



6th PRIORITY PROJECT LIST REPORT

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LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION
TASK FORCE

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Coastal Wetlands Planning, Protection and Restoration Act

6th Priority Project List Report

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INTRODUCTION

The State of Louisiana contains about 40 percent of the Nation's coastal wetlands. Louisiana's coastal wetlands are experiencing losses at a rate of approximately 80 percent of the Nation's total coastal wetland loss rate. This is a disproportionately high level of loss, compared to nation-wide rates. In addition, the coastal wetland loss problem in Louisiana is extensive and complex in nature. Agencies of diverse purpose and mission that are involved with addressing the problem have proposed many alternative solutions. These proposals have had a wide spectrum of approach for diminishing, neutralizing, or reversing these losses. A global observation of these efforts by Federal, state, and local governments and the public has led to the conclusion that a comprehensive approach is needed to address this significant environmental problem. In response to this, the Coastal Wetlands Planning, Protection and Restoration Act (Public Law 101-646) was signed into law by President Bush on November 29, 1990. This report documents the implementation of Section 303(a) of the cited legislation.

STUDY AUTHORITY

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

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

STUDY PURPOSE

The purpose of this study effort was to prepare the 6th Priority Project List (PPL) and transmit the list to Congress, as specified in Section 303(a)(3) of the CWPPRA. Section 303(b) of the act calls for preparation of a comprehensive restoration plan for coastal Louisiana; that effort was completed in November 1993, with the submission of the Louisiana Coastal Wetlands Restoration Plan.

PROJECT AREA

Plate 1 is a map that delineates the Louisiana coastal zone. The entire coastal area, which comprises all or part of 20 Louisiana parishes, is considered to be the CWPPRA project area. To facilitate the study process, the coastal zone was divided into nine hydrologic basins (refer to map).

STUDY PROCESS

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

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

The State of Louisiana is a full voting member of the Task Force except for selection of the Priority Project List [Section 303(a)(2)], as stipulated in President Bush's November 29, 1990, signing statement (Appendix A). In addition, the State of Louisiana may not serve as a "lead" Task Force member for design and construction of wetlands projects of the priority project list.

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

To assist it in putting the CWPPRA into action, the Task Force established the Technical Committee and the Planning and Evaluation Subcommittee. Each of these bodies contains the same representation as the Task Force -- one member from each of the five Federal agencies and one from the State. The Planning and Evaluation Subcommittee is responsible for the actual planning of projects and preparation of the November

1993 comprehensive restoration plan, as well as the other details involved in the CWPPRA process (such as development of schedules, budgets, etc.); the subcommittee makes recommendations to the Technical Committee and lays the groundwork for decisions which will ultimately be made by the Task Force. The Technical Committee reviews all materials prepared by the subcommittee, makes appropriate revisions, and provides recommendations to the Task Force. The Technical Committee operates at an intermediate level between the planning details considered by the subcommittee and the policy matters dealt with by the Task Force, and often formalizes procedures and formulates policy for the Task Force.

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

The Citizen Participation Group. The Task Force also established a Citizen Participation Group to provide general input from the diverse interests across the coastal zone: local officials, landowners, farmers, sportsmen, commercial fishermen, oil and gas developers, navigation interests, and environmental organizations. The Citizen Participation Group was formed to promote citizen participation and involvement in formulating priority project lists and the restoration plan. The group meets at its own discretion, but may at times meet in conjunction with other CWPPRA elements, such as the Technical Committee. The purpose of the Citizen Participation Group is to maintain consistent public review and input into the plans and projects being considered by the Task Force and to assist and participate in the public involvement program. The membership of the Citizen Participation Group is shown in Table 1.

Table 1
Membership of the Citizen Participation Group

Gulf Coast Conservation Association	Concerned Shrimpers of America
Coalition to Restore Coastal Louisiana	Gulf Intracoastal Canal Association
Lake Pontchartrain Basin Foundation	Louisiana Association of Soil and Water Conservation Districts
Louisiana Farm Bureau Federation, Inc.	Louisiana Landowners Association
Louisiana League of Women Voters	Louisiana Nature Conservancy
Louisiana Oyster Growers and Dealers Association	Louisiana Wildlife Federation, Inc.
Midcontinent Oil and Gas Association	New Orleans Steamship Association
Oil and Gas Task Force (Regional Economic Development Council)	Police Jury Association of Louisiana
Organization of Louisiana Fishermen	

Involvement of the Academic Community. While the agencies sitting on the Task Force possess considerable expertise regarding Louisiana's coastal wetlands problems, the Task Force recognized the need to incorporate another invaluable resource: the state's academic community. The Task Force therefore retained the services of the Louisiana Universities Marine Consortium (LUMCON) to provide scientific advisors to aid the Environmental Work Group in performing Wetland Value Assessments. This Academic Assistance Group also assists the Task Force in carrying out the two feasibility studies authorized by the Task Force in March 1995: the Louisiana Barrier Shoreline study (managed by the Louisiana Department of Natural Resources) and the Mississippi River Sediment, Nutrient, and Freshwater Redistribution study (managed by the Corps of Engineers).

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

PLAN FORMULATION PROCESS FOR THE 6th PRIORITY PROJECT LIST

BACKGROUND

The planning effort associated with the CWPPRA initially proceeded simultaneously along two tracks. Section 303(b) of the act calls for the development of a comprehensive restoration plan for Louisiana's coastal wetlands. This long term plan was developed over a three-year period, with the report (the *Louisiana Coastal Wetlands Restoration Plan*) completed in November 1993. Section 303(a), on the other hand, deals with projects which can be implemented within a short period of time. This section requires that any project selected for a priority project list be substantially complete within five years of its appearance on a list. The intent of this section is to provide a rapid response to the loss of coastal wetlands. The first Priority Project List was to be submitted within one year of enactment of the CWPPRA, with subsequent lists to be prepared annually.

Section 303(a) actually requires that priority project lists be submitted only until such time as the comprehensive restoration plan called for in section 303(b) has been prepared. Projects can then be drawn from the comprehensive plan. In practice, however, the Task Force has found the annual priority list process to be an effective means of developing projects and has continued to use that process -- without the five-year implementation limit.

The one-year time limit associated with developing a priority project list necessitated a deviation from the usual plan formulation process. Rather than beginning with a clean slate, it was preferable to begin with projects which were already developed to some degree. The emphasis was to develop where possible projects on which some planning had already been done; The projects on the First Priority Project List submitted in November 1991 fell into this category.

Preparation of subsequent lists involved somewhat more lead time than did the first list and employed a more traditional approach. This section describes the process by which the 6th Priority Project List was developed.

Development of the 6th list was a three-stage process: selection of candidate projects, evaluation of candidate projects, and selection of the priority project list.

IDENTIFICATION OF PROJECTS

Projects considered for the 6th list were derived from the *Louisiana Coastal Wetlands Restoration Plan*. In the restoration plan, an identification number was assigned to each project to help keep track through the screening and evaluation process. Each project received a two-letter code to identify its basin; these codes are shown below.

PO	Pontchartrain	AT	Atchafalaya
BS	Breton Sound	TV	Teche/Vermilion
MR	Mississippi River Delta	ME	Mermentau
BA	Barataria	cs	Calcasieu/Sabine
TE	Terrebonne		

Projects which were originally part of the State's Coastal Wetlands Conservation and Restoration Plan use these two letters followed by a number. Projects which were derived from the scoping meetings held in the fall of 1991 are identified by a "P" ("public") preceding the two-letter code (e.g., PPO-52, PTV-18).

Plan formulation meetings held from February through May 1992 were an additional source of projects for consideration for priority project lists. Projects which were proposed during and after these meetings are identified with an "X" (e.g., XTE-41).

The CWPPRA provides for revision of the comprehensive restoration plan as appropriate, and the Task Force considers such revisions on an annual basis. Some projects which have been added to the plan are not specific to one project area, but rather may be applied at any appropriate site on a coastwide basis. These projects are designated "CW," followed by a numerical identifier.

SELECTION OF CANDIDATE PROJECTS

Candidate projects are those which the Task Force will evaluate in some detail in order to choose a priority project list. The Planning and Evaluation Subcommittee selects a number of candidate projects as the first step in priority project list development.

In May 1996 the Planning and Evaluation Subcommittee held a series of meetings for project nominations and the selection of candidate projects. The meetings were held according to the schedule shown in Table 2.

Table 2
Meetings for Project Nominations
and Selection of Candidate Projects

Purpose and Location	Date	Hydrologic Basins
Nominations -- New Orleans, Louisiana	July 9, 1996	Pontchartrain Mississippi River Delta Breton Sound Barataria Terrebonne
Nominations -- Abbeville, Louisiana	July 11, 1996	Atchafalaya Teche-Vermilion Mermentau Calcasieu/Sabine
Candidate Selection -- Baton Rouge, Louisiana	July 23, 1996	All basins

The public was invited to participate in these meetings, not only by commenting on projects nominated by the CWPPRA agencies, but also by nominating projects of their own. The sole requirement for nomination was that a project must be listed in the *Louisiana Coastal Wetlands Restoration Plan*. The subcommittee selected the candidate projects from among the nominees at the July 23rd meeting.

The Planning and Evaluation Subcommittee established in advance that the nominee projects to be selected as candidates were to be the top ten by closed-ballot agency popular vote. The subcommittee considered the qualitative benefits of each nominee project to establish project value to the ecosystem and respective popular vote. In the voting process, the projects having highest- to lowest-value to the ecosystem respectively received the highest- to lowest-numerical vote. The popular vote for the nominees are displayed in table 3.

Of the nominees, 26 projects were chosen as candidate to be evaluated in detail; these were the projects from which the 6th Priority Project List would be selected. In addition, the Planning and Evaluation Subcommittee decided 3 demonstration projects (some proposed by the agencies, some proposed by the public) merited consideration for the 6th Priority Project List. By Task Force decision, the total cost of demonstration projects for any list is generally limited to about \$2 million.

A lead federal agency was then assigned to each candidate project. The lead agency was responsible for developing the project more fully and producing designs and cost estimates. The Engineering Work Group met and reviewed each agency's design and cost estimate for the projects. After finalization of the designs and cost estimates, the lead agencies furnished

Table 3

Agency Vote for Screening of Nominee Projects on the 6th Priority Project List^a

Project No.	Project Name	Project Rank	LA Vote	NRCS Vote	NMFS Vote	EPA Vote	USFWS Vote	COE Vote	Total Project Vote
XTE-12	Bayou Boeuf Pump Station ^b	1	12	17	13	25	11	18	106
PTE-26	Penchant Basin Plan ^b	2	12	24	17	14	12	11	90
PBA-44	Sediment Diversion at Boothville ^b	3	8		25	15	14	24	86
TE-76	Lake Boudreaux Basin Freshwater Introduction and Hydrologic Management ^b	4		15	18	9	25	17	89
CW-5	Long-term Marsh Creation at 60-mile Point (West Point a la Hache) ^b	5	24		15	21		23	83
CW-6	Long-term Marsh Creation East of Atchafalaya Bay ^b	6	23		23	22		15	83
PBA-12b	Barataria Bay Waterway Bank Protection East ^b	7	1	22	21		23		74
CW-1	Dedicated Dredging in the Mississippi River ^b	8	15			19	13	25	72
TV-5/7	Marsh Island Hydrologic Restoration ^b	9	9	17	4	6	17	19	72
CW-7	Bayou Lafourche Dedicated Dredging (in Oilfield Canals) ^b	10	18	3	8	20		22	71
XCS-48	Black Bayou Hydrologic Restoration ^b	11		14	20	7	19	6	66
PMR-10	Delta-wide Crevassees ^b	12	7		22	13		21	63
PME-2	Breakwaters at Rockefeller Refuge ^b	13	16	15	11			20	62
PBA-48	Myrtle Grove Siphon enlargement ^b	14			24	12	24		60
XMR-10b	Channel Armor Gaps West ^b	15	4		10	23	21		58
XTV-25/ PTV-10	Oaks/Avery Canals Hydrologic Restoration ^b	16	25	23		4	1		53
PTV-19b	Sediment Trapping at the Jaws ^b	17	19	2		17		14	52
BA-3/4	Assume OM&M of the Siphons at Naomi, Violet, and West Pointe a la Hache	18	14	7	6		18		45
CS-2	Rycade Canal Assumption of OM&M	19	20	9			15		44
PBA-11	Tiger/Ped (Spanish) Pass Diversion ^b	20			19		20		39
XBA-63	Land Bridge in the Barataria Basin	21	3	8	16		6	1	34
CS-1a	Holly Beach Breakwaters Assumption of Maintenance	22	22	11					33
XTE-62	Wine Island Eastward Extension	23	21		5	5			31
XME-22	Pecan Island Terracing	24			14		4	12	30
PTV-20	Little White Lake Terracing	26			12		5	13	30
PO-1a	LaBranche Wetland South of I-10	28		20			10		30
XBA-51	Shoreline Replenishment at Pass Chaland and East	29	2		7	16		4	29
TV-2a	Hammock Lake Shoreline Protection	30		19			7		26
XPO-64	Bayou Sauvage NWR Rstrtn, I-10 to L Pontchartrain	31			9		16		25
TE-2	Falgout Canal Assumption of Maintenance	32	13	4			8		25
PME-14 etc.	South Mermentau Hydrologic Restoration	33		25					25
PTE-15b(iv)	Isles Dernieres Restoration, Eastern Trinity Island	34				24			24
BA-16	Assume OM&M of the L Salvadore/Jean Lafitte Proj	35	5	6			12		23
PCS-12/18	Oyster Bayou Hydrologic Restoration	36		21					21
PBA-58b	Little Lake Oil and Gas Field Shore Protection	37	17				2		19
PPO-7	LaBranche Marsh Creation East	38				8		10	18
XTV-27	Freshwater Bayou Bank Stabilization East	39		18					18
XTE-64	Avoca Island Diversion	40				18			18
PME-7	Pecan Island Pump Station	41				1		16	17
XTE-70	Terrebonne Ridge Hydrologic Restoration	42		12	1			3	16
XBA-1d	Cheniere Ronquille Segmented Breakwaters	43	6					9	15
XTE-45	Timbalier Island Restoration	44			3	11			14
XTE-59	Fina Laterre Freshwater Introduction	45		5			9		14
CS-55	Sabine Terracing Assumption of OM&M	46	11				3		14
CW-4	Highway 1 Marsh Creation ^c	47	10	1		3			14
PPO-2a etc.	Lakes Pontchartrain/Borgne Land Bridge Phase 1	48		13					13
XBA-55	Jetty Modification at Empire	49			2	10			12
XBA-73a	Ft. Jackson Marsh Creation	50						8	8
CW-3	Big Mar Marsh Restoration	51						5	5
PPO-2h	Lake Borgne Shore Protection West of Shell Beach	52				2		2	4
CW-2	Big Mar Marsh Restoration	53							0
XTE-66	Sediment Conveyance	54							0
XBA-75	Jetty Modification at Tiger Pass	55							0
XBA-76	Mississippi River Diversion at Port Sulphur	56							0
Cumulative Project Votes of Each Agency =			325	325	325	325	325	325	

^a Nominee votes were compiled on July 24, 1996.

^b Selected for evaluation as a Candidate project on the 6th Priority Project List.

CMRPPA Agencies:

- LA = State of Louisiana
- COE = US Army Corps of Engineers
- EPA = Environmental Protection Agency
- NMFS = National Marine Fisheries Service
- NRCS = Natural Resources Conservation Service
- USFWS = US Fish and Wildlife Service

Basin Project Identification Codes:

- PO = Pontchartrain
- BS = Breton Sound
- MR = Mississippi River Delta
- BA = Barataria
- TE = Terrebonne
- AT = Atchafalaya
- TV = Teche/Vermilion
- ME = Mermentau
- CS = Calcasieu/Sabine

this information to the Environmental Work Group. The Environmental Work Group performed a Wetland Value Assessment (WA) for each candidate project. The section entitled "Evaluation of Candidate Projects" summarizes the information developed by the lead agencies in this process.

EVALUATION OF CANDIDATE PROJECTS

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

The WA was developed by the Environmental Work Group. The Environmental Work Group is assembled under the Planning and Evaluation Subcommittee of the CWPPRA Technical Committee. The Environmental Work Group includes members from each agency represented on the CWPPRA Task Force. The WA was designed to be applied, to the greatest extent possible, using only existing or readily obtainable data.

The WA has been developed strictly for use in ranking proposed CWPPRA projects; it is not intended to provide a detailed, comprehensive methodology for establishing baseline conditions within a project area. Some aspects of the WA have been defined by policy and functional considerations of the CWPPRA; therefore, user-specific modifications may be necessary if the WA is used for other purposes.

The WA is a modification of the Habitat Evaluation Procedures (HEP) developed by the U.S. Fish and Wildlife Service (U.S. Fish and Wildlife Service, 1980). HEP is widely used by the Fish and Wildlife Service and other Federal and State agencies in evaluating the impacts of development projects on fish and wildlife resources. A notable difference exists between the two methodologies. The HEP generally uses a species-oriented approach, whereas the WA uses a community approach.

The WA was developed for application to the following coastal Louisiana wetland types: fresh marsh (including intermediate marsh), brackish marsh, saline marsh, and cypress-tupelo swamp. Future reference in this document to "wetland" or "wetland type" refers to one or more of those four communities.

The WA operates under the assumption that optimal conditions for fish and wildlife habitat within a given coastal wetland type can be characterized, and that existing or predicted conditions can be compared to that optimum to provide an index of habitat quality. Habitat quality is estimated or expressed through the use of a mathematical model

developed specifically for each wetland type. Each model consists of the following components:

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

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

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

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

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

1. Construction Cost
2. Contingencies Cost
3. Engineering and Design
4. Environmental Compliance
5. Supervision and Administration (Corps and LADNR Project Management)
6. Supervision and Inspection (Construction Contract)
7. Real Estate
8. Operation and Maintenance
9. Monitoring

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

An Engineering Work Group was established by the Planning and Evaluation Subcommittee, with each Federal agency and the State of Louisiana represented. The work group reviewed each estimate for accuracy and consistency.

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

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

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

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

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

Implementation costs were used to calculate the economic and financial costs of each wetland project. Financial costs chiefly consist of the resources needed to plan, design, construct, operate, and maintain the project. These are the costs, when adjusted for inflation, that the Task Force uses in budgeting decisions. The economic costs include, in addition to the financial cost, monetary indirect impacts of the plans not accounted for in the implementation costs. Examples would include impacts on dredging in nearby commercial navigation channels, effects on water supplies, and

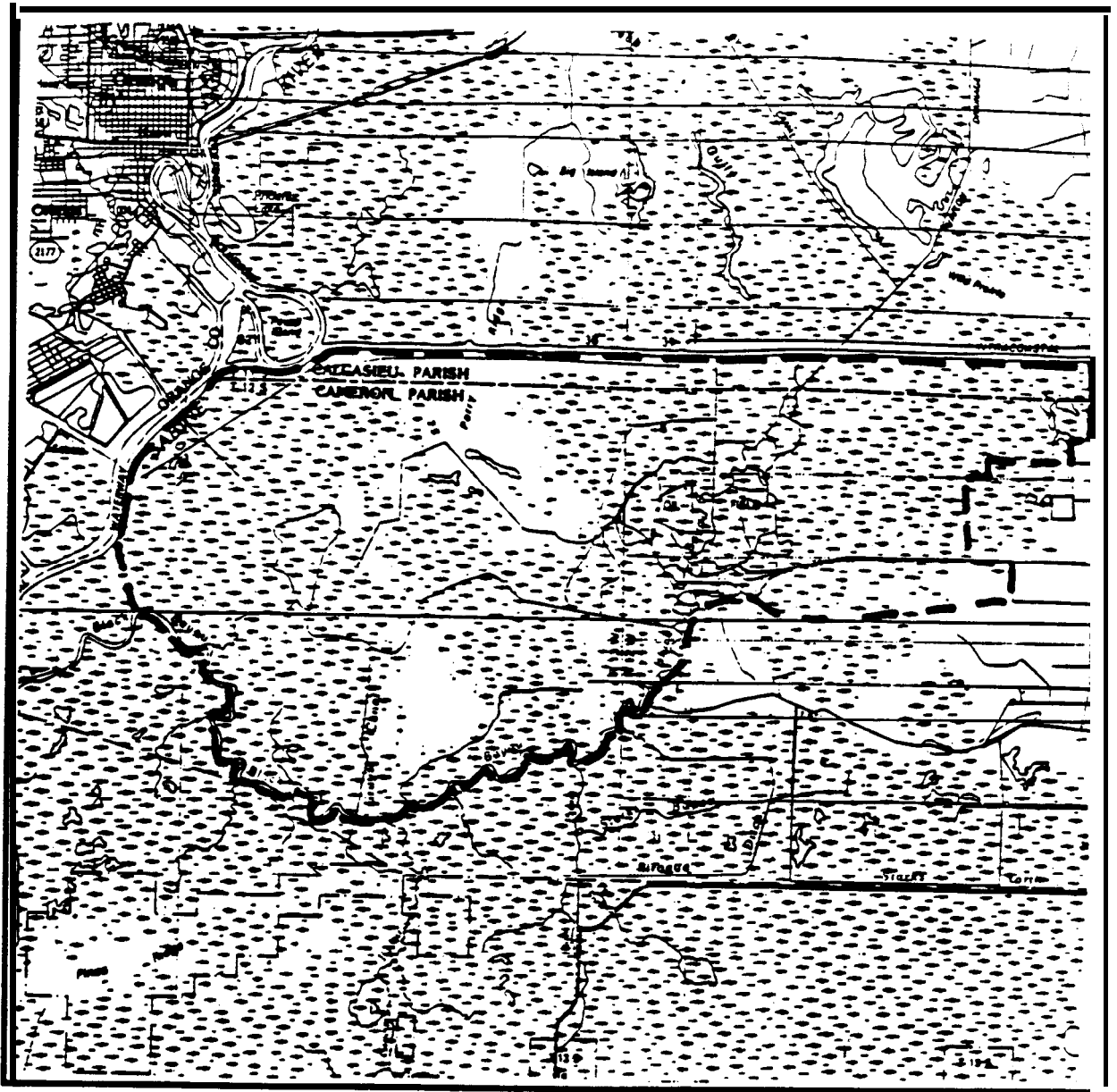
effects on nearby facilities and structures not reflected in right-of-way and acquisition costs.

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

Following the review by the Engineering Work Group, costs were expressed as first costs, fully funded costs, present worth costs, and average annual costs. The Cost per Habitat Unit criterion was derived by dividing the average annual cost for each wetland project by the Average Annual Habitat Units (AAHU) for each wetland project. The average annual costs figures are based on 1997 price levels, a discount rate of 7.375 percent, and a project life of 20 years. The fully funded cost estimates developed for each project were used to determine how many projects could be supported by the funds expected to be available in fiscal year 1997. The fully funded cost estimates include operation and maintenance and other compensated financial costs.

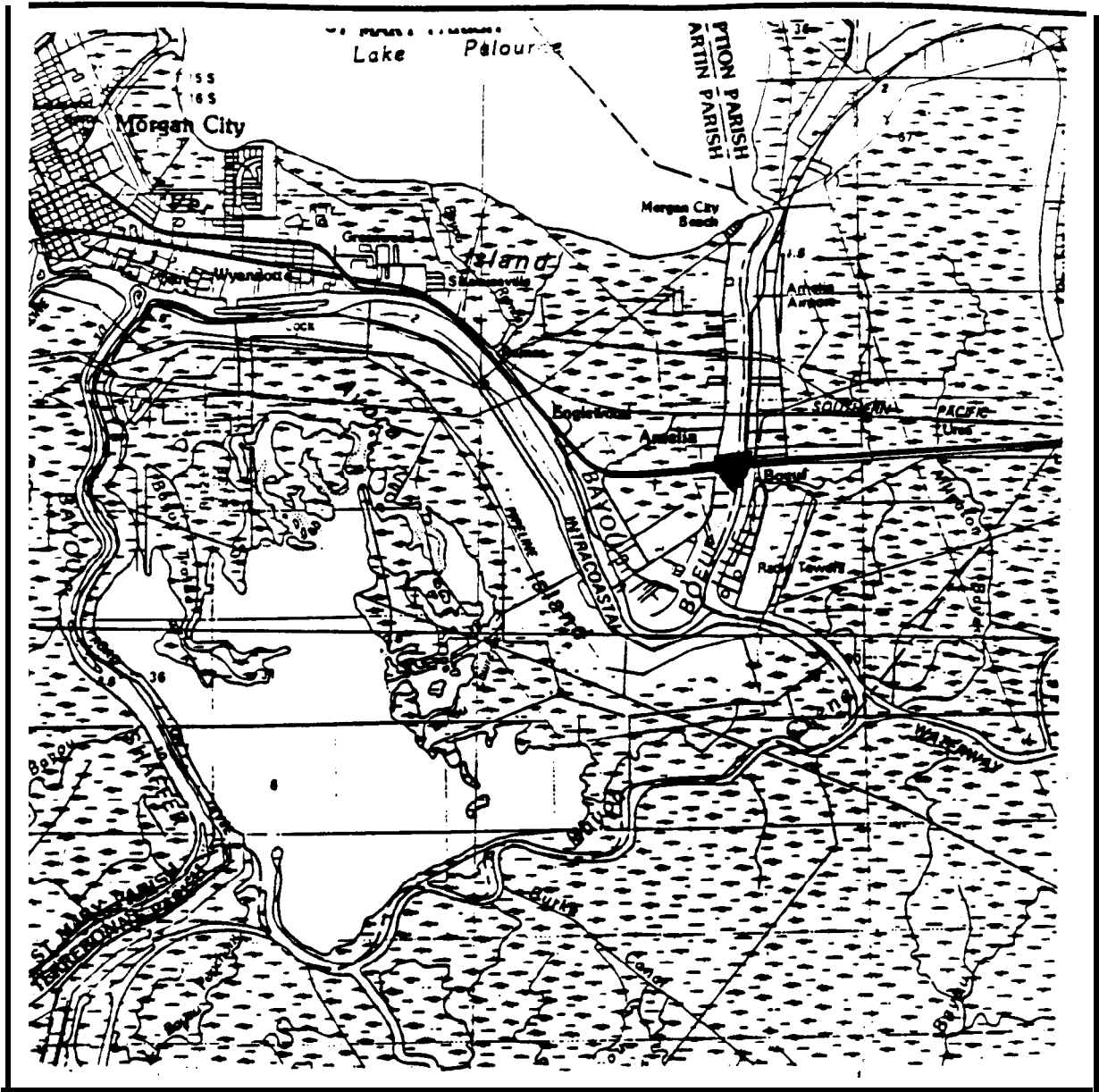
DESCRIPTION OF CANDIDATE PROJECTS

This section provides a brief description of each candidate project. The descriptions include the project location, features, anticipated benefits, and a map identifying the project area and project features.



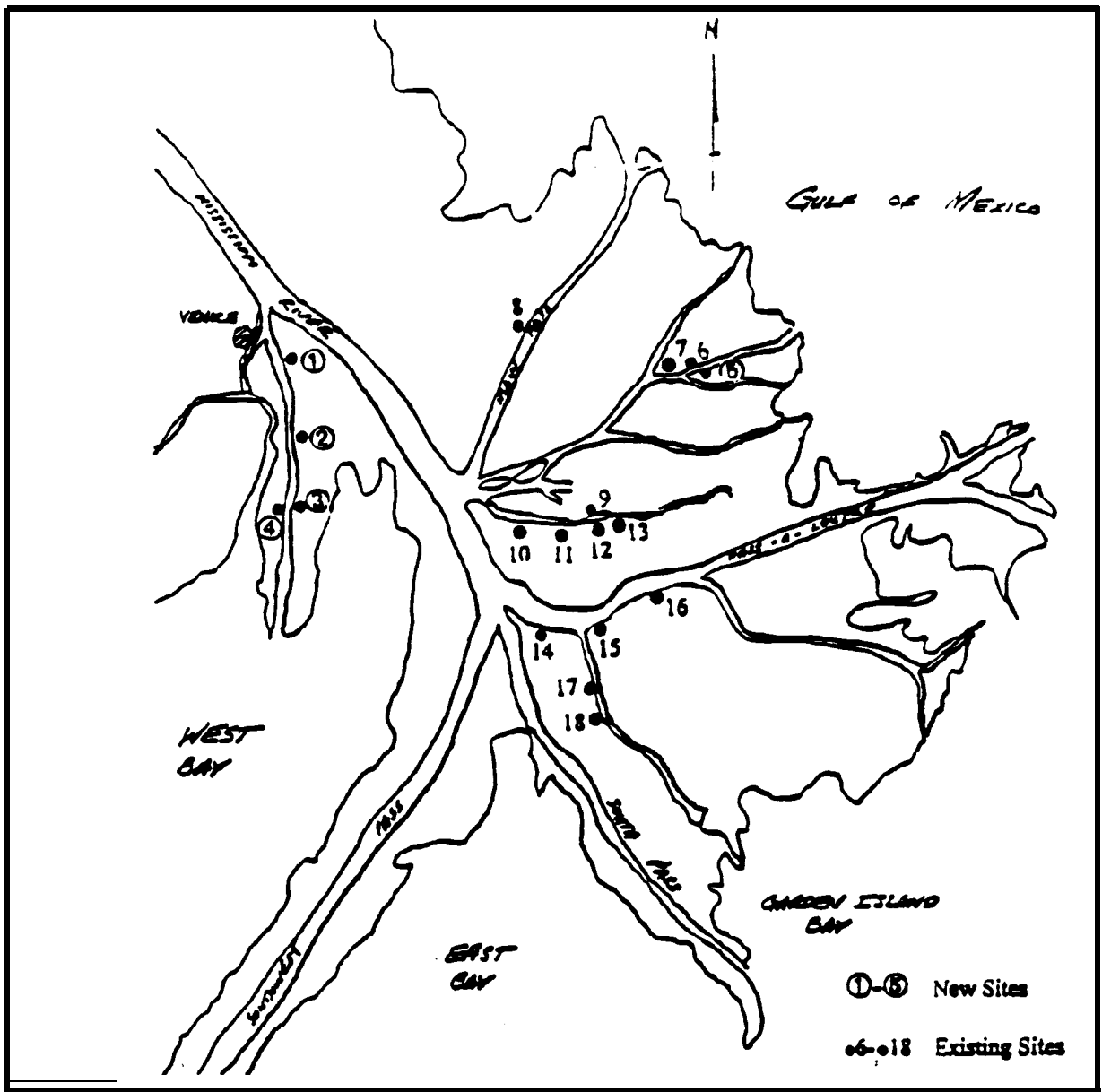
Black Bayou Hydrologic Restoration (XCS-48)

The project is located in Cameron Parish in the northwestern quadrant of the Calcasieu-Sabine Basin about 5 miles SE from Grange, TX. The project consists of: 1) shoreline restoration of 9,000 A of GIWW shoreline west of the Gum Cove Ridge; 2) a weir with a barge bay in the canal leading from the GIWW to the Black Bayou Oil Field; 3) replacement of the collapsed culverts in the shell road on the southern boundary of Unit NO-13; 4) a plug with flapgated culverts in the Vinton Drainage ditch; 5) a rock liner in Black Bayou near its intersection with the GIWW; 6) 24,000 linear ft of bullwhip (*Scirpus californicus*) vegetative plantings in certain areas of Units NO-1 7, NO-1 8 and NO-19; and 7) 20,000 linear A of shallow water straight line terraces in Unit NO- 13 with 8,000 linear ft of wiregrass (*Spartina patens*) plantings on the terraces. The project area is 25,529 acres and will restore/protect 3,594 acres of marsh in 20 years.



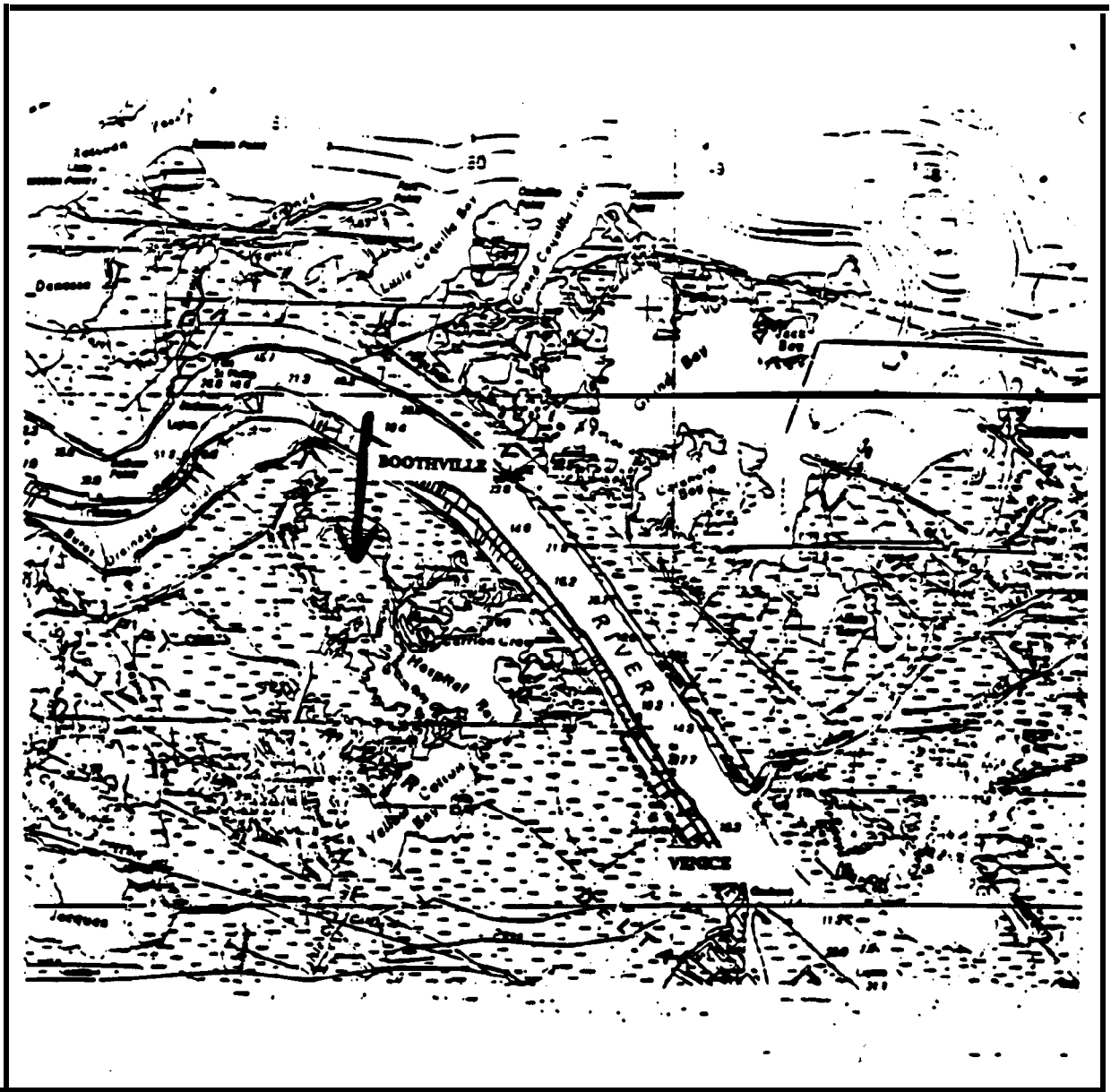
Bayou Boeuf Pump Station (XTE-32)

The proposed project consists of the installation of an approximately 7,500 cubic-foot-per-second pumping station in Bayou Boeuf at Amelia, La. This pump is part of the "Barrier Plan" to protect Amelia and Morgan City from backwater flooding. It will also reduce water levels in the Vcrrct Sub-basin which will improve swamp production. The project area is 279,000 acres and will restore/protect 279,000 acres of marsh.



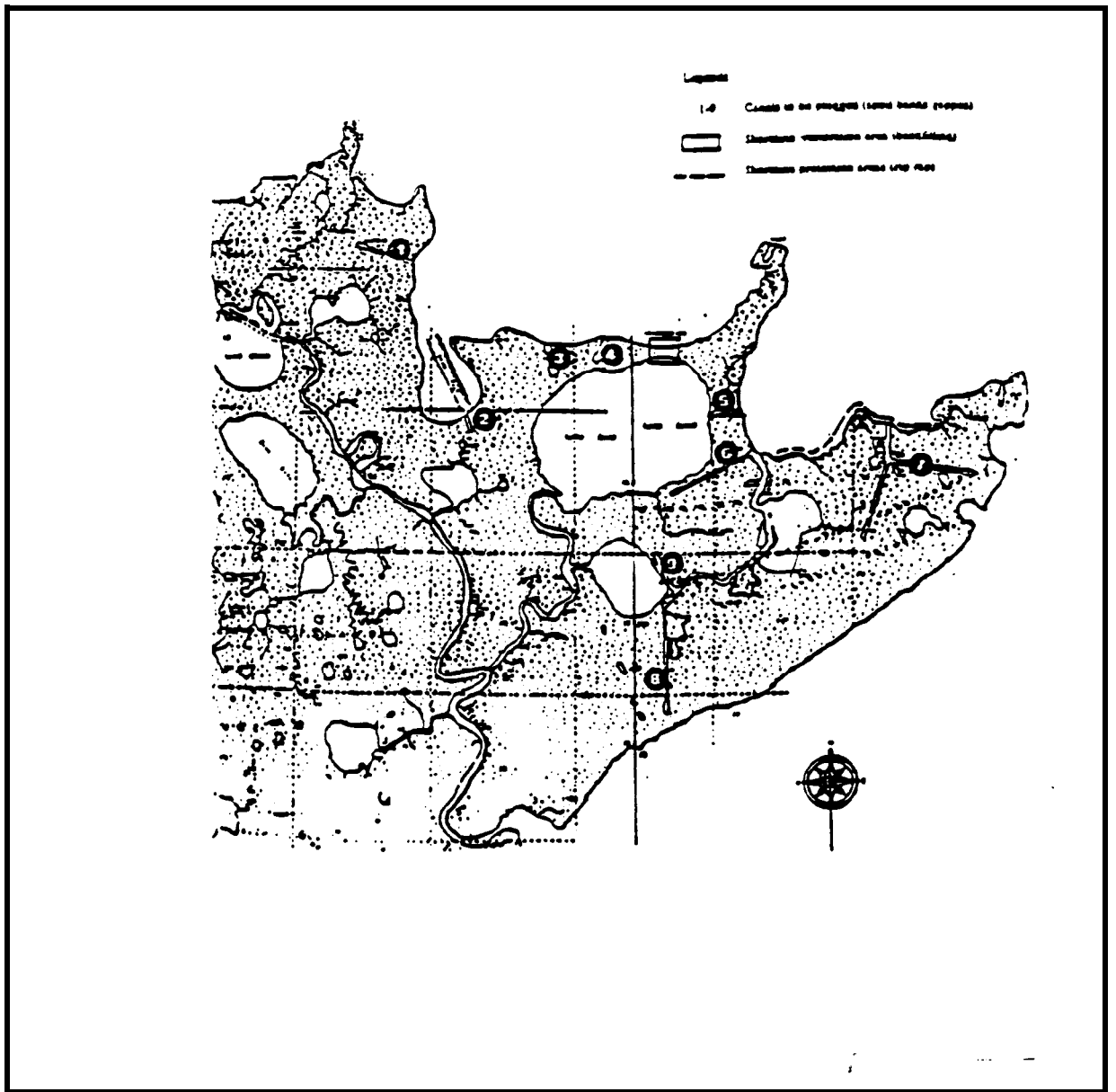
Delta wide Crevasses (PMR-10)

The project is located in the Mississippi River Modern Delta and contains portions of the Delta National Wildlife Refuge, the Pass a Loutre Wildlife Management Area, and the Grand Pass area. This project involves the construction of five new crevasses, funding for the maintenance of thirteen existing crevasses, and plugging one crevasse. The project will ensure that up to 30 crevasses will remain open until the receiving water body is entirely silted in and filled with marsh over a 20 year period. The project area is 5,210 acres and the project will restore/protect 2,386 acres of marsh in 20 years.



Fort Jackson/Boothville Diversion (PBA-44)

The project is located between Boothville and Venice it consists of an “uncontrolled” diversion from the Mississippi River into wetlands in the vicinity of Yellow Cotton Bay. Project components consist of: 1) a diversion channel from the Mississippi River through the back hurricane protection levee; 2) a low level bridge to route Hwy 23 traffic over the channel; 3) hurricane protection levees on both sides of channel; and, 4) possibly the installation of a floodgate in the channel to prevent backward flow of saltwater from the marsh into the Mississippi River during low river stages. The project area is 81,768 acres and will restore/protect 13,007 of marsh in 20 years.



Marsh Island Hydrologic Restoration (TY 5/7)

This project includes the construction of 9 plugs in oil and gas canals at the NE end of Marsh Island. The project also includes protection of the NE shoreline with rock and the isolation of Lake Sand from Vermilion Bay with dredged material. It was a candidate project for PPL-5. The project area is 6,697 acres and will restore/protect 408 acres of marsh in 20 years.



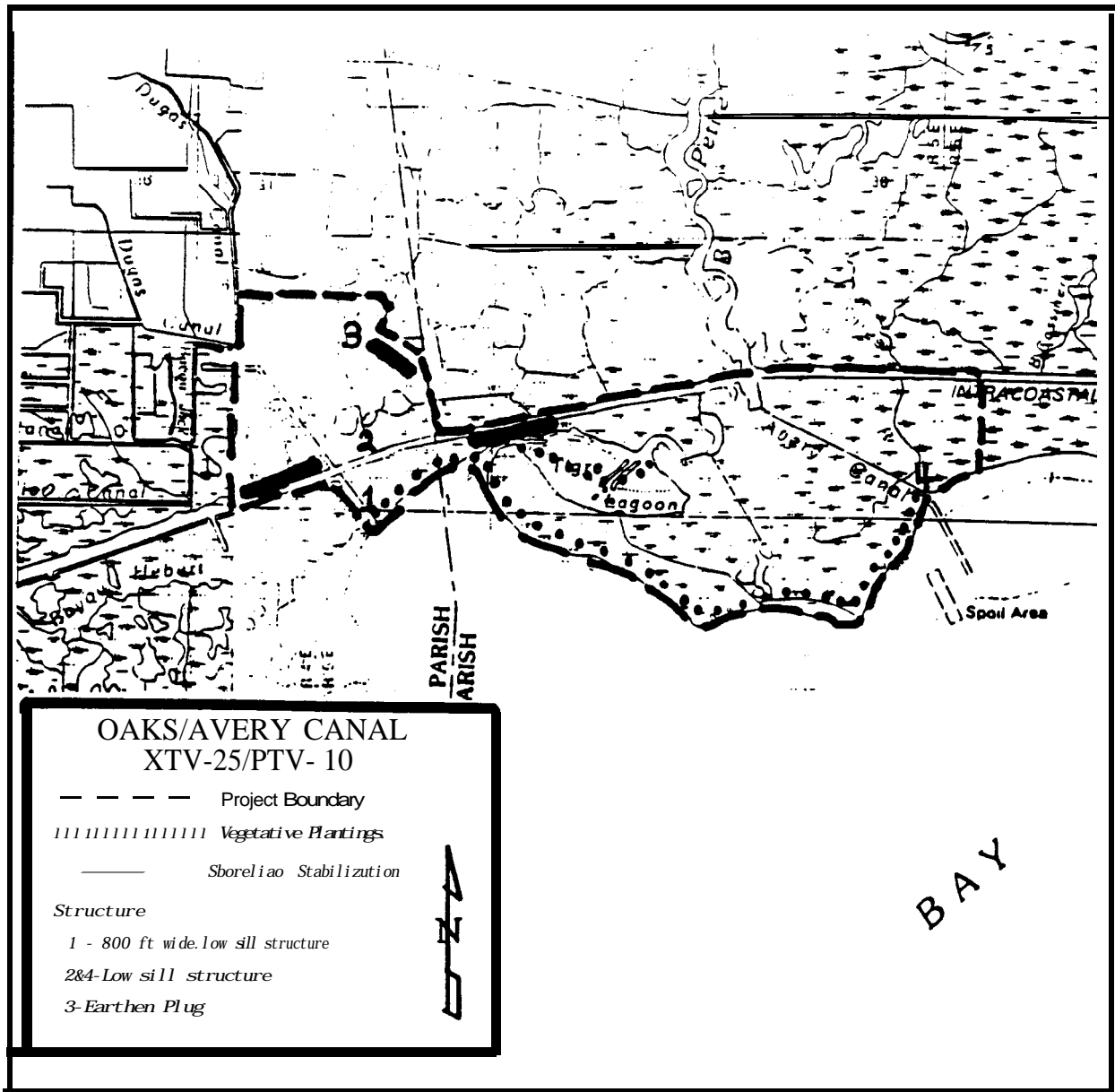
Penchant Basin Natural Resources Plan (PTE-26)

The project is located in the western portion of the Terrebonne Basin. The project consists of the installation of approximately 10 new water control structures (fixed and variable crest weirs), maintenance of 3 existing structures, installation of one plug (dam), shoreline stabilization along major bayous and canals in the area, and marsh restoration at the mouth of Bayou Penchant. The project area is 141,677 acres. The project is divided into two increments with or without shoreline stabilization. With shoreline stabilization the project will restore /protect 2,970 acres. Without shoreline stabilization the project will restore/protect 1,178 acres.



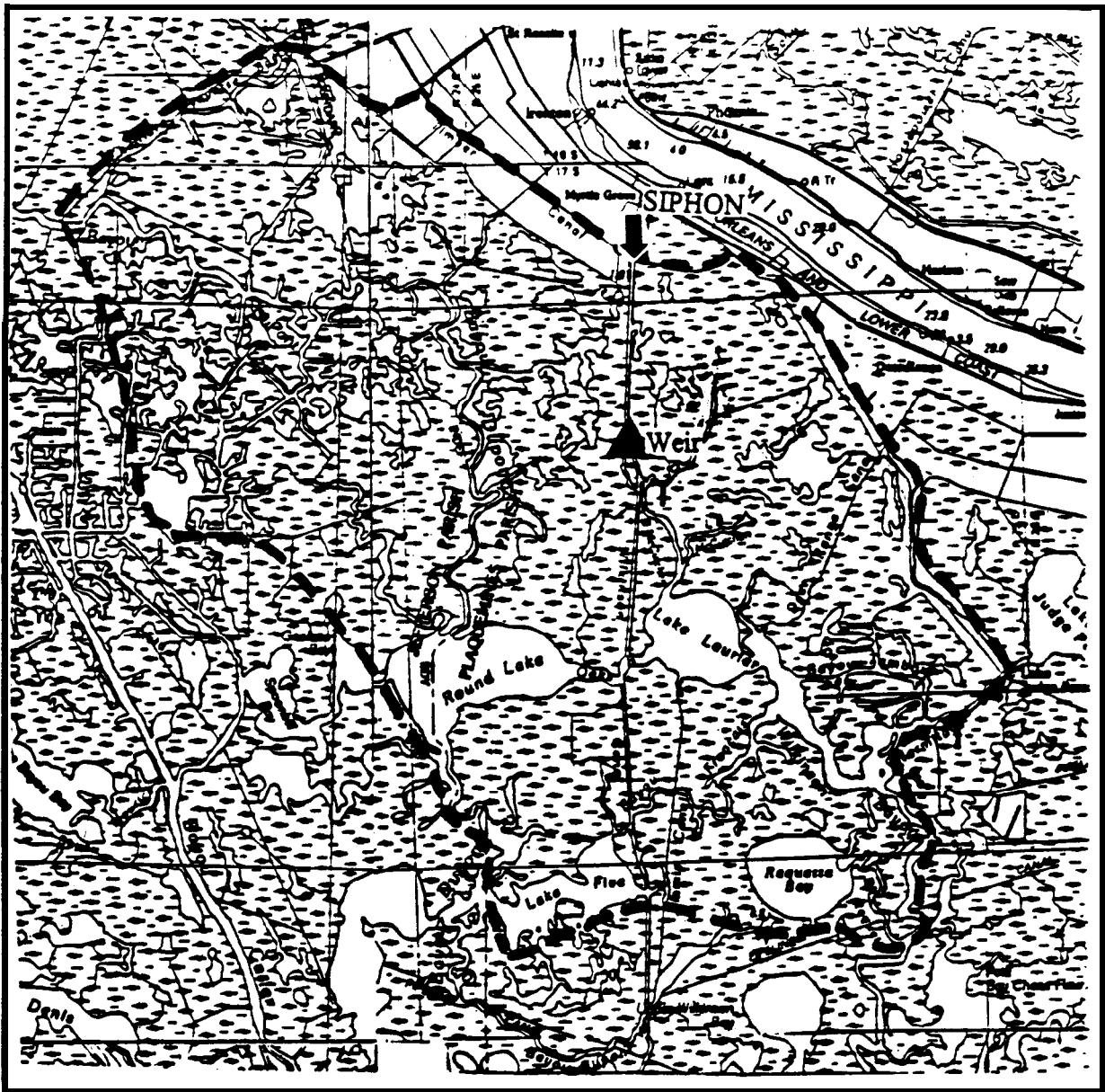
Sediment Trapping at 'The Jaws' (PTV-19h)

The project is similar to the Little Vermilion Bay Sediment Trapping (PTV-19) project approved by CWPRA for PPW with the exception that it is 2.7 times larger and is located near "The Jaws" in the NE portion of West Cote Blanche Bay. The project components include: dredging 38,000 A of distributary channels 100 A wide and 6 ft deep (844,444 cy), making 87 terraces approximately 100 ft wide at an elevation of 2 ft + MSL. Vegetation will be planted on the terrace surfaces. The project area is 2,782 acres and will restore/protect 1,999 acres of marsh in 20 years.



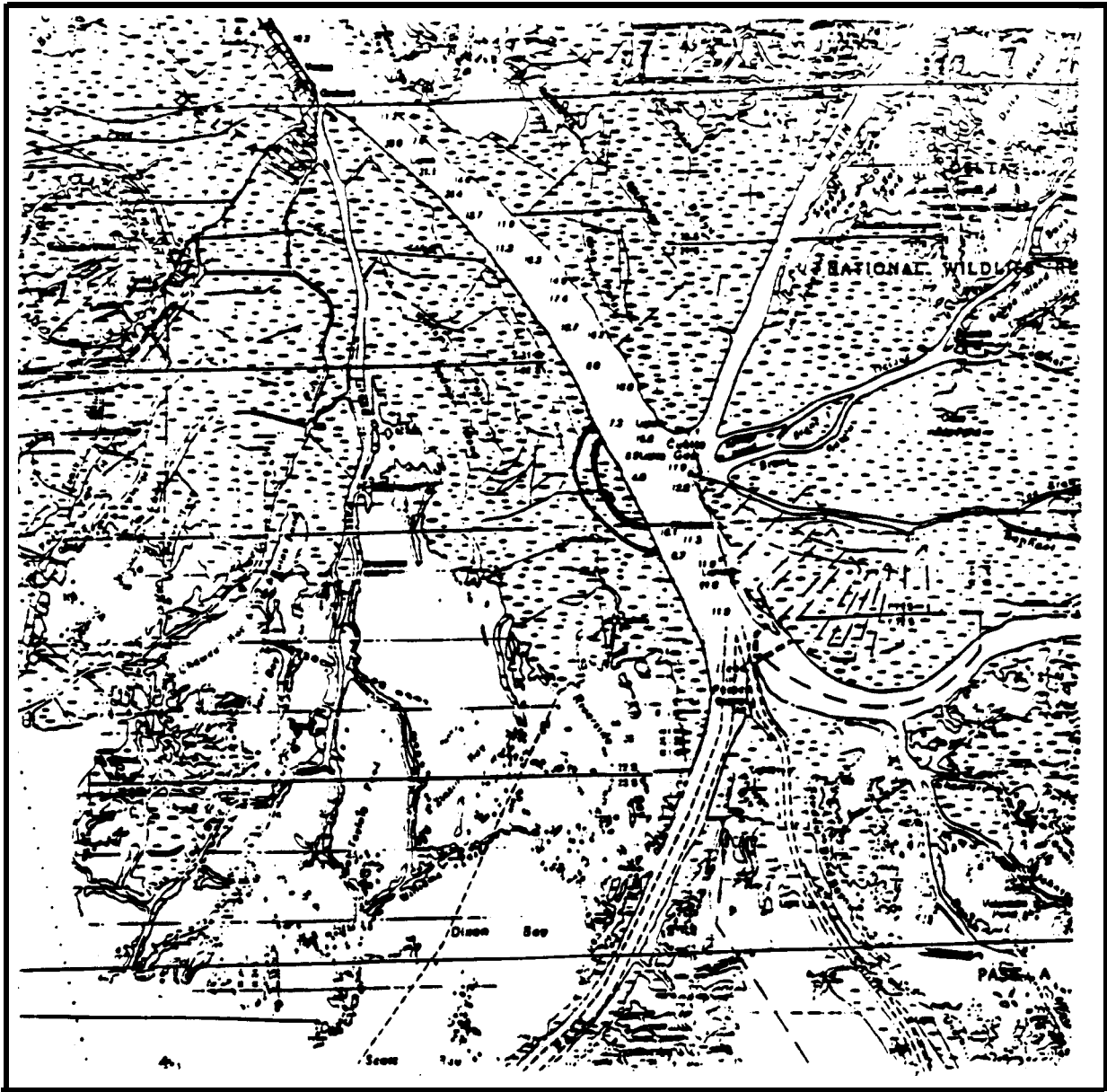
Oaks/Avery Canal (XTV-25/PTV-10)

The project is located in NE Vermilion Bay in Vermilion and Iberia Parishes. The project consists of the construction of: two low sill rock weir structures one each on the Oaks and Avery Canals in NE Vermilion Bay, an earthen plug, 7,000 linear ft of rock shoreline protection and a rock weir on the GIWW, Vermilion and Weeks Bay shoreline vegetative plantings, spoilbank stabilization, and vegetative plantings in Tiger Lagoon. The project area is 5,365 acres and will restore/protect 16 acres of marsh in 20 years.



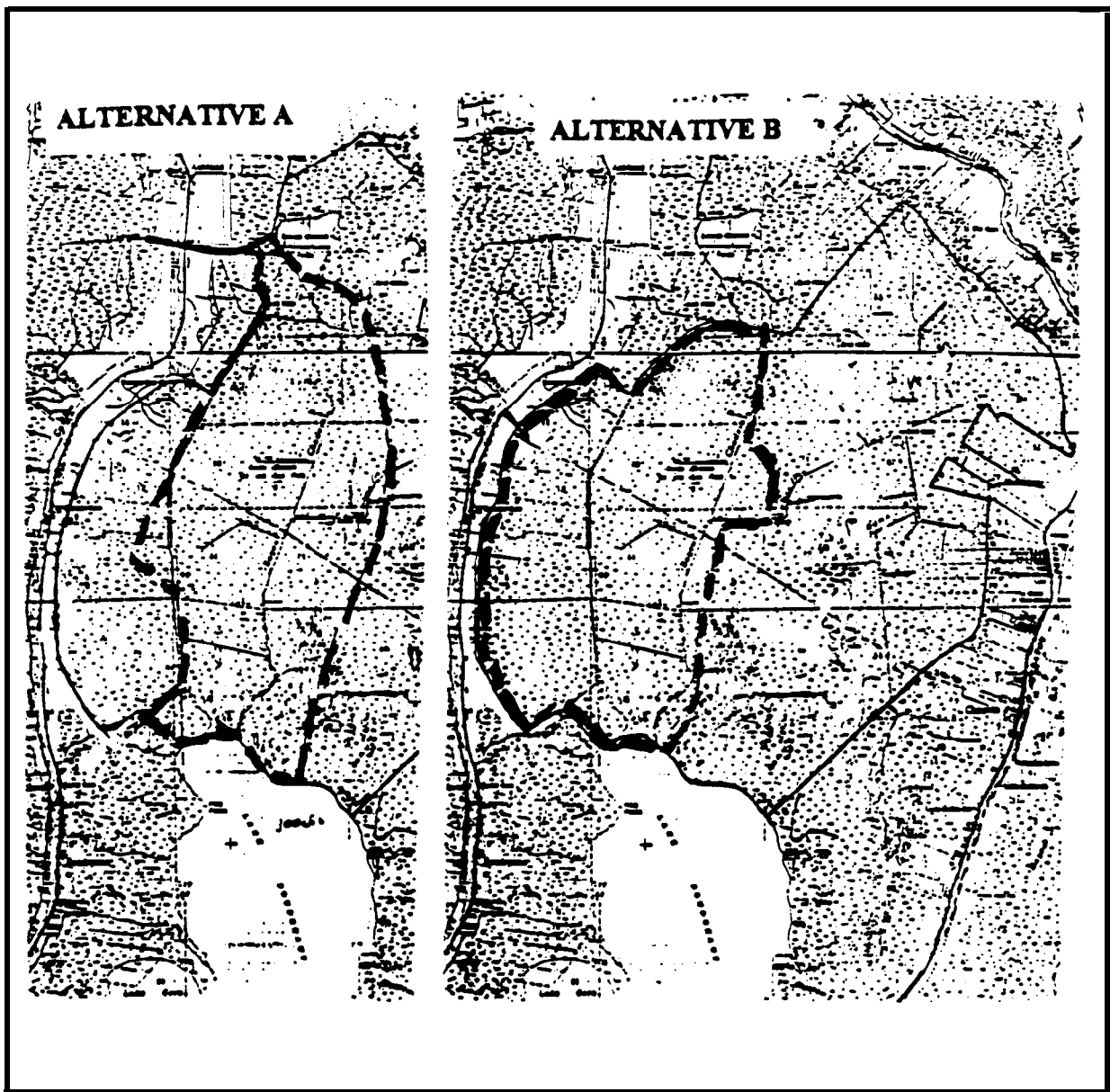
Myrtle Grove Siphon Enlargement (PBA-48)

This project consists of doubling the size of the approved Myrtle Grove Siphon project from 2,100 cubic feet per second (&) to 4,000 cfs. A siphon, consisting of sixteen 6 A diameter pipes, will be installed to divert water from the Mississippi River into Plaquemines and Jefferson Parish wetlands through the Wilkinson Canal at Myrtle Grove. The project area is 36,356 acres. The project is estimated to restore/protect 2,024 acres of marsh in 20 years.



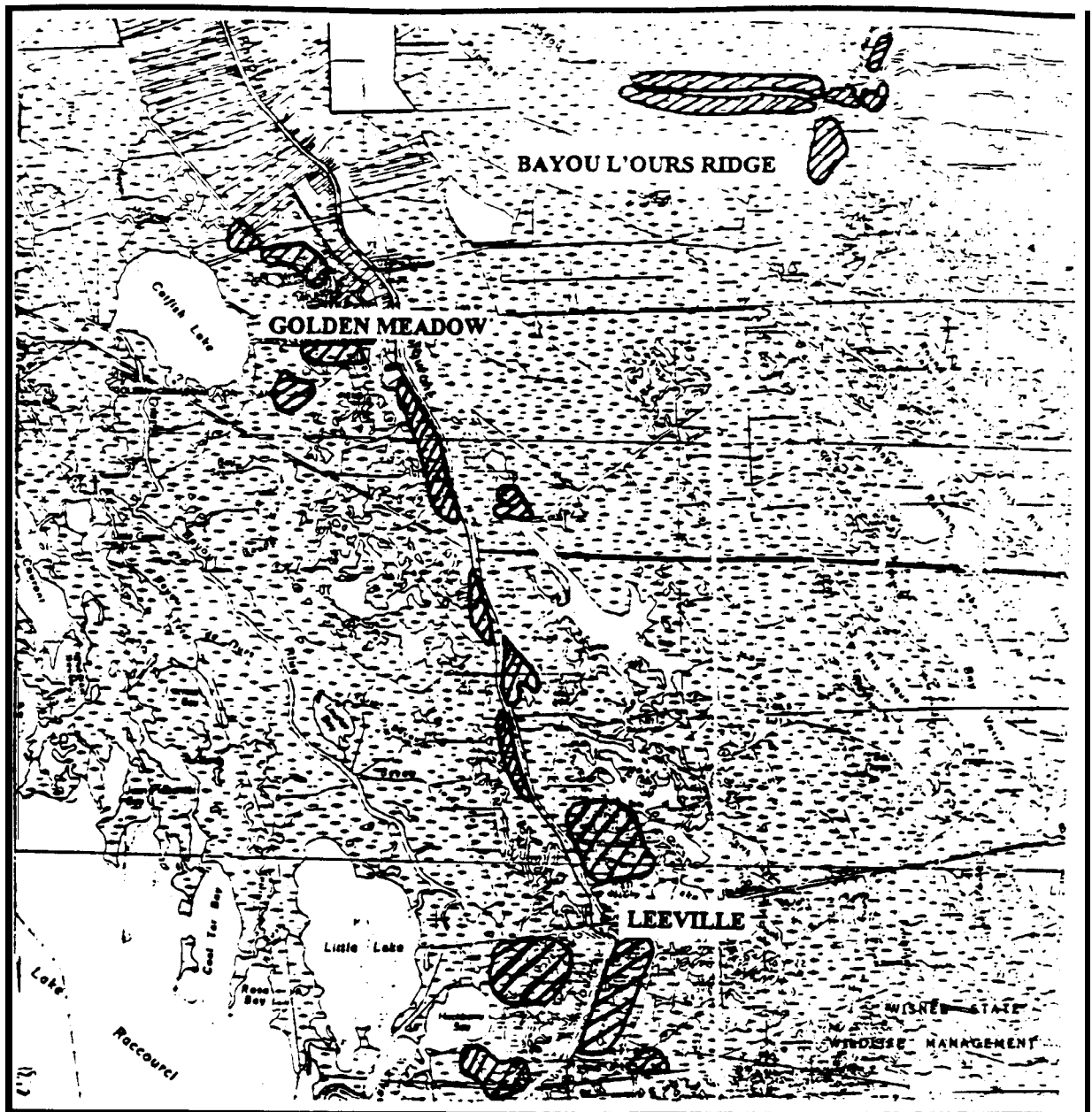
Channel Armor Gap West (XMR-10h)

Located on the west bank of Mississippi River approximately 6.5 miles below Venice and 3.5 miles above Head of Passes in Plaqueminc Parish. The project consists of increasing the depths of the existing gaps thereby allowing greater diversion of river water and sediments into the West Bay area of the Mississippi River Delta. The project area is 4,800 acres and will restore/protect 810 acres of marsh.



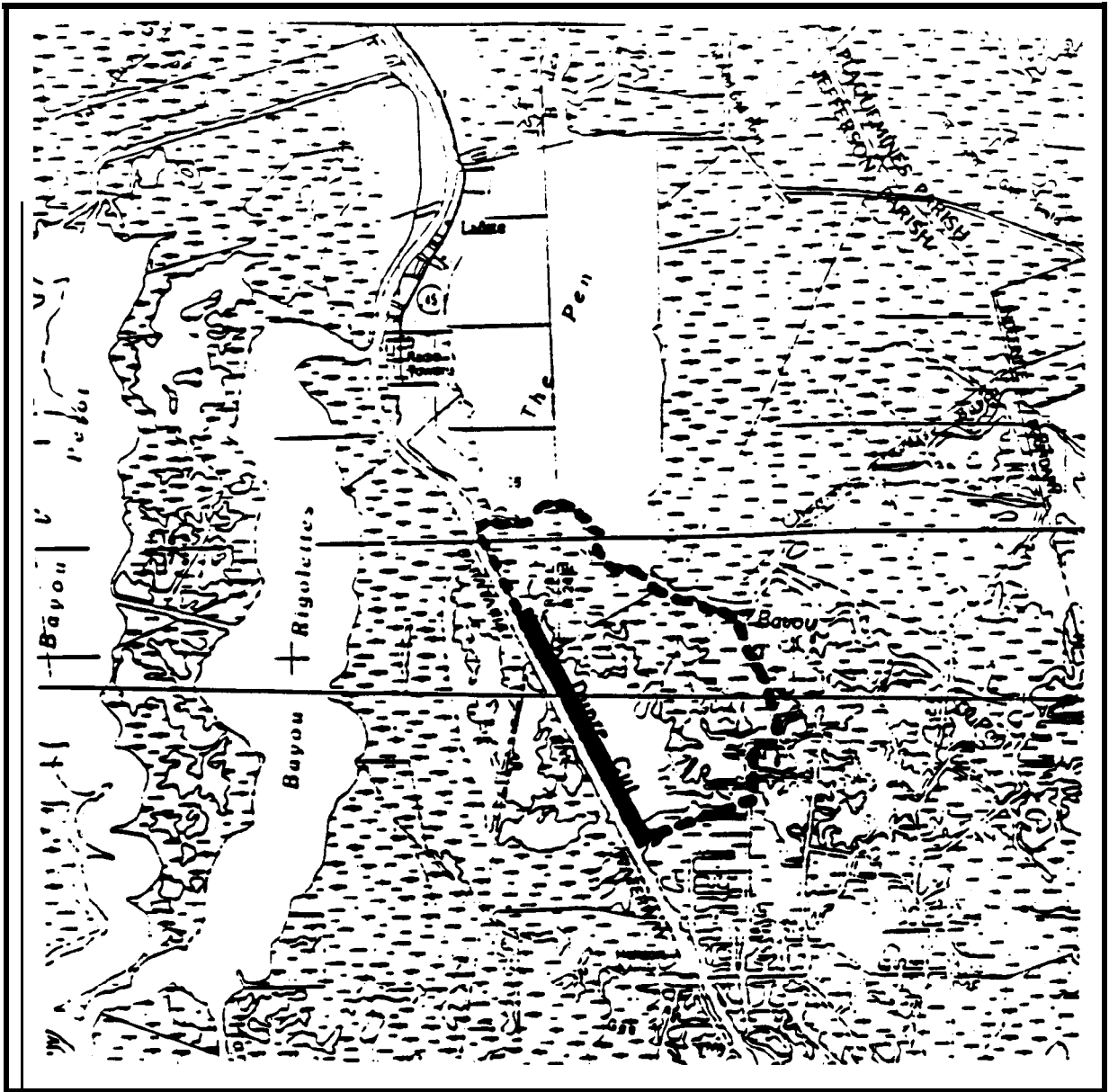
Lake Boudreaux Basin Freshwater Introduction and Hydrologic Management (TE-70)

The project is located in Terrebonne Parish, 5 miles SW of Chauvin, La. The St. Louis Canal freshwater introduction project (Alt. A) consists of: 1) enlarging 1,000' of trenasse and 15,000' of St. Louis Canal 2) removing an existing plug and culvert and installing five 5' diameter flapgated culverts, 3) constructing a plug/structure on Bayou Grand Caillou, 4) installing 2 outfall management structures, and 5) gapping spoil banks. The Bayou Pelton project (Alt. B) consists of: 1) dredging 6,700' of Bayou Pelton and dredging 3,200' of outfall channel, 2) installing five 5' diameter flapgated culverts under the highway, 3) constructing 3 outfall management structures, and 4) gapping spoil banks. The selected project would seasonally introduce up to 450 cfs at either location, introduce ail discharge from Ashland pump Station, and restore hydrology altered by canals The project area is 6,884 acres for (Alt. A) and 7,189 acres for (Alt. B). The project will restore/protect 415 acres of marsh for (Alt. A) and will restore/protect 619 acres of marsh for (Alt. B) in 20 years.



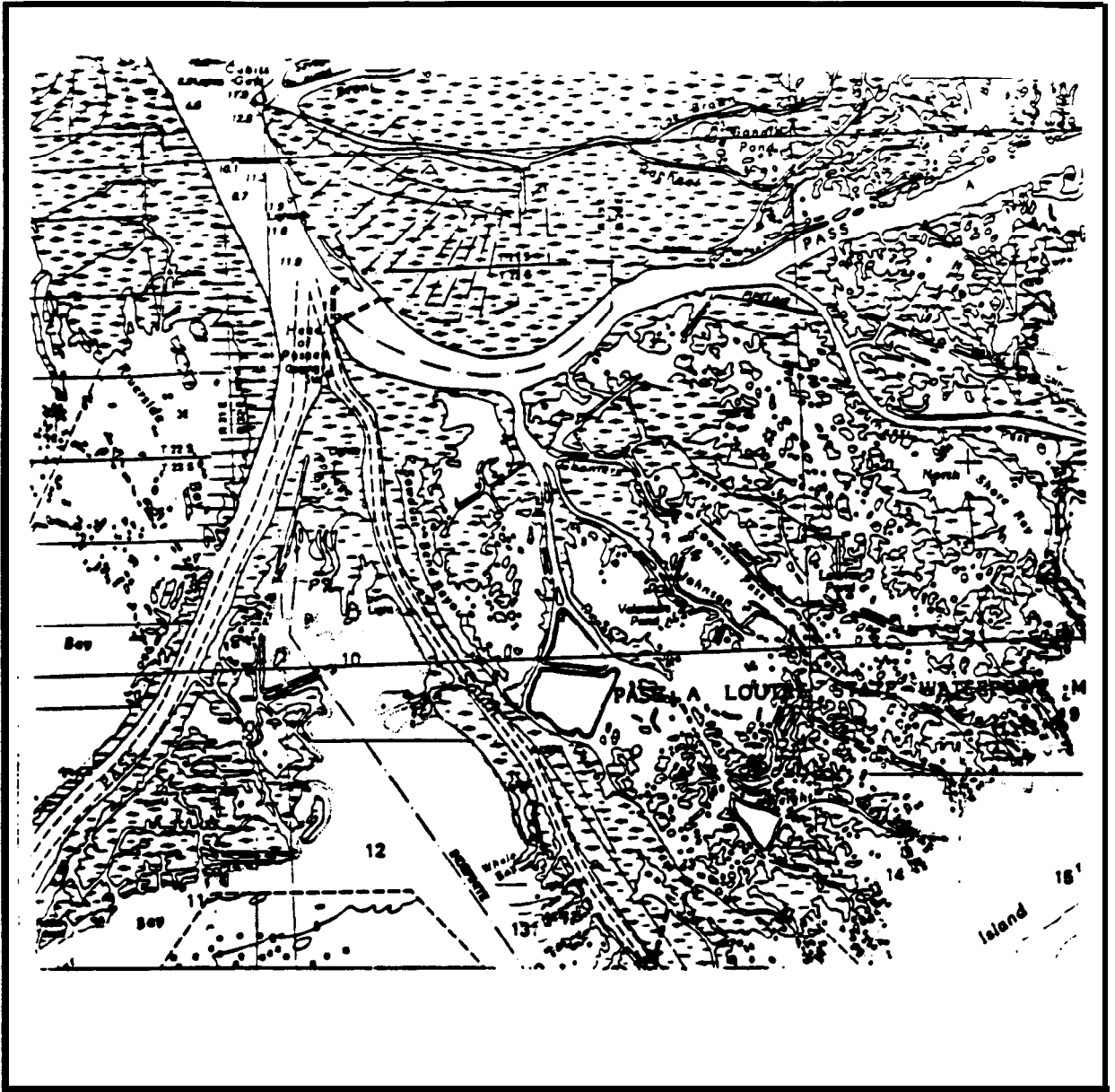
Dedicated Dredging in Oil field Canals (CW-6)

The proposed project consists of purchasing a micro dredge (4"-6" diameter dredge) and trailer which is towable by a light duty truck to be owned and operated by the government. The hydraulically dredged material will be dispersed in an areas around Leeville, Golden Meadow, and the Bayou L'Ours Ridge. The micro dredge can be used to dredge in oil field canals and in open water adjacent to areas of shallow open water surrounded by remnant marsh. The dredged material can be deposited in these shallow open water areas to restore broken marsh. The project area is 1,917 acres and will restore/create 1,528 acres of marsh in 20 years.



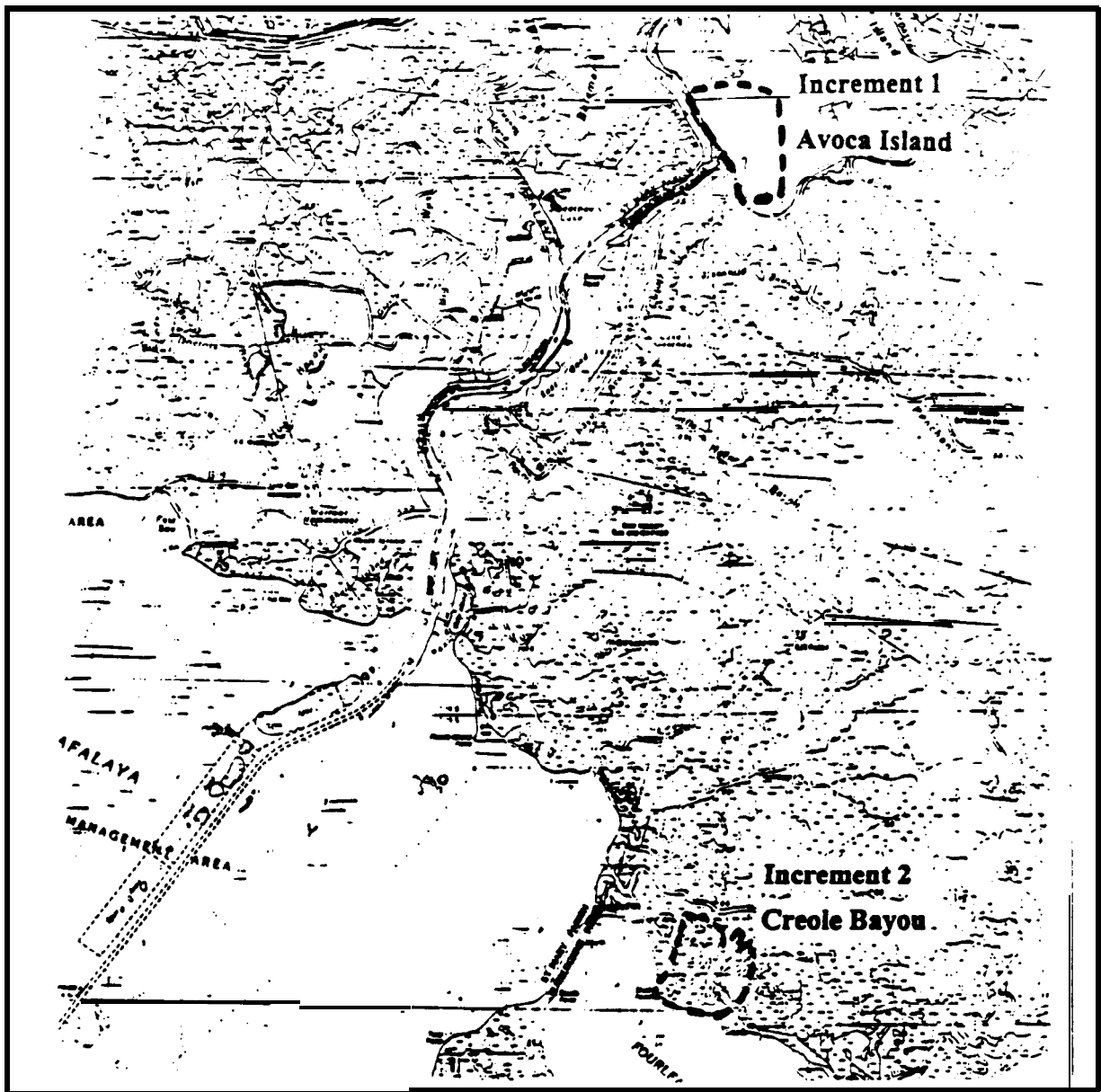
Barataria Bay Waterway "Dupre Cut" Shoreline Protection East (PBA-12b)

The project is located in Jefferson Parish on the east bank of the Dupre Cut on the Barataria Bay Waterway. The project involves rebuilding the east bank of the Dupre Cut to protect the adjacent marsh from excessive tidal action and saltwater intrusion. Dredged material from the BBWW will be armored with approximately 10,200 A (1.9 mi) of rock. The project will help increase the effectiveness of the Naomi Outfall Management plan. It was a candidate project for PPL5. The project area is 2,790 acres and will restore/protect 223 acres of marsh in 20 years.



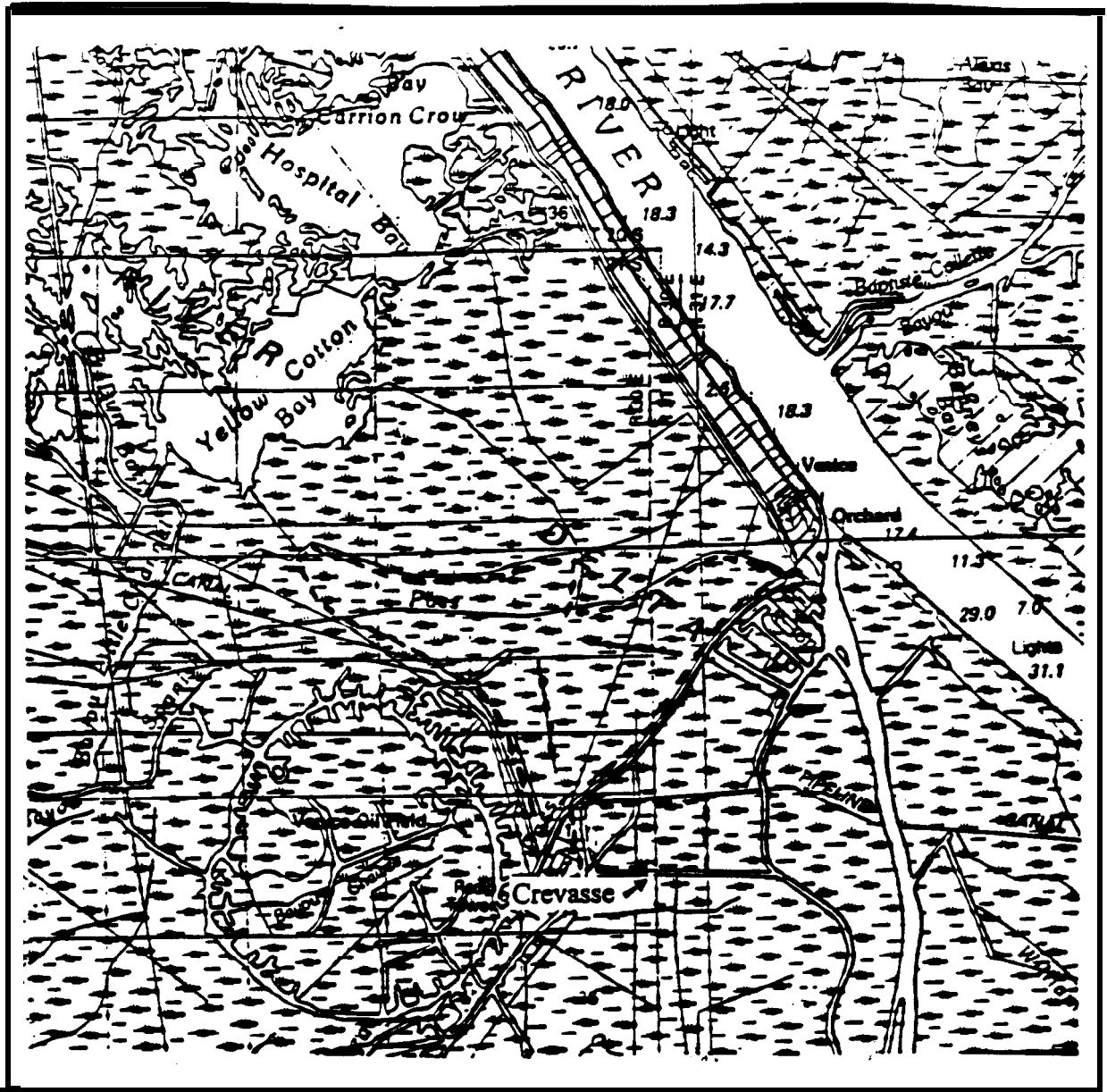
Dedicated Dredging in the Mississippi River (CW-1)

The project is located in the modern Mississippi River delta near Venice, LA. The project entails creation of marsh in various ponds in the delta using dedicated dredging from the Mississippi River or adjacent passes. The material would be dredged using a cutter head dredge and placed in the ponds suggested by personnel of the Delta National Wildlife Refuge or Pass a Loutre Wildlife Management Area. The project consists of three areas for a total project area of 3,480 acres (150 ac. marsh, 3,330 ac. water) and will restore/protect 1,222 acres of marsh in 20 years. Open water accounts for 96% of the total project area.



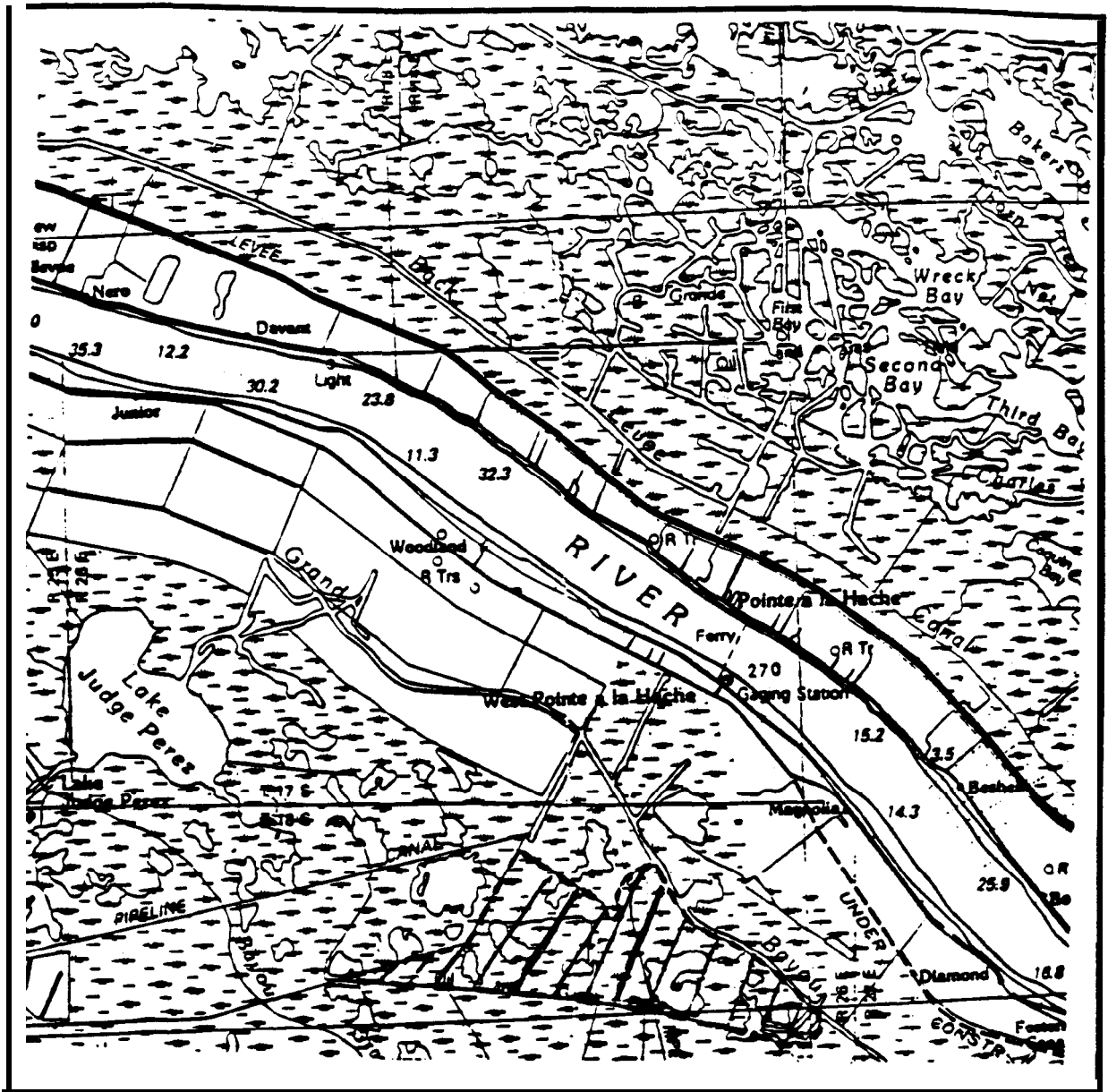
Marsh Creation East of the Atchafalaya River (CW-5)

The project is located in St. Mary and Terrebonne Parishes south of Morgan City, La. The Avoca Island project (Increment 1) consists of the beneficial use of dredged material (1 million cubic yards per year) from the "Crew Boat Chute"* area. This project would provide a pipeline and booster pumps to transport the dredged material for five years to the Avoca Island area for the purpose of marsh creation. The Creole Bayou project (Increment 2) consists of placing dredged material in approximately 300 acres of shallow open water south of Creole Bayou for the purpose of marsh creation. The material will be dredged from either the Four League Bay or from the Atchafalaya Bar Channel areas. The project area is 2,000 acres for increment 1 and will restore/protect 434 acres of marsh in 20 years. The project area is 600 acres for increment 2 and will restore/protect 264 acres of marsh in 20 years.



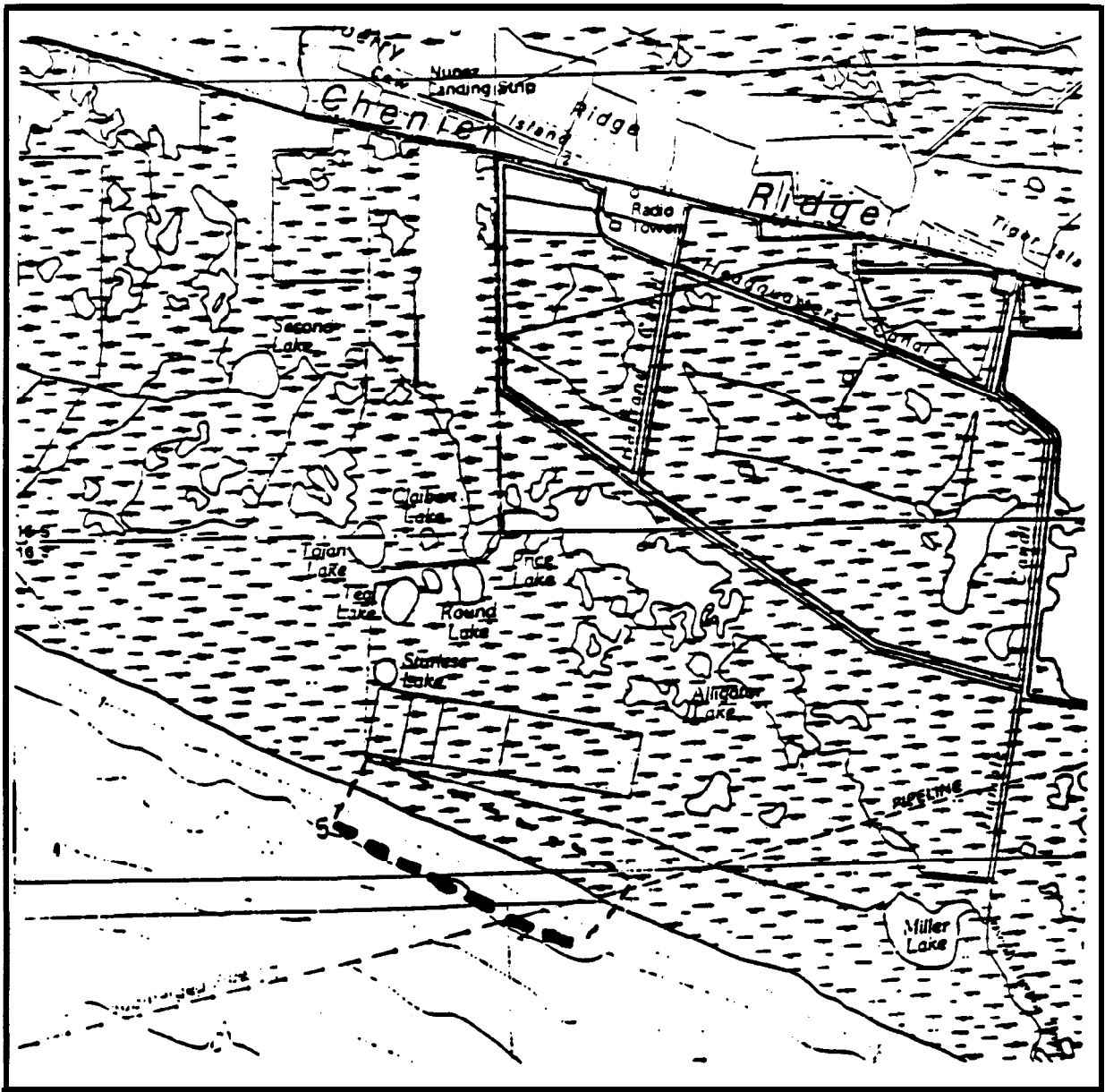
Spanish Pass Diversion (PBA-11)

The project is located near Venice, in Plaquemines Parish, between Spanish Pass and the roadway adjacent to Red Pass. The project consists of cleaning out an existing ditch leading from Pass Tante Phine to the Tidewater Road paralleling Red Pass. A bridge will be constructed across Tidewater Road to allow water to flow into the project area. Sediment trapping fences will be installed in a delta-like pattern to trap sediment and restore marsh. This is similar to the proposed Tiger/Red Pass state restoration project. In addition to the canal being cleaned out, a crevasse will be constructed in the canal off Tiger Pass adjacent to the Venice Marina. The project area is 2,403 acres and will restore/protect 187 acres of marsh in 20 years.



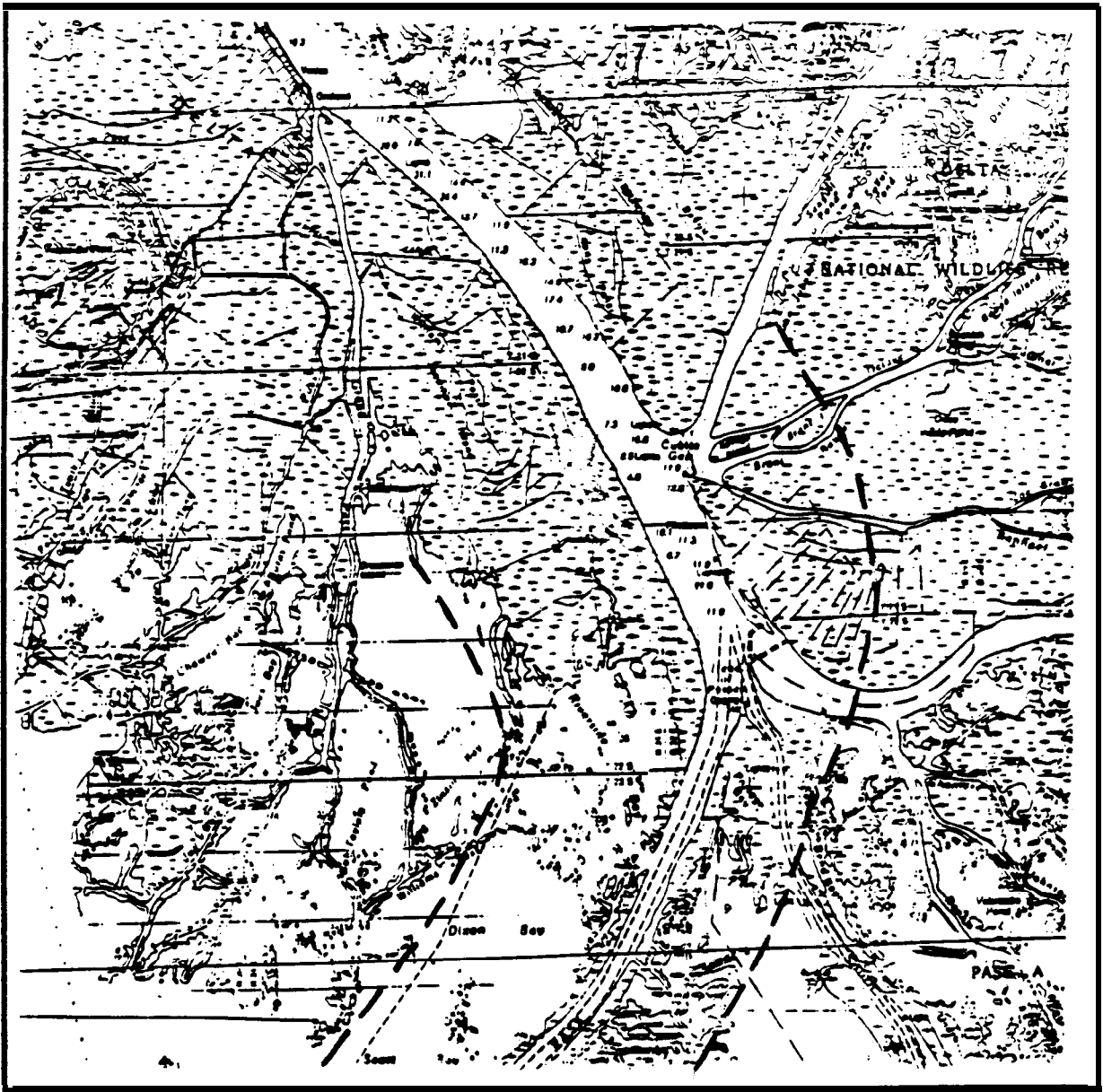
Dedicated Dredging at West Point a la Hache (CW-4)

The proposed project consists of dedicated dredging in the east bank of the Mississippi River at a location east of Happy Jack with a 30" hydraulic dredge. Dredged material will be transported to and placed in the West Point a la Hache Siphon Outfall area. This project will create 759 acres of marsh in 20 years. The project includes the installation of a pipe infrastructure and operation of the dredge for approximately one year. Approximately 10,000,000 cubic yards of material could be dredged annually in this manner. The project area is 1,146 acres. The project will restore/protect 668 acres of marsh in 20 years.



Breakwaters at Rockefeller Refuge (PME-02)

The project is located in the Chenier Sub-basin of the Mermentau Basin along the shoreline of the Rockefeller State Wildlife Refuge in Cameron Parish. The project consists of the construction of segmented breakwaters from the southwestern most point of the Price Lake unit and extending 1 mile to the east. The breakwaters will consist of 200 foot long segments of rock with 300 foot gaps. They will be built on geotextile at 6 foot contour, assumed to be 500 feet offshore. The breakwaters will be 10 feet high with a 5 foot crown and 1 on 2 side slopes. The project area is 140 acres and will restore/protect 46 acres of marsh in 20 years.

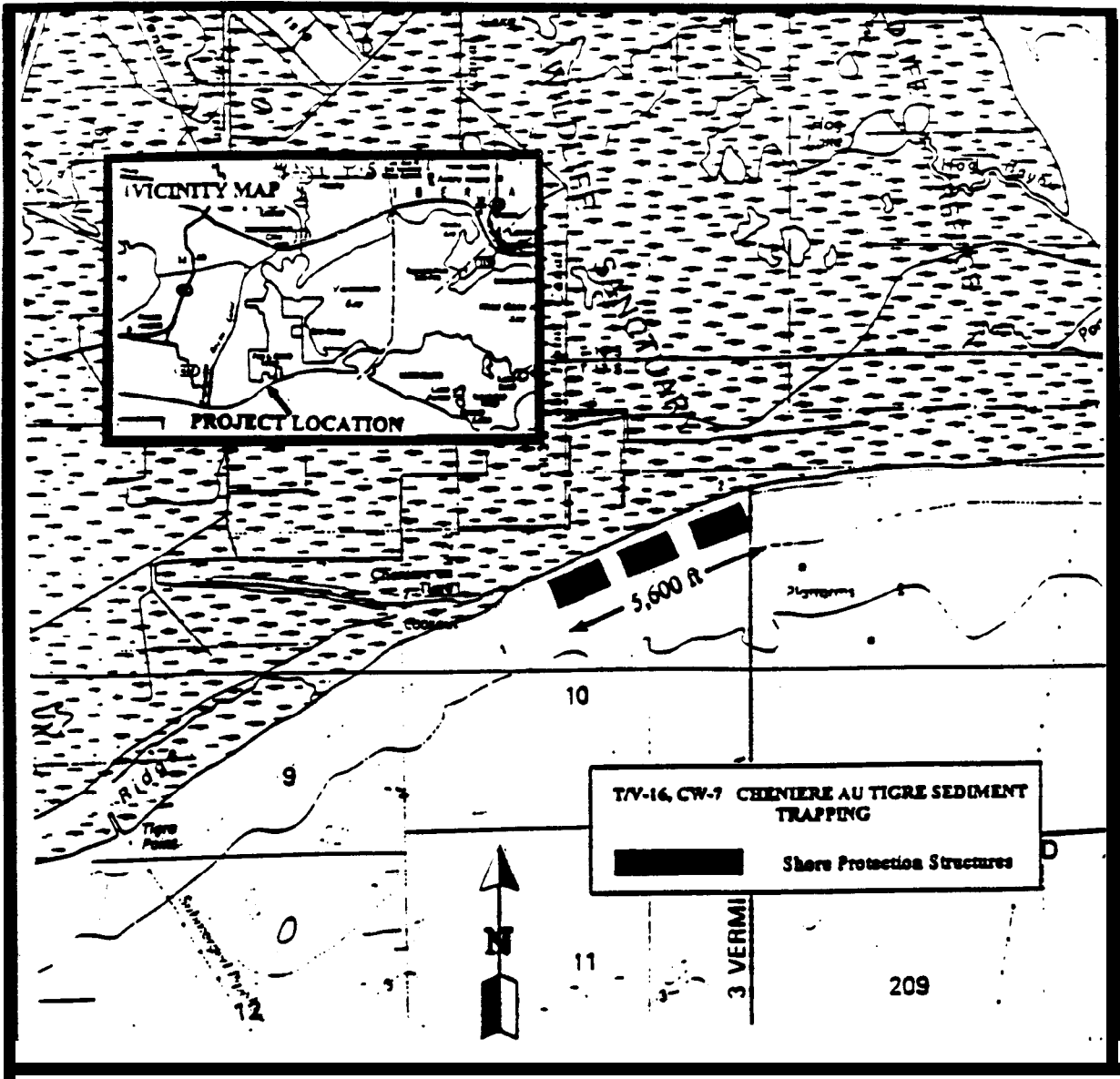


**Combination Dustpan and Cutterhead
Maintenance Dredging Operations for Marsh Creation
in the Mississippi River Delta (MR-10, XMR-12b, DEMONSTRATION)**

Located on the east and west banks of the Mississippi River, approximately 6.5 miles below Venice and 3.5 miles above Head of Passes in Plaquemines Parish. The project involves using new dredging techniques for increasing the level of maintenance dredging materials that are placed in the region for marsh creation. The project will restore about 273 acres of marsh.

Nutria Harvest for Wetland Restoration (LA-2, PTV-5. DEMONSTRATION)

Located across coastal Louisiana, especially in areas of high-concentration of nutria population. The project will determine if nutria meat for human consumption program can be developed to facilitate harvest of areas overpopulated with nutria. This program is intended to reduce the nutria's consumptive destruction of marsh vegetation, in an effort to protect these wetlands.



Cheniere Au Tigre Sediment Trapping (TN-16, CW-7, DEMONSTRATION

Located along the Gulf of Mexico shoreline in southern Vermillion Parish. It lies east of Cheniere Au Tigre, south of the Audubon Society's Paul J. Rainey Wildlife Sanctuary and southwest of Louisiana' State Wildlife Refuge and Game Reserve. The proposed structures will extend gulfward 500 ft and parallel to the shore for a cumulative distance of 5,600 linear feet. The project is intended to preserve the cheniere plain that protects thousands of acres of interior wetlands.

PROJECT SELECTION PROCESS

Background and Rationale of Ranking Criteria Development.

The priority list selection process has undergone several changes during the life of the Breaux Act. These changes have generally been aimed at increasing public involvement or making the project evaluation and selection process more rigorous. The principal change in the process of selecting the 6th Priority Project List addressed the second of these objectives.

In the past, projects have been evaluated and ranked in order of cost-effectiveness; the project with the lowest cost per average annual habitat unit is ranked first, and the rest follow in order of increasing cost/AAHU. One means of selecting the priority project list from this ranked list would be simply to begin at the top of the list and approve as many projects as could be built with that year's funding (usually about \$40 million). However, this has never been the procedure used by the Task Force.

In the past, selection of the list involved considerable discussion at all three levels in the Task Force hierarchy: the Planning and Evaluation Subcommittee prepared a recommended list for the Technical Committee; the Technical Committee revised the list and presented a recommendation to the Task Force; and the Task Force considered that recommendation and generally made revisions before giving final approval to a priority project list.

Factors other than cost-effectiveness have always figured into the Task Force's decisions. These other factors include such things as implementability (the ease with which a project can be brought to construction) and public support. The Task Force has at times also taken into account the geographical distribution of projects in the coastal zone.

In an attempt to make the selection process more rigorous, the Technical Committee developed a procedure which took into account various criteria to produce an overall ranking of candidate projects. The criteria were evaluated such that each would have a maximum value of 10 points. Each criterion was weighted in a manner deemed appropriate by the committee to reflect its relative importance, and the sum of the resulting values gave a score for each project. Candidate projects were ranked according to these scores to produce a recommended list for consideration by the Task Force. The Technical Committee required a two-thirds majority vote for any deviation from the ranked list. Table 4 lists the criteria and their assigned weights.

Table 4
Candidate Project Ranking Criteria

Criterion	Weight
Cost-Effectiveness	0.55
Longevity/Sustainability	0.15
Support of Restoration Plan Strategy	0.15
Supporting Partnerships	0.05
Public Support	0.05
Risk/Uncertainty	0.05
Total	1.00

Cost-Effectiveness. The committee agreed that cost-effectiveness is the single most important criterion in the ranking and selection of projects (it is, in fact, the only criterion mentioned in the Breaux Act). For this reason, the committee assigned a weight of 0.55 to the cost-effectiveness index, so that it would count for more than half of a project's total score. The index itself is based on a comparison of the relative values of projects' cost-effectiveness as measured by the ratio of average annual costs to average annual habitat units. A base 10 logarithm is used to prevent skewing of the results in the case of a project with a very high cost/AAHU (very low cost-effectiveness). The equation for determining the cost-effectiveness index is given below.

$$\text{Cost-effectiveness index of project } n = 5 \log_{10} (100 (E_n / E_1)),$$

where E_1 = average annual
cost/AAHU of the
most cost-effective
project
and E_n = average annual
cost/AAHU of
project n

In the case of the most cost-effective project (the project with the lowest average annual cost/AAHU), the term E_n/E_1 has the value of unity, and the cost-effectiveness index is 10.

Longevity/Sustainability. This criterion measures a project's estimated ability to continue to produce wetlands benefits over time. Projects that achieve long-term maintenance or restoration of natural processes (such as sediment transport via a crevasse) and can be sustained without extensive replacement actions will be favored over projects that will produce only short-term benefits or require extensive maintenance or replacement of project features to sustain long-term wetland benefits. The determination of longevity/sustainability is made by the Environmental and Engineering Work Groups, considering the following factors.

1. The ability of a project (including planned operation, maintenance, and replacement actions) to provide wetland benefits through the end of the 20-year project life.

2. The project's ability to provide wetland benefits beyond target year 20 without any further operation, maintenance, or replacement of project features. This evaluation would consider effects of anticipated site-specific conditions, such as hydrology, wave energy, saltwater intrusion, subsidence, and landscape conditions.

3. The extent to which a project provides sediment, or facilitates or maintains peat build-up, sufficient to withstand or offset relative sea level rise and storm events.

4. Predictions of longevity/sustainability made through use of reliable simulation models, especially in the case of projects where there is substantial uncertainty and such models can be employed at a reasonable cost and in a timely manner.

Each work group representative and the assigned member of the Academic Assistance Group scored each project based on the one condition from among those listed below which they determined to be most applicable. An average score was then taken.

1. Project expected to continue providing substantial wetland benefits more than 40 years after construction: 10 points.

2. Project expected to provide substantial wetland benefits 30 to 40 years after construction: 7 points.

3. Project expected to cease providing substantial wetland benefits 20 to 30 years after construction: 3 points.

4. Project expected to cease providing substantial wetland benefits less than 20 years after construction: 0 points.

Support for Restoration Plan. All eligible candidate projects must be identified in the November 1993 *Louisiana Coastal Wetlands Restoration Plan* or subsequent revisions.

"Critical Projects," as defined in that plan, directly implement a basin's key restoration strategy and objectives. "Supporting Projects" address more-localized wetland protection and restoration needs. Therefore, Critical Projects will be given greater weight than Supporting Projects. Scoring is based on whether a project is classified as critical or supporting; points are assigned as listed below.

Critical Projects: 10 points
Supporting Projects: 3 points.

Supporting Partnerships. The State's required cost share for CWPBRA projects is derived from the State's Wetlands Conservation and Restoration Fund (Trust Fund). The degree to which non-Federal entities agree, in writing, to bear all or part of the State's cost-share with non-Trust Fund sources will weigh favorably in project selection; contributions could consist of cash or in-kind services, including those covering maintenance, operation, or replacement expenses. Donation of land rights would not be considered as a financial contribution. The

following formula was used to calculate the partnership index, which cannot exceed 10 points:

Partnership Index = $10(PS/SS)$,
Where: SS = dollar amount of the required 25 percent non-Federal cost share
and PS = dollar amount of the non-Federal cost (other than that provided via the Trust Fund) to be contributed by the partner(s).

Public Support. The degree of public support (evidenced by written endorsement or testimony at a CWPPRA-related public meeting) is an important indicator of a project's acceptability and implementability.

Values were assigned according to which of the following conditions applied to each project.

1. Project is supported by local and State elected officials and Congressional representatives: 10 points.
2. Project is supported by 2 of above entities: 7 points.
3. Project is supported by 1 of above entities: 3 points.
4. Project without support by any of the above entities: 0 points.

Risk/Uncertainty. Projects with a greater probability of long-term success are ranked higher than those for which there is a greater level of uncertainty regarding success. Uncertainty may stem from a project's location in a rapidly changing or subsiding area, vulnerability to hurricane damage, or the use of untested or otherwise questionable methods. Risk may arise when contaminated sediments, water quality issues, or other problems are involved.

Each Task Force agency's Environmental Work Group member and a representative from the Academic Assistance Group scored each project between 0 and 1.0. The higher the score the greater the degree of confidence that the project will meet its objectives. Points were summed and multiplied by 1.43 (to convert the maximum possible raw score of 7 to a maximum value of 10 points) to determine the point total.

Table 5 shows the summary of candidate project rankings. The table is sorted by project in descending order, based on the sum of the weighted criteria points that resulted from analysis of each candidate project.

Rationale for Selection. The November 1993 Louisiana *Coastal Wetlands Restoration Plan* noted that a serious effort to address the state's problem of coastal wetlands loss would necessitate the investigation and implementation of large-scale restoration projects. During 1995, the State of Louisiana assumed a position of strong support for large-scale projects, particularly restoration of barrier islands and diversions of sediment and fresh water. The Task Force took steps to assure the selection of some large-scale projects when it approved a policy devoting

Table 5
Candidate Project Rankings and Systemic Effects Categorization on the Sixth Priority Project List*

Project No.	Project Name	Sponsoring Agency	Pully Funded Total Cost	Average Annual Cost (AAC)	Average Annual Habitat Units (AAHU)	Average Annual Cost/AAHU for Project (E) = AAC/AAHU	Rank by E	Cost Effectiveness Index (CEI) = $\frac{\text{Log}_{10}(\text{AAHU})}{\text{AAC}}$	Logevity/Sustainability Average Point Score (LSP)	Restoration Plan Support Average Point Score (RSP)	Dollar Amount of the Contribution Made by Non-Federal Cost Share (NS)	Supporting Partnership Index (SPI) = $\frac{\text{NS}}{\text{Total Cost}}$	Public Support Index (PSI)	Public Support Index (PSI) = $\frac{\text{PSI}}{\text{Total Cost}}$	Rank/Uncertainty Index (RUI)	Rank/Uncertainty Index (RUI) = $\frac{\text{RUI}}{\text{Total Cost}}$	Summation of Criteria Weights = $\frac{\text{Summation of Criteria Weights}}{\text{Total Cost}}$
ACS-48	Black Bayou Hydrologic Restoration	US Army Corps of Engineers	\$ 5,316,800	\$ 667,700	2812	\$ 237.5	2	3.95	5.4	10	\$ 1,579,200.00	0.295	10	0.295	6	6.14	6.14
XTE-121	Bayou Boeuf Pump Station, Increment 1	EPA	\$ 2,941,800	\$ 187,500	1516	\$ 123.6	1	10.00	3.8	10	\$ 740,475.00	0.252	10	0.252	5	5.04	7.65
XTE-32	Bayou Boeuf Pump Station	EPA	\$ 7,402,400	\$ 565,000	1678	\$ 337.19	4	7.91	3.8	10	\$ 1,850,450.00	0.252	10	0.252	5	5.04	6.45
PMH-10	Delta-Wide Crevasse	US Army Corps of Engineers	\$ 5,473,900	\$ 270,400	927	\$ 291.69	3	8.22	7.0	10	\$ 1,368,475.00	0.252	10	0.252	5	5.04	6.45
PBA-41	Pt. Jackson/Moohville Diversion	US Army Corps of Engineers	\$ 45,518,100	\$ 6,735,900	7398	\$ 911.72	9	5.72	3.15	10	\$ 3,033,725.00	0.252	10	0.252	5	5.04	6.45
TY-77	Marsh Island Hydrologic Restoration	COE	\$ 4,094,900	\$ 364,000	452	\$ 805.31	6	6.02	3.31	10	\$ 1,033,725.00	0.252	10	0.252	5	5.04	6.45
STE-26	Pancharat Basin Plan with Shoreline Stabilization	US Army Corps of Engineers	\$ 21,180,200	\$ 1,488,800	1445	\$ 1,030.31	10	5.48	3.01	10	\$ 5,295,050.00	0.252	10	0.252	5	5.04	6.45
STE-251	Pancharat Basin Plan without Shoreline Stabilization	US Army Corps of Engineers	\$ 14,103,100	\$ 1,244,400	1204	\$ 1,033.72	11	5.47	3.01	10	\$ 1,525,775.00	0.252	10	0.252	5	5.04	6.45
PTV-19B	Sediment Trapping at the Jaws	US Army Corps of Engineers	\$ 3,147,400	\$ 321,500	754	\$ 429.05	5	7.38	3.0	10	\$ 791,450.00	0.252	10	0.252	5	5.04	6.45
XTV-251	Oaks/Avery Canals Hydrologic Restoration Increment 1 (Bank Stabilization Only)	US Army Corps of Engineers	\$ 2,347,700	\$ 171,800	192	\$ 905.21	8	5.16	3.17	10	\$ 591,925.00	0.252	10	0.252	5	5.04	6.45
XTV-25	Oaks/Avery Canals Hydrologic Restoration	US Army Corps of Engineers	\$ 3,119,500	\$ 249,500	305	\$ 824.77	7	5.42	3.20	10	\$ 829,875.00	0.252	10	0.252	5	5.04	6.45
PBA-48	Myrtle Grove Siphon Enlargement	US Army Corps of Engineers	\$ 4,316,500	\$ 4,037,400	1932	\$ 2,087.27	18	3.95	2.17	10	\$ 310,079,125.00	0.252	10	0.252	5	5.04	6.45
MBR-19B	Channel Armor Onp Near Lake Boudreaux Basin Freshwater Introduction and	EPA	\$ 6,412,800	\$ 454,700	357	\$ 1,273.87	12	5.02	2.76	10	\$ 1,151,150.00	0.252	10	0.252	5	5.04	6.45
TR-76	Lake Bogalusa Basin Freshwater Introduction and	USFWS	\$ 2,831,300	\$ 244,500	422	\$ 1,744.22	15	4.31	3.37	10	\$ 2,457,825.00	0.252	10	0.252	5	5.04	6.45
TR-71	Hydrologic Management - Alternative A	USFWS	\$ 11,592,900	\$ 875,700	308	\$ 2,843.18	23	3.28	3.00	10	\$ 2,898,225.00	0.252	10	0.252	5	5.04	6.45
CM-61Y	Lafourche Parish Dedicated Dredging (Incr. 4)	EPA	\$ 15,547,700	\$ 667,500	390	\$ 1,711.56	13	4.38	2.41	10	\$ 1,086,925.00	0.252	10	0.252	5	5.04	6.45
CM-6Y	Lafourche Parish Dedicated Dredging (Incr. 5)	EPA	\$ 12,405,800	\$ 525,600	301	\$ 1,764.18	16	4.14	2.38	10	\$ 3,101,475.00	0.252	10	0.252	5	5.04	6.45
PBA-12B	Beauregard Bay Waterway Bank Protection East	US Army Corps of Engineers	\$ 5,019,800	\$ 508,400	128	\$ 3,971.88	25	2.55	1.40	10	\$ 1,254,975.00	0.252	10	0.252	5	5.04	6.45
CM-611	Lafourche Parish Dedicated Dredging (Incr. 2)	EPA	\$ 4,641,000	\$ 274,400	195	\$ 1,392.00	17	4.13	2.27	10	\$ 2,110,100.00	0.252	10	0.252	5	5.04	6.45
CM-6111	Lafourche Parish Dedicated Dredging (Incr. 3)	EPA	\$ 11,937,200	\$ 888,200	260	\$ 2,352.31	19	3.77	2.04	10	\$ 3,484,300.00	0.252	10	0.252	5	5.04	6.45
CM-61	Lafourche Parish Dedicated Dredging (Incr. 1)	EPA	\$ 6,183,100	\$ 353,300	130	\$ 2,717.69	21	3.18	1.86	10	\$ 2,040,775.00	0.252	10	0.252	5	5.04	6.45
CM-1	Dedicated Dredging in the Mississippi River - Avoca	COE	\$ 42,473,600	\$ 5,420,700	1807	\$ 2,986.43	20	3.40	1.98	10	\$ 3,016,140.00	0.252	10	0.252	5	5.04	6.45
CM-51	Island (Increment 1)	COE	\$ 6,938,400	\$ 663,400	355	\$ 1,868.73	16	4.19	2.30	10	\$ 1,609,800.00	0.252	10	0.252	5	5.04	6.45
PBA-11	Spanish Pass Diversion	US Army Corps of Engineers	\$ 7,283,400	\$ 654,600	210	\$ 3,137.16	24	3.08	1.69	10	\$ 3,820,900.00	0.252	10	0.252	5	5.04	6.45
CM-5	Dedicated Dredging at West Point a la Roche	COE	\$ 12,263,800	\$ 1,200,200	466	\$ 2,590.13	22	3.32	1.82	10	\$ 3,085,975.00	0.252	10	0.252	5	5.04	6.45
CM-511	Bayou (Incr. 2)	COE	\$ 5,131,000	\$ 545,500	134	\$ 4,070.90	26	2.50	1.37	10	\$ 1,328,375.00	0.252	10	0.252	5	5.04	6.45
MBE-2	Breakwaters at Rockefeller Refuge	COE	\$ 5,432,800	\$ 471,100	18	\$ 26,172.22	27	1.54	0.81	10	\$ 1,458,200.00	0.252	10	0.252	5	5.04	6.45

DEMOCRATIZATION PROJECTS			
DMR-12B	Duval/Cutlerhead Dredging for Marsh Creation in the	COE	\$ 1,460,000
DMR-7	Marine Harvest for Wetland Restoration	USFWS	\$ 2,140,000
DMR-5	Marine Harvest for Wetland Restoration (Wetlands at Three Sediment Trapping Devices)	USFWS	\$ 500,000

* In this table, some project names were revised from the original names as originally presented during the nomination phase (Table 1). However, all of the project numbers are the same between the nominee and candidate projects.

In this column, "Y" = Systemic, "N" = Non-systemic, and "Y/N" indicates tie in voting.

two-thirds of future years' funding to "large-scale projects with systemic effects."

The Technical Committee assigned the candidate projects a category based on estimated costs and project outputs, in accordance with the policy. In general, projects with estimated costs exceeding \$10 million were considered large-scale projects. In addition, the committee classified as large-scale those projects expected to produce what they considered systemic, process-level benefits. Table 5 presents the systemic/non-systemic classification of the candidate projects, based on these categories assigned by the Technical Committee.

In preparation of the Task Force meeting for project selection of the 6th Priority Project List, the Technical Committee developed a list of recommended projects for the Task Force. The Technical Committee's decision was aided by a list of preferred projects presented by the State. In general, the selected list was developed based on the ranking procedure described above and a consideration of the policy requiring two-thirds of the year's funding to be allocated to projects with systemic, process-level benefits. The recommended list contained a total of 10 selected candidate projects, three demonstration projects, and funds for three phased projects selected in prior years.

Similar to the 5th Priority Project List, this list contains a recommendation for phased construction of projects (Prior to the 5th Priority Project List, there were no phased projects recommended). On previous priority project lists to the 5th Priority Project List, the annual funding had been adequate to cover the recommended projects.

On April 24, 1997, the Louisiana Coastal Wetlands Conservation and Restoration Task Force accepted the recommendations of the Technical Committee for the 6th Priority Project List. The list is shown in Table 6. Table 6 also shows one possible schedule for funding phased projects. The schedule shown in Table 6 could vary depending upon the availability of funds and the outcome of the engineering and design effort for the Bayou Lafourche Siphon project.

Table 6
Task Force Project Selection for the Sixth Priority Project List^a

Project No.	Name of Selected Project on 6th Priority Project List	Fully Funded Total Cost	6th List Phase 1 Cost	7th List Phase 2 Cost	Cumulative Fully Funded Total Cost
XCS-48	Black Bayou Hydrologic Restoration	\$ 6,316,800	\$ 6,316,800		\$ 6,316,800
XTE-32i	Bayou Boeuf Pump Station, Increment 1	500,000	\$ 150,000	\$ 250,000	\$ 6,816,800
PMR-10	Delta-Wide Crevasses	\$ 5,473,900	\$ 2,736,950	\$ 2,736,950	\$ 12,290,700
TVS/7	Marsh Island Hydrologic Restoration	\$ 4,094,900	\$ 4,094,900		\$ 16,385,600
PTE-26i	Penchant Basin Plan without Shoreline Stabilization	\$ 14,103,100	\$ 7,051,550	\$ 7,051,550	\$ 30,488,700
PTV-19b	Sediment Trapping at the Jaws	\$ 3,167,400	\$ 3,167,400		\$ 33,656,100
XTV-25i	Oaks/Avery Canals Hydrologic Restoration Increment 1 (Bank Stabilization Only)	\$ 2,367,700	\$ 2,367,700		\$ 36,023,800
TE-7f	Lake Boudreaux Basin Freshwater Introduction and Hydrologic Management - Alternative B	\$ 9,931,300	\$ 4,915,650	\$ 4,915,650	\$ 45,855,100
PBA-12b	Barataria Bay Waterway Bank Protection East	5,019,900	\$ 5,019,900		\$ 50,875,000
CW-5i	Marsh Creation East of the Atchafalaya River - Avoca Island (Increment 1)	\$ 6,438,400	\$ 6,438,400		\$ 57,313,400
Sub-totals:		\$ 57,313,400	\$ 42,259,250	\$ 14,954,150	
XMR-12b	Dustpan/Cutterhead Dredging for Marsh Creation in the Mississippi River Delta ^b	1,600,000	\$ 1,600,000	\$ -	\$ 58,913,400
CW-7	Nutria Narvest for Wetland Restoration ^b	\$ 2,140,000	\$ 400,000	\$ 1,740,000	\$ 61,053,400
PTV-5	Cheniere au Tigre Sediment Trapping Device ^b	\$ 500,000	\$ 500,000		\$ 61,553,400
Total ⁸ :		\$ 61,553,400	\$ 44,759,250	\$ 16,694,150	

Proposed Schedule of Allocations for Phased Projects

Project No.	Name of Phased Project from Previously Approved Lists	5th List Cost	6th List Cost	7th List Cost	Total Line Item Cost
PBA-20	Bayou Lafourche Siphon	\$ 1,000,000	\$ 8,000,000	\$ 15,487,000	\$
PBA-48a	Myrtle Grove Siphon	\$ 4,500,000	\$ 6,000,000	\$ 5,000,000	\$ 15,500,000
CS-11b	Sweet/Willow Lakes Hydrologic Restoration	\$ 2,300,000	\$ 2,500,000	\$ -	\$ 4,800,000
Annual Totals:		\$ 7,800,000	\$ 16,500,000	\$ 20,487,000	

Grand Totals for 5th and 7th List: \$ 61,259,250 \$ 37,161,150

^aAs approved on April 24, 1997 by the Louisiana Coastal Wetlands Conservation and Restoration Task Force.

^b Demonstration projects.

DESCRIPTIONS OF SELECTED PROJECTS

This section provides a concise narrative of each selected project. The project details provided include the project location and size, problems, features, effects and issues, benefits and cost, status, and a map identifying the project area and features.

Project: C/S-27, XCS-48 Black Bayou Hydrologic Restoration (Priority Project List 6)

Federal Sponsor: National Marine Fisheries Service

Location and Size:

This project is located in Cameron Parish, LA in the northwestern quadrant of the Calcasieu-Sabine Basin. The total project area is 25,529 acres and contains 6,516 acres of fresh intermediate marsh, 7,353 acres of brackish marsh and 11,660 acres of open water.

Problems:

The area has suffered wetland loss due to hydrologic changes, including reduced freshwater flow, increased tidal fluctuations, increased salinities, high water levels, excessive water exchange, and artificial water circulation patterns.

Project Features:

This project will divert freshwater from the GIWW and create a hydrologic head that maximizes freshwater retention time and reduces salt water intrusion and tidal action. Project components:

- 1) shoreline restoration of the GIWW shoreline west of the Gum Cove Ridge with 20,000' of rock foreshore dike,
- 2) installation of a weir with barge bay at the GIWW in the Black Bayou Cut Off Canal,
- 3) replacing the collapsed culverts in the shell road on the southern boundary of Unit NO- 13 with eight (8) 24" culverts,
- 4) constructing a 150' wide plug with at least four (4) 48" culverts fitted with flapgates and screw gates in the Vinton Drainage Ditch,
- 5) placing a rock liner in Black Bayou near its intersection with the GIWW,
- 6) constructing a 100' wide plug with at least four (4) 48" culverts fitted with flapgates and screw gates in the Burton Canal at its intersection with the Sabine River,
- 7) constructing a rock weir with a boat bay at the intersection of Block's Creek with Black Bayou, and
- 8) installation of 133,000 linear A of vegetative plantings in Unit NO-13,17,18 &19.

Effects and Issues:

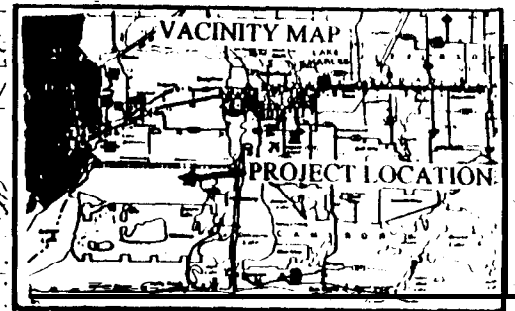
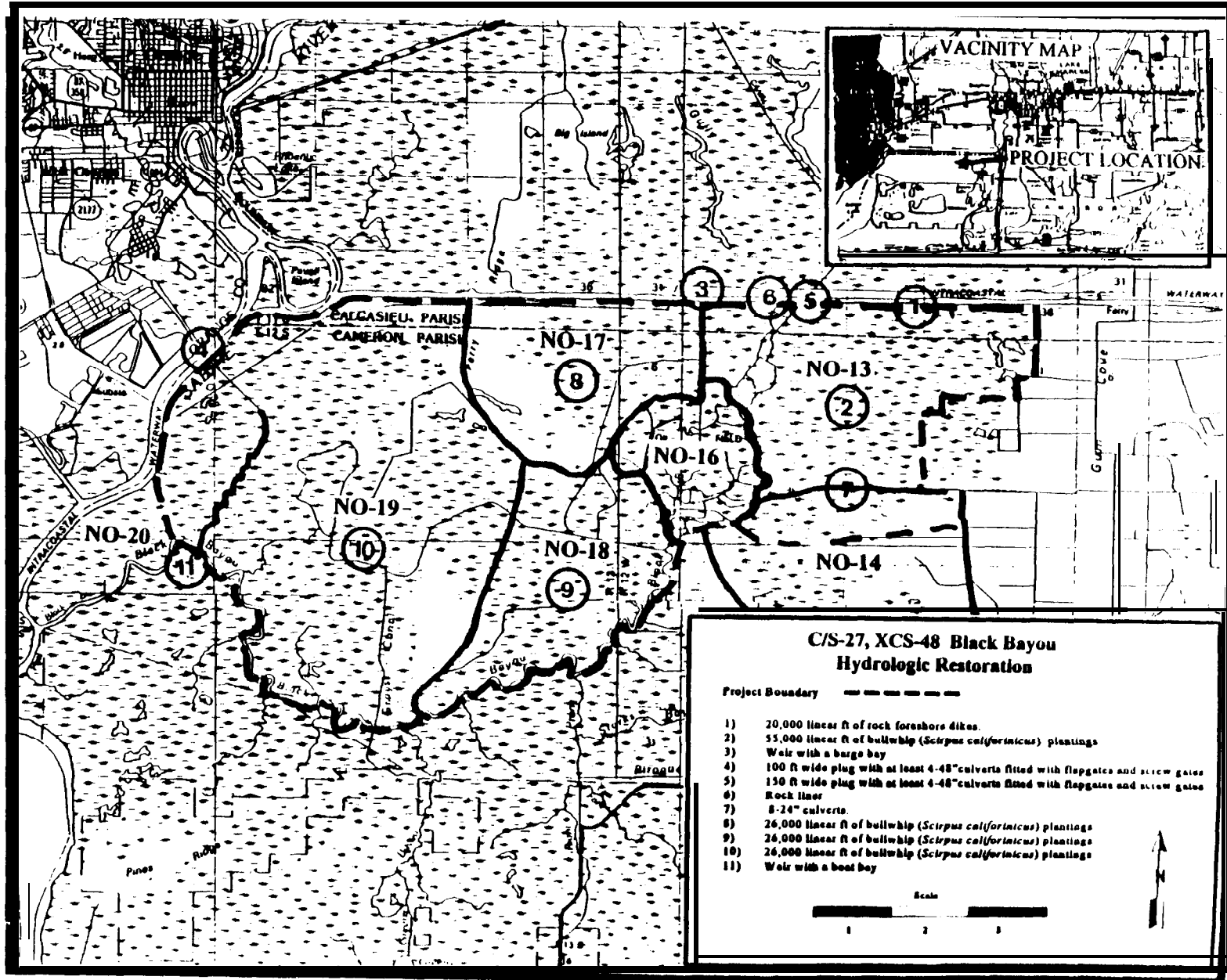
This project consists of the installation of structures to normalize area hydrology; shoreline stabilization and vegetative plantings. Estuarine fisheries access and productivity will not be negatively impacted by the project because the hydrologic restoration structures are planned to be placed across man-made canals and not natural bayous. The project is not in an oyster harvesting area. The project should increase fish and wildlife productivity by protecting and restoring marsh in the Black Bayou area.

Benefits and Cost:

Baseline Cost	AAC/AAHU	AAHU	Create & Restored	Protected	Total Benefitted
\$6,316,800	5200	2,812	2,960 ac	634 ac	3,594 ac

Status:

This project was approved by the Task Force on April 24, 1997. Construction is tentatively scheduled to begin September, 1998.



Project: TE-33, XTE-32i Bayou Boeuf Pump Station (Priority Project List 6)

Federal Sponsor: Environmental Protection Agency

Location and Size:

The project is located in Bayou Boeuf at Amelia, LA. The total project area is 218,000 acres and contains 53,000 acres of bottomland hardwood wetlands and 165,000 acres of swamp.

Problems:

Water levels have been rising in the Verret Sub-basin for at least 30 years. The increasing water levels are threatening the health and sustainability of the extensive cypress-tupelo swamps of the Verret Sub-basin.

Project Features:

This project will coordinate with the USACE flood control feasibility study and subsequent project to optimize benefits to the cypress-tupelo swamps, and evaluate the course of action that will optimally restore these stressed swamps, best manage the substantial freshwater outflow from the Verret Sub-basin, and influence restoration efforts in the Penchant and Timbalier Sub-basins. Phase I consists of scoping and coordination, ecological characterization, and possible project changes after the “barrier” flood protection plan is implemented by the U. S. Army Corps of Engineers. This is a feasibility study to coordinate with the USACE ongoing Lower Atchafalaya Reevaluation flood control feasibility study to determine how the flood control project may provide additional benefits to swamp and bottomland hardwood habitats in the subbasin.

Effects and Issues:

As a feasibility study, the “project” will not have any impacts to coastal fisheries resources. The final flood protection project will have impacts to fisheries access from Bayou Boeuf into Lake Palourde if the final project involves a pumping station at Bayou Boeuf.

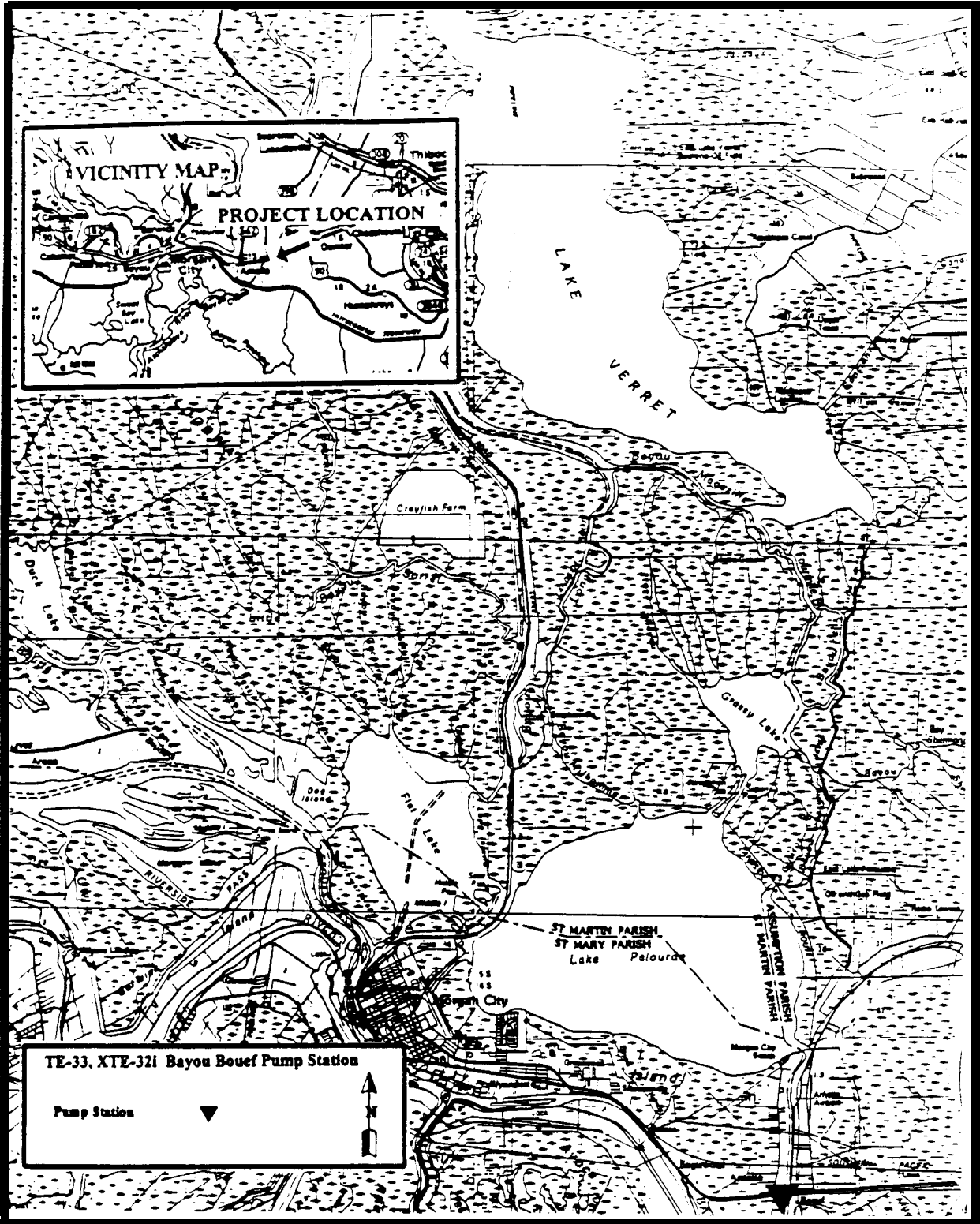
Benefits and Cost:

This project consists of three phases: Phase I-\$1 50,000 PPL-6, Phase II-\$250,000 PPL-7, and Phase III-\$ 100,000 PPL-8.

Baseline Cost	AAC/AAHU	AAHU	Created/Restored	Protected	Total Benefitted
5500,000	s129	1,458	N/A	N/A	N/A

Status:

This project was approved by the Task Force on April 24, 1997. Engineering and construction schedules have not yet been determined.



Project: MR-9 Delta Wide Crevasses (Priority Project List 6)

Federal Sponsor: National Marine Fisheries Service

Location and Size:

This project is located in the Mississippi River Modern Delta and contains portions of the Delta National Wildlife Refuge, the Pass-a-Loutre Wildlife Management Area, and Grand Pass. The total project area is 5,210 acres and contains 783 acres of fresh marsh and 4,427 acres of open water.

Problems:

Since 1927, extensive rock-armored levees constructed along the Mississippi River have prevented most of the regular flooding and over banking events that historically created crevasses. Many natural and human made “crevasses” or splays have silted in over time.

Project Features:

The objective of this project is to promote the formation of emergent freshwater and intermediate marsh in place of the shallow, open water areas by either cleaning existing splays or creating new ones. Project components include:

- 1) constructing 5 new crevasses (100’ wide x 6’ deep), 4 in Grand Pass and 1 in the Delta National Wildlife Refuge (Dead Women Pass),
- 2) re-dredging existing crevasses, according to their needs, located in the Delta National Wildlife Refuge and in the Pass-a-Loutre Wildlife Management area, and
- 3) constructing a plug in an existing crevasse in Raphael Pass to force water through more efficient splays to the south.

Effects and Issues:

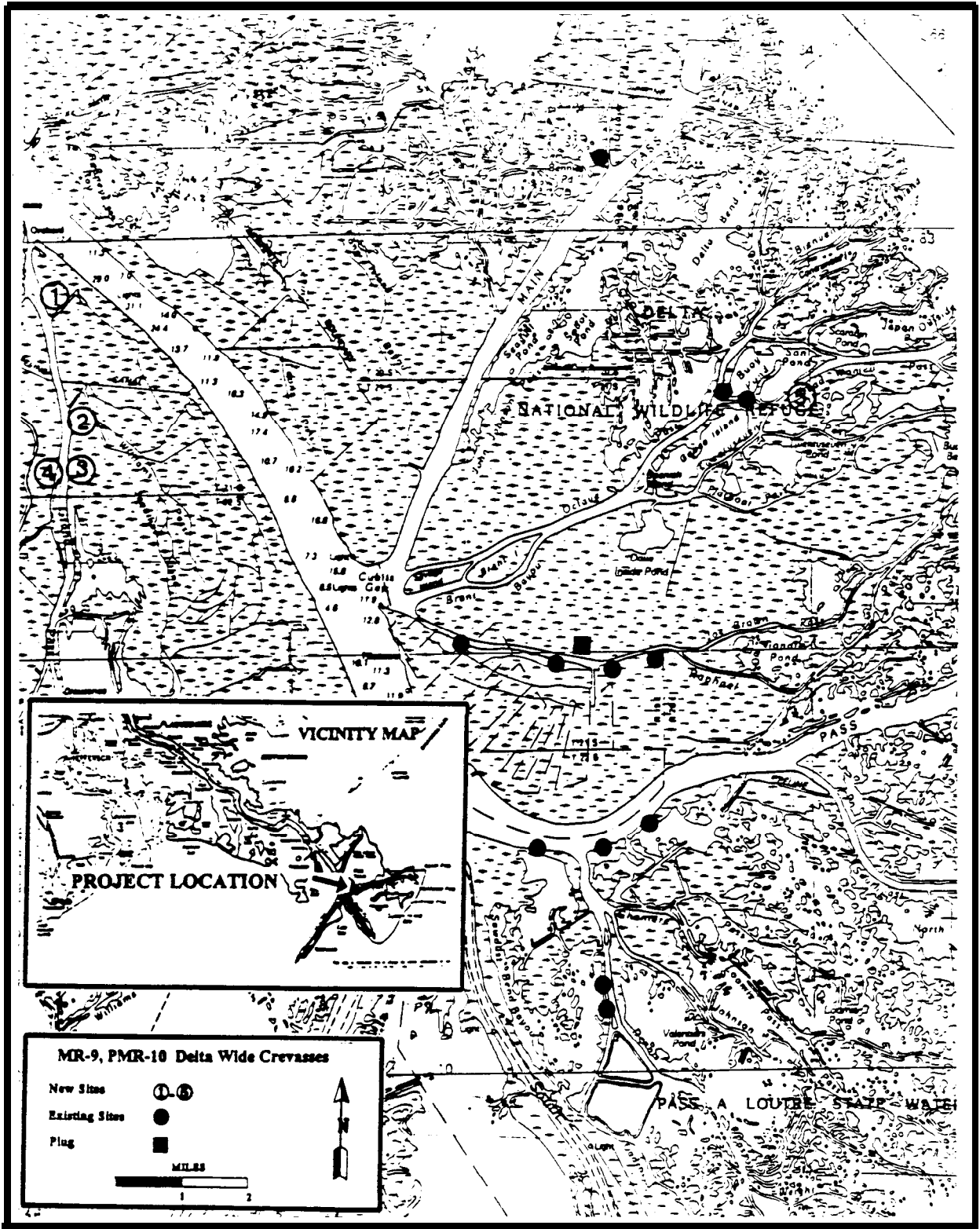
This project will provide benefits to coastal fisheries by increasing the amount of marsh available for fisheries use and productivity at the mouth of the Mississippi River. One earthen plug will be constructed to increase water and sediment flow south of Raphael Pass. This plug will reduce fisheries access at this location, but the other project components will serve to increase overall fisheries access, habitat and productivity. The project will not negatively affect coastal fisheries.

Benefits and Cost:

Baseline Cost	AAC/AAHU	AAHU	Created/Restored	Protected	Total Benefited
\$5,307,400	5292	927	2,298	88	2,386

Status:

This project was approved by the Task Force on April 24, 1997.



Project: T/V- 14, T/V-5/7 Marsh Island Hydrologic Restoration (Priority Project List 6)

Federal Sponsor: U.S. Army Corps of Engineers

Location and Size:

This project is located in Iberia Parish, LA on the Marsh Island Wildlife Refuge. The total project area is 6,697 acres, which contains 5,034 acres of brackish marsh and 1,663 acres of open water.

Problems:

Natural erosional processes and subsidence along the northeast shoreline of Marsh Island have lead to the deterioration of the north rim of Lake Sand.

Project Features:

This project will to stabilize the northeastern shoreline of Marsh Island, including the northern shoreline of Lake Sand, and help to restore historical hydrology. Project components include:

- 1) construction of 9 plugs in oil and gas canals at the NE end of Marsh Island,
- 2) protection of the NE shoreline with rock, and
- 3) isolate Lake Sand from Vermilion Bay with dredged material.

Effects and Issues:

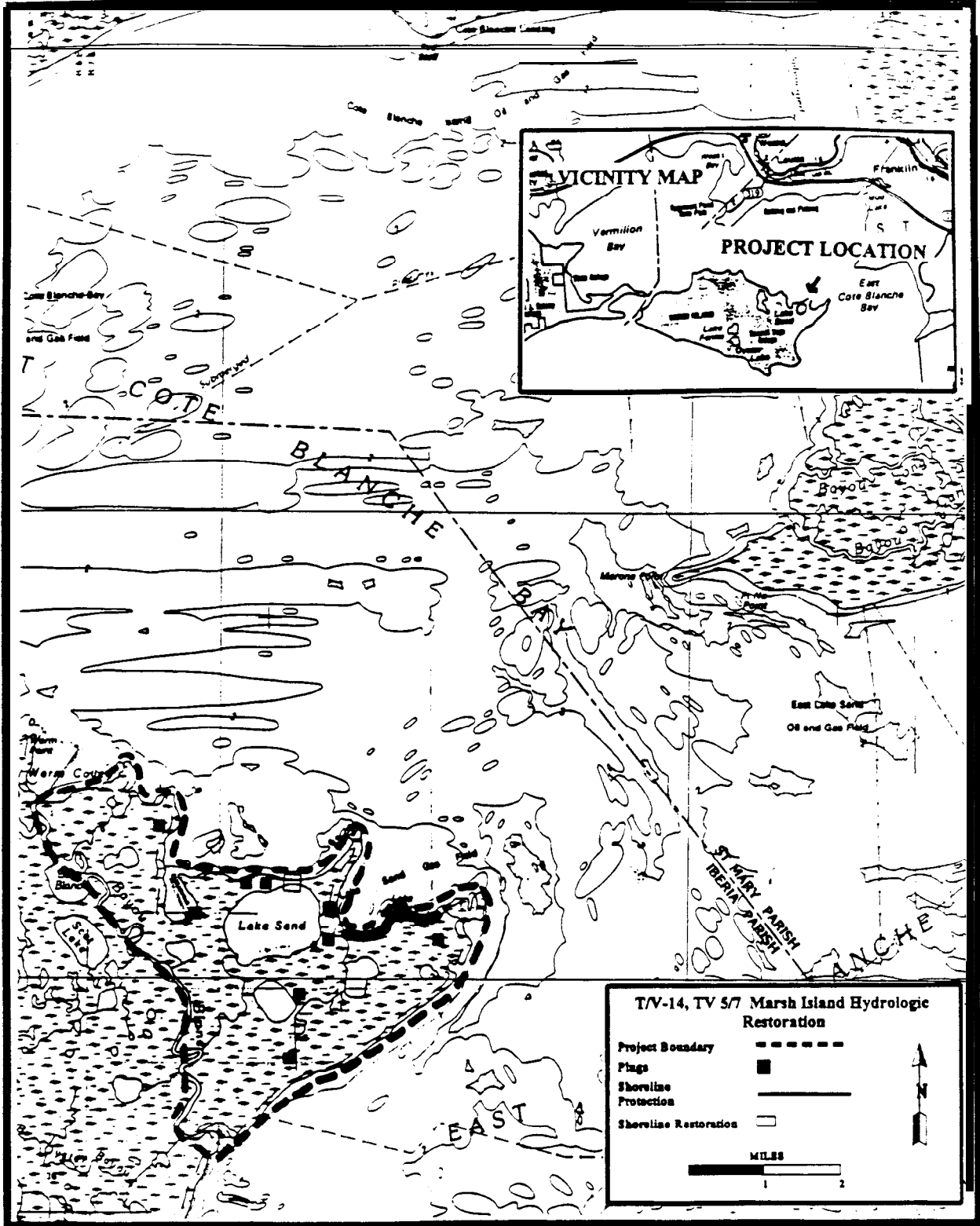
The low earthen dams will not reduce estuarine fisheries access to area marshes because there are other fisheries access points into the project area through natural bayous. The project will increase marsh, fish and wildlife productivity by reducing shoreline erosion and correcting altered hydrology.

Benefits and Cost:

Baseline Cost	AAC/AAHU	AAHU	Created/stored	Protected	Total Benefined
\$4,094,900	\$805	452	0 ac	408 ac	408 ac

status:

The project was approved by the Task Force on April 24, 1997. Engineering and landrights have been initiated. Construction is scheduled to begin May, 1998.



Project: TE-34, PTE-26 Penchant Basin Natural Resources Plan Increment 1 (Priority Project List 6)

Federal Sponsor: Natural Resources Conservation Service

Project Location:

Located in western Tenebonne Basin, LA. The total project area is 140,380 acres and contains 92,200 acres of fresh and intermediate marsh and 5,625 acres of brackish marsh.

Problems:

Area problems include the following; 1) major hydrologic alterations, 2) interior marsh erosion, 3) subsidence, 4) saltwater intrusion, 5) herbivory, and 6) hurricane damages.

Project Features:

This project will combine long term realignment of Penchant Basin hydrology with restoration and protection measures aimed at maintaining the physical integrity of the area during the transition toward greater riverine influence. Project components include the installation of:

- 1) a rock weir with barge bay in the northern end of Carrion Crow Bayou at its intersection with Bayou Penchant,
- 2) steel sheetpile weir with variable crest sections and flapgates in the Mauvais Bois Ridge at its intersection with the Superior Canal,
- 3) dredging and marsh creation at the mouth of Bayou Penchant,
- 4) a rock weir with a barge bay at the southern shoreline of Raccourci Bay,
- 5) maintenance of an existing weir along Bayou DeCade
- 6) shell plug with rock rip-rap cover along Bayou DeCade,
- 7) three (3) steel sheetpile variable crest weirs along Bayou DeCade,
- 8) maintenance of an existing fixed crest weir along Bayou DeCade,
- 9) two (2) steel sheetpile variable crest weirs with boat bays along Bayou DeCade.
- 10) rock liner in the Little Deuce Bayou at its intersection with Bayou DeCade,
- 11) rock weir with barge bay in Bayou LaLoutre at its intersection with the Superior Canal,
- 12) steel sheetpile weir with boat bay and variable crest sections in Brady Canal at its intersection with Bayou Penchant,
- 13) approximately 3,600 A of rock bank stabilization at mouth of Bayou Penchant,
- 14) approximately 59,600 ft of earthen bank stabilization along Bayou DeCade, and
- 15) approximately 125.3 11 A of bank maintenance.

Effects and Issues:

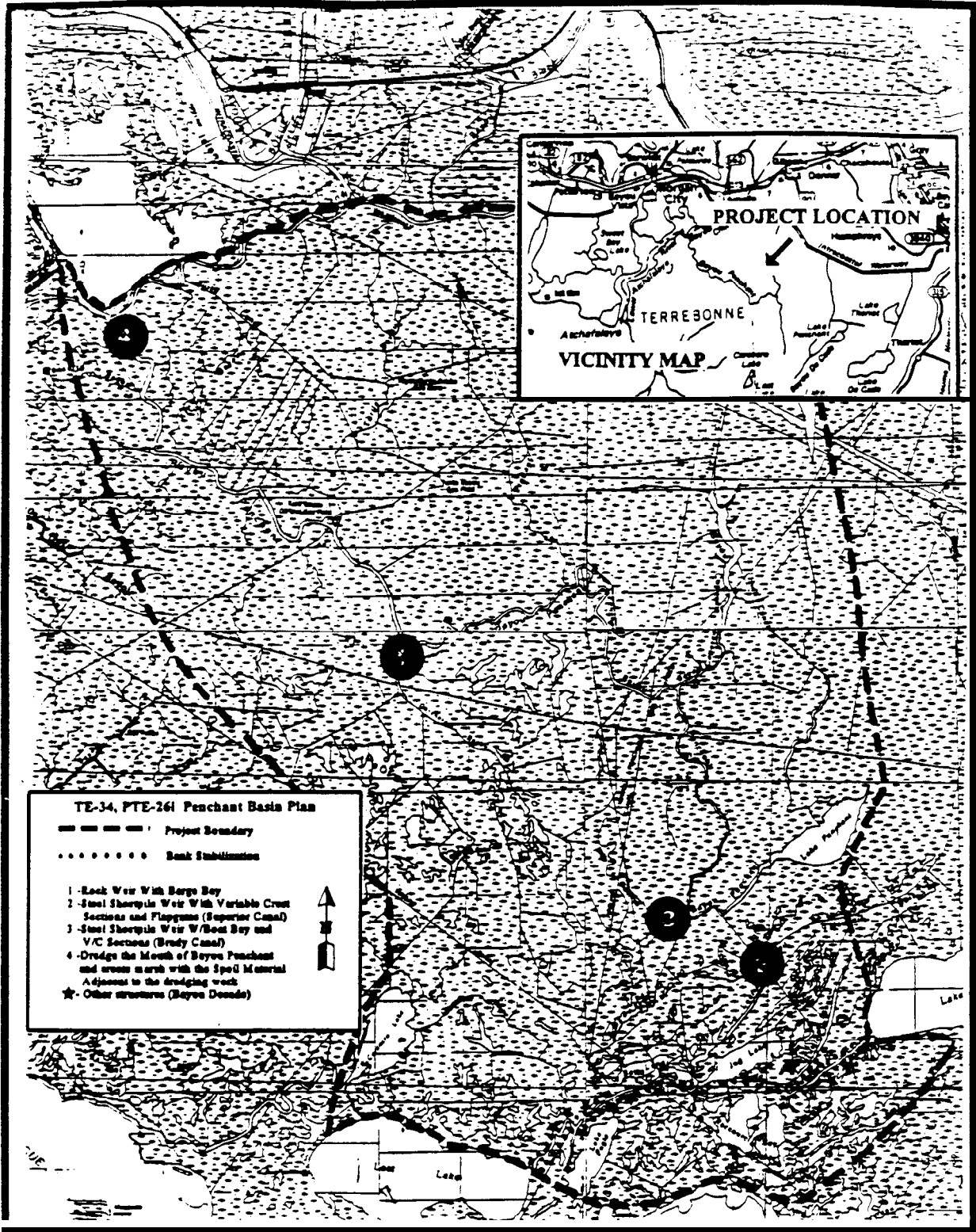
The project is expected to reduce water levels in the northwestern portion of the project and divert that freshwater southeastward where it is needed. This is expected to increase marsh and fisheries production. Estuarine fisheries access may be reduced slightly for the brackish marsh area south of Bayou DeCade.

Benefits and Cost:

Baseline Cost	AAC/AAHU	AAHU	Created/Restored	Protected Total	Total Benefit-ated
\$7,051,550	\$1,034	1,204	1,155 ac	0 ac	1,155 ac

Status:

This project was approved by the Task Force on April 24.1997.



TE-34, PTE-261 Penchant Basin Plan

--- Project Boundary

..... Bank Stabilization

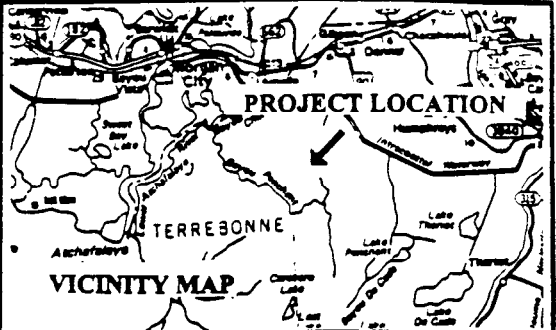
1 - Lock Weir With Berge Bay

2 - Steel Sheetpile Weir With Variable Crest Sections and Flapways (Superior Canal)

3 - Steel Sheetpile Weir W/Boat Bay and V/C Sections (Buddy Canal)

4 - Dredge the Mouth of Bayou Penchant and cross marsh with the Spoil Material Adjacent to the dredging work

★ - Other structures (Bayou Decade)



Project: T/V-15, PTV-19b Sediment Trapping at ‘The Jaws’ (Priority Project List 6)

Federal Sponsor: National Marine Fisheries Service

Location and Size:

This project is located in St. Mary Parish, LA near ‘The Jaws’ in the northeast portion of West Cote Blanche Bay. The project area is 2,782 acres and contains 182 acres of fresh marsh and 2,600 acres of open water.

Problems:

The area is experiencing shoreline erosion at the rate of 15 ft/yr, and available sediments from ‘The Jaws’ are not being used to create vegetated marshes.

Project Features:

This project will induce sedimentation to create emergent vegetated wetlands by reducing wave fetch. Project components include:

- 1) dredging 63,000 A of distributary channels 60 A wide and 6 ft deep (844,444 cy),
- 2) constructing 145 terraces approximately 60 fi wide at an elevation of 2 A above (+) MSL, and
- 3) vegetative plantings on the terrace surfaces and between the ten-aces with Bullwhip and Giant Cutgrass.

Effects and Issues:

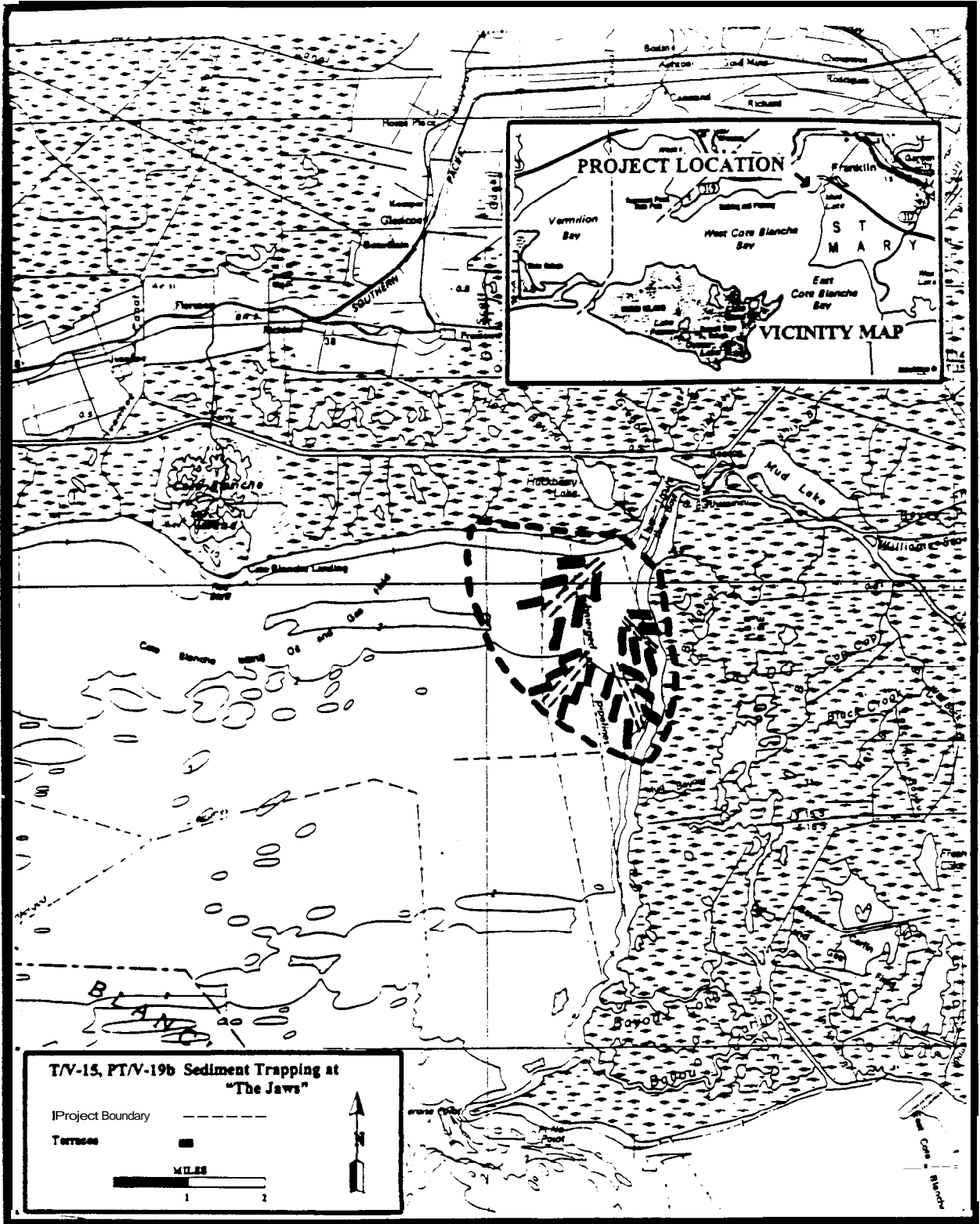
This project will create approximately 1,837 acres of linear ‘terraced’ marsh in a shallow open water area in West Cote Blanche Bay. This open water habitat, when it is converted to marsh, will not be accessible to freshwater and estuarine fisheries organisms except in high tide conditions. The project is expected to increase marsh and fisheries productivity by restoring marsh to an area that has experienced marsh loss. This is not an oyster harvesting area.

Benefits and Cost:

Baseline Cost	AAC/AAHU	AAHU	Create&Restored	Protected	Total Benefitted
\$3,167,400	\$429	754	1,837 ac	162 ac	1,999 ac

Status:

This project was approved by the Task Force on April 24, 1997. Engineering and landrights are underway. Construction is tentatively scheduled to begin September, 1998.



Project: T/V-1 3 a XTV-25i Oaks/Avery Canal Hydrologic Restoration (Inc. 1) (Priority Project List 6)

Federal Sponsor: Natural Resources Conservation Service

Location and Size:

This project is located in northeast Vermilion Bay in both Vermilion and Iberia Parishes, LA. The total project area for the increment (TN-13a) equals 3,348 acres.

Problems:

Marsh loss is due to increased tidal action and altered hydrology. The north shoreline of Vermilion Bay is eroding at a rate of 7- 12 feet per year, and marine traffic is causing bank-line erosion along the GIWW.

Project Features:

This project will improve hydrology, reduce tidal fluctuation to minimize marsh loss, and provide protection to critically eroding bank-line and shoreline areas. Project components include:

- 1) bank-line stabilization along the Oaks Canal (400 ft per side),
- 2) bank-line stabilization along the GIWW (6,000 A),
- 3) low sill rock weir in a manmade channel east of Oaks Canal and north of the GIWW,
- 4) earthen plug in a breached opening along the Union Oil Canal (47 A wide x 11 A deep),
- 5) spoilbank maintenance on the western side of the Union Oil Canal (1,000 A),
- 6) sediment fencing along Bayou Petite Anse in Tigre Lagoon (4,300 ft), and
- 7) vegetative plantings along the northern shoreline of Vermilion Bay from Oaks Canal eastward to Avery Canal (5 miles).

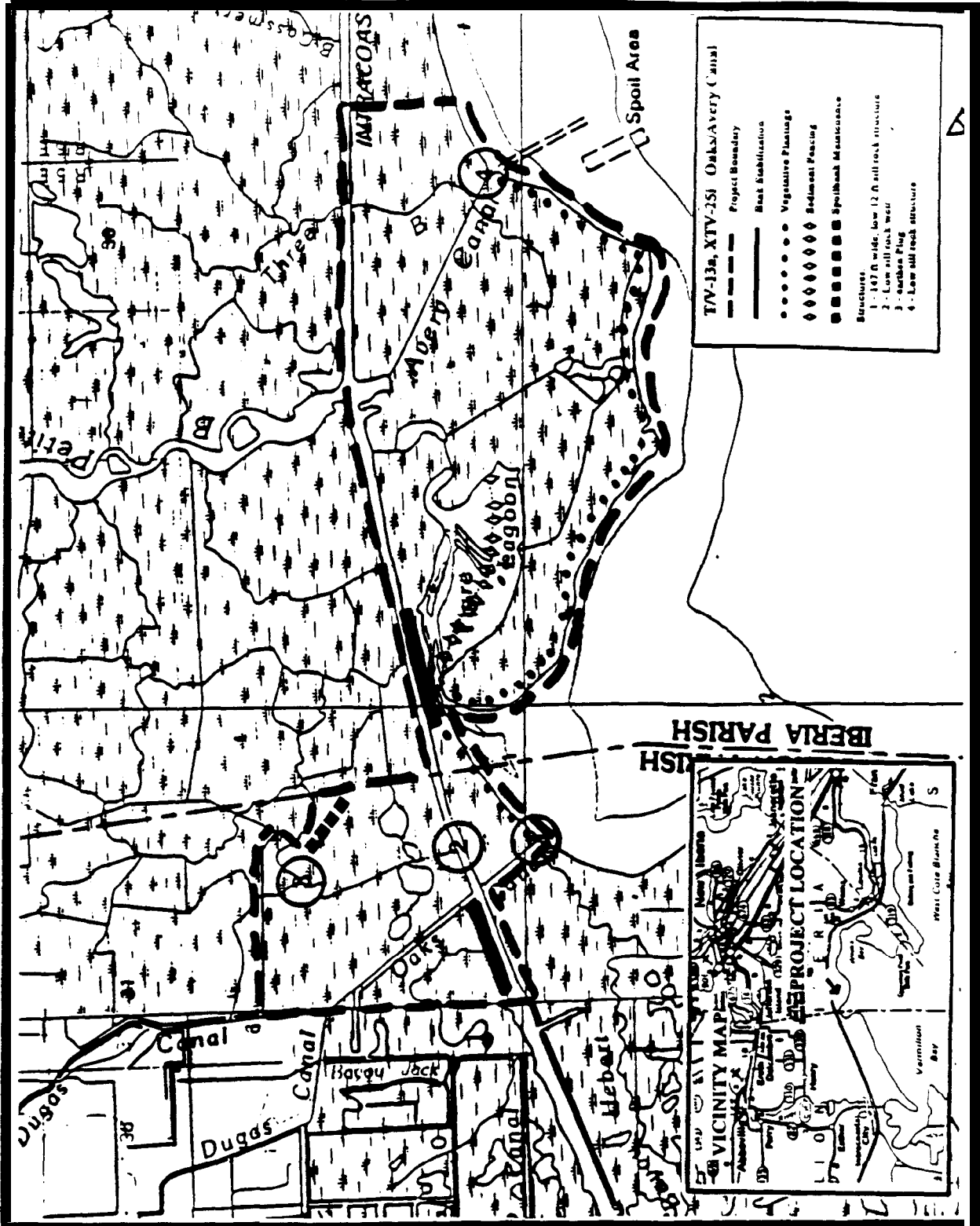
Effects and Issues:

This project consists of bank stabilization with rock, water control structures, spoilbank maintenance, sediment fencing and vegetative plantings. The low sill rock weir east of Oaks Canal and the earthen plug will not reduce estuarine fisheries access to area marshes because there are other access points to the project area through natural bayous. The project will increase marsh, fish and wildlife productivity by reducing shoreline erosion and correcting altered hydrology.

Benefits and Cost:

Baseline Cost	AAC/AAHU	AAHU	Create&Restore	Protected	Total Benefitted
\$2,367,700	\$905	192	160 ac	0 ac	160 ac

Status: This project was approved by the Task Force on April 24, 1997. Preliminary engineering will begin November, 1997.



Project: TE-32, TE-if Alternative B Lake Boudreaux Basin Freshwater Introduction and Hydrologic Management (Priority Project List 6)

Federal Sponsor: U.S. Fish and Wildlife Service

Location and Size:

This project is located in Terrebonne Parish approximately 5 miles SW of Chauvin, LA. The total project area is 7,222 acres and contains 3,755 acres of intermediate marsh, 1,640 acres of brackish marsh and 1,827 acres of open water.

Problems:

The area is suffering from a lack of freshwater head to reduce the negative effects of saltwater intrusion.

Project Features:

This project will introduce available freshwater from the north and route this freshwater through the project area to reduce saltwater intrusion and promote vegetative diversity. Project components include:

- 1) maintenance dredging 6,700 ft of Bayou Pelton to 70 ft x 8 ft,
- 2) dredging 3,200 A of outfall channel to 70 A x 8 A,
- 3) installing seven 8 A x 8 A sluice gates under Highway 57,
- 4) constructing two (2) outfall management structures and gap spoil,
- 5) maintenance dredging Bayou Grand Caillou north of the St. Louis Canal, and
- 6) providing flood protection for developed areas south of the St. Louis Canal to Canebrake.

Effects and Issues:

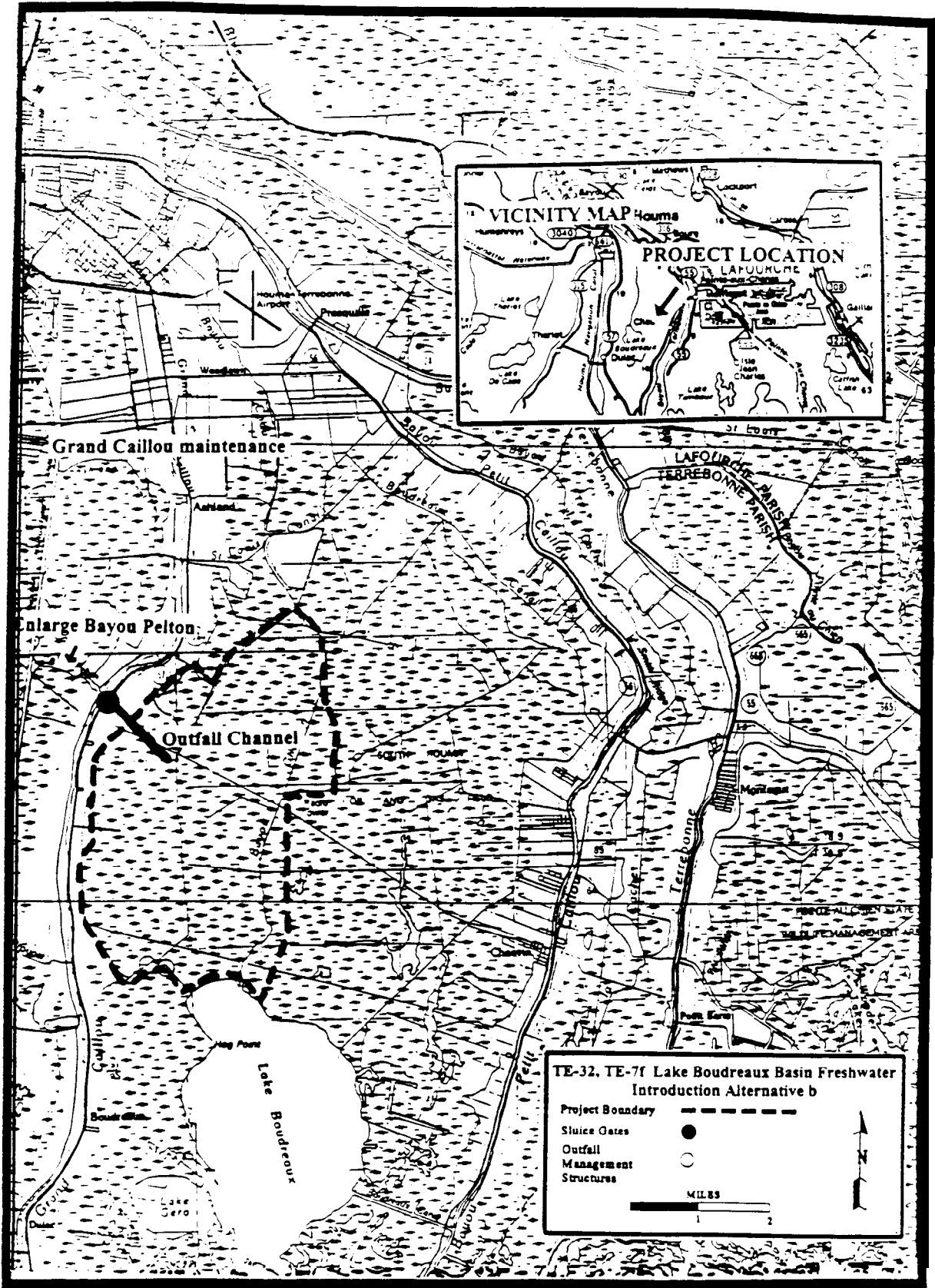
This project will not have any negative impacts to fisheries access or productivity to the in the project area The project will increase the flow of freshwater and nutrients into' the upper Lake Boudreaux watershed.This is expected to increase marsh, fish and wildlife productivity. The project is not in an oyster harvesting area.

Benefits and Cost:

Baseline Cost	AAC/AAHU	AAHU	Created/Restored	Protected	Total Benefitted
\$ 4,915,650	\$1,764	422	619 ac	0 ac	619 ac

Status:

This project was approved by the Task Force on April 24, 1997. Engineering and construction schedules have not yet been determined.



Project: BA-26 Bay Waterway "Dupre Cut" Bank Protection East (Priority Project List 6)

Federal Sponsor: Natural Resources Conservation Service

Location and Size:

Located in Jefferson Parish on the east bank of the Barataria Bay Waterway (BBWW) the section known as "Dupre Cut". The total project area is 2,790 acres and contains 1,479 acres of brackish marsh and 1,311 acres of open water.

Problems:

The banks of the BBWW have deteriorated considerably due to erosion from boat wakes. Large breaches in the banks have exposed the adjacent marsh to increased water exchange, tidal energy, and saltwater intrusion.

Project Features:

The objective of this project is to rebuild and stabilize the banks of the BBWW to protect the adjacent marsh from excessive tidal action and saltwater intrusion. The project consists of the following components:

- 1) 17,600 A (3.3 miles) levee construction with dredged material from the borrow/access channel in the BBWW, and
- 2) 17,600 ft (3.3 miles) of foreshore rock dike.

Effects and Issues:

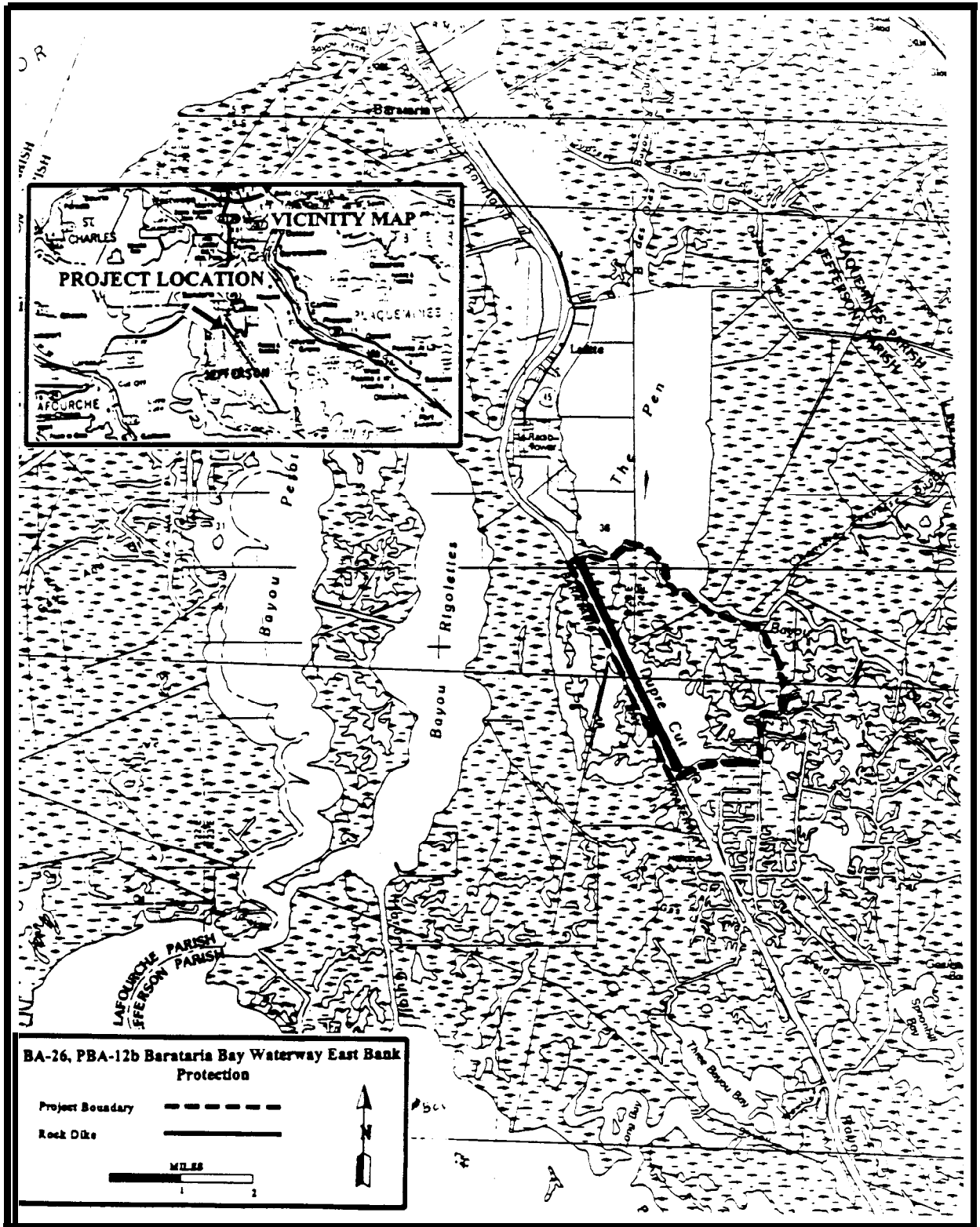
The project involves the construction of over 3 miles of foreshore rock dike adjacent to the Dupre Cut to protect adjacent marshes from shoreline erosion. This rock dike will extend above the surface of the water and could reduce estuarine fisheries access to the project area from the Dupre Cut. This fisheries access may be provided by existing bayous and cuts from Bayou Dupont to the project area. The project design may be modified if necessary to add shallow "fish access points" along the rock dike. This project is not located in an oyster harvesting area.

Benefits and Cost:

Baseline Cost	AAC/AAHU	AAHU	Created/Restored	Protected	Total Benefitted
\$5,019,900	53,972	128	0	217	217

Status:

The project was approved by the Task Force on April 24, 1997. Final engineering is estimated to be completed November, 1998. Construction is estimated to begin March, 1999.



Project: TE-35, CW-5i Marsh Creation East of the Atchafalaya River - Avoca Island
(Priority Project List 6)

Federal Sponsor: U.S. Army Corps of Engineers

Location and Size:

This project is located in St. Mary and Tembonne Parish south of Morgan City, LA. The total project area for Avoca Island (Increment 1) is 2,000 acres of open water.

Problems:

Avoca Island is a failed agricultural impoundment that became flooded when the levee broke in 1927.

Project Features:

The goal of this project is to create approximately 434 acres of marsh. This will be done by beneficially using material dredged from the "Crew Boat Chute" reach of the Atchafalaya River and placing it in the Avoca Island area.

Effects and Issues:

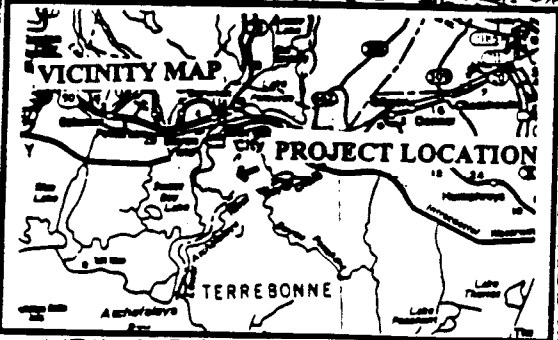
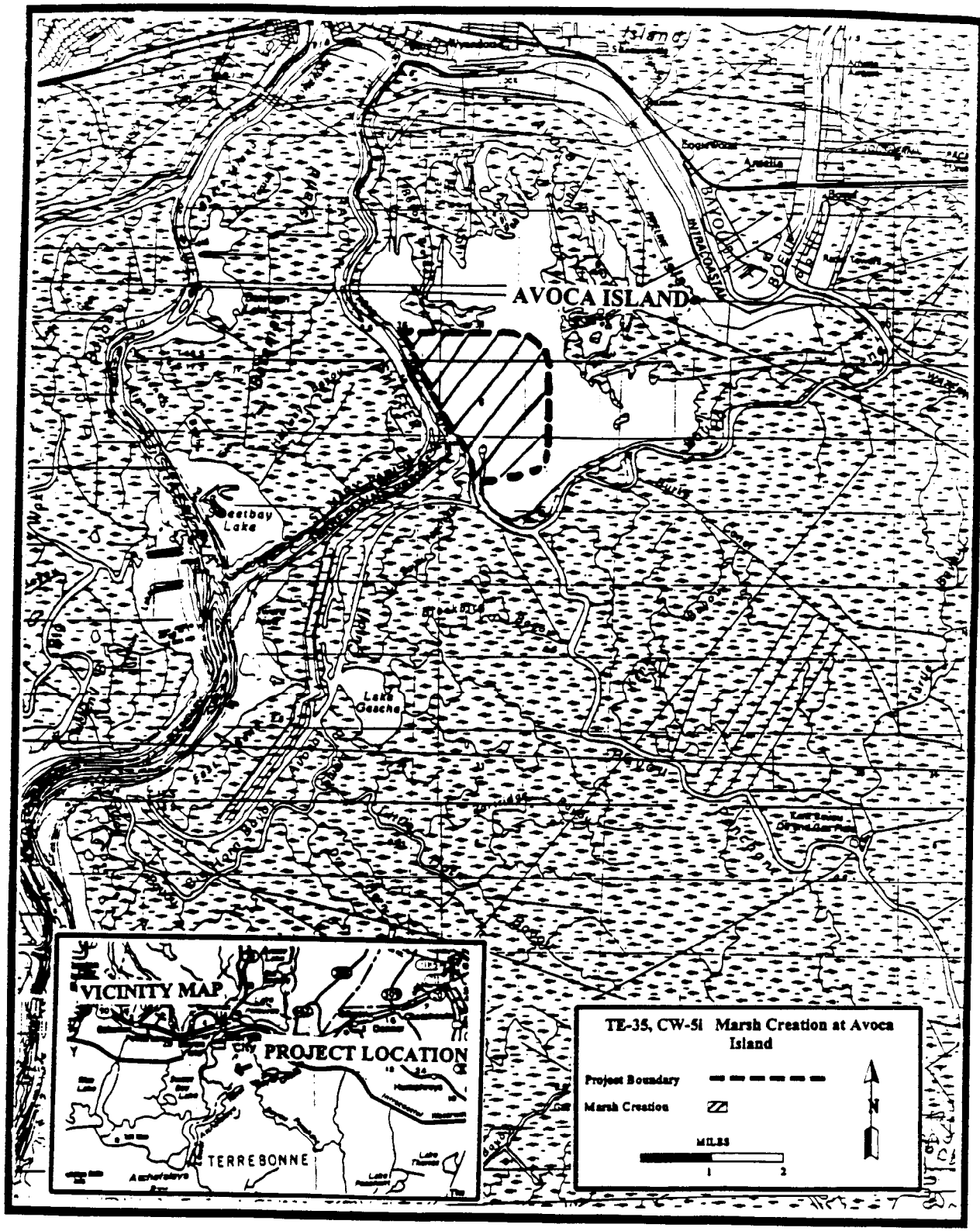
At the present time, the area consists of shallow open water habitat with some floating aquatic plants present. When the project is constructed, approximately 434 acres of this open water habitat will not be accessible to freshwater fisheries organisms because it will have been converted to marsh. The project is expected to increase marsh and fisheries productivity by restoring marsh to the area.

Benefits and Cost:

Baseline Cost	AAC/AAHU	AAHU	Created/Restored	Protected	Total Benefitted
\$ 6,438,400	31,869	355	434 ac	0 ac	434 ac

Status:

This project was approved by the Task Force on April 24, 1997. Engineering and construction schedules have not yet been determined.



TE-35, CW-51 Marsh Creation at Avoca Island

Project Boundary ————

Marsh Creation [Hatched Box]

MILES
 1 2

Project: MR- 10, XMR- 12b Combination Dustpan and Cutterhead Maintenance Dredging Operations for Marsh Creation in the Mississippi River Delta (DEMONSTRATION) (Priority Project List 6)

Federal Sponsor: U.S. Army Corps of Engineers

Location and Size:

This project is located in Plaquemines Parish, LA in the Mississippi River Modern Delta. The dredging will take place near Cubit’s Gap, Head of Passes, and Southwest Pass (Mile 3.5 to 11 .0 Above Head of Passes (AHP)]. The project will restore approximately 273 acres of marsh.

Problems:

Development and maintenance of the navigation channel through the Mississippi River Delta has adversely affected delta growth and wetland creation. The use of “hopper” dredges for maintenance of the Mississippi River deep draft navigation channel limits the use of the spoil material for marsh creation because hopper dredges must dispose their material in deep water; therefore, the spoil from the hopper dredges is unavailable for use in shallow, open water areas.

Project Features:

This project will use material dredged from the maintenance of the Mississippi River Navigation Channel beneficially to restore and create marsh. A dustpan dredge will be used in the maintenance dredging of the Mississippi River deep draft navigation channel to stack the dredged material underwater adjacent to the channel. This stacked material will then be dredged and transported by a cutterhead dredge to shallow open water areas adjacent to the Mississippi River levees for the purpose of marsh creation. Approximately 273 acres of eroded marsh sites will be restored using about 1.76 million cubic yards of dredged material over a course of three years. The dredged materials will be placed in unconfined marsh areas to an initial elevation no higher than +3.0 A National Geodetic Vertical Datum (NGVD).

Effects and Issues:

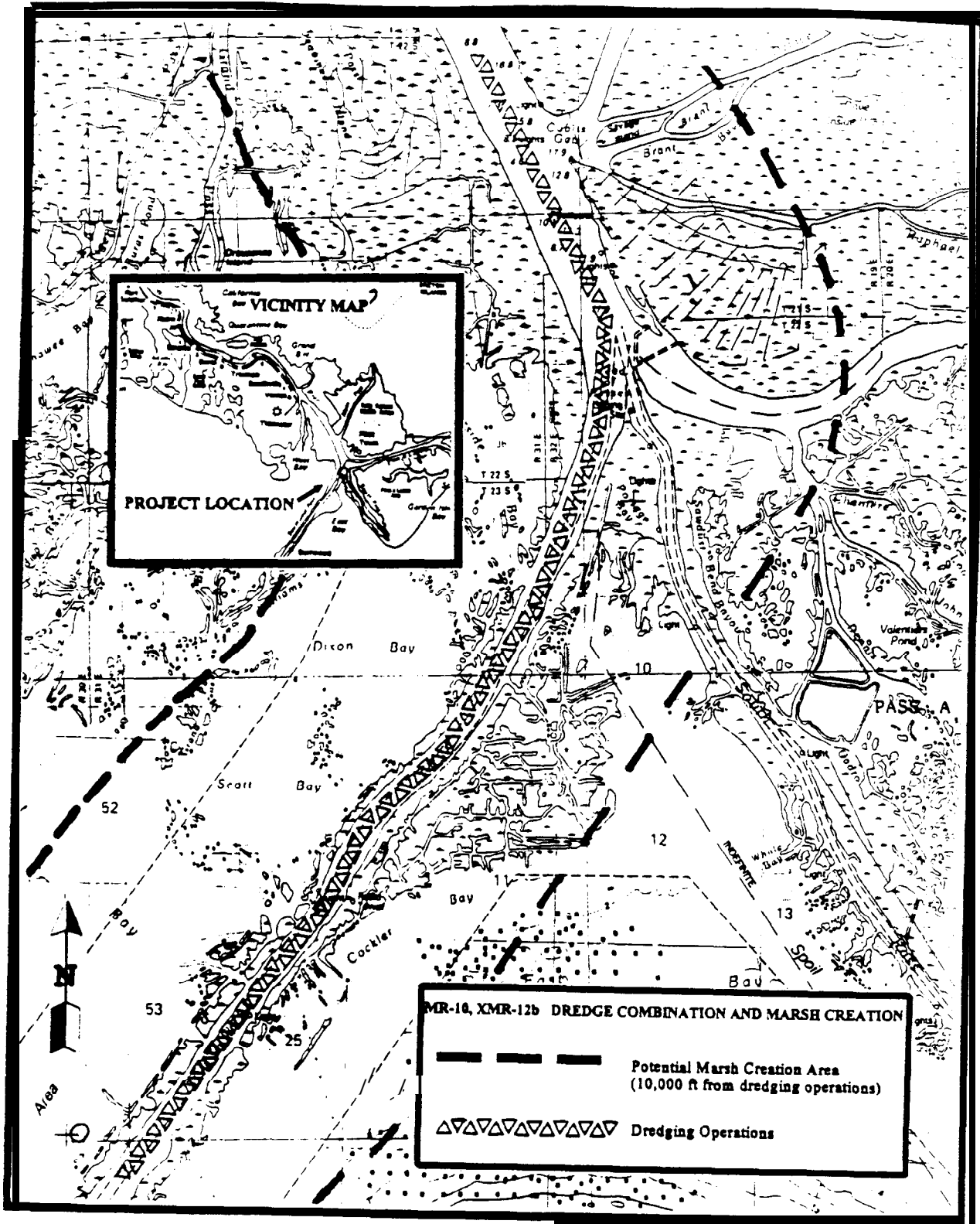
After project implementation, this shallow open water habitat will not be accessible to freshwater fisheries organisms because it will have been converted to marsh. The project is expected to increase marsh and fisheries productivity by restoring approximately 273 acres of marsh in the Mississippi River Delta. The project is not within an oyster leasing area.

Benefits and Cost:

Baseline Cost	AAC/AAHU	AAHU	Created/Restored	Protected	Total Benefit-ted
\$1,600,000	N/A	NA	273 ac	0 ac	273 ac

Status:

This project was approved by the Task Force on April 24, 1997. Construction schedules are pending USAGE dredging schedules.



Project: LA-2 PTV-5 Nutria Harvest for Wetland Restoration (DEMONSTRATION)
(priority Project List 6)

Federal Sponsor: National Marine Fisheries Service

Location and Size:

This is a project which affects the entire coast of Louisiana. The project may be located at the coastal locations containing the highest nutria harvest.

Problems:

The nutria is an introduced, furbearing species in the rodent family that was intended to increase production in the Louisiana fur industry. Since the decline of the fur industry, nutria populations have increased tremendously along the coast. This unnatural nutria population has a significant negative impact on the coastal marshes in Louisiana. The negative impacts are due to nutria consumption (herbivory) of marsh plants to the degree that marsh damage occurs.

Project Features:

This project will determine if a nutria meat for human consumption program and meat processing system can be developed that facilitates nutria harvest by increasing the demand for their meat. This will be done by matching CWPPRA funding with that of participating meat processing plants to adequately compensate trappers for the nutria meat brought to the processor. Selected coastal marsh areas will be monitored by the LA Dept. of Wildlife and Fisheries to assess nutria herbivory damage or recovery as a result of this program. Other critical project components include recipe development and publication, as well as the development of an advertising and marketing strategy which will be focused on increasing public demand for nutria meat. This project will be implemented by the LA Dept. of Wildlife and Fisheries with oversight by the Dept. of Natural Resources and the National Marine Fisheries Service.

Effects and Issues:

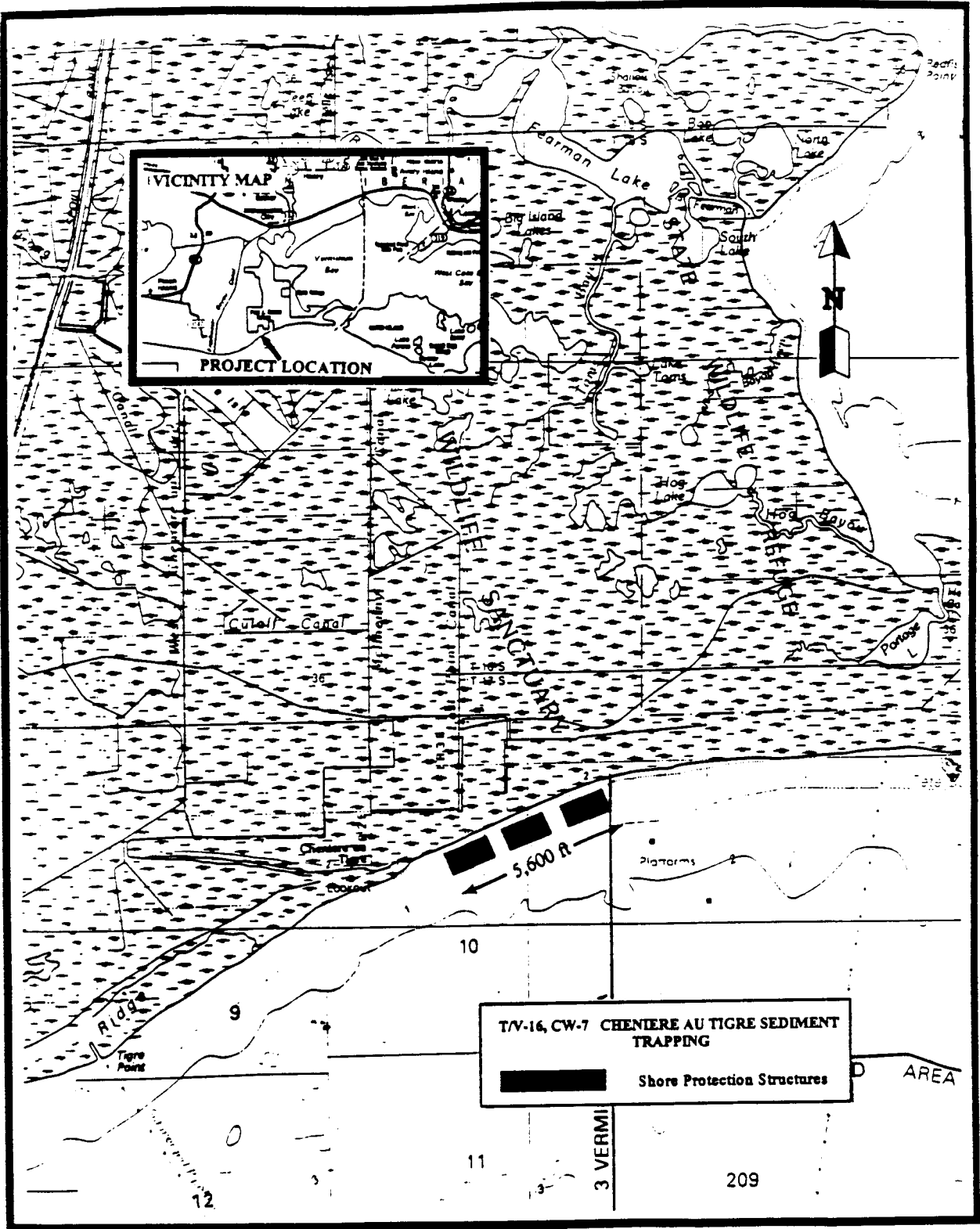
-The project will have no negative effects on coastal fisheries access or production. If successful, it should increase fisheries and wildlife production in coastal Louisiana by reducing coastal marsh loss caused by nutria herbivory.

Benefits and Cost:

Baseline Cost	AAC/AAHU	AAHU	Created/Restored	Protected	Total Benefitted
\$2,140,000	N/A	N/A	N/A	N/A	N/A

Status:

This project was approved by the Task Force on April 24, 1997. The total project cost over two years allows \$400,000 for Phase I, and \$1,740,000 for Phase II.



Project: T/V- 16, CW-7 Cheniere Au Tigre Sediment Trapping (DEMONSTRATION)
(Priority Project List 6)

Federal Sponsor: Natural Resources Conservation Service

Location and Size

This project is located along the Gulf of Mexico shoreline in southern Vermilion Parish, LA. It lies east of Cheniere Au Tigre, south of the Audubon Society's Paul J. Rainey Wildlife Sanctuary and southwest Louisiana's State Wildlife Refuge and Game Preserve. The proposed structures will extend gulfward 500 A and parallel the shore for a cumulative distance of 5,600 linear ft.

Problems:

The beach along the cheniere plain protects thousands of acres of wetlands, and is critical to diverse communities of fish and wildlife populations. This project area includes portions of a wildlife sanctuary and a state refuge. The wetlands north of the demonstration project contain several oil fields and navigation channels, one of which terminates only a few hundred feet from the existing shoreline. If the beach breaches into this canal, full strength Gulf of Mexico seawater will intrude into intermediate and brackish marshes, where saltwater intrusion and increased tidal action will negatively impact 68,000 acres of marsh located in the project area.

Project Features:

This project will field test a conceptual device designed to trap sediment from the gulf tides, stabilize the existing shoreline erosion on Cheniere Au Tigre, and build up portions of the shoreline that have already eroded. The project components consist of installing three structures, each 500 A by 1,000 A by 500 ft, located 1,200 ft apart along the Gulf of Mexico shoreline east of Cheniere Au Tigre. One conceptual design for a part of the project would install 43 standard creosote pole timbers and about 8,000 discarded tires. The structure will have a block "U" shape with the open end facing the shoreline, and holes will be punched in the top of each tire to keep them from floating. The tires will be placed as a horizontal mat under water and stacked up to five tires high as the water depth offshore increases to three A at the 500 A mark.

Effects and Issues:

This is a demonstration project which involves the placement of shoreline stabilization materials along the Gulf shoreline at Cheniere Au Tigre. The project will not have any negative impacts to fisheries access or production because it will have openings for fish to access the shoreline. There are oyster leases approximately 1 mile to the southeast of the project area, but the project should not impact these leases. Careful attention needs to be paid to tire attachment such that they will not become dislodged from the supporting structure and become a navigation hazard.

Benefits and Costs:

Baseline Cost	AAC/AAHU	AAHU	Created/Restored	Protected	Total Benefitted
\$500,000	N/A	N/A	N/A	N/A	N/A

Status:

This project was approved by the Task Force on April 24, 1997.

SUMMARY AND CONCLUSIONS

The 6th Priority Project List consists of 13 projects, which includes 3 demonstration projects. The total fully funded cost of these projects is \$61,553,400. The total benefits of the projects is 8,704 Average Annual Habitat Units, based on project implementation as compared to the future without-project conditions over the 20-year project life.

On the 6th Priority Project List, project cost phasing is continued from the 5th Priority Project List. On the proposed schedule of allocations for phased projects, the grand totals for the 6th and 7th Priority Project Lists are \$61,259,250 and \$37,181,150, respectively.

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

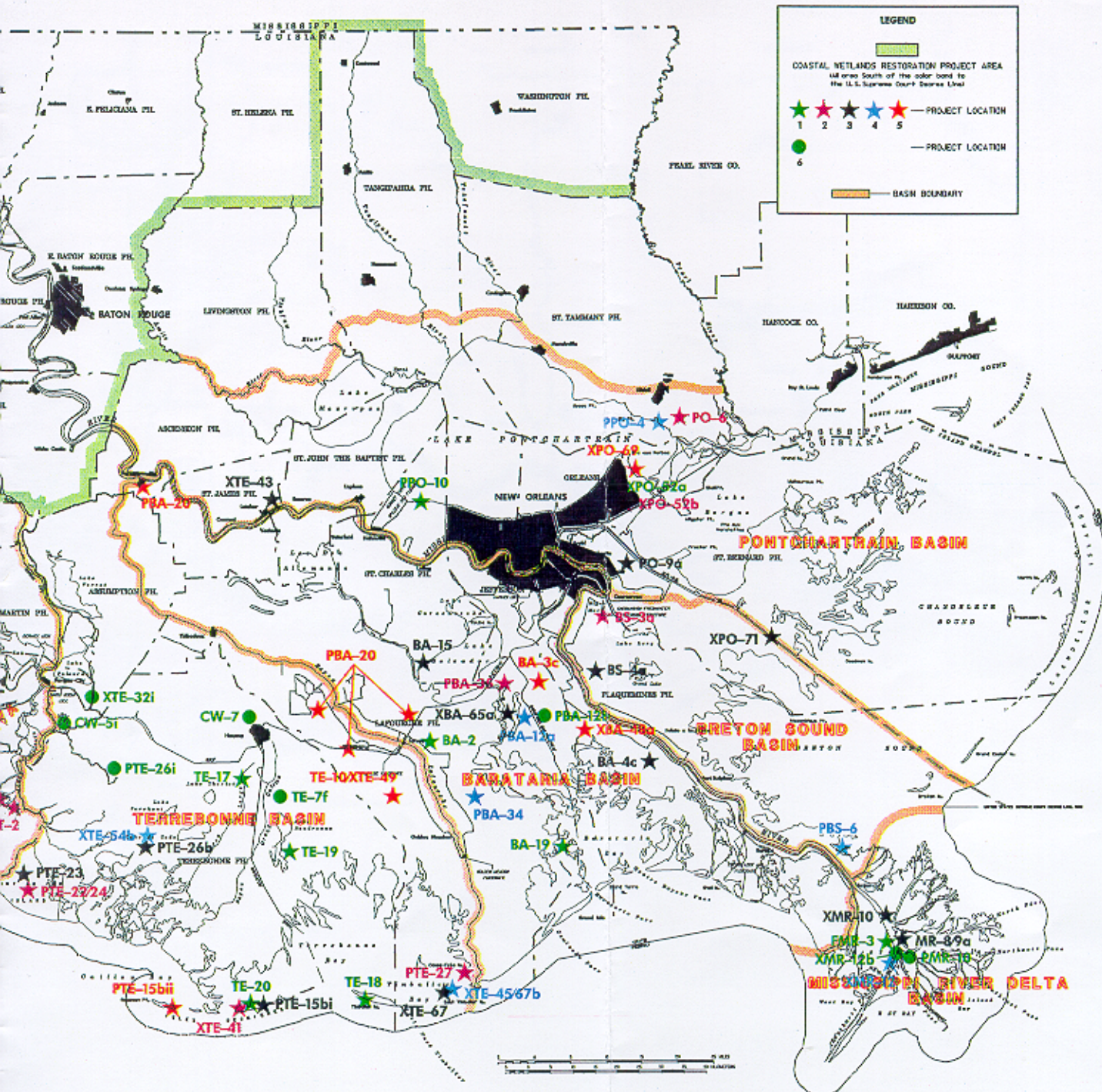
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U.S. Fish and Wildlife Service. 1980. Habitat Evaluation Procedures (HEP) Division Ecol. Service ESM 102, U.S. Fish and Wildlife Service, Washington DC. 141 pp.



1st thru 6th F

COASTAL WETLANDS PLANNING, P



Project List
 PROTECTION AND RESTORATION ACT

1st Priority Project List**ENVIRONMENTAL PROTECTION AGENCY**

TE-20 Eastern Isles Dernieres Barrier Island Restoration Demonstration

U. S. DEPARTMENT OF THE ARMY

FMR-3 West Bay Sediment Diversion for Marsh Creation

PPO-10 Bayou La Branche Wetland Marsh Creation

BA-19 Barataria Bay Waterway Marsh Creation

FTV-3 Vermilion River Cutoff Wetland Creation

U. S. DEPARTMENT OF COMMERCE

TE-19 Lower Bayou La Cache Wetland Hydrologic Restoration

U. S. DEPARTMENT OF AGRICULTURE

BA-2 G.J.W.W. to Clavelly Hydrologic Restoration Coastal Vegetative Program

TE-18 Timballer Island Planting Demonstration

TE-17 Folgout Canal Planting Demonstration

FCS-19 West Hackberry Vegetative Planting

ME-8 Dewitt-Rollover Shore Protection Demonstration

U. S. DEPARTMENT OF THE INTERIOR

XPO-52a Bayou Sauvage NWR Hydrologic Restoration

ME-9 Cameron Prairie Refuge NWR Erosion Prevention

FCS-18 Sabine Refuge Pool 3 Unit Protection

FCS-17 Cameron-Creole Watershed Project Borrow Canal Plug

2nd Priority Project List**U. S. DEPARTMENT OF AGRICULTURE**

CS-9 Brown Lake Hydrologic Restoration

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

PBA-35 Jonathan Davis Wetland Protection

PCS-24 East Mud Lake Hydrologic Restoration

PCS-25 Hwy. 384 Hydrologic Restoration

PO-6 Fritchie Marsh Restoration

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

BS-3a Coernarvon Diversion Outfall Management

U. S. DEPARTMENT OF COMMERCE

PAT-2 East Atchafalaya Delta Crevasses

PTE-22/24 Point Au Fer Canal Plugs

XAT-7 Big Island Sediment Distribution

U. S. DEPARTMENT OF THE INTERIOR

XPO-52b Bayou Sauvage Hydrologic Restoration

U. S. DEPARTMENT OF THE ARMY

PTE-2T West Belle Pass Headland Restoration

PCS-2T Clear Marsh Shore Protection

ENVIRONMENTAL PROTECTION AGENCY

XTE-4 Isles Dernieres Restoration

3rd Priority Project List**U. S. DEPARTMENT OF THE ARMY**

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

XMR-10 Channel Armor Gap Crevasse

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

U. S. DEPARTMENT OF AGRICULTURE

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

TV-4 Cote Blanche Marsh Management

CS-4a Cameron-Creole Maintenance

BS-4a White's Ditch Diversion Outfall Management

PTE-26b Brady Canal Hydrologic Restoration

PO-9a Violet Freshwater Distribution, Central Wetlands

PME-6 Southwest Shore White Lake Shore Protection Demonstration

U. S. DEPARTMENT OF COMMERCE

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

XTE-6T East Timballer Sediment Restoration

PTE-23 Lake Chapou Marsh Creation and Hydrologic Restoration, Point Au Fer Island

BA-15 Lake Salvador Shoreline Protection Demonstration

ENVIRONMENTAL PROTECTION AGENCY

PTE-15b1 Whiskey Island Restoration

XTE-43 Modified Red Mud Demonstration

U. S. DEPARTMENT OF THE INTERIOR

XCS-47/48I Replace Hog Island, West Cove, and Headquarters Canal at Sabine Refuge Water Control Structures

4th Priority Project List**U. S. DEPARTMENT OF THE ARMY**

PBS-6 Grand Bay Crevasse

XMR-12 Beneficial Use of Hopper Dredged Material Demonstration

U. S. DEPARTMENT OF COMMERCE

PPO-4 Eden Isles East Marsh Sediment Restoration

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

ENVIRONMENTAL PROTECTION AGENCY

XCS-36 Compost Demonstration

U. S. DEPARTMENT OF AGRICULTURE

PCS-26 Perry Ridge Shore Protection

PBA-34 Bayou L'Ours Ridge Hydrologic Restoration

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

XCS-56 Plowed Terraces Demonstration

XTE-54b Flatout Marsh Fencing Demonstration

5th Priority Project List**U. S. DEPARTMENT OF COMMERCE**

PTV-19 Little Vermilion Bay Sediment Trapping

XBA-48a Siphon at Myrtle Grove

ENVIRONMENTAL PROTECTION AGENCY

PBA-20 Bayou Lafourche Siphon In./w/o Cutoff Structure

U. S. DEPARTMENT OF THE ARMY

XPO-69 Marsh Creation at Bayou Chevee

U. S. DEPARTMENT OF AGRICULTURE

BA-3c Noemi Outfall Management

CS-11b Sweet Lake / Willow Lake Hydrologic Restoration

PTE-15bII Raccoon Island Breakwaters Demonstration

XME-29 Freshwater Bayou Bank Stabilization

U. S. DEPARTMENT OF THE INTERIOR

TE-10/XTE-49 Grand Bayou / GRW Freshwater Diversion

6th Priority Project List**U. S. DEPARTMENT OF AGRICULTURE**

PTE-26I Panchant Natural Resources Plan Increment I

XTV-25I Oaks/Avery Canals Hydrologic Restoration, Increment I (Bank Stabilization Only)

PBA-12b Barataria Bay Waterway "Duane Cut" Bank Protection (East)

PTV-5 Cheniere au Tigre Sediment Trapping Device

ENVIRONMENTAL PROTECTION AGENCY

XTE-32I Bayou Beauf Pump Station, Increment I

U. S. DEPARTMENT OF THE INTERIOR

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

U. S. DEPARTMENT OF THE ARMY

TV-5/7 Marsh Island Hydrologic Restoration

CW-5I Marsh Creation E. of the Atchafalaya River - Avoca Island Increment II

XMR-12b Dustpan/Cutterhead Breeding for Marsh Creation in the Mississippi River Delta Region

U. S. DEPARTMENT OF COMMERCE

XCS-48 Black Bayou Hydrologic Restoration

PMR-10 Delta-Wide Crevasses

PTV-19b Sediment Trapping at the Jaws

CW-7 Nutria Harvest for Wetland Restoration