



9th PRIORITY PROJECT LIST REPORT

PREPARED BY:

LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION
TASK FORCE

DECEMBER 2001

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

9th Priority Project List Report

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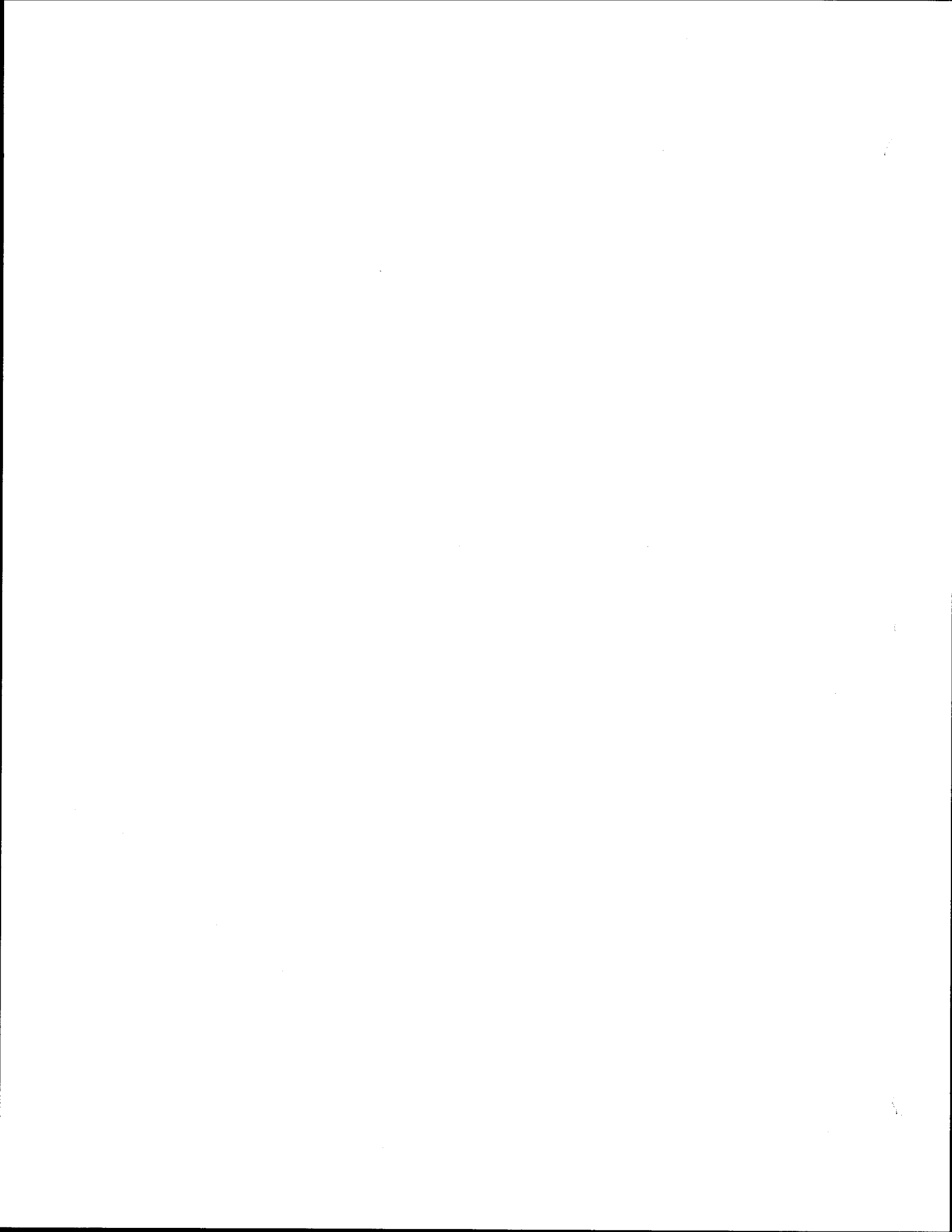
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Breaux Act
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INTRODUCTION

Approximately 80 percent of the total coastal marsh loss within the lower 48 states occurs in the State of Louisiana. These losses are due to a combination of human and natural factors, including subsidence, shoreline erosion, freshwater and sediment deprivation, saltwater intrusion, oil and gas canals, navigation channels, and herbivory. While Louisiana still contains 40 percent of all the coastal marshes in the lower 48 states, dramatic annual losses of 25-35 square miles per year in the state continue to threaten the resource. Concern over this loss exists because of the living resources and national economies dependent on Louisiana's coastal wetlands. Louisiana's coastal wetlands provide habitat for fisheries, waterfowl, neotropical birds and furbearers, protection for oil and gas exploration and production, and water-borne commerce; amenities for recreation, tourism, flood protection; and the context for a culture unique to the world. Benefits go well beyond the local and state levels by providing positive economic impacts to the entire nation.

