

Coastal Wetlands Planning, Protection and Restoration Act

9th Priority Project List Report

Table of Contents

Volume 1 Main Report

Volume 2..... Appendices

Appendix A..... Summary and Complete Text of the CWPPRA

Appendix B..... Wetland Value Assessment Methodology and Community Models

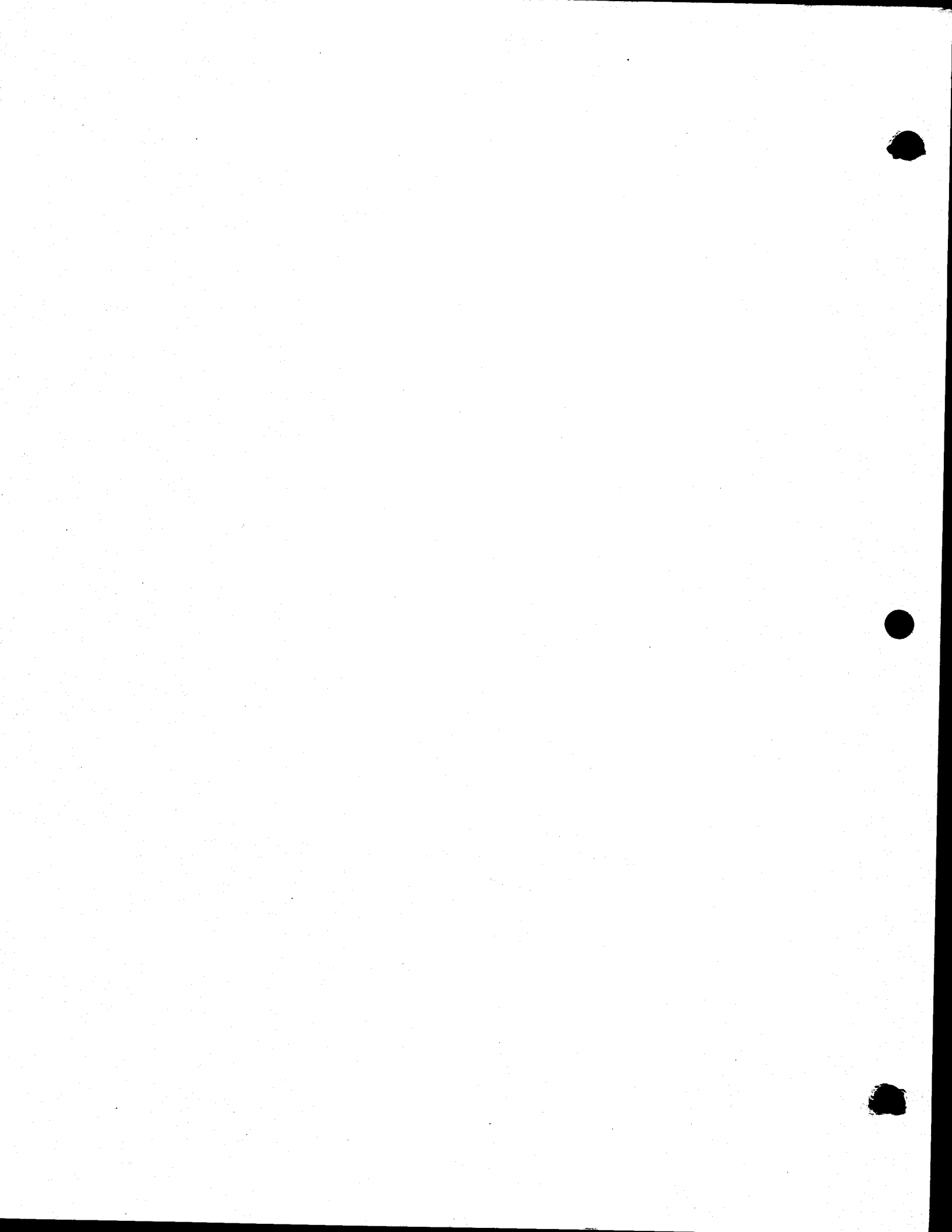
Appendix C..... Engineering

Appendix D..... Economics

Appendix E..... Wetland Value Assessment

Appendix F..... Public Support for Candidate Projects

Appendix G..... Status of Projects Previous Priority Project Lists

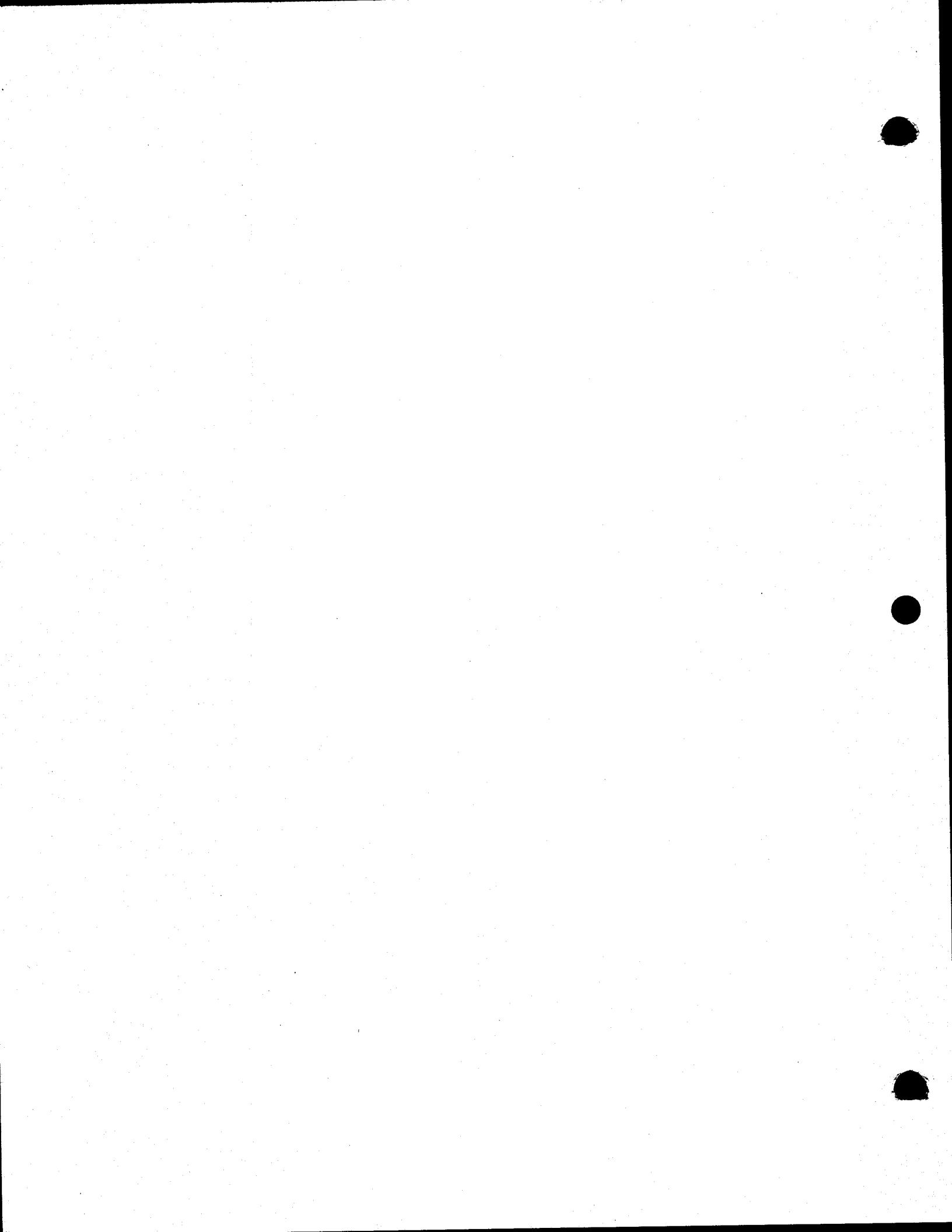


Coastal Wetlands Planning, Protection, and
Restoration Act

9th Priority Project List Report

Appendix A

Summary and Complete Text of the CWPPRA



COASTAL WETLANDS PLANNING, PROTECTION & RESTORATION ACT
Public Law 101-646, Title III

SECTION 303. Priority Louisiana Coastal Wetlands Restoration Projects.

- Section 303a. Priority Project List
- NLT 13 Jan 91, Sec. Of Army (Secretary) will convene a Task Force
 - Secretary
 - Administrator. EPA
 - Governor, Louisiana
 - Secretary, Interior
 - Secretary, Agriculture
 - Secretary, Commerce
- NLT 28 Nov. 91, Task Force will prepare and transmit to Congress a Priority List of wetland restoration projects based on cost effectiveness and wetland quality.
- Priority List is revised and submitted annually as part of President's budget.
- Section 303b. Federal and State Project Planning
 - NLT 28 Nov. 93, Task Force will prepare a comprehensive coastal wetlands Restoration Plan for Louisiana.
 - Restoration Plan will consist of a list of wetland projects, ranked by cost effectiveness and wetland quality.
 - Completed Restoration Plan will become Priority List.
 - Secretary will ensure that navigation and flood control projects are consistent with the purpose of the Restoration Plan.
 - Upon submission of the Restoration Plan to Congress, the Task Force will conduct a scientific evaluation of the completed wetland restoration projects every 3 years and report findings to Congress.

SECTION 304. Louisiana Coastal Wetlands Conservation Planning.

- Secretary; Administrator, EPA; and Director, USFWS will:
 - Sign an agreement with the Governor specifying how Louisiana will develop and implement the Conservation Plan.
 - Approve the Conservation Plan.
 - Provide Congress with periodic status reports on Plan implementation.
- NLT 3 years after agreement is signed, Louisiana will develop a Wetland Conservation Plan to achieve no net loss of wetlands resulting from development.

SECTION 305. National Coastal Wetlands Conservation Grants.

- Director, USFWS, will make matching grants to any coastal state to implement Wetland Conservation Projects (projects to acquire, restore, manage, and enhance real property interest in coastal lands and waters).
- Cost sharing is 50% Federal/ 50% State.

SECTION 306. Distribution of Appropriations.

- 70% of annual appropriations not to exceed (NTE) \$70 million used as follows:
 - NTE \$15 million to fund Task Force completion of Priority List and Restoration Plan--Secretary disburses the funds.
 - NTE \$10 million to fund 75% of Louisiana's cost to complete Conservation Plan-- Administrator disburses funds.
 - Balance to fund wetland restoration projects at 75% Federal/ 25% Louisiana-- Secretary disburses funds.
- 15% of annual appropriations, NTE \$15 million for Wetland Conservation Grants--Director, USFWS disburses funds.
- 15% of annual appropriations, NTE \$15 million for projects authorized by the North American Wetlands Conservation Act-- Secretary, Interior disburses funds.

SECTION 307. Additional Authority for the Corps of Engineers.

- Section 307a. Secretary authorized to:
 - Carry out projects to protect, restore, and enhance wetlands and aquatic/coastal ecosystems.
- Section 307b. Secretary authorized and directed to study feasibility of modifying MR&T to increase flows and sediment to the Atchafalaya River for land building wetland nourishment.
 - 25% if the state has dedicated trust fund from which principal is not spent.
 - 15% when Louisiana's Conservation Plan is approved.

TITLE III--WETLANDS

Sec. 301. SHORT TITLE.

This title may be cited as the "Coastal Wetlands Planning, Protection and Restoration Act".

Sec. 302. DEFINITIONS.

As used in this title, the term--

- (1) "Secretary" means the Secretary of the Army;
- (2) "Administrator" means the Administrator of the Environmental Protection Agency;
- (3) "development activities" means any activity, including the discharge of dredged or fill material, which results directly in a more than de minimus change in the hydrologic regime, bottom contour, or the type, distribution or diversity of hydrophytic vegetation, or which impairs the flow, reach, or circulation of surface water within wetlands or other waters;
- (4) "State" means the State of Louisiana;
- (5) "coastal State" means a State of the United States in, or bordering on, the Atlantic, Pacific, or Arctic Ocean, the Gulf of Mexico, Long Island Sound, or one or more of the Great Lakes; for the purposes of this title, the term also includes Puerto Rico, the Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and the Trust Territories of the Pacific Islands, and American Samoa;
- (6) "coastal wetlands restoration project" means any technically feasible activity to create, restore, protect, or enhance coastal wetlands through sediment and freshwater diversion, water management, or other measures that the Task Force finds will significantly contribute to the long-term restoration or protection of the physical, chemical and biological integrity of coastal wetlands in the State of Louisiana, and includes any such activity authorized under this title or under any other provision of law, including, but not limited to, new projects, completion or expansion of existing or on-going projects, individual phases, portions, or components of projects and operation, maintenance and rehabilitation of completed projects; the primary purpose of a "coastal wetlands restoration project" shall not be to provide navigation, irrigation or flood control benefits;
- (7) "coastal wetlands conservation project" means--
 - (A) the obtaining of a real property interest in coastal lands or waters, if the obtaining of such interest is subject to terms and conditions that will ensure that the real property will be administered for the long-term conservation of such lands and waters and the hydrology, water quality and fish and wildlife dependent thereon; and
 - (B) the restoration, management, or enhancement of coastal wetlands ecosystems if such restoration, management, or enhancement is conducted on coastal lands and waters that are administered for the long-term conservation of such lands and waters and the hydrology, water quality and fish and wildlife dependent thereon;
- (8) "Governor" means the Governor of Louisiana;
- (9) "Task Force" means the Louisiana Coastal Wetlands Conservation and Restoration Task Force which shall consist of the Secretary, who shall serve as chairman, the

Administrator, the Governor, the Secretary of the Interior, the Secretary of Agriculture and the Secretary of Commerce; and

(10) "Director" means the Director of the United States Fish and Wildlife Service.

SEC. 303. PRIORITY LOUISIANA COASTAL WETLANDS RESTORATION PROJECTS.

(a) PRIORITY PROJECT LIST.--

(1) PREPARATION OF LIST.--Within forty-five days after the date of enactment of this title, the Secretary shall convene the 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 on 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.

(2) TASK FORCE PROCEDURES.--The Secretary shall convene meetings of the Task Force as appropriate to ensure that the list is produced and transmitted annually to the Congress as required by this subsection. If necessary to ensure transmittal of the list on a timely basis, the Task Force shall produce the list by a majority vote of those Task Force members who are present and voting; except that no coastal wetlands restoration project shall be placed on the list without the concurrence of the lead Task Force member that the project is cost effective and sound from an engineering perspective. Those projects which potentially impact navigation or flood control on the lower Mississippi River System shall be constructed consistent with section 304 of this Act.

(3) TRANSMITTAL OF LIST.--No later than one year after the date of enactment of this title, the Secretary shall transmit to the Congress the list of priority coastal wetlands restoration projects required by paragraph (1) of this subsection. Thereafter, the list shall be updated annually by the Task Force members and transmitted by the Secretary to the Congress as part of the President's annual budget submission. Annual transmittals of the list to the Congress shall include a status report on each project and a statement from the Secretary of the Treasury indicating the amounts available for expenditure to carry out this title.

(4) LIST OF CONTENTS.--

(A) AREA IDENTIFICATION; PROJECT DESCRIPTION--The list of priority coastal wetlands restoration projects shall include, but not be limited to--

(i) identification, by map or other means, of the coastal area to be covered by the coastal wetlands restoration project; and

(ii) a detailed description of each proposed coastal wetlands restoration project including a justification for including such project on the list, the proposed activities to be carried out pursuant to each coastal wetlands restoration project, the benefits to be realized by such project, the identification of the lead Task Force member to undertake each proposed coastal wetlands restoration project and the responsibilities of each other participating Task Force member, an estimated timetable for the completion of each coastal wetlands restoration project, and the estimated cost of each project.

(B) PRE-PLAN.--Prior to the date on which the plan required by subsection (b) of this section becomes effective, such list shall include only those coastal wetlands restoration projects that can be substantially completed during a five-year period commencing on the date the project is placed on the list.

(C) Subsequent to the date on which the plan required by subsection (b) of this section becomes effective, such list shall include only those coastal wetlands restoration projects that have been identified in such plan.

(5) FUNDING.--The Secretary shall, with the funds made available in accordance with section 306 of this title, allocate funds among the members of the Task Force based on the need for such funds and such other factors as the Task Force deems appropriate to carry out the purposes of this subsection.

(b) FEDERAL AND STATE PROJECT PLANNING.--

(1) PLAN PREPARATION.--The Task Force shall prepare a plan to identify coastal wetlands restoration projects, in order of priority, based on the cost-effectiveness of such projects in creating, restoring, protecting, or enhancing the long-term conservation of 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. Such restoration plan shall be completed within three years from the date of enactment of this title.

(2) PURPOSE OF THE PLAN.--The purpose of the restoration plan is to develop a comprehensive approach to restore and prevent the loss of, coastal wetlands in Louisiana. Such plan shall coordinate and integrate coastal wetlands restoration projects in a manner that will ensure the long-term conservation of the coastal wetlands of Louisiana.

(3) INTEGRATION OF EXISTING PLANS.--In developing the restoration plan, the Task Force shall seek to integrate the "Louisiana Comprehensive Coastal Wetlands Feasibility Study" conducted by the Secretary of the Army and the "Coastal Wetlands Conservation and Restoration Plan" prepared by the State of Louisiana's Wetlands Conservation and Restoration Task Force.

(4) ELEMENTS OF THE PLAN.--The restoration plan developed pursuant to this subsection shall include--

(A) identification of the entire area in the State that contains coastal wetlands;

(B) identification, by map or other means, of coastal areas in Louisiana in need of coastal wetlands restoration projects;

(C) identification of high priority coastal wetlands restoration projects in Louisiana needed to address the areas identified in subparagraph (B) and that would provide for the long-term conservation of restored wetlands and dependent fish and wildlife populations;

(D) a listing of such coastal wetlands restoration projects, in order of priority, to be submitted annually, incorporating any project identified previously in lists produced and submitted under subsection (a) of this section;

(E) a detailed description of each proposed coastal wetlands restoration project, including a justification for including such project on the list;

(F) the proposed activities to be carried out pursuant to each coastal wetlands restoration project;

(G) the benefits to be realized by each such project;

(H) an estimated timetable for completion of each coastal wetlands restoration project;

(I) an estimate of the cost of each coastal wetlands restoration project;

(J) identification of a lead Task Force member to undertake each proposed coastal wetlands restoration project listed in the plan;

(K) consultation with the public and provision for public review during development of the plan; and

(L) evaluation of the effectiveness of each coastal wetlands restoration project in achieving long-term solutions to arresting coastal wetlands loss in Louisiana.

(5) PLAN MODIFICATION.--The Task Force may modify the restoration plan from time to time as necessary to carry out the purposes of this section.

(6) PLAN SUBMISSION.--Upon completion of the restoration plan, the Secretary shall submit the plan to the Congress. The restoration plan shall become effective ninety days after the date of its submission to the Congress.

(7) PLAN EVALUATION.--Not less than three years after the completion and submission of the restoration plan required by this subsection and at least every three years thereafter, the Task Force shall provide a report to the Congress containing a scientific evaluation of the effectiveness of the coastal wetlands restoration projects carried out under the plan in creating, restoring, protecting and enhancing coastal wetlands in Louisiana.

(c) COASTAL WETLANDS RESTORATION PROJECT BENEFITS.--Where such a determination is required under applicable law, the net ecological, aesthetic, and cultural benefits, together with the economic benefits, shall be deemed to exceed the costs of any coastal wetlands restoration project within the State which the Task Force finds to contribute significantly to wetlands restoration.

(d) CONSISTENCY.--(1) In implementing, maintaining, modifying, or rehabilitating navigation, flood control or irrigation projects, other than emergency actions, under other authorities, the Secretary, in consultation with the Director and the Administrator, shall ensure that such actions are consistent with the purposes of the restoration plan submitted pursuant to this section.

(2) At the request of the Governor of the State of Louisiana, the Secretary of Commerce shall approve the plan as an amendment to the State's coastal zone management program approved under section 306 of the Coastal Zone Management Act of 1972 (16 U.S.C. 1455).

(e) FUNDING OF WETLANDS RESTORATION PROJECTS.--The Secretary shall, with the funds made available in accordance with this title, allocate such funds among the members of the Task Force to carry out coastal wetlands restoration projects in accordance with the priorities set forth in the list transmitted in accordance with this section. The Secretary shall not fund a coastal wetlands restoration project unless that project is subject to such terms and conditions as necessary to ensure that wetlands restored, enhanced or managed through that project will be administered for the long-term conservation of such lands and waters and dependent fish and wildlife populations.

(f) COST-SHARING.--

(1) FEDERAL SHARE.--Amounts made available in accordance with section 306 of this title to carry out coastal wetlands restoration projects under this title shall provide 75 percent of the cost of such projects.

(2) FEDERAL SHARE UPON CONSERVATION PLAN APPROVAL.--Notwithstanding the previous paragraph, if the State develops a Coastal Wetlands Conservation Plan pursuant to this title, and such conservation plan is approved pursuant to section 304 of this title, amounts made available in accordance with section 306 of this title for any coastal

wetlands restoration project under this section shall be 85 percent of the cost of the project. In the event that the Secretary, the Director, and the Administrator jointly determine that the State is not taking reasonable steps to implement and administer a conservation plan developed and approved pursuant to this title, amounts made available in accordance with section 306 of this title for any coastal wetlands restoration project shall revert to 75 percent of the cost of the project: Provided, however, that such reversion to the lower cost share level shall not occur until the Governor, has been provided notice of, and opportunity for hearing on, any such determination by the Secretary, the Director, and Administrator, and the State has been given ninety days from such notice or hearing to take corrective action.

(3) FORM OF STATE SHARE.--The share of the cost required of the State shall be from a non-Federal source. Such State share shall consist of a cash contribution of not less than 5 percent of the cost of the project. The balance of such State share may take the form of lands, easements, or right-of-way, or any other form of in-kind contribution determined to be appropriate by the lead Task Force member.

(4) Paragraphs (1), (2), and (3) of this subsection shall not affect the existing cost-sharing agreements for the following projects: Caernarvon Freshwater Diversion, Davis Pond Freshwater Diversion, and Bonnet Carre Freshwater Diversion.

SEC. 304. LOUISIANA COASTAL WETLANDS CONSERVATION PLANNING.

(a) DEVELOPMENT OF CONSERVATION PLAN.--

(1) AGREEMENT.--The Secretary, the Director, and the Administrator are directed to enter into an agreement with the Governor, as set forth in paragraph (2) of this subsection, upon notification of the Governor's willingness to enter into such agreement.

(2) TERMS OF AGREEMENT.--

(A) Upon receiving notification pursuant to paragraph (1) of this subsection, the Secretary, the Director, and the Administrator shall promptly enter into an agreement (hereafter in this section referred to as the "agreement") with the State under the terms set forth in subparagraph (B) of this paragraph.

(B) The agreement shall--

(i) set forth a process by which the State agrees to develop, in accordance with this section, a coastal wetlands conservation plan (hereafter in this section referred to as the "conservation plan");

(ii) designate a single agency of the State to develop the conservation plan;

(iii) assure an opportunity for participation in the development of the conservation plan, during the planning period, by the public and by Federal and State agencies;

(iv) obligate the State, not later than three years after the date of signing the agreement, unless extended by the parties thereto, to submit the conservation plan to the Secretary, the Director, and the Administrator for their approval; and

(v) upon approval of the conservation plan, obligate the State to implement the conservation plan.

(3) GRANTS AND ASSISTANCE.--Upon the date of signing the agreement--

(A) the Administrator shall, in consultation with the Director, with the funds made available in accordance with section 306 of this title, make grants during the development of the conservation plan to assist the designated State agency in developing such plan. Such grants shall not exceed 75 percent of the cost of developing the plan; and

(B) the Secretary, the Director, and the Administrator shall provide technical assistance to the State to assist it in the development of the plan.

(b) CONSERVATION PLAN GOAL.--If a conservation plan is developed pursuant to this section, it shall have a goal of achieving no net loss of wetlands in the coastal areas of Louisiana as a result of development activities initiated subsequent to approval of the plan, exclusive of any wetlands gains achieved through implementation of the preceding section of this title.

(c) ELEMENTS OF CONSERVATION PLAN.--The conservation plan authorized by this section shall include--

(1) identification of the entire coastal area in the State that contains coastal wetlands;

(2) designation of a single State agency with the responsibility for implementing and enforcing the plan;

(3) identification of measures that the State shall take in addition to existing Federal authority to achieve a goal of no net loss of wetlands as a result of development activities, exclusive of any wetlands gains achieved through implementation of the preceding section of this title;

(4) a system that the State shall implement to account for gains and losses of coastal wetlands within coastal areas for purposes of evaluating the degree to which the goal of no net loss of wetlands as a result of development activities in such wetlands or other waters has been attained;

(5) satisfactory assurance that the State will have adequate personnel, funding, and authority to implement the plan;

(6) a program to be carried out by the State for the purpose of educating the public concerning the necessity to conserve wetlands;

(7) a program to encourage the use of technology by persons engaged in development activities that will result in negligible impact on wetlands; and

(8) a program for the review, evaluation, and identification of regulatory and nonregulatory options that will be adopted by the State to encourage and assist private owners of wetlands to continue to maintain those lands as wetlands.

(d) APPROVAL OF CONSERVATION PLAN.--

(1) IN GENERAL.--If the Governor submits a conservation plan to the Secretary, the Director, and the Administrator for their approval, the Secretary, the Director, and the Administrator shall, within one hundred and eighty days following receipt of such plan, approve or disapprove it.

(2) APPROVAL CRITERIA.--The Secretary, the Director, and the Administrator shall approve a conservation plan submitted by the Governor, if they determine that -

(A) the State has adequate authority to fully implement all provisions of such a plan;

(B) such a plan is adequate to attain the goal of no net loss of coastal wetlands as a result of development activities and complies with the other requirements of this section; and

(C) the plan was developed in accordance with terms of the agreement set forth in subsection (a) of this section.

(e) MODIFICATION OF CONSERVATION PLAN.--

(1) NONCOMPLIANCE.--If the Secretary, the Director, and the Administrator determine that a conservation plan submitted by the Governor does not comply with the requirements of subsection (d) of this section, they shall submit to the Governor a statement explaining why the plan is not in compliance and how the plan should be changed to be in compliance.

(2) RECONSIDERATION.--If the Governor submits a modified conservation plan to the Secretary, the Director, and the Administrator for their reconsideration, the Secretary, the Director, and Administrator shall have ninety days to determine whether the modifications are sufficient to bring the plan into compliance with requirements of subsection (d) of this section.

(3) APPROVAL OF MODIFIED PLAN.--If the Secretary, the Director, and the Administrator fail to approve or disapprove the conservation plan, as modified, within the ninety-day period following the date on which it was submitted to them by the Governor, such plan, as modified, shall be deemed to be approved effective upon the expiration of such ninety-day period.

(f) AMENDMENTS TO CONSERVATION PLAN.--If the Governor amends the conservation plan approved under this section, any such amended plan shall be considered a new plan and shall be subject to the requirements of this section; except that minor changes to such plan shall not be subject to the requirements of this section.

(g) IMPLEMENTATION OF CONSERVATION PLAN.--A conservation plan approved under this section shall be implemented as provided therein.

(h) FEDERAL OVERSIGHT.--

(1) INITIAL REPORT TO CONGRESS.--Within one hundred and eighty days after entering into the agreement required under subsection (a) of this section, the Secretary, the Director, and the Administrator shall report to the Congress as to the status of a conservation plan approved under this section and the progress of the State in carrying out such a plan, including and accounting, as required under subsection (c) of this section, of the gains and losses of coastal wetlands as a result of development activities.

(2) REPORT TO CONGRESS.--Twenty-four months after the initial one hundred and eighty day period set forth in paragraph (1), and at the end of each twenty-four-month period thereafter, the Secretary, the Director, and the Administrator shall, report to the Congress on the status of the conservation plan and provide an evaluation of the effectiveness of the plan in meeting the goal of this section.

SEC. 305 NATIONAL COASTAL WETLANDS CONSERVATION GRANTS.

(a) MATCHING GRANTS.--The Director shall, with the funds made available in accordance with the next following section of this title, make matching grants to any coastal State to carry out coastal wetlands conservation projects from funds made available for that purpose.

(b) PRIORITY.--Subject to the cost-sharing requirements of this section, the Director may grant or otherwise provide any matching moneys to any coastal State which submits a proposal substantial in character and design to carry out a coastal wetlands conservation project. In awarding such matching grants, the Director shall give priority to coastal wetlands conservation projects that are--

(1) consistent with the National Wetlands Priority Conservation Plan developed under section 301 of the Emergency Wetlands Resources Act (16 U.S.C. 3921); and

(2) in coastal States that have established dedicated funding for programs to acquire coastal wetlands, natural areas and open spaces. In addition, priority consideration shall be given to coastal wetlands conservation projects in maritime forests on coastal barrier islands.

(c) CONDITIONS.--The Director may only grant or otherwise provide matching moneys to a coastal State for purposes of carrying out a coastal wetlands conservation project if the grant or provision is subject to terms and conditions that will ensure that any real property interest acquired in whole or in part, or enhanced, managed, or restored with such moneys will be administered for the long-term conservation of such lands and waters and the fish and wildlife dependent thereon.

(d) COST-SHARING.--

(1) FEDERAL SHARE.--Grants to coastal States of matching moneys by the Director for any fiscal year to carry out coastal wetlands conservation projects shall be used for the payment of not to exceed 50 percent of the total costs of such projects: except that such matching moneys may be used for payment of not to exceed 75 percent of the costs of such projects if a coastal State has established a trust fund, from which the principal is not spent, for the purpose of acquiring coastal wetlands, other natural area or open spaces.

(2) FORM OF STATE SHARE.--The matching moneys required of a coastal State to carry out a coastal wetlands conservation project shall be derived from a non-Federal source.

(3) IN-KIND CONTRIBUTIONS.--In addition to cash outlays and payments, in-kind contributions of property or personnel services by non-Federal interests for activities under this section may be used for the non-Federal share of the cost of those activities.

(e) PARTIAL PAYMENTS.--

(1) The Director may from time to time make matching payments to carry out coastal wetlands conservation projects as such projects progress, but such payments, including previous payments, if any, shall not be more than the Federal pro rata share of any such project in conformity with subsection (d) of this section.

(2) The Director may enter into agreements to make matching payments on an initial portion of a coastal wetlands conservation project and to agree to make payments on the remaining Federal share of the costs of such project from subsequent moneys if and when they become available. The liability of the United States under such an agreement is contingent upon the continued availability of funds for the purpose of this section.

(f) WETLANDS ASSESSMENT.--The Director shall, with the funds made available in accordance with the next following section of this title, direct the U.S. Fish and Wildlife Service's National Wetlands Inventory to update and digitize wetlands maps in the State of Texas and to conduct an assessment of the status, condition, and trends of wetlands in that State.

SEC. 306. DISTRIBUTION OF APPROPRIATIONS.

(a) PRIORITY PROJECT AND CONSERVATION PLANNING EXPENDITURES.--Of the total amount appropriated during a given fiscal year to carry out this title, 70 percent, not to exceed \$70,000,000, shall be available, and shall remain available until expended, for the purposes of making expenditures--

(1) not to exceed the aggregate amount of \$5,000,000 annually to assist the Task Force in the preparation of the list required under this title and the plan required under this title, including preparation of--

- (A) preliminary assessments;
- (B) general or site-specific inventories;
- (C) reconnaissance, engineering or other studies;
- (D) preliminary design work; and
- (E) such other studies as may be necessary to identify and evaluate the feasibility of coastal wetlands restoration projects;

(2) to carry out coastal wetlands restoration projects in accordance with the priorities set forth on the list prepared under this title;

(3) to carry out wetlands restoration projects in accordance with the priorities set forth in the restoration plan prepared under this title;

(4) to make grants not to exceed \$2,500,000 annually or \$10,000,000 in total, to assist the agency designated by the State in development of the Coastal Wetlands Conservation Plan pursuant to this title.

(b) COASTAL WETLANDS CONSERVATION GRANTS.--Of the total amount appropriated during a given fiscal year to carry out this title, 15 percent, not to exceed \$15,000,000 shall be available, and shall remain available to the Director, for purposes of making grants--

(1) to any coastal State, except States eligible to receive funding under section 306(a), to carry out coastal wetlands conservation projects in accordance with section 305 of this title; and

(2) in the amount of \$2,500,000 in total for an assessment of the status, condition, and trends of wetlands in the State of Texas.

(c) NORTH AMERICAN WETLANDS CONSERVATION.--Of the total amount appropriated during a given fiscal year to carry out this title, 15 percent, not to exceed \$15,000,000, shall be available to, and shall remain available until expended by, the Secretary of the Interior for allocation to carry out wetlands conservation projects in any coastal State under section 8 of the North American Wetlands Conservation Act (Public Law 101-233, 103 Stat. 1968, December 13, 1989).

SEC. 307. GENERAL PROVISIONS.

(a) ADDITIONAL AUTHORITY FOR THE CORPS OF ENGINEERS.--The Secretary is authorized to carry out projects for the protection, restoration, or enhancement of aquatic and associated ecosystems, including projects for the protection, restoration, or creation of wetlands and coastal ecosystems. In carrying out such projects, the Secretary shall give such projects equal consideration with projects relating to irrigation, navigation, or flood control.

(b) STUDY.--The Secretary is hereby authorized and directed to study the feasibility of modifying the operation of existing navigation and flood control projects to allow for an increase in the share of the Mississippi River flows and sediment sent down the Atchafalaya River for purposes of land building and wetlands nourishment.

SEC.308. CONFORMING AMENDMENT.

16 U.S.C. 777c is amended by adding the following after the first sentence: "The Secretary shall distribute 18 per centum of each annual appropriation made in accordance with the provisions of section 777b of this title as provided in the Coastal Wetlands Planning, Protection and Restoration Act: Provided, That, notwithstanding the provisions of section 777b, such sums shall remain available to carry out such Act through fiscal year 1999."

LEGISLATIVE HISTORY – H.R. 5390 (S. 2244):

SENATE REPORTS: No. 101-523 accompanying S. 2244 (Comm. On Environment and Public Works).

CONGRESSIONAL RECORD, Vol. 136 (1990):

Oct. 1, considered and passed House.

Oct. 26, considered and passed Senate, amended, in lieu of S. 2244.

Oct. 27, House concurred in Senate amendment.

WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 26 (1990):

Nov. 29, Presidential statement.

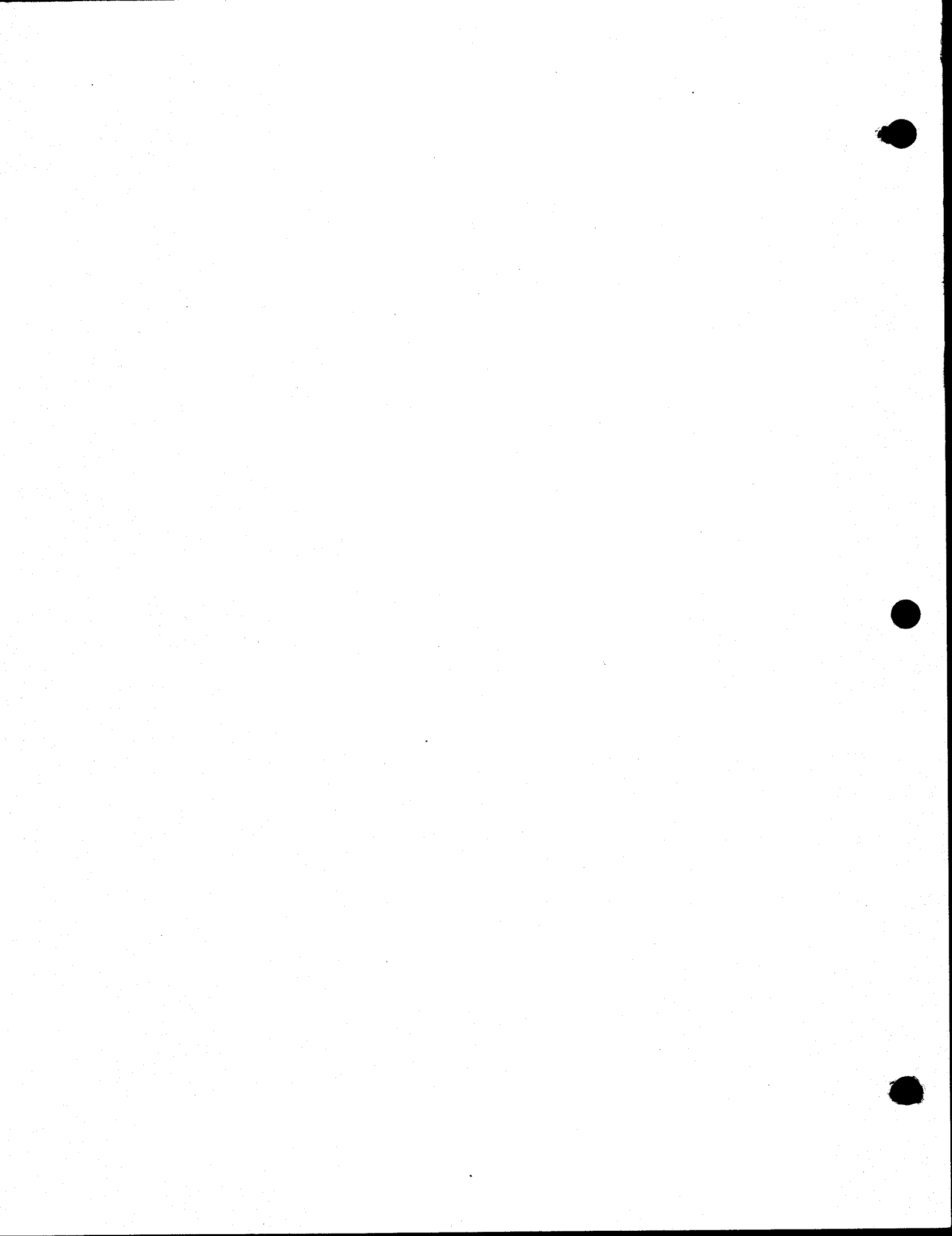


**Coastal Wetlands Planning, Protection, and
Restoration Act**

9th Priority Project List Report

Appendix B

**Wetland Value Assessment Methodology and
Community Models**

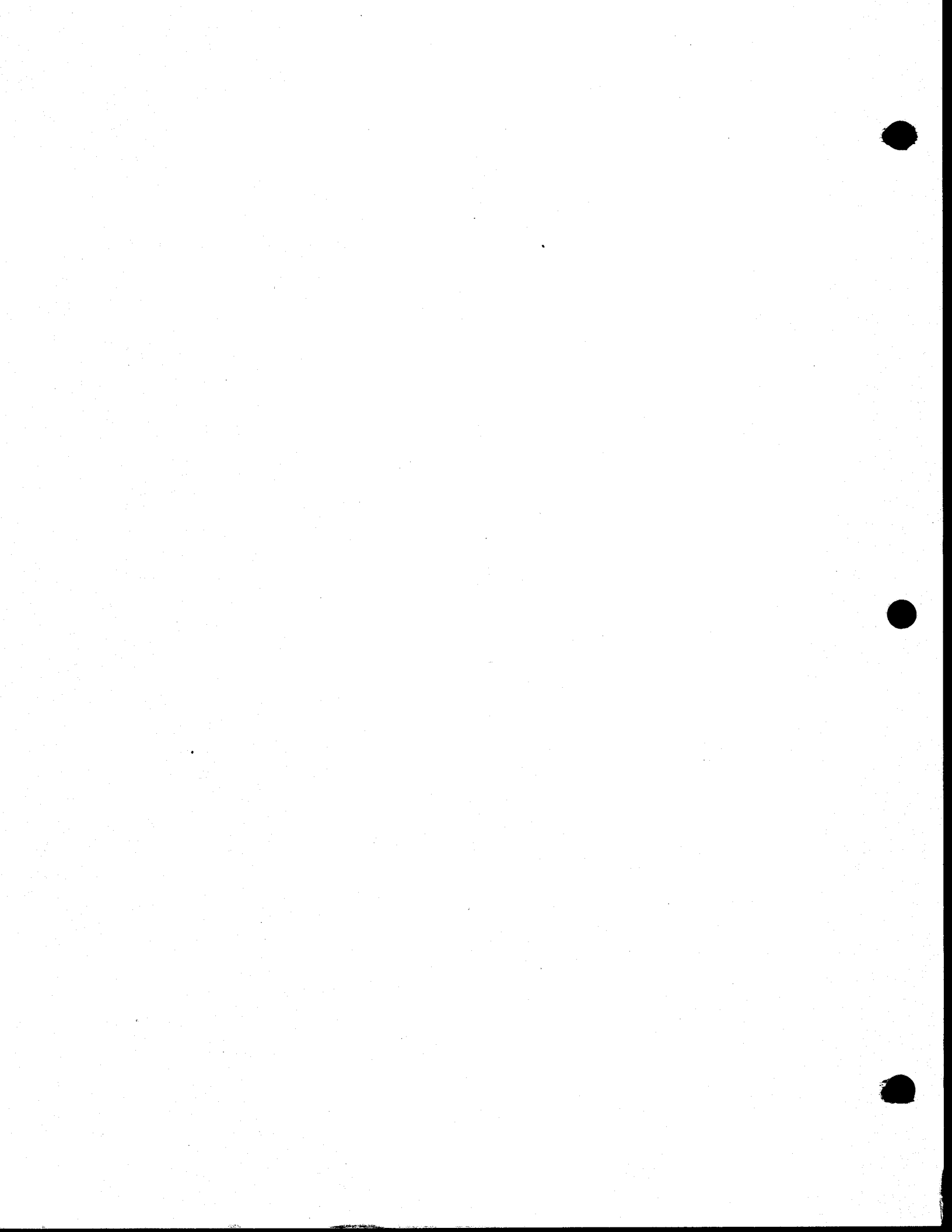


Appendix B

Wetland Value Assessment Methodology and Community Models

Table of Contents

	<u>Page</u>
INTRODUCTION.....	B-1
WVA CONCEPT	B-1
COMMUNITY MODEL VARIABLE SELECTION	B-2
SUITABILITY INDEX GRAPHS.....	B-3
SUITABILITY INDEX GRAPH ASSUMPTIONS.....	B-4
Fresh/Intermediate Marsh Model	B-4
Brackish Marsh Model	B-7
Saline Marsh Model	B-8
Cypress-Tupelo Swamp Model	B-9
HABITAT SUITABILITY INDEX FORMULA	B-10
BENEFIT ASSESSMENT	B-12
LITERATURE CITED.....	B-14
 WETLAND VALUE ASSESSMENT COMMUNITY MODELS	
Attachment 1: Fresh/Intermediate Marsh Model.....	B-15
Attachment 2: Brackish Marsh Model.....	B-22
Attachment 3: Saline Marsh Model.....	B-29
Attachment 4: Cypress-Tupelo Swamp Model.....	B-36
Attachment 5: Interspersion	B-40
Attachment 6: Procedure for Calculating Access Value	B-42
Attachment 7: Published Habitat Suitability Index Models Consulted For Variables for Possible Use in the MVA Models	B-46



Wetland Value Assessment Methodology and Community Models

I. INTRODUCTION

The Wetland Value Assessment (WVA) methodology is a quantitative habitat-based assessment methodology developed for use in prioritizing project proposals submitted for funding under the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) of 1990. The WVA quantifies changes in fish and wildlife habitat quality and quantity that are projected to be brought about 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 gained.

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

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. Some aspects of the WVA have been defined by policy and/or functional considerations of the CWPPRA; therefore, user-specific modifications may be necessary if the WVA is used for other purposes.

The WVA 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, however, in that HEP generally uses a species-oriented approach, whereas the WVA utilizes a community approach.

The WVA has been developed for application to the following wetland types: fresh marsh (including intermediate marsh), brackish marsh, and saline marsh. Future reference in this document to "wetland" or "wetland type" refers to one or more of those three communities. For projects impacting bottomland hardwood forest or cypress-tupelo swamp, community models developed for those habitat types by the Louisiana Department of Natural Resources are used.

II. WVA CONCEPT

The WVA 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 mathematical models developed specifically for each wetland type. Each model consists of 1) a list of variables that are considered important in characterizing fish and wildlife habitat, 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 (Attachments 1-3) have been developed for determining the suitability of Louisiana coastal wetlands in 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. Earlier attempts to capture other wetland functions and values such as storm-surge protection, flood water storage, water quality functions and nutrient import/export were abandoned due to the difficulty in defining unified model relationships and meaningful model outputs for such a variety of wetland benefits. However, the ability of a Louisiana coastal wetland to provide those functions and values may be generally assumed to be positively correlated with fish and wildlife habitat quality as predicted through the WVA.

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.

III. COMMUNITY MODEL VARIABLE SELECTION

Habitat variables considered appropriate for describing habitat quality in each wetland type were selected according to the following criteria:

- 1) the condition described by the variable had to be important in characterizing fish and wildlife habitat quality in the wetland type under consideration;
- 2) values had to be easily estimated and predicted based on existing data (e.g., aerial photography, LANDSAT, GIS, water quality monitoring stations, and interviews with knowledgeable individuals); and
- 3) the variable had to be sensitive to the types of changes expected to be brought about by typical wetland projects proposed under the CWPPRA.

Variables for each model were selected through a two part procedure. The first involved a listing of environmental variables thought to be important in characterizing fish and wildlife habitat in coastal marsh or swamp systems.

The second part of the selection procedure involved reviewing variables used in species-specific HSI models published by the U.S. Fish and Wildlife Service. Review was limited to models for those fish and wildlife species known to inhabit Louisiana coastal wetlands, and included models for 10 estuarine fish and shellfish, 4 freshwater fish, 12 birds, 3 reptiles and amphibians, and 2 mammals (Attachment 6). The number of models included from each species group was dictated by model availability.

Selected HSI models were then grouped according to the wetland type(s) used by each species. Because most species for which models were considered are not restricted to one wetland type, most models were included in more than one wetland type group. Within each wetland type group, variables from all models were then grouped according to similarity (e.g., water quality, vegetation, etc.). Each variable was evaluated based on 1) whether it met the variable selection criteria; 2) whether another, more easily measured/predicted variable in the same or a different similarity group functioned as a surrogate; and 3) whether it was deemed suitable for the WVA application (e.g., some freshwater fish model variables dealt with riverine or lacustrine environments). Variables that did not satisfy those conditions were eliminated from further consideration. The remaining variables, still in their similarity groups, were then further eliminated or refined by combining similar variables and/or culling those that were functionally duplicated by variables from other models (i.e., some variables were used frequently in different models in only slightly different format, such as percent marsh coverage, salinity, etc.).

Variables selected from the HSI models were then compared to those identified in the first part of the selection procedure to arrive at a final list of variables to describe wetland habitat quality. That list includes six variables for each marsh type (Attachments 1-3).

IV. SUITABILITY INDEX GRAPHS

Suitability Index (SI) graphs were constructed for each variable selected within a wetland type. A suitability index graph is a graphical representation of how fish and wildlife habitat quality or "suitability" of a given wetland type is predicted to change as values of the given variable change, and allows the model user to numerically describe, through a Suitability Index, the habitat quality of a wetland area for any variable value. Each Suitability Index ranges from 0.1 to 1.0, with 1.0 representing the optimum condition for the variable in question.

A variety of resources were utilized to construct each SI graph, including personal knowledge of EWG members, the HSI models from which the final list of variables was partially derived, consultation with other professionals and researchers outside the EWG, and published and unpublished data and studies. An important "non-biological" constraint on SI graph development was the need to insure that graph relationships were not counter to the purpose of the CWPPRA, that is, the long term creation, restoration, protection, or enhancement of coastal vegetated wetlands. That constraint was most

operative in defining SI graphs for Variable V_1 under each marsh model (see discussion below).

The process of SI graph development was one of constant evolution, feedback, and refinement; the form of each SI graph was decided upon through consensus among Group members.

V. SUITABILITY INDEX GRAPH ASSUMPTIONS

Suitability Index graphs were developed according to the following assumptions:

1. Fresh/Intermediate Marsh Model

Variable V_1 - Percent of wetland covered by persistent emergent vegetation (\geq 10 percent canopy cover). Persistent emergent vegetation plays an important role in coastal wetlands by providing foraging, resting, and breeding habitat for a variety of fish and wildlife species; and by providing a source of detritus and energy for lower trophic organisms that form the basis for the food chain. An area with no marsh (i.e., shallow open water) is assumed to have minimal habitat suitability in terms of this variable, and is assigned an SI of 0.1.

Optimum vegetation coverage in a fresh/intermediate marsh is assumed to occur at 100 percent persistent emergent vegetation cover (SI=1.0). That assumption is dictated primarily by the constraint of not having graph relationships conflict with the CWPPRA's purpose of long term creation, restoration, protection, or enhancement of vegetated wetlands. The EWG had originally developed a strictly biologically-based graph defining optimum habitat conditions at marsh cover values between 60 and 80 percent, and sub-optimum habitat conditions at 100 percent cover. However, application of that graph, in combination with the time analysis used later in the evaluation process, often reduced project benefits or generated a net loss of habitat quality through time with the project. Those situations arose primarily when: existing (baseline) emergent vegetation cover exceeded the optimum (> 80 percent); the project was predicted to maintain baseline cover values; and without the project the marsh was predicted to degrade, with a concurrent decline in percent emergent vegetation cover into the optimum range (60-80 percent). The time factor aggravated the situation when the without-project degradation was not rapid enough to reduce marsh cover values significantly below the optimum range, or below the baseline SI, within the 20-year evaluation period. In those cases, the analysis would show net negative benefits for the project, and positive benefits for letting the marsh degrade rather than maintaining the existing marsh. Coupling that situation with the presumption that marsh conditions are not static, and that Louisiana will continue to lose coastal

emergent marsh; and taking into account the purpose of the CWPPRA, the EWG decided that, all other factors being equal, the WVA should favor projects that maximize emergent marsh creation, maintenance, and protection. Therefore, the EWG agreed to deviate from a strictly biologically-based habitat suitability graph for V_1 setting optimum habitat conditions at 100 percent marsh cover.

Variable V_2 - Percent of open water area dominated (> 50 percent canopy cover) by aquatic vegetation. Fresh and intermediate marshes often support diverse communities of floating-leaved and submerged aquatic plants that provide important food and cover to a wide variety of fish and wildlife species. A fresh/intermediate open water area with no aquatics is assumed to have low suitability ($SI=0.1$). Optimum condition ($SI=1.0$) is assumed to occur when 100 percent of the open water is dominated by aquatic vegetation. Habitat suitability may be assumed to decrease with aquatic plant coverage approaching 100 percent due to the potential for mats of aquatic vegetation to hinder fish and wildlife utilization; to adversely affect water quality by reducing photosynthesis by phytoplankton and other plant forms due to shading; and contribute to oxygen depletion spurred by warm-season decay of large quantities of aquatic vegetation. The EWG recognized, however, that those effects were highly dependent on the dominant aquatic plant species, their growth forms, and their arrangement in the water column. It is possible to have 100 percent cover of a variety of floating and submerged aquatic plants without the above-mentioned problems due to differences in plant growth form and stratification of plants through the water column. Because predictions of which species may dominate at any time in the future would be tenuous, at best, the EWG decided to simplify the graph and define optimum conditions at 100 percent aquatic cover.

Variable V_3 - Marsh edge and interspersions. This variable takes into account the relative juxtaposition of marsh and open water for a given marsh:open water ratio, and is measured by comparing the project area to sample illustrations (Attachment 4) depicting different degrees of interspersions. Interspersions are assumed to be especially important when considering the value of an area as foraging and nursery habitat for freshwater and estuarine fish and shellfish; the marsh/open water interface represents an ecotone where prey species often concentrate, and where post-larval and juvenile organisms can find cover. Isolated marsh ponds are often more productive in terms of aquatic vegetation than are larger ponds due to decreased turbidities, and, thus, may provide more suitable waterfowl habitat. However, interspersions can be indicative of marsh degradation, a factor taken into consideration in assigning suitability indices to the various Interspersions Types.

A relatively high degree of interspersions in the form of stream courses and tidal channels (Interspersions Type 1, Attachment 4) is assumed to be optimal

(SI=1.0); streams and channels offer interspersions, yet are not indicative of active marsh deterioration. Areas exhibiting a high degree of marsh cover are also ranked as optimum, even though interspersions may be low, to avoid conflicts with the premises underlying the SI graph for variable V₁. Without such an allowance, areas of relatively healthy, solid marsh, or projects designed to create marsh, would be penalized with respect to interspersions. Numerous small marsh ponds (Interspersions Type 2) offer a high degree of interspersions, but are also usually indicative of the beginnings of marsh break-up and degradation, and are therefore assigned a more moderate SI of 0.6. Large open water areas (Interspersions Types 3 and 4) offer lower interspersions values and usually indicate advanced stages of marsh loss, and are thus assigned SI's of 0.4 and 0.2, respectively. The lowest expression of interspersions, Type 5 (i.e., no emergent marsh at all within the project area), is assumed to be least desirable and is assigned an SI=0.1.

Variable V₄- Percent of open water area \leq 1.5 feet deep in relation to marsh surface. Shallow water areas are assumed to be more biologically productive than deeper water due to a general reduction in sunlight, oxygen, and temperature as water depth increases. Also, shallower water provides greater bottom accessibility for certain species of waterfowl, better foraging habitat for wading birds, and more favorable conditions for aquatic plant growth. Optimum depth in a fresh/intermediate marsh is assumed to occur when 80 to 90 percent of the open water area is less than or equal to 1.5 feet deep. The value of deeper areas in providing drought refugia for fish, alligators and other marsh life is recognized by assigning an SI=0.6 (i.e., sub-optimal) if all of the open water is less than or equal to 1.5 feet deep.

Variable V₅- Mean high salinity during the growing season. It is assumed that periods of high salinity are most detrimental in a fresh/intermediate marsh when they occur during the growing season (defined as March through November, based on dates of first and last frost contained in Soil Conservation Service soil surveys for coastal Louisiana). Mean high salinity is defined as the average of the upper 33 percent of salinity readings taken during a specified period of record. Optimum condition in fresh marsh is assumed to occur when mean high salinity during the growing season is less than 2 parts per thousand (ppt). Optimum condition in intermediate marsh is assumed to occur when mean high salinity during the growing season is less than 4 ppt.

Variable V₆- Aquatic organism access. Access by aquatic organisms, particularly estuarine-dependent fishes and shellfishes, is considered to be a critical component in assessing the quality or suitability of a given marsh system to provide habitat to those species. Additionally, a marsh with a relatively high degree of access by default also exhibits a relatively high degree of hydrologic connectivity with adjacent systems, and therefore may be considered to contribute more to nutrient exchange than would a marsh

exhibiting a lesser degree of access. The Suitability Index for V_6 is determined by calculating an "Access Value" based on the interaction between the percentage of the project area wetlands considered accessible by estuarine organisms during normal tidal fluctuations, and the type of man-made structures (if any) across identified points of ingress/egress (bayous, canals, etc.). Standardized procedures for calculating the Access Value have been established (Attachment 5). It should be noted that access ratings for man-made structures were determined by consensus among Environmental Work Group members and that scientific research has not been conducted to determine the actual access value for each of those structures. Optimum condition is assumed to exist when all of the study area is accessible and the access points are entirely open and unobstructed. A fresh marsh with no access is assigned a $SI=0.3$, reflecting the assumption that, while fresh marshes are important to some species of estuarine-dependent fishes and shellfish, such a marsh lacking access continues to provide benefits to a wide variety of other wildlife and fish species, and is not without habitat value. An intermediate marsh with no access is assigned a $SI=0.2$, reflecting that intermediate marshes are somewhat more important to estuarine organisms than fresh marshes.

2. Brackish Marsh Model

Variable V_1 - Percent of wetland covered by persistent emergent vegetation (\geq 10 percent canopy cover). Refer to the V_1 discussion under the fresh/intermediate marsh model for a discussion of the importance of persistent emergent vegetation in coastal marshes. The V_1 Suitability Index graph in the brackish marsh model is identical to that in the fresh/intermediate model.

Variable V_2 - Percent of open water area dominated ($>$ 50 percent canopy cover) by aquatic vegetation. Like fresh/intermediate marshes, brackish marshes have the potential to support aquatic plants that serve as important sources of food and cover for several species of fish and wildlife. Although brackish marshes generally do not support the amounts and kinds of aquatic plants that occur in fresh/intermediate marshes, certain species, such as widgeon-grass, and coontail and milfoil in lower salinity brackish marshes, can occur abundantly under certain conditions. Those species, particularly widgeon-grass, provide important food and cover for many species of fish and wildlife. Therefore, the V_2 Suitability Index graph in the brackish marsh model is identical to that in the fresh/intermediate model. A brackish marsh entirely lacking aquatic plants is assigned an $SI=0.1$. It is assumed that optimum open water coverage of aquatic plants in a brackish marsh occurs at 100 percent aquatic cover.

Variable V_3 - Marsh edge and interspersion. The Suitability Index graph for edge and interspersion in the brackish marsh model is the same as that in the fresh/intermediate marsh model.

Variable V₄- Open water depth in relation to marsh surface. As in the fresh/intermediate model, shallow water areas in brackish marsh habitat are assumed to be important. However, brackish marsh generally exhibits deeper open water areas than fresh marsh due to tidal scouring. Therefore, the SI graph is constructed so that lower percentages of shallow water receive higher SI values relative to fresh/intermediate marsh. Optimum open water depth condition in a brackish marsh is assumed to occur when 70 to 80 percent of the open water area is less than or equal to 1.5 feet deep.

Variable V₅- Average annual salinity. The suitability index graph is constructed to represent optimum average annual salinity condition at between 0 ppt and 10 ppt. The EWG acknowledges that average annual salinities below 6 ppt will effectively define a marsh as fresh or intermediate, not brackish. However, the suitability index graph makes allowances for lower salinities (i.e., < 6 ppt) to account for occasions when there is a trend of decreasing salinities through time toward a more intermediate condition. Implicit in keeping the graph at optimum for salinities less than 6 ppt is the assumption that lower salinities are not detrimental to a brackish marsh. However, average annual salinities greater than 10 ppt are assumed to be progressively more harmful to brackish marsh vegetation, as illustrated in the downward sloping right leg of the suitability index graph. Average annual salinities greater than 16 ppt are assumed to be representative of those found in a saline marsh, and thus are not considered in the brackish marsh model.

Variable V₆- Aquatic organism access. The general rationale and procedure behind the V₆ Suitability Index graph for the brackish marsh model is identical to that established for the fresh/intermediate model. However, brackish marshes are assumed to be more important as habitat for estuarine fish and shellfish than fresh/intermediate marshes. Therefore, a brackish marsh providing no access is assigned an SI of 0.1.

3. Saline Marsh Model

Variable V₁- Percent of wetland covered by persistent emergent vegetation (\geq 10 percent canopy cover). Refer to the V₁ discussion under the fresh/intermediate marsh model for a discussion of the importance of persistent emergent vegetation in coastal marshes. The V₁ Suitability Index graph in the saline marsh model is identical to that in the fresh/intermediate and brackish models.

Variable V₂- Percent of open water area dominated ($>$ 50 percent canopy cover) by aquatic vegetation. Some low-salinity saline marshes may contain beds of widgeon-grass and open water areas behind some barrier islands may contain dense stands of seagrasses (e.g., *Halodule wrightii* and *Thalassia*

testudinum). However, saline marshes typically do not contain an abundance of aquatic vegetation as often found in fresh/intermediate marshes and brackish marshes. Open water areas in saline marshes typically contain sparse aquatic vegetation and are primarily important as nursery areas for marine organisms. Therefore, in order to reflect the importance of those open water areas to marine organisms, a saline marsh lacking aquatic vegetation is assigned a $SI=0.3$. It is assumed that optimum coverage of aquatic plants occurs at 100 percent aquatic cover.

Variable V₃- Marsh edge and interspersion. The Suitability Index graph for edge and interspersion in the saline marsh model is the same as that in the fresh/intermediate and brackish marsh models.

Variable V₄- Open water depth in relation to marsh surface. The Suitability Index graph for open water depth in the saline marsh is similar to that for brackish marsh, where optimum conditions are assumed to occur when 70 to 80 percent of the open water area is less than or equal to 1.5 feet deep. However, at 100 percent shallow water, the saline graph yields an $SI= 0.5$ rather than 0.6 for the brackish model. That change reflects the increased abundance of tidal channels and generally deeper water conditions prevailing in a saline marsh due to increased tidal influences, and the importance of those tidal channels to estuarine organisms.

Variable V₅- Average annual salinity. The Suitability Index graph is constructed to represent optimum salinity conditions at between 9 ppt and 21 ppt. The Group acknowledges that average annual salinities between 9 and 12 ppt will effectively define a marsh as brackish, not saline. However, the suitability index graph makes allowances for lower salinities (i.e., < 12 ppt) to account for occasions when there is a trend of decreasing salinities through time toward a more brackish condition. Implicit in keeping the graph at optimum for salinities less than 12 ppt is the assumption that lower salinities (9-12 ppt) are not detrimental to a saline marsh. Average annual salinities greater than 21 ppt are assumed to be slightly stressful to saline marsh vegetation, as illustrated in the downward sloping right leg of the suitability index graph.

Variable V₆- Aquatic organism access. The Suitability Index graph for aquatic organism access in the saline marsh model is the same as that in the brackish marsh model.

4. Cypress-Tupelo Swamp Model

Variable V₁- Water regime. Four water regime categories are described for the cypress-tupelo swamp model. The optimum water regime for a cypress-tupelo

swamp is assumed to be seasonal flooding (SI=1.0); seasonal flooding with periodic drying cycles is assumed to contribute to increased nutrient cycling (primarily through oxidation and decomposition of accumulated detritus), increased vertical structure complexity (due to growth of other plants on the swamp floor), and increased recruitment of dominant overstory trees. Semipermanent flooding is also assumed to be desirable, as reflected in the SI=0.8 for that water regime category. Permanent flooding is assumed to be the least desirable (SI=0.2).

Variable V₂- Water flow/exchange. This variable attempts to take into consideration the amounts and types of water inputs into a cypress-tupelo swamp. The Suitability Index graph is constructed under the assumption that abundant and consistent riverine input and water flow-through is optimum (SI=1.0), because under that regime the full functions and values of a cypress-tupelo swamp in providing fish and wildlife habitat are assumed to be maximized. Habitat suitability is assumed to decrease as water exchange between the swamp and adjacent systems is reduced. A swamp system with no water exchange (e.g., an impounded swamp where the only water input is through rainfall and the only water loss is through evapotranspiration and ground seepage) is assumed to be least desirable, and is assigned an SI= 0.2.

Variable V₃- Average high salinity. Average high salinity is defined as the average of the upper 33 percent of salinity measurements taken during a specified period of record. Because baldcypress is salinity-sensitive, optimum conditions for baldcypress survival are assumed to occur at average high salinities less than 1 ppt. Habitat suitability is assumed to decrease rapidly at average high salinities in excess of 1 ppt.

VI. HABITAT SUITABILITY INDEX FORMULA

The final step in WVA model development was to construct a mathematical formula that combines all Suitability Indices for each wetland type into a single Habitat Suitability Index (HSI) value. Because the Suitability Indices range in value from 0.1 to 1.0, the HSI also ranges in value from 0.1 to 1.0, and is a numerical representation of the overall or "composite" habitat quality of the particular wetland area being evaluated. The HSI formula defines the aggregation of Suitability Indices in a manner unique to each wetland type depending on how the formula is constructed.

Within an HSI formula, any Suitability Index can be weighted by various means to increase the power or "importance" of that variable relative to the other variables in determining the HSI. Additionally, two or more variables can be grouped together into subgroups to further isolate variables for weighting.

In developing the HSI formulas, the EWG recognized that the primary focus of the CWPPRA is on vegetated wetlands, and that some marsh protection strategies could have adverse impacts to estuarine organism access. Therefore, the EWG made an *a priori* decision to emphasize variables V₁, V₂, and V₆ by grouping them together, when possible, and weighting them greater than the remaining variables. Weighting was facilitated by treating the grouped variables as a geometric mean. Variables V₃, V₄, and V₅ were grouped to isolate their influence relative to V₁, V₂, and V₆.

For all marsh models, V₁ receives the strongest weighting. The relative weights of V₁, V₂, and V₆ differ by marsh model to reflect differing levels of importance for those variables between the marsh types. For example, the amount of aquatic vegetation was deemed more important in the context of a fresh/intermediate marsh than in a saline marsh, due to the relative contributions of aquatic vegetation between the two marsh types in terms of providing food and cover. Therefore, V₂ receives more weight in the fresh/intermediate HSI formula than in the saline HSI formula. Similarly, the degree of estuarine organism access was considered more important in a saline marsh than a fresh/intermediate marsh, and V₆ receives more weight in the saline HSI formula than in the fresh/intermediate formula. As with the Suitability Index graphs, the Habitat Suitability Index formulas were developed by consensus among the EWG members.

For several years, 1991 through 1996, the EWG utilized one HSI formula specific to each wetland type (i.e., fresh/intermediate, brackish, and saline) to characterize habitat quality. However, it was noted that Variables V₂ and V₄, which characterize open water areas only, often resulted in an "artificially inflated" HSI when those variable values were optimum (i.e., SI = 1.0) and open water comprised a very small portion of the project area. For example, Project Area A contains 90 percent emergent marsh and 10 percent open water. Project Area B contains 10 percent emergent marsh and 90 percent open water. Assume the open water in each project area is completely covered by submerged aquatic vegetation and is entirely less than 1.5 feet in depth. Under those conditions, the Suitability Index values for V₂ and V₄ would each equal 1.0 for both project areas even though open water only accounts for 10 percent of Project Area A. The EWG has commonly referred to this as a "scaling" problem; the Suitability Index values for V₂ and V₄ are not "scaled" in respect to the proportion of the project area they describe. This allows those variables to contribute disproportionately to the HSI in instances when open water constitutes a small portion of the project area.

The EWG acknowledged that the scaling problem presented a flaw in the WVA methodology resulting in unrealistic HSI values for certain project areas and eventually resulting in inflated wetland benefits for those projects. During 1996 and 1997, Dr. Gary Shaffer assisted the EWG in developing potential solutions to the scaling problem. After several unsuccessful attempts to develop a single HSI formula for each wetland type which scaled the Suitability Index values for V₂ and V₄ based on the ratio of emergent marsh to open water, the EWG decided to develop a "split" model for each wetland type. The split model concept utilizes two HSI formulas for each wetland type; one HSI formula characterizes the emergent marsh habitat within the project area and another HSI

formula characterizes the open water habitat. The HSI formula for the emergent habitat contains only those variables important in assessing habitat quality for emergent marsh (i.e., V₁, V₃, V₅, and V₆). Likewise, the open water HSI formula contains only those variables important in characterizing the open water habitat (i.e., V₂, V₃, V₄, V₅, and V₆). Individual HSI formulas were developed for emergent marsh and open water habitats for fresh/intermediate, brackish, and saline wetlands.

As with the development of a single HSI model for each marsh type, the split models follow the same conventions for weighting and grouping of variables, to increase their importance, as previously discussed.

VII. BENEFIT ASSESSMENT

The net benefits of a proposed project are estimated by predicting future habitat conditions under two scenarios: with the proposed project and without the proposed project. Specifically, predictions are made as to how the model variables will change through time under the two scenarios. Through that process, HSI's are established for baseline (pre-project) conditions and for future with- and future without-project scenarios for selected "target years" throughout the expected life of the project for the emergent marsh and open water habitat. Those HSI's are then multiplied by the acreage of emergent marsh and open water present at each target year to arrive at Habitat Units. Habitat Units (HUs) represent a numerical combination of quality (HSI) and quantity (acres) existing at any given point in time. The HUs resulting from the future with- and future without-project scenarios are annualized, averaged over the project life, to determine average annual HUs (AAHUs) for the emergent marsh and open water habitats. The "benefit" of a project can be quantified by comparing AAHUs between the future with- and future without-project scenarios. The difference in AAHUs between the two scenarios represents the net benefit attributable to the project in terms of habitat quantity and quality for the emergent marsh and open water habitats.

As previously stated, the primary focus of the CWPPRA is on **vegetated** wetlands. Therefore, in order to place greater emphasis on wetland benefits to emergent marsh, a weighted average of the net benefits (net AAHUs) for emergent marsh and open water is calculated with the emergent marsh AAHUs weighted proportionately higher than the open water AAHUs. The weighted formulas to determine net benefits or net AAHUs for each wetland type are shown below:

$$\text{Fresh Marsh: } \frac{2.1(\text{Emergent Marsh AAHUs}) + \text{Open Water AAHUs}}{3.1}$$

$$\text{Brackish Marsh: } \frac{2.6(\text{Emergent Marsh AAHUs}) + \text{Open Water AAHUs}}{3.6}$$

Saline Marsh: $\frac{3.5(\text{Emergent Marsh AAHUs}) + \text{Open Water AAHUs}}{4.5}$

Net gain in AAHUs is then combined with annualized cost data to arrive at a cost per AAHU (\$/AAHU) or cost-effectiveness figure for the evaluated project. The cost-effectiveness figure, as well as other criteria, are then compared between projects in order to provide a ranked list of candidate projects.

LITERATURE CITED

U. S. Fish and Wildlife Service. 1980. Habitat evaluation procedures (HEP). Div. Ecol. Serv. ESM 102, U. S. Fish and Wildl. Serv., Washington, DC. 141pp

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Vegetation:

Variable V₁ Percent of wetland area covered by emergent vegetation ($\geq 10\%$ canopy cover).

Variable V₂ Percent of open water area dominated ($> 50\%$ canopy cover) by aquatic vegetation.

Interspersion:

Variable V₃ Marsh edge and interspersion.

Water Depth:

Variable V₄ Percent of open water area ≤ 1.5 feet deep, in relation to marsh surface.

Water Quality:

Variable V₅ Mean high salinity during the growing season (March through November).

Aquatic Organism Access:

Variable V₆ Aquatic organism access.

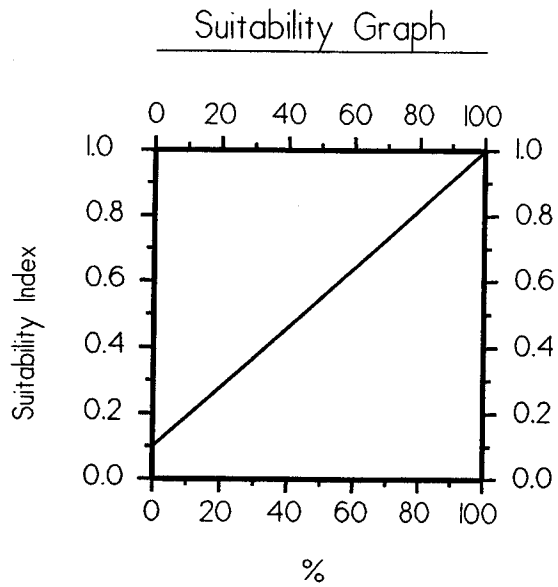
HSI Calculations:

$$\text{Emergent Marsh HSI} = \frac{\left(3.5 \times (SIV_1^5 \times SIV_6^1)^{(1/6)}\right) + \left(\frac{(SIV_3 + SIV_5)}{2}\right)}{4.5}$$

$$\text{Open Water HSI} = \frac{\left(3.5 \times (SIV_2^3 \times SIV_6^1)^{(1/4)}\right) + \left(\frac{(SIV_3 + SIV_4 + SIV_5)}{3}\right)}{4.5}$$

FRESH/INTERMEDIATE MARSH

Variable V₁ Percent of wetland area covered by emergent vegetation ($\geq 10\%$ canopy cover).

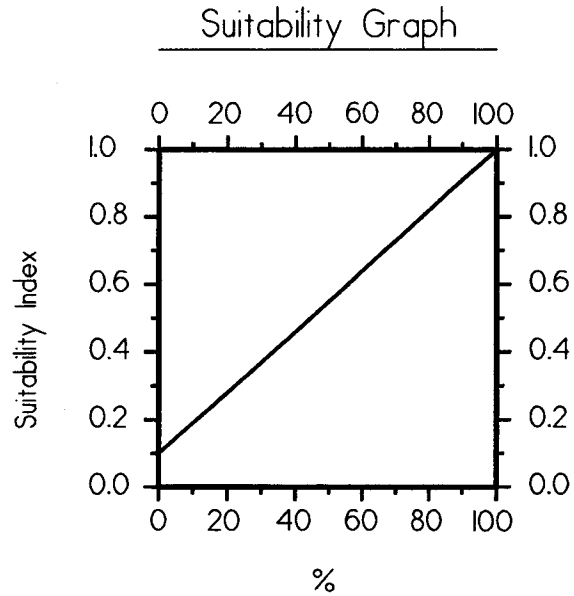


Line Formula

$$SI = (0.009 * \%) + 0.1$$

FRESH/INTERMEDIATE MARSH

Variable V₂ Percent of open water area dominated (> 50% canopy cover) by aquatic vegetation.

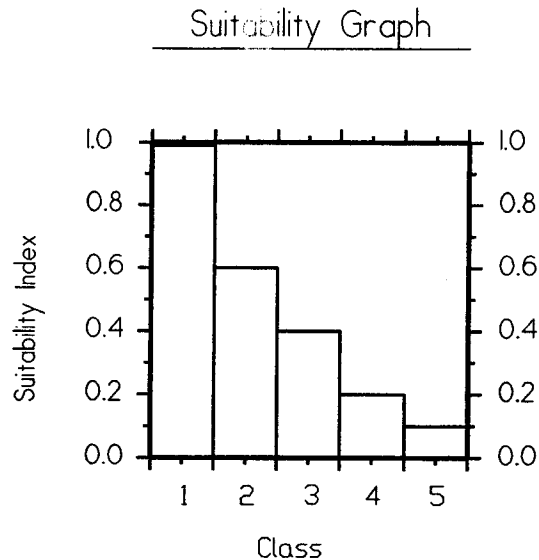


Line Formula

$$SI = (0.009 * \%) + 0.1$$

FRESH/INTERMEDIATE MARSH

Variable V₃ Marsh edge and interspersion.

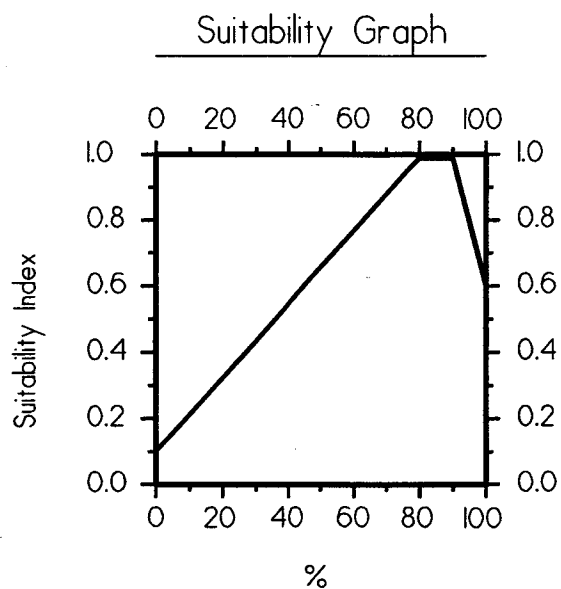


Instructions for Calculating SI for Variable V₃:

1. Refer to Attachment 4 for examples of the different interspersion classes (=types).
2. Estimate percent of project area in each class and compute a weighted average to arrive at SIV₃. If the entire project area is solid marsh, assign an interspersion class #1 (SI=1.0). Conversely, if the entire project area is open water, assign an interspersion class #5 (SI=0.1).

FRESH/INTERMEDIATE MARSH

Variable V₄ Percent of open water area \leq 1.5 feet deep, in relation to marsh surface.



Line Formulas

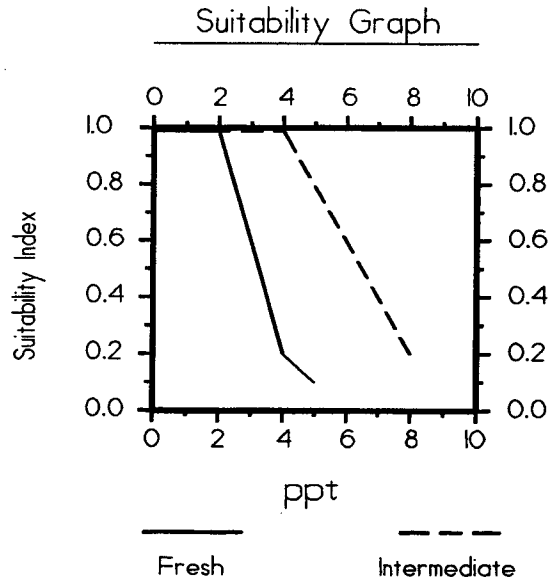
If $0 \leq \% < 80$, then $SI = (0.01125 * \%) + 0.1$

If $80 \leq \% \leq 90$, then $SI = 1.0$

If $\% > 90$, then $SI = (-0.04 * \%) + 4.6$

FRESH/INTERMEDIATE MARSH

Variable V₅ Mean high salinity during the growing season (March through November).



Line Formulas

Fresh Marsh:

If $0 \leq \text{ppt} \leq 2$, then $\text{SI} = 1.0$

If $2 < \text{ppt} \leq 4$, then $\text{SI} = (-0.4 * \text{ppt}) + 1.8$

If $4 < \text{ppt} \leq 5$ then $\text{SI} = (-0.1 * \text{ppt}) + 0.6$

Intermediate Marsh:

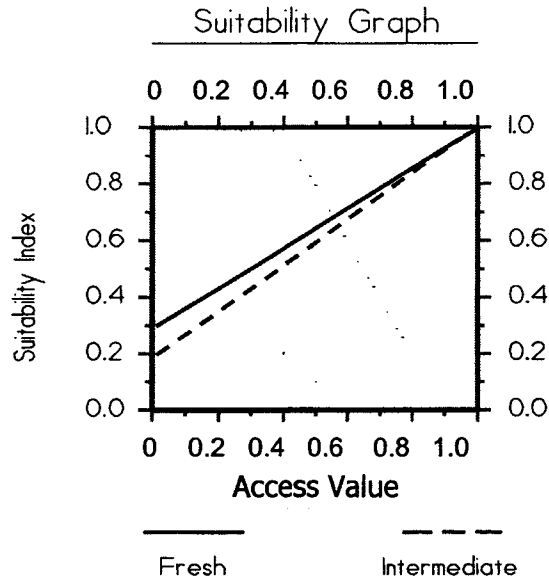
If $0 \leq \text{ppt} \leq 4$, then $\text{SI} = 1.0$

If $4 < \text{ppt} \leq 8$, then $\text{SI} = (-0.2 * \text{ppt}) + 1.8$

NOTE: Mean high salinity is defined as the average of the upper 33 percent of salinity readings taken during the period of record.

FRESH/INTERMEDIATE MARSH

Variable V₆ Aquatic organism access.



Line Formulas

Fresh Marsh:

$$SI = (0.7 * \text{Access Value}) + 0.3$$

Intermediate Marsh:

$$SI = (0.8 * \text{Access Value}) + 0.2$$

NOTE: Access Value = P * R, where "P" = percentage of wetland area considered accessible by estuarine organisms during normal tidal fluctuations, and "R" = Structure Rating.

Refer to Attachment 5 "Procedure For Calculating Access Value" for complete information on calculating "P" and "R" values.

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Vegetation:

Variable V_1 Percent of wetland area covered by emergent vegetation ($\geq 10\%$ canopy cover).

Variable V_2 Percent of open water area dominated ($> 50\%$ canopy cover) by aquatic vegetation.

Interspersion:

Variable V_3 Marsh edge and interspersion.

Water Depth:

Variable V_4 Percent of open water area ≤ 1.5 feet deep, in relation to marsh surface.

Water Quality:

Variable V_5 Average annual salinity.

Aquatic Organism Access:

Variable V_6 Aquatic organism access.

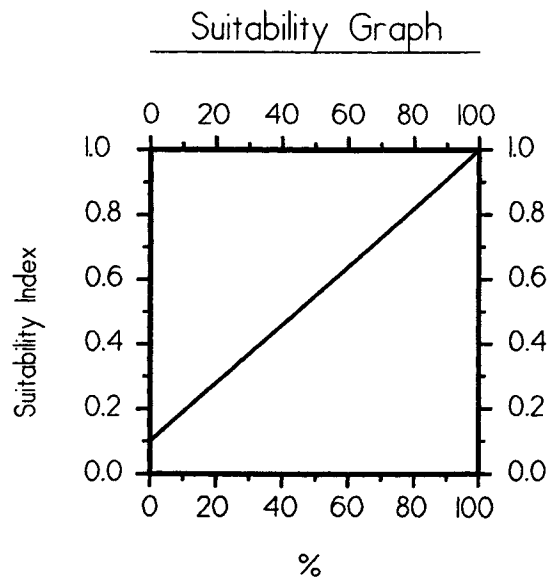
HSI Calculations:

$$\text{Emergent Marsh HSI} = \frac{\left(3.5 \times (SIV_1^5 \times SIV_6^{1.5})^{(1/6.5)}\right) + \left(\frac{(SIV_3 + SIV_5)}{2}\right)}{4.5}$$

$$\text{Open Water HSI} = \frac{\left(3.5 \times (SIV_2^3 \times SIV_6^2)^{(1/5)}\right) + \left(\frac{(SIV_3 + SIV_4 + SIV_5)}{3}\right)}{4.5}$$

BRACKISH MARSH

Variable V₁ Percent of wetland area covered by emergent vegetation ($\geq 10\%$ canopy cover).

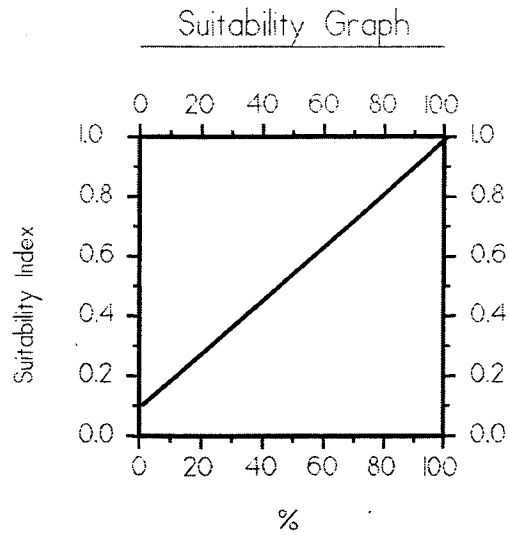


Line Formula

$$SI = (0.009 * \%) + 0.1$$

BRACKISH MARSH

Variable V₂ Percent of open water area dominated (> 50% canopy cover) by aquatic vegetation.

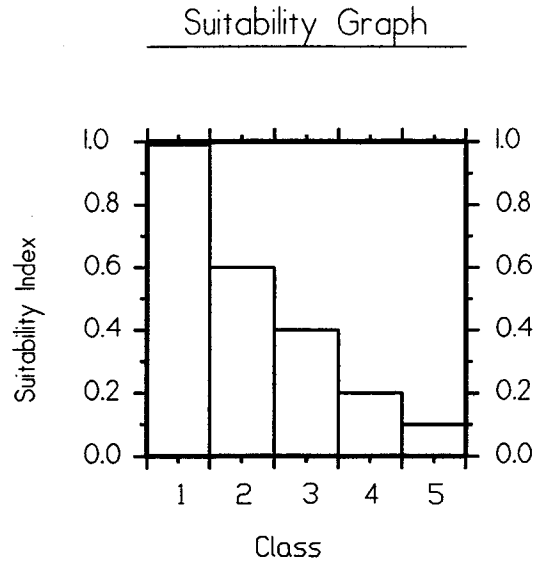


Line Formula

$$SI = (0.009 * \%) + 0.1$$

BRACKISH MARSH

Variable V₃ Marsh edge and interspersion.

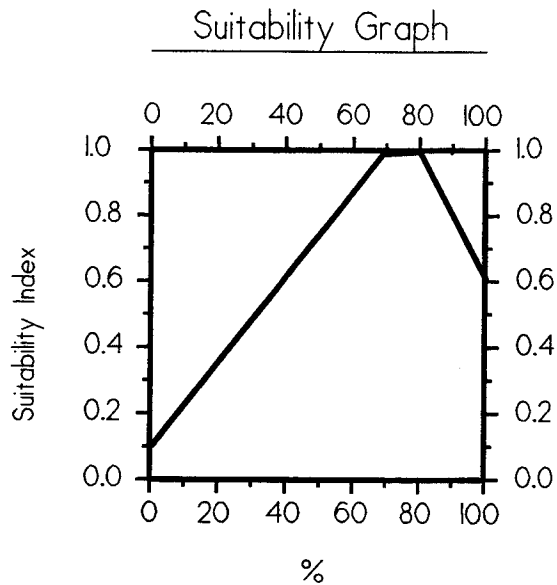


Instructions for Calculating SI for Variable V₃:

1. Refer to Attachment 4 for examples of the different interspersion classes (=types).
2. Estimate percent of project area in each class and compute a weighted average to arrive at SIV₃. If the entire project area is solid marsh, assign an interspersion class #1 (SI=1.0). Conversely, if the entire project area is open water, assign an interspersion class #5 (SI=0.1).

BRACKISH MARSH

Variable V₄ Percent of open water area \leq 1.5 feet deep, in relation to marsh surface.



Line Formulas

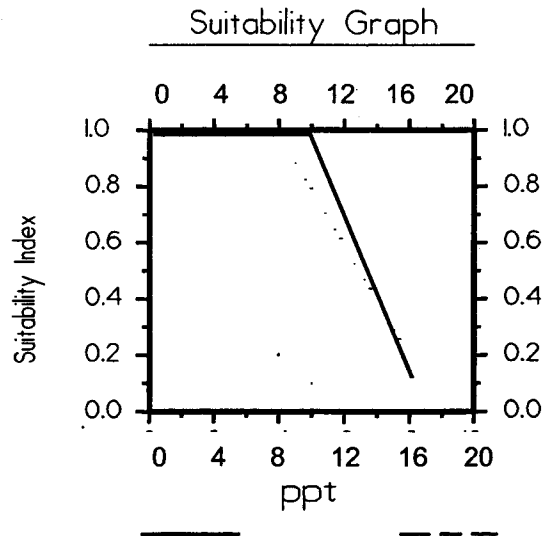
If $0 \leq \% < 70$, then $SI = (0.01286 * \%) + 0.1$

If $70 \leq \% \leq 80$, then $SI = 1.0$

If $\% > 80$, then $SI = (-0.02 * \%) + 2.6$

BRACKISH MARSH

Variable V₅ Average annual salinity.



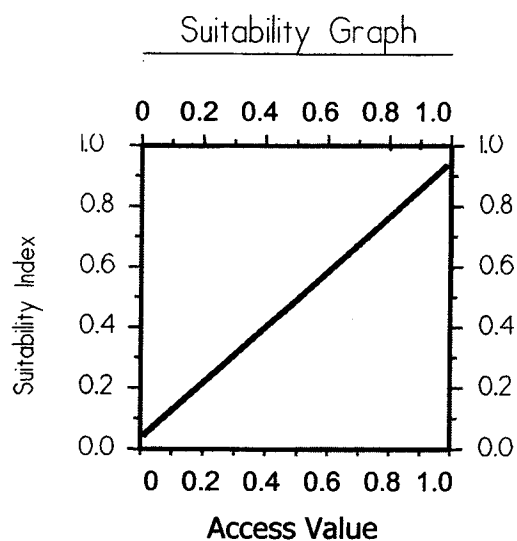
Line Formulas

If $0 \leq \text{ppt} < 10$, then $SI = 1.0$

If $\text{ppt} > 10$, then $SI = (-0.15 * \text{ppt}) + 2.5$

BRACKISH MARSH

Variable V₆ Aquatic organism access.



Line Formulas

$$SI = (0.9 * \text{Access Value}) + 0.1$$

Note: Access Value = P * R, where "P" = percentage of wetland area considered accessible by estuarine organisms during normal tidal fluctuations, and "R" = Structure Rating.

Refer to Attachment 5 "Procedure for Calculating Access Value" for complete information on calculating "P" and "R" values.

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Vegetation:

Variable V₁ Percent of wetland area covered by emergent vegetation (≥10% canopy cover).

Variable V₂ Percent of open water area dominated (> 50% canopy cover) by aquatic vegetation.

Interspersion:

Variable V₃ Marsh edge and interspersion.

Water Depth:

Variable V₄ Percent of open water area ≤ 1.5 feet deep, in relation to marsh surface.

Water Quality:

Variable V₅ Average annual salinity.

Aquatic Organism Access:

Variable V₆ Aquatic organism access.

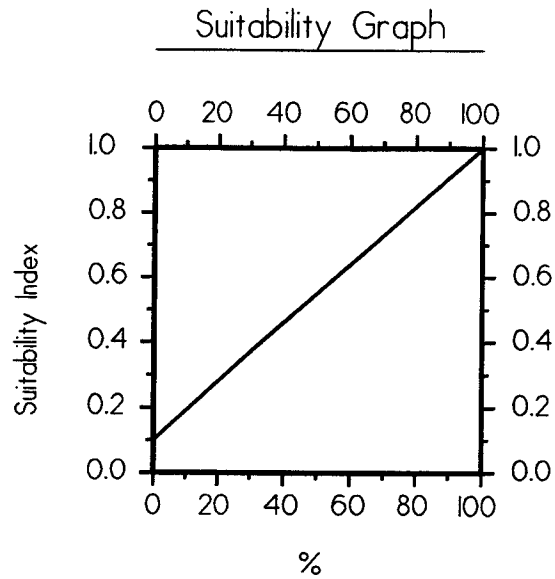
HSI Calculations:

$$\text{Emergent Marsh HSI} = \frac{\left(3.5 \times (SIV_1^3 \times SIV_6^1)^{(1/4)}\right) + \left(\frac{(SIV_3 + SIV_5)}{2}\right)}{4.5}$$

$$\text{Open Water HSI} = \frac{\left(3.5 \times (SIV_2^1 \times SIV_6^{2.5})^{(1/3.5)}\right) + \left(\frac{(SIV_3 + SIV_4 + SIV_5)}{3}\right)}{4.5}$$

SALINE MARSH

Variable V₁ Percent of wetland area covered by emergent vegetation ($\geq 10\%$ canopy cover).

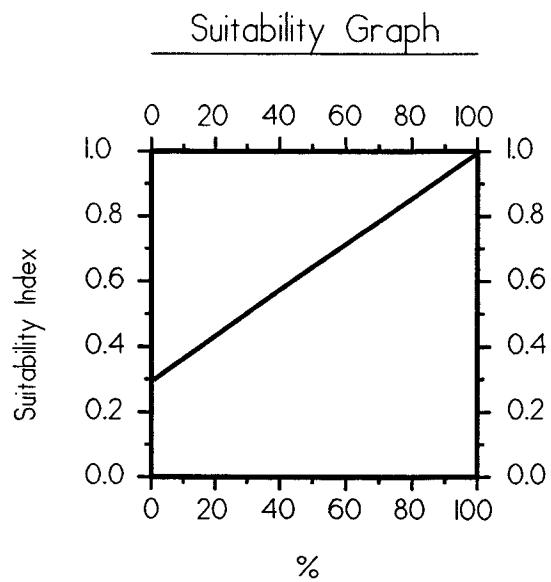


Line Formula

$$SI = (0.009 * \%) + 0.1$$

SALINE MARSH

Variable V₂ Percent of open water area dominated (> 50% canopy cover) by aquatic vegetation.

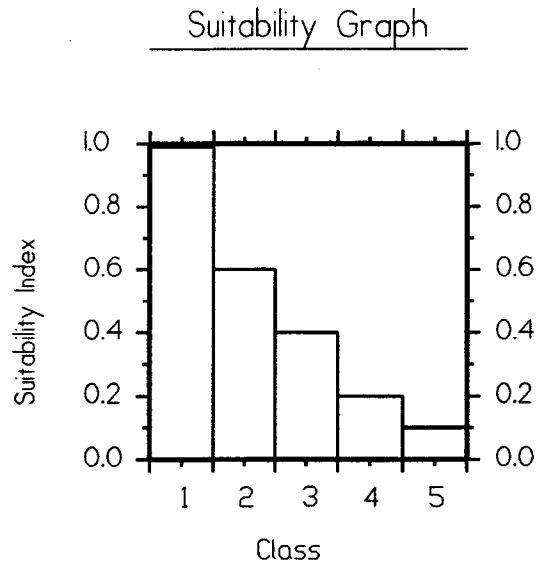


Line Formula

$$SI = (0.007 * \%) + 0.3$$

SALINE MARSH

Variable V₃ Marsh edge and interspersion.

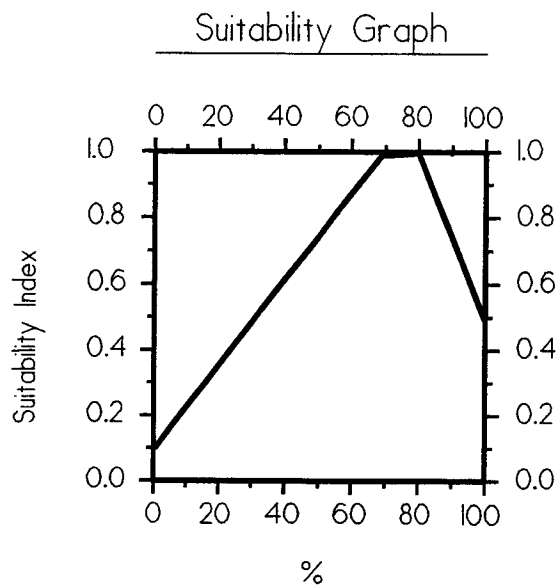


Instructions for Calculating SI for Variable V₃:

1. Refer to Attachment 4 for examples of the different interspersion classes (=types).
2. Estimate percent of project area in each class and compute a weighted average to arrive at SIV₃. If the entire project area is solid marsh, assign an interspersion class #1 (SI=1.0). Conversely, if the entire project area is open water, assign an interspersion class #5 (SI=0.1).

SALINE MARSH

Variable V₄ Percent of open water area ≤ 1.5 feet deep, in relation to marsh surface.



Line Formulas

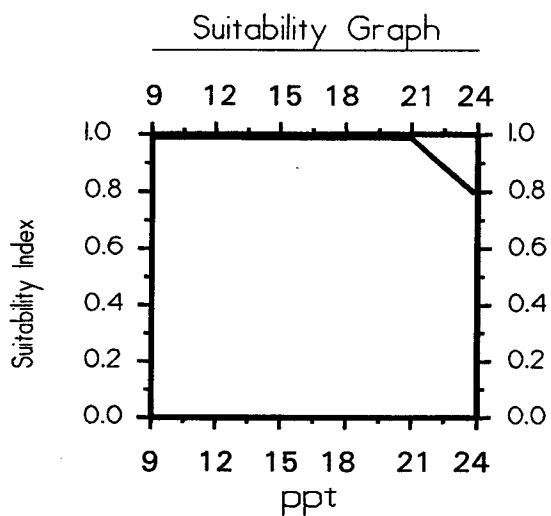
If $0 \leq \% < 70$, then $SI = (0.01286 * \%) + 0.1$

If $70 \leq \% \leq 80$, then $SI = 1.0$

If $\% > 80$, then $SI = (-0.025 * \%) + 3.0$

SALINE MARSH

Variable V₅ Average annual salinity.



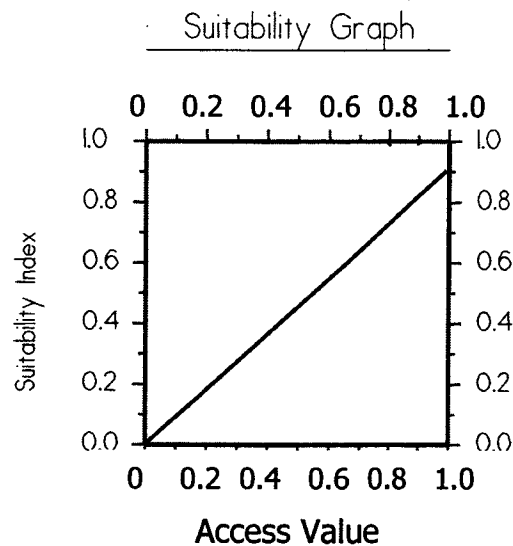
Line Formulas

If $9 \leq \text{ppt} \leq 21$, then $SI = 1.0$

If $\text{ppt} > 21$, then $SI = (-0.067 * \text{ppt}) + 2.4$

SALINE MARSH

Variable V₆ Aquatic organism access.



Line Formulas

$$SI = (0.9 * \text{Access Value}) + 0.1$$

Note: Access Value = P * R, where "P" = percentage of wetland area considered accessible by estuarine organisms during normal tidal fluctuations, and "R" = Structure Rating.

Refer to Attachment 5 "Procedure for Calculating Access Value" for complete information on calculating "P" and "R" values.

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Cypress-Tupelo Swamp

Water Depth and Duration:

Variable V₁ Water regime.

Water Quality:

Variable V₂ Water flow/exchange.

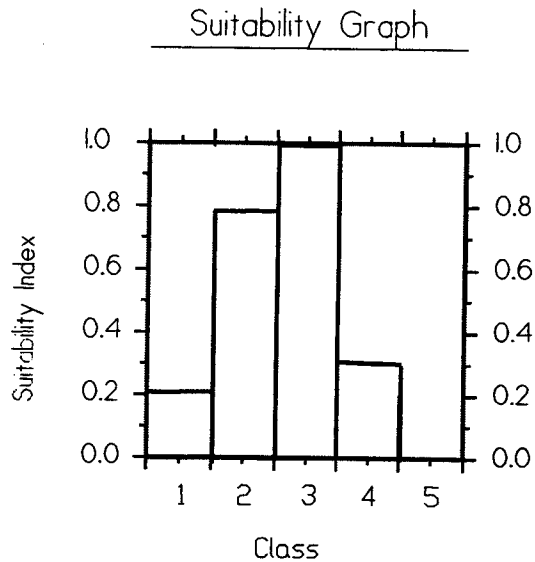
Variable V₃ Average high salinity.

HSI Calculation:

$$HSI = (SIV_1 \times SIV_2 \times SIV_3)^{1/3}$$

CYPRESS-TUPELO SWAMP

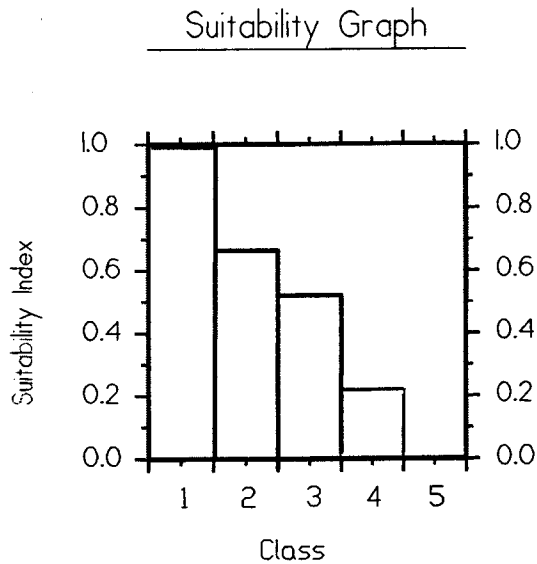
Variable V₁ Water regime.



1. Permanently Flooded: water covers the substrate throughout the year in all years.
2. Semipermanently Flooded: surface water is present throughout the growing season in most years.
3. Seasonally Flooded: surface water is present for extended periods, especially in the growing season, but is absent by the end of the growing season in most years.
4. Temporarily Flooded: surface water is present for brief periods during the growing season, but the water table usually lies well below the surface for most of the season.

CYPRESS-TUPELO SWAMP

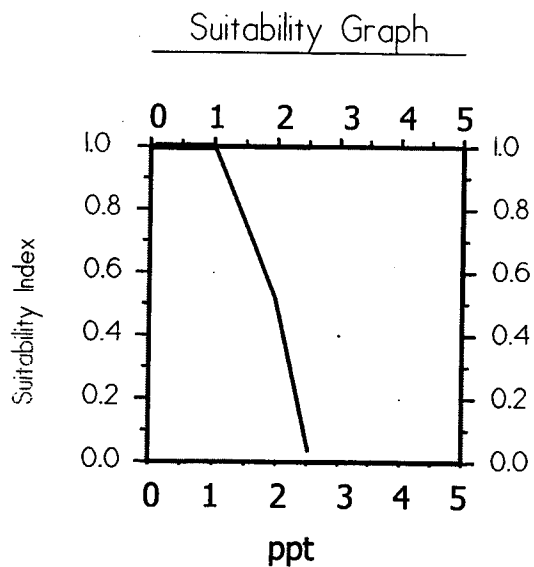
Variable V₂ Water flow/exchange.



1. Receives abundant and consistent riverine input and throughflow.
2. Moderate water exchange, through riverine or tidal input.
3. Limited water exchange, through riverine or tidal input.
4. No water exchange (stagnant, impounded).

CYPRESS-TUPELO SWAMP

Variable V₃ Average high salinity.



Line Formulas

If $0 \leq \text{ppt} < 1$, then $SI = 1.0$

If $1 \leq \text{ppt} < 2$, then $SI = (-0.5 \times \text{ppt}) + 1.5$

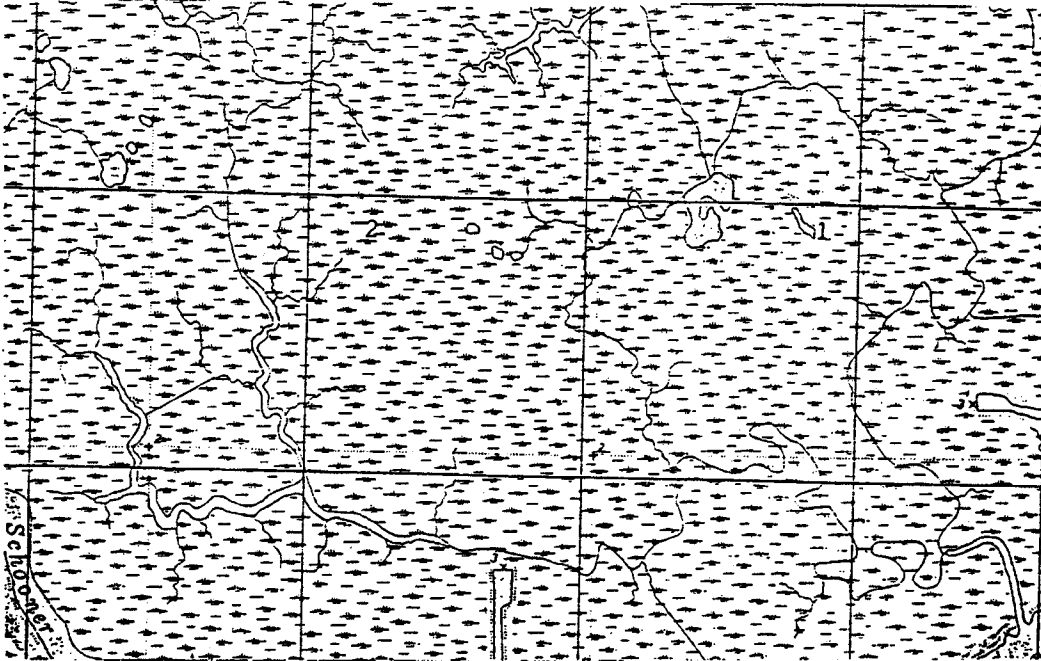
If $2 \leq \text{ppt} < 2.5$, then $SI = (-1.0 \times \text{ppt}) + 2.5$

If $\text{ppt} \geq 2.5$, then $SI = 0$

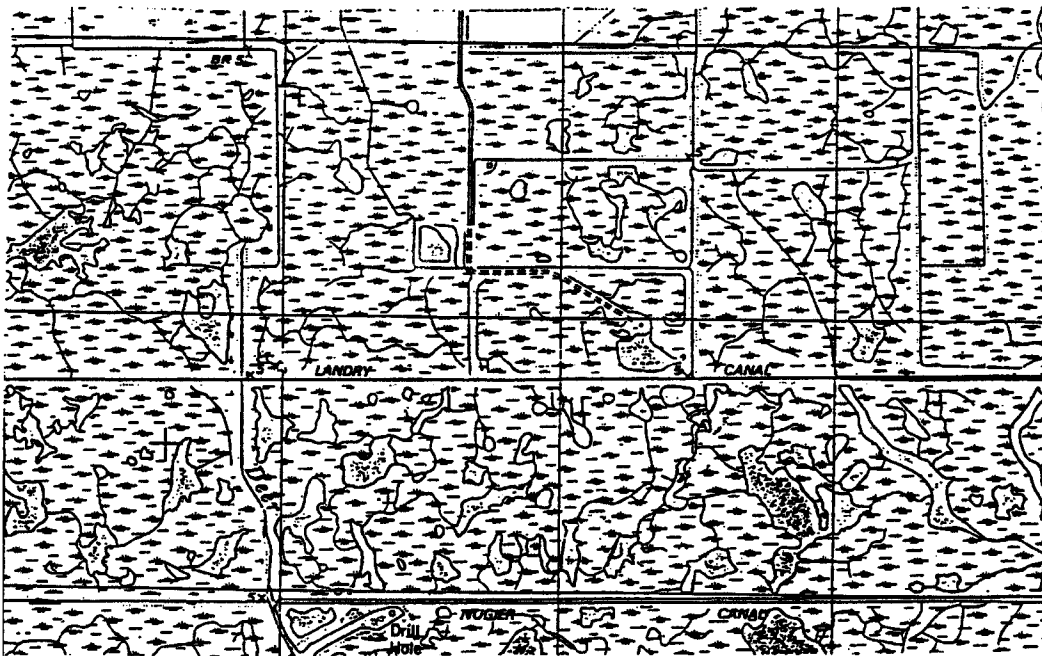
Average high salinity is defined as the average of the upper 33 percent of salinity readings taken during the period of record.

Variable V3 – Marsh Edge and Interspersion

Class 1

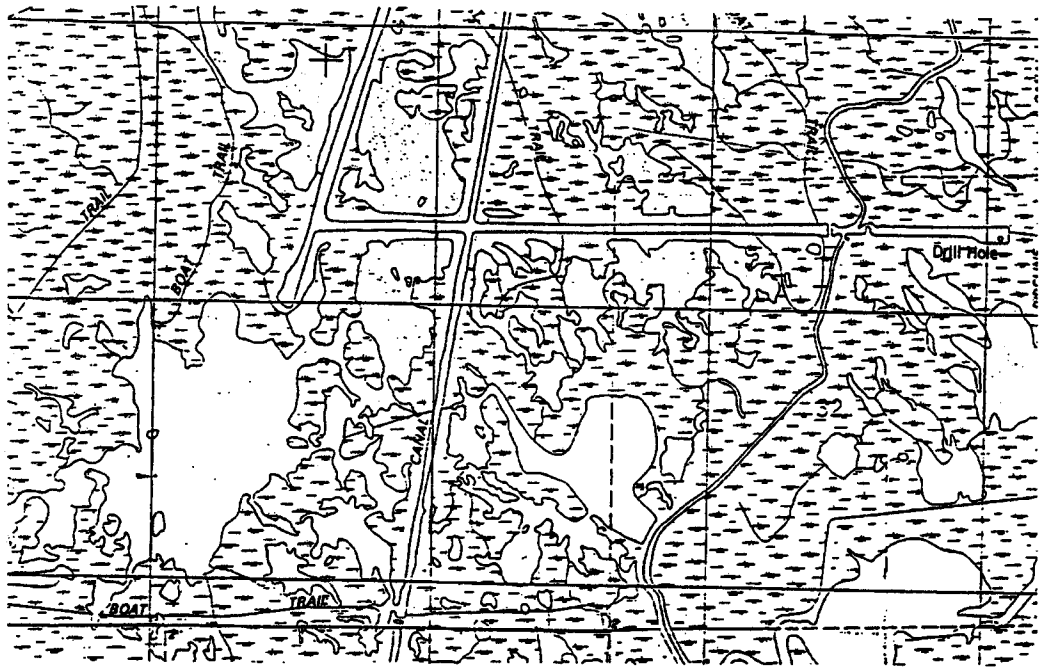


Class 2

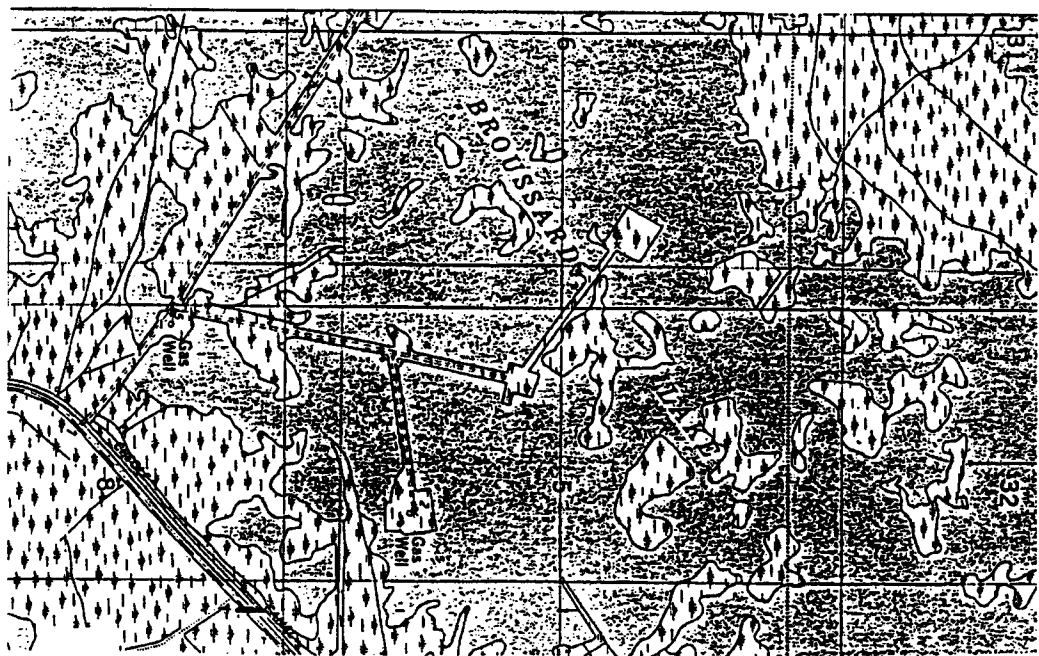


Variable V3 – Marsh Edge and Interspersion

Class 3



Class 4



PROCEDURE FOR CALCULATING ACCESS VALUE

1. Determine the percent of wetland area accessible by estuarine organisms during normal tidal fluctuations (P) for baseline (TY0) conditions. P may be determined by examination of aerial photography, knowledge of field conditions, or other appropriate methods.
2. Determine the Structure Rating (R) for each project structure as follows:

Structure Type	Rating
open system	1.0
rock weir set at 1ft BML ¹ , w/ boat bay	0.8
rock weir with boat bay	0.6
rock weir set at \geq 1ft BML	0.6
slotted weir with boat bay	0.6
open culverts	0.5
weir with boat bay	0.5
weir set at \leq 1ft BML	0.5
slotted weir	0.4
flapgated culvert with slotted weir	0.35
variable crest weir	0.3
flapgated variable crest weir	0.25
flapgated culvert	0.2
rock weir	0.15
fixed crest weir	0.1
solid plug	0.0001

For each structure type, the rating listed above pertains only to the standard configuration and assumes that the structure is operated according to common operating schedules consistent with the purpose for which that structure is designed. In the case of a "hybrid" structure or a unique application of one of the above listed types (including unique or "non-standard" operational schemes), the WVA analyst(s) may assign an appropriate Structure Rating between 0.0001 and 1.0 that most closely approximates the relative degree to which the structure in question would allow ingress/egress of estuarine organisms. In those cases, the rationale used in developing the new Structure Rating shall be documented.

3. Determine the Access Value. Where multiple openings equally affect a common "accessible unit", the Structure Rating (R) of the structure proposed for the "major" access point for the unit will be used to calculate Access Value. The designation of "major" will be made by the Environmental Work Group. An "accessible unit" is defined as a portion of the total accessible area that is served by one or more access routes (canals, bayous, etc.), yet is isolated in terms of estuarine organism access to or from other units of the project area. Isolation factors include physical barriers that prohibit further movement of estuarine

¹ Below Marsh Level

organisms, such as natural levee ridges, and spoil banks; and dense marsh that lacks channels, trenasses, and similar connections that would, if present, provide access and intertidal refugia for estuarine organisms.

Access Value should be calculated according to the following examples (Note: for all examples, P for TY0 = 90%. That designation is arbitrary and is used only for illustrative purposes; P could be any percentage from 0% to 100%):

- a. One opening into area; no structure.

$$\begin{aligned}\text{Access Value} &= P \\ &= .90\end{aligned}$$

- b. One opening into area that provides access to entire 90% of the project area deemed accessible. A flapgated culvert with slotted weir is placed across the opening.

$$\begin{aligned}\text{Access Value} &= P * R \\ &= .90 * .35 \\ &= .32\end{aligned}$$

- c. Two openings into area, each capable by itself of providing full access to the 90% of the project area deemed accessible in TY0. Opening #2 is determined to be the major access route relative to opening #1. A flapgated culvert with slotted weir is placed across opening #1. Opening #2 is left unaltered.

$$\begin{aligned}\text{Access Value} &= P \\ &= .90\end{aligned}$$

Note: Structure #1 had no bearing on the Access Value calculation because its presence did not reduce access (opening #2 was determined to be the major access route, and access through that route was not altered).

- d. Two openings into area. Opening #1 provides access to an accessible unit comprising 30% of the area. Opening #2 provides access to an accessible unit comprising the remaining 60% of the project area. A flapgated culvert with slotted weir is placed across #1. Opening #2 is left open.

$$\begin{aligned}\text{Access Value} &= \text{weighted avg. of Access Values of the two accessible units} \\ &= ([P_1 * R_1] + [P_2 * R_2]) / (P_1 + P_2) \\ &= ([.30 * 0.35] + [.60 * 1.0]) / (.30 + .60)\end{aligned}$$

$$\begin{aligned}
 &= (.11+.60)/.90 \\
 &= .71/.90 \\
 &= .79
 \end{aligned}$$

Note: $P_1+P_2=.90$, because only 90 percent of the study area was determined to be accessible at TY0.

- e. Three openings into area, each capable of providing full access to the entire area independent of the others. Opening #3 is determined to be the major access route relative to openings #1 and #2. Opening #1 is blocked with a solid plug. Opening #2 is fitted with a flapgated culvert with slotted weir, and opening #3 is left open.

$$\begin{aligned}
 \text{Access Value} &= P \\
 &= .90
 \end{aligned}$$

Note: Structures #1 and #2 had no bearing on the Access Value calculation because their presence did not reduce access (opening #3 was determined to be the major access route, and access through that route was not altered).

- f. Three openings into area, each capable of providing full access to the entire area independent of others. Opening #2 is determined to be the major access route relative to openings #1 and #3. Opening #1 is blocked with a solid plug. Opening #2 is fitted with a flapgated culvert with slotted weir, and opening #3 is fitted with a fixed crest weir.

$$\begin{aligned}
 \text{Access Value} &= P * R_2 \\
 &= .90 * .35 \\
 &= .32
 \end{aligned}$$

Note: Structures #1 and #3 had no bearing on the Access Value calculation because their presence did not reduce access. Opening #2 was determined beforehand to be the major access route; thus, it was the flapgated culvert with slotted weir across that opening that actually served to limit access.

- g. Three openings into area. Opening #1 provides access to an accessible unit comprising 20% of the area. Opening #2 and #3 provide access to an accessible unit comprising the remaining 70% of the area, and within that area, each is capable by itself of providing full access. However, opening #3 is determined to be the major access route relative to opening #2. Opening #1 is fitted with an open culvert, #2 with a flapgated culvert with slotted weir, and #3 with a fixed crest weir.

$$\begin{aligned}
 \text{Access Value} &= ([P_1 * R_1] + [P_2 * R_3]) / (P_1 + P_2) \\
 &= ([.20 * .5] + [.70 * .35]) / (.20 + .70) \\
 &= (.10 + .25) / .90 \\
 &= .35 / .90 \\
 &= .39
 \end{aligned}$$

- h. Three openings into area. Opening #1 provides access to an accessible unit comprising 20% of the area. Opening #2 provides access to an accessible unit comprising 40% of the area, and opening #3 provides access to the remaining 30% of the area. Opening #1 is fitted with an open culvert, #2 with a flapgated culvert with slotted weir, and #3 with a fixed crest weir.

$$\begin{aligned}\text{Access Value} &= ([P_1 * R_1] + [P_2 * R_2] + [P_3 * R_3]) / (P_1 + P_2 + P_3) \\ &= ([.20 * .5] + [.40 * .35] + [.30 * .1]) / (.20 + .40 + .30) \\ &= (.10 + .14 + .03) / .90 \\ &= .27 / .90 \\ &= .30\end{aligned}$$

Published Habitat Suitability Index (HSI) Models Consulted for Variables for Possible Use in the
Wetland Value Assessment Models

Estuarine Fish and Shellfish

pink shrimp
white shrimp
brown shrimp
spotted seatrout
Gulf flounder
southern flounder
Gulf menhaden
juvenile spot
juvenile Atlantic croaker
red drum

Reptiles and Amphibians

American alligator
slider turtle
bullfrog

Mammals

mink
muskrat

Freshwater Fish

channel catfish
largemouth bass
red ear sunfish
bluegill

Birds

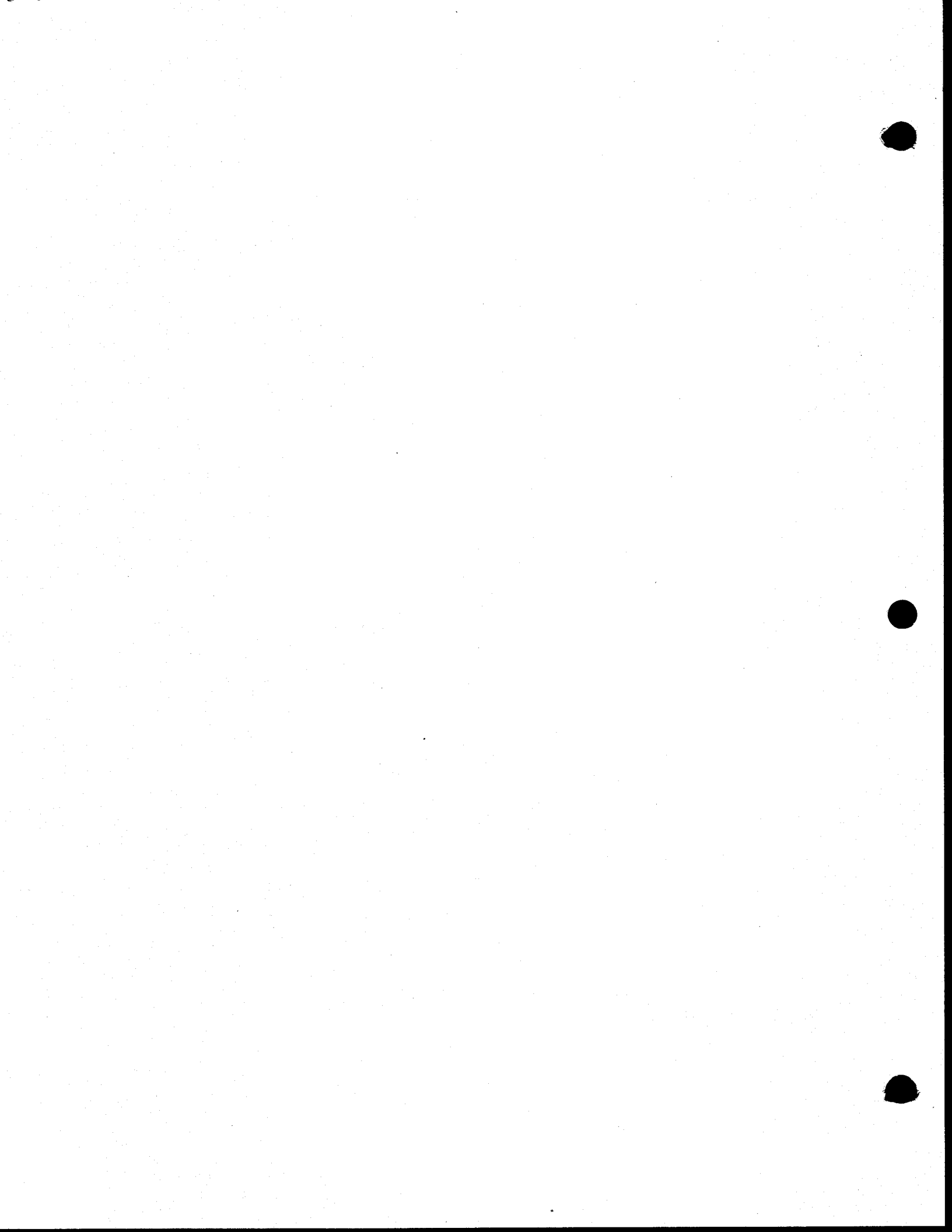
clapper rail
great egret
northern pintail
mottled duck
American coot
marsh wren
great blue heron
laughing gull
snow goose
red-winged blackbird
roseate spoonbill
white-fronted goose

**Coastal Wetlands Planning, Protection, and
Restoration Act**

9th Priority Project List Report

Appendix C

**Engineering Designs and Cost Estimates
For Candidate Projects**

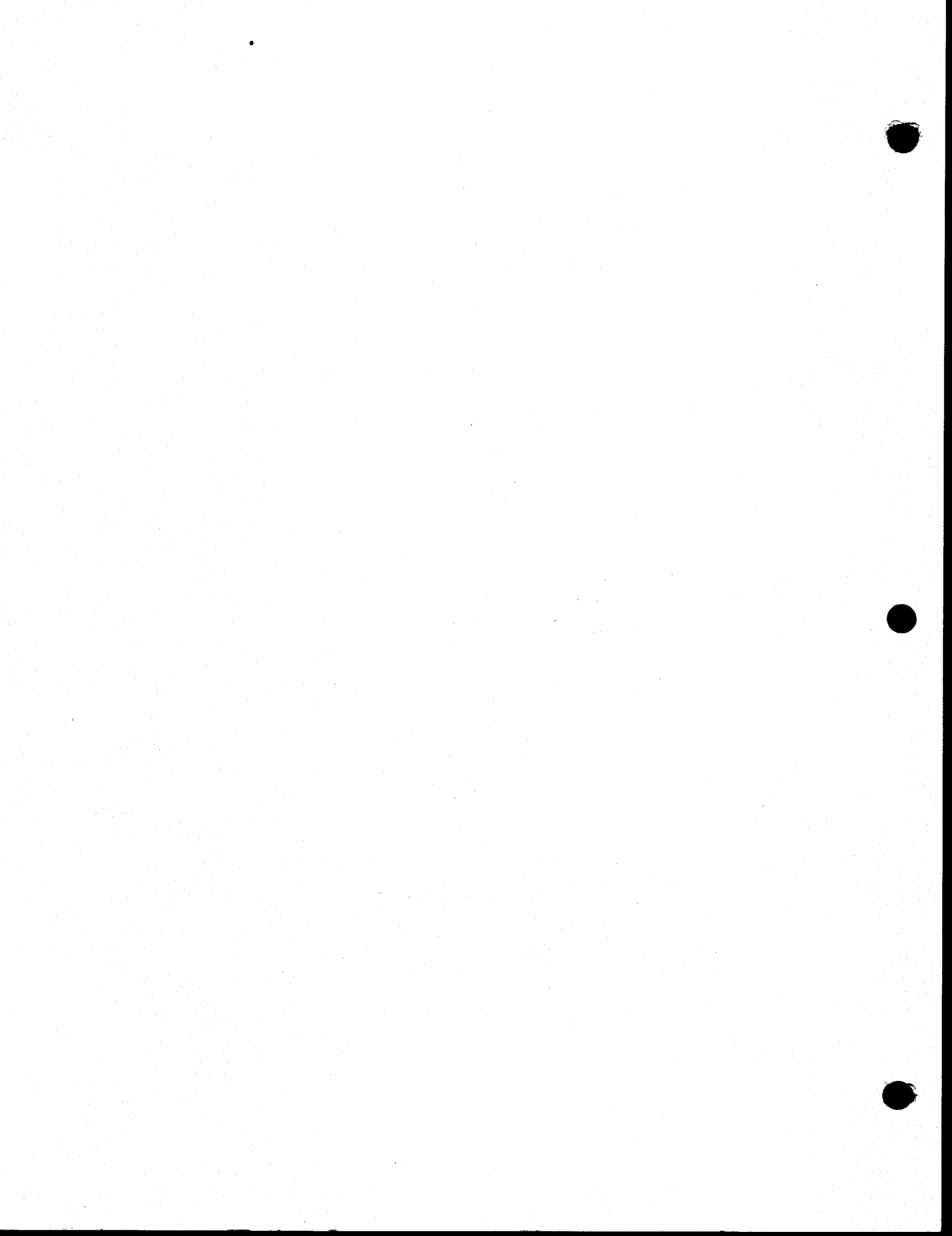


Appendix C

Engineering Designs and Cost Estimate For Candidate Projects

Table of Contents

<u>Table Number</u>		<u>Page Number</u>
C-1	Opportunistic Use of Bonnet Carré Spillway (XPO-55a).....	C-2
C-2	Northern Chandeleur Islands Marsh Restoration (XPO-95).....	C-2
C-3	Freshwater Introduction South of Hwy 82 to the Eastern Portion of Rockefeller Refuge Project (PME-7a).....	C-3
C-4	Southwest Lake Pontchartrain Sediment Trapping Project (XPO-54a).....	C-3
C-5	South Lake Decade Atchafalaya Freshwater/Sediment Introduction (PTE-28).....	C-4
C-6	Four Mile Canal/Little White Lake Hydrologic Restoration (XTV-30).....	C-5
C-7	Castille Pass Channel Sediment Delivery (XAT-11).....	C-6
C-8	LaBranche Wetlands Terracing, Planting, and Shoreline Protection (PPO-7a).....	C-7
C-9	Black Bayou Culverts Hydrologic Restoration (CS-16).....	C-7
C-10	Perry Ridge West Bank Stabilization (PCS-26 ii).....	C-8
C-11	Freshwater Bayou Bank Stabilization and Hydrologic Restoration (Belle Isle Canal to Lock) (East) (XTV-27).....	C-9
C-12	North Houma Navigational Channel Salinity Control Project (TE-8a).....	C-10
C-13	Little Pecan Bayou Hydrologic Restoration (XME-42a).....	C-12
C-14	Barataria Basin Landbridge Shoreline Protection, Ph. 3 (XBA-63 iii-2a).....	C-13
C-15	LA Highway 1 Marsh Creation (BA-32a).....	C-14
C-16	Tangipahoa/Pontchartrain Shoreline Protection (PO-13).....	C-15
C-17	Grand/White Lake Land Bridge Protection Project (PME-18).....	C-16
C-18	Raccoon Island Restoration (PTE-15-viii).....	C-18
C-19	Amoretta Freshwater Diversion (BA-17a).....	C-18
C-20	East/West Grand Terre Restoration Project (XBA-1).....	C-19
C-21	East Golden Meadow Terracing Project (XBA-77).....	C-20
C-22	Timbalier Island Dune and Marsh Creation (XTE-45a).....	C-20
C-23	Grand Pierre Island Restoration (XBA-1c).....	C-21
C-24	Freshwater Bayou Canal Shoreline Stabilization and Hydrologic Restoration (Schooner Bayou to the GIWW) (West) (XME-28/33).....	C-22
C-25	New Cut Dune and Marsh Creation (TE-11a).....	C-22
C-26	North Bully Camp Outfall Management (XTE-58).....	C-23
C-27	Weeks Bay Marsh Creation and Shore Protection/Commercial Canal Freshwater Re-Direction (PTV-13).....	C-24
C-28	Shoreline Protection at Lake Borgne (PPO-b/d/h).....	C-25
C-29	Constriction at Lighthouse Bayou (PCS-32).....	C-26
C-30	Restore Original Mermentau River Project (PME-17).....	C-27
C-31	Lake Athanasio Oyster Reef Demonstration Project (BS-DEMO).....	C-28
C-32	Mandalay Bank Protection Demonstration Project (XTE-DEMO).....	C-28
C-33	Periodic Introduction of Sediment and Nutrients at Selected Diversion Sites Demonstration Project (MR-DEMO).....	C-29
C-34	Grand Temple Shoreline Protection Demonstration Project (BA-DEMO).....	C-29
C-35	Terrebonne Bay Shore Protection Demonstration Project (XTE-DEMO).....	C-30



Legend

LF = Linear Foot
SF = Square Foot
EA = Each
CY = Cubic Yard
SY = Square Yard
TN = Ton
LS = Lump Sum
LB = Pound
ST = 100 ft station
AC = Acre

Table C-1a
Estimated Construction Cost
Opportunistic Use of Bonnet Carre' Spillway (XPO-55a)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
	CONSTRUCTION COST				0
	CONSTRUCTION COST + 25% CONTINGENCY				0

Table C-1b
Breakdown of Phased Costs
Opportunistic Use of Bonnet Carre' Spillway (XPO-55a)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	50.000
Supervision and Administration	35.000
TOTAL	85.000
Phase 2 Costs	
Construction + 25% Contingency	0
TOTAL	0
GRAND TOTAL OF ALL PHASES	85.000

Table C-2a
Estimated Construction Cost
Northern Chandeleur Islands Marsh Restoration (XPO-95)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
	Plant gallon containers around each overwash fan perimeter	62.054	EA	10	620.500
	Plant trade four-inch pots on each overwash fan	36.400	EA	4.5	163.800
	CONSTRUCTION COST				784.300
	CONSTRUCTION COST + 25% CONTINGENCY				980.300

Table C-2b
Breakdown of Phased Costs
Northern Chandeleur Islands Marsh Restoration (XPO-95)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	75.000
Environmental Compliance	10.500
Land Rights	0
Supervision and Administration	54.900
TOTAL	140.400
Phase 2 Costs	
Construction + 25% Contingency	980.300
Inspection	45.000
Insurance and bonds	11.800
TOTAL	1,037.100
GRAND TOTAL OF ALL PHASES	1,177.500

Table C-2c
Periodic Costs
Northern Chandeleur Islands Marsh Restoration (XPO-95)

Description	Frequency	Cost (\$)
Corps Administration	Per year	500
Monitoring	Per year	4896

Table C-3a
Estimated Construction Cost
Freshwater Introduction South of Hwy 82 to the Eastern Portion of Rockefeller Refuge (PME-7a)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Install 6-48" Dia pipes w/flap gates and stop logs	1	LS	195.000	195.000
2	Dredge existing oil access canal	16.600	CY	2	33.200
3	Dredge Grand Volle Canal	47.250	CY	2	94.500
4	Dredge Unit 14 Canal	47.250	CY	2	94.500
5	Install 3-10' x 10' flap gates at Little Constance Str.	1	LS	150.000	150.000
6	Install 3-10' x 10' flap gates at Big Constance Str.	1	LS	150.000	150.000
7-8	Install 4-48" dia. Pipes w/flap gates and stop logs	2	EA	130.800	261.600
9-12	Install 3-48" dia. Pipes w/flap gates and stop logs	4	EA	100.000	400.000
13	Construct 150-200' x 200' Terrace	93.333	CY	2	186.667
14	Smooth cord sprigs planted on crown of terraces	12.000	EA	2.5	30.000
15	Gal. Container of smooth cord grass	48.000	EA	7	336.000
16	Dewatering	1	LS	100.000	100.000
17	Anti-trespassing gates	2	EA	500	1.000
	Mob/Demobilization	1	LS	101.600	101.600
	Insurance & Bonds	1	LS	30.500	30.500
	Supervision & Inspection	1	LS	247.500	247.500
	CONSTRUCTION COST				2.032.500
	CONSTRUCTION COST + 25% CONTINGENCY				3.015.100

Table C-3b
Breakdown of Phased Costs
Freshwater Introduction South of Hwy 82 to the Eastern Portion of Rockefeller Refuge (PME-7a)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	248.920
Environmental Compliance	40.000
Land Rights	60.000
Supervision and Administration	211.100
TOTAL	560.000
Phase 2 Costs	
Construction + 25% Contingency	3.015.100
TOTAