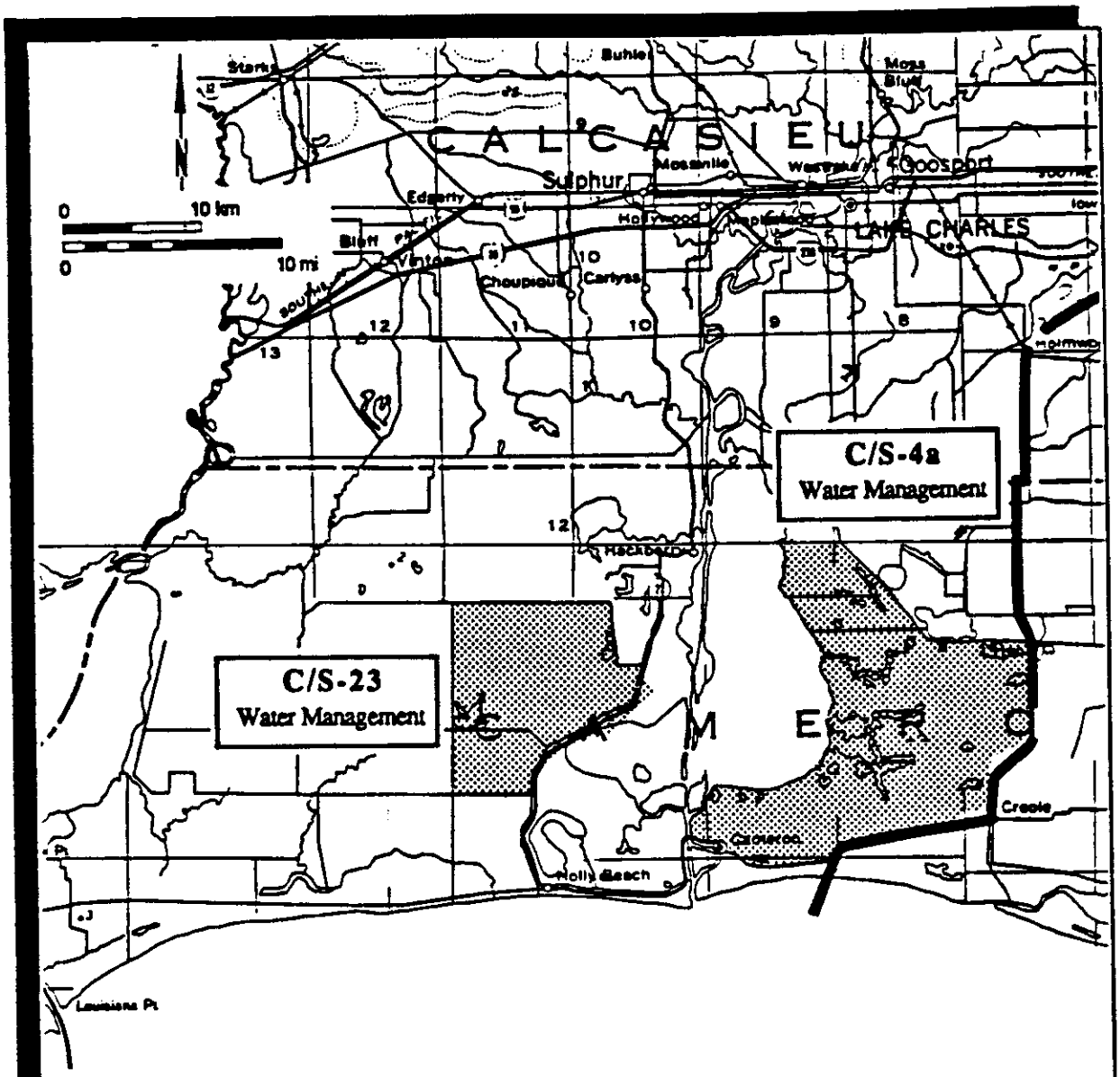
- Maintain integrity of Gulf shore barrier, including both structural and non-structural elements.

- Improve protection from saltwater incursions and prevent rapid loss of freshwater through water management.

- Full utilization of available sediment resources, including dredged material.

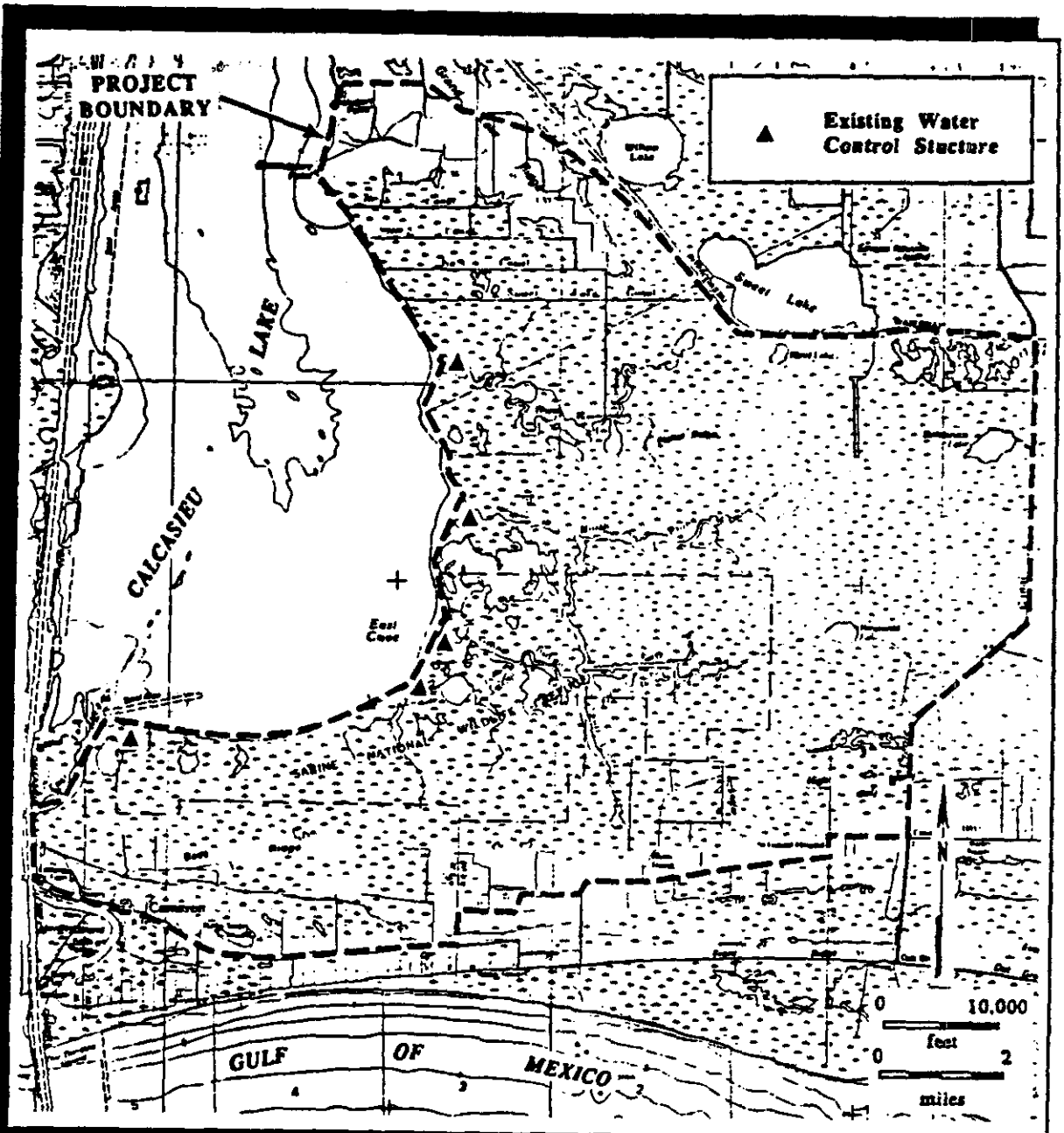
- Restoration of interior marsh through water management and planting.

- Address critical, localized wetland loss.



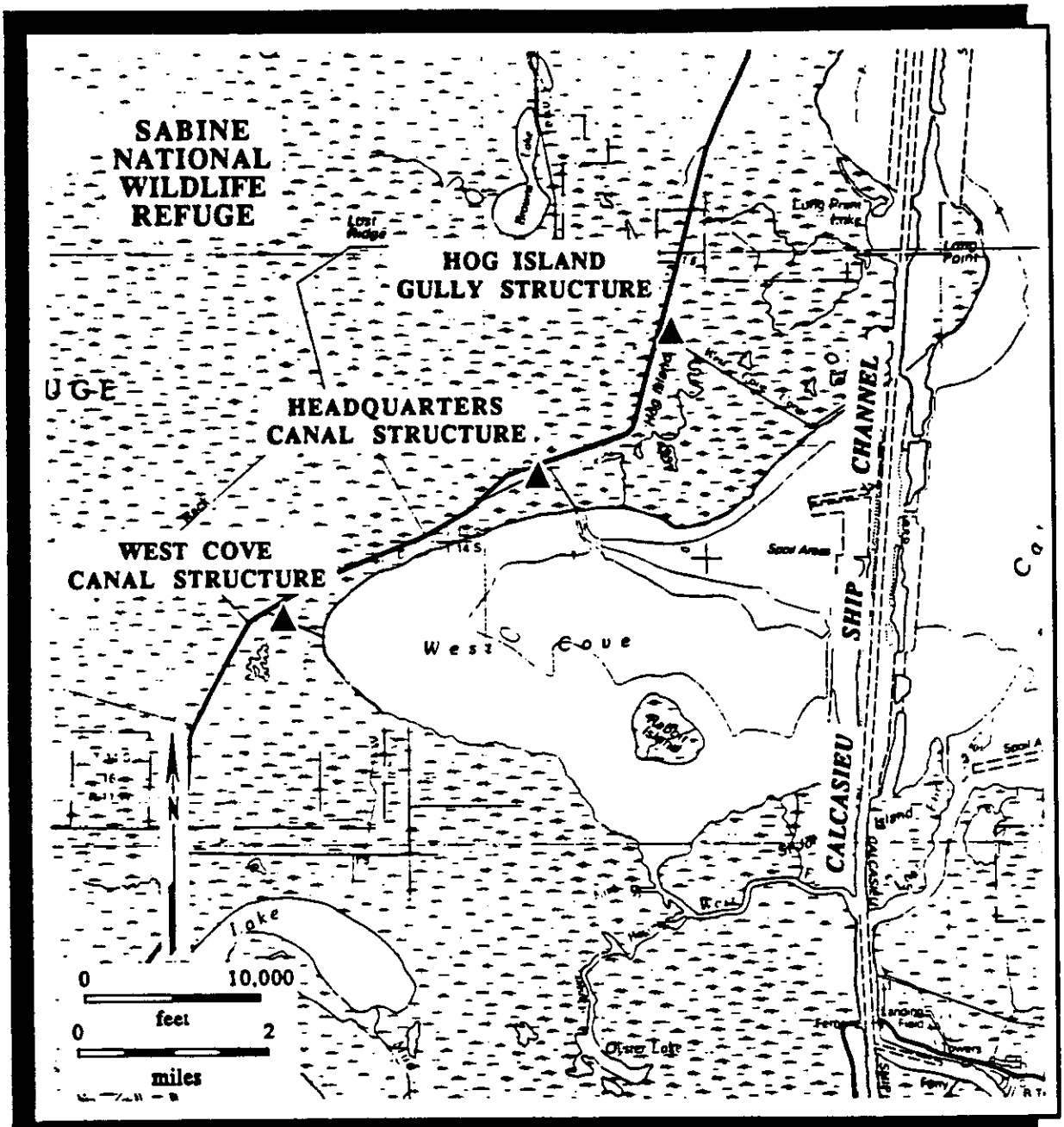
PROJECTS IN THE CALCASIEU/SABINE BASIN

C/S-4a	Cameron Creole Watershed Maintenance
C/S-23	Sabine Refuge Water Control Structures



C/S-4a. CAMERON CREOLE WATERSHED MAINTENANCE

The Cameron Creole Watershed Project protects nearly the entire wetland area between Calcasieu Lake, Highway 27, and the GIWW from rapid water level fluctuations and high salinities that resulted from construction of the Calcasieu Ship Channel. Water exchange between these wetlands and Calcasieu Lake is controlled by five large structures to allow for the management of water levels and salinities, and provide for movement in and out of the wetlands of marine organisms. This project will provide $3,719,926 for continued operation and maintenance of the existing water control structures and is expected to benefit 12,065 acres.



C/S-23. SABINE REFUGE WATER CONTROL STRUCTURES.

The control over water exchange between the Sabine National Wildlife Refuge (SNWR) and Calcasieu Lake plays an important role in the protection of these wetlands from rapid water level fluctuations and high salinities that resulted from construction of the Calcasieu Ship Channel. The project will replace eight existing water control structures that are in need of major repairs and have proven to provide inadequate control over water exchange. The structures are located at Hog Bayou, West Cove, and near the SNWR Headquarters. The project is expected to benefit 6,873 acres at an estimated cost of $4,581,454.

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