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

STUDY AUTHORITY

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

... initiate a process to identify and prepare a list of coastal wetlands restoration projects in Louisiana to provide for the long-term conservation of such wetlands and dependent fish and wildlife populations in order of priority,

based upon the cost-effectiveness of such projects in creating, restoring, protecting, or enhancing coastal wetlands, taking into account the quality of such coastal wetlands, with due allowance for small-scale projects necessary to demonstrate the use of new techniques or materials for coastal wetlands restoration.

STUDY PURPOSE

The purpose of this study effort was to prepare the 9th Priority Project List (PPL) and transmit the list to Congress, as specified in Section 303(a)(3) of the CWPPRA. Section 303(b) of the act calls for preparation of a comprehensive restoration plan for coastal Louisiana. In November 1993, the Louisiana Coastal Wetlands Restoration Plan was submitted. In December 1998, *Coast 2050: Toward a Sustainable Coastal Louisiana* was signed by all Federal and state Task Force members. This plan consisted of several regional ecosystem strategies, that if all implemented would achieve no net loss of coastal marsh in Louisiana by the year 2050. A broad coalition of Federal, state, and local entities, landowners, environmentalists, and wetland scientists developed the plan. In addition, all 20 coastal parishes approved the Coast 2050 plan.

PROJECT AREA

A map of the Louisiana coastal zone is presented in Plate 1, indicating project locations by number of Priority Project Lists 1 through 9. Plate 2 contains a listing of these project names, referenced by number and grouped by sponsoring agency, for each PPL. The entire coastal area, which comprises all or part of 20 Louisiana parishes, is considered to be the CWPPRA project area. To facilitate the study process, the coastal zone was divided into nine hydrologic basins (refer to Plate 1).

STUDY PROCESS

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

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

The State of Louisiana is a full voting member of the Task Force, with the exception of budget matters, as stipulated in President Bush's November 29, 1990,

signing statement, displayed on the last page of Appendix A. In addition, the State of Louisiana may not serve as a "lead" Task Force member for design and construction of wetlands projects of the priority project list.

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

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

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

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

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

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

PLAN FORMULATION PROCESS FOR THE 9th PRIORITY PROJECT LIST

IDENTIFICATION & SELECTION OF CANDIDATE PROJECTS

Four regional nomination workshops were conducted by the Planning and Evaluation (P&E) in order to receive project nominations from interested parties. The meetings were held according to the schedule shown in Table 1. In these workshops, participants were invited to nominate projects for consideration as candidate and demonstration projects for the 9th PPL. Each project had to support one or more Coast 2050 regional strategies in order to qualify for consideration in the process. Coast 2050 regional strategies were recognized as being among the most important to coastal restoration.

Table 1: Meetings for Project Nominations and Selection of Candidate Projects

Grand Cheniere, Louisiana	January 25, 1999
Morgan City, Louisiana	January 26, 1999
New Orleans, Louisiana	January 27, 1999
New Orleans, Louisiana	January 28, 1999

Invitees for these meetings included the public, State and local government representatives, Federal Agencies, the State, CWPPRA Workgroups, and the Regional Planning Teams (RPT) of Coast 2050.

The first task in each meeting was for the group to pick the first and second five highest priority regional strategies in their region. The goal of each regional meeting was to identify up to 15 of the total number of nominee projects that exhibit the highest potential for addressing Coast 2050 strategies. At the conclusion of each meeting, a group approval, which is based on a consensus, is made for up to 15 projects for the region.

A meeting was conducted on February 2, 1999, to briefly review the list of projects nominated for the 9th PPL and to assign those projects to the CWPPRA agencies for compilation of existing background information.

Meetings were conducted March 2-4, 1999, to screen the nominated projects in order to identify technical concerns and any potential implementation problems, as well as, to discuss possible project modifications. Projects that successfully passed the screening process were preliminarily classified as complex or non-complex. Non-complex nominee projects underwent further evaluation and development as had been traditionally done in the CWPPRA program. They were evaluated and developed for selection and funding on the 9th PPL. Projects that were considered complex will be investigated to a greater level of detail to more accurately determine costs and benefits. Complex projects will generally require an extended period of investigation, which may

last as long as 3 years. As the benefits and costs of complex projects become available, they, along with other complex and non-complex projects which have undergone complete evaluation and development, will each compete for selection for construction on a PPL subsequent to the 9th Priority Project List.

At a Technical Committee Meeting on March 31, 30 non-complex projects were chosen as candidates to be evaluated in detail and presented for the 9th Priority Project List. To determine which nominees were to become candidates votes were polled and then tallied at a Technical Committee Meeting. Table 3 indicates the voting of individual agencies during the selection process. The 30 top-ranking projects were chosen from the 47 nominees. In addition, the committee decided that 5-demonstration projects merited consideration for the 9th Priority Project List. As in prior lists, the Task Force determined that demonstration projects would generally be limited to approximately \$2 million total cost.

Upon candidate project selection from the list of nominees, a lead federal agency was then assigned to the development of each candidate project. During project development, the lead agency was responsible for more fully producing designs and cost estimates. The Engineering Work Group met and reviewed each agencies design and cost estimates.

During the development of designs and cost estimates, the lead agencies furnished information to the Environmental Work Group. The Environmental Work Group performed a Wetland Value Assessment (WVA) for each candidate project. The section of this report entitled "Evaluation of Candidate Projects" summarizes the information developed by the lead agencies in this process.

Table 2: 9th Priority Projects List Candidate Selection Process - Agency Voting Record

Project No.	Nominee Project Name	Coast 2050 Region	EPA	COE	FWS	DNR	NRCS	NMFS	Total
PPO-7a	LaBranche Wetlands Terracing, Planting, and Shoreline Protection	R1	3	3	3	2	2	3	16
XAT-11	Castille Pass Channel Sediment Delivery	R3	2	3	3	3	1	3	15
BA-17a	Amoretta Freshwater Diversion	R2	3	3	3	2	3	1	15
XPO-55a	Opportunistic use of Bonnet Carre Spillway	R1	3	3	1	3	1	3	14
XTE-45a	Timbalier Island Dune and Marsh Creation	R3	3	2	2	2	1	3	13
PTE-15-viii	Raccoon Island Restoration	R3	2	2	2	3	2	2	13
PME-18	Grand/White Lake Land Bridge Protection Project	R4	1	2	2	3	1	3	12
BA-32a	LA Highway 1 Marsh Creation	R2	3	3	1	3	0	1	11
TE-8a	North Houma Navigational Channel Salinity Control Project	R3	2	3	3	0	0	3	11
XTV-30	Four-Mile Canal/Little White Lake Hydrologic Restoration	R3	1	2	2	2	1	3	11
PTV-13	Weeks Bay Marsh Creation and Shore Protection/Commercial Canal Freshwater Re-Direction	R3	0	2	1	3	3	1	10
CS-16	Black Bayou Culverts Hydrologic Restoration	R4	0	0	3	3	3	1	10
XBA-1	East/West Grand Terre Islands Restoration	R2	3	1	0	3	0	2	9
PME-7a	Freshwater Introduction South of Hwy 82 to the Eastern Portion of Rockefeller Refuge Project	R4	2	2	3	0	0	2	9
XPO-54a	Southwest Lake Ponchartrain Sediment Trapping Project	R1	1	3	1	0	0	3	8
XPO-95	Northern Chandeleur Islands Marsh Restoration	R1	2	3	1	0	0	2	8

Project No.	Nominee Project Name	Coast 2050 Region	EPA	COE	FWS	DNR	NRCS	NMFS	Total
XBA-63 iii-2a	Barataria Basin Landbridge Shoreline Protection, Ph. 3	R2	0	0	3	1	3	1	8
PCS-26 ii	Perry Ridge West Bank Stabilization	R4	0	1	2	0	3	2	8
PME-17	Restore Original Mermentau River Project	R4	2	1	3	1	0	1	8
PCS-32	Constriction at Lighthouse Bayou	R4	1	2	0	2	1	2	8
PPO-b/d/h	Shoreline Protection at Lake Borne	R1	0	1	1	1	2	2	7
XME-28/33	Freshwater Bayou Canal Shoreline Stabilization and Hydrologic Restoration (Schooner Bay to GIWW)	R4	0	1	1	2	2	0	6
XTE-58	North Bully Camp Outfall Management	R3	0	0	2	2	3	0	7
PO-13	Tangipahoa/Ponchartrain Shoreline Protection	R1	0	1	0	2	2	1	6
XBA-1c	Grand Pierre Island Restoration	R2	3	0	0	1	0	1	5
PTE-28	South Lake Decade Atchafayaya Freshwater/Sediment Introduction	R3	0	0	2	0	3	0	5
XTV-27	Freshwater Bayou Bank Stabilization and Hydrologic Restoration (Belle Isle Canal to Lock)	R3	0	1	2	0	0	2	5
TE-11a	New Cut Dune and Marsh Creation	R3	3	0	0	1	0	0	4
XME-42a	Little Pecan Bayou Hydrologic Restoration	R4	1	0	0	0	3	0	4
XBA-77	East Golden Meadow Terracing Project	R2	2	2	0	0	0	0	4
	Big Lake Hydrologic Restoration	R4	0	0	0	1	2	0	3
	Burns Point/Ecotourism Park Shoreline Protection	R3	1	0	0	0	2	0	3
PPO-2x	Shoreline Stabilization on L. Borgne along East Orleans Land Bridge	R1	1	0	0	0	1	0	2
	Beneficial use in Eloi Bay to Create Fringing Marsh	R1	2	0	0	0	0	0	2
	Shoreline Protection on L. Salvador at Catahoula Bay	R2	0	0	0	0	2	0	2
	Wisner Hydrologic Restoration, Cheniere Restoration	R2	1	0	0	0	0	0	1
	East Lake Verret Hydrologic Restoration	R3	0	0	0	1	0	0	1
XME-42	Hog Bayou Hydrologic Restoration	R4	0	0	1	0	0	0	1
XCS-48 (SO-8)	Oyster Bayou Hydrologic Restoration	R4	0	0	0	0	1	0	1
	Inshore Barrier Islands from Miss. R. to MRGO	R2	0	0	0	0	0	0	0
XPO-56b	Sill at Seabrook	R1	0	0	0	0	0	0	0
	Beneficial use in Central Wetlands	R1	0	0	0	0	0	0	0
	Shoreline Protection in Biloxi Marshes with Reefs and Dredging	R1	0	0	0	0	0	0	0
	Lower Barataria Drainage and Pumping	R2	0	0	0	0	0	0	0
	GIWW Bank Stabilization (Gibbstown to Lock)	R4	0	0	0	0	0	0	0
	Stabilize Gulf Shore Between Natural Mermentau and Navigation Channel	R4	0	0	0	0	0	0	0

EVALUATION OF CANDIDATE PROJECTS

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

The Environmental Work Group developed a WVA for each project. The WVA has been developed strictly for use in ranking proposed CWPPRA projects; it is not intended to provide a detailed, comprehensive methodology for establishing baseline conditions within a project area.

It is a modification of the Habitat Evaluation Procedures (HEP) developed by the U.S. Fish and Wildlife Service (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 WVA uses a community approach.

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

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

1. A list of variables that are considered important in characterizing fish and wildlife habitat:
 - a. V_1 --percent of wetland covered by emergent vegetation,
 - b. V_2 --percent open water dominated by submerged aquatic vegetation,
 - c. V_3 --marsh edge and 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 (25%)
3. Engineering and Design
4. Environmental Compliance
5. Supervision and Administration (Corps (\$500/yr administrative and \$30,000 minimum, up to 6% of construction per project for project management, and the Louisiana Department of Natural Resources (LADNR) Project Management (2% of construction))
6. Supervision and Inspection (Construction Contract)
7. Real Estate
8. Operations and Maintenance
9. Monitoring

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

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

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

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

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

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

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

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

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

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

DESCRIPTION OF CANDIDATE PROJECTS

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

CWPPRA PPL-9 Project Nominee: Opportunistic Use of Bonnet Carre Spillway



Opportunistic Use of Bonnet Carre' Spillway (XPO-55a)

This project is located on the southwestern shore of Lake Pontchartrain, in Region 1 of the Coast 2050 Plan. Most of the wetlands directly connected to the lake would be benefited by the opportunistic use of the Bonnet Carre' Spillway. The majority of the benefits would be in the La Branche Wetlands. Project features include pulling enough pins to allow no more than 4,000 cfs to enter the spillway when the Mississippi River is high enough that leakage occurs through the Bonnet Carre structure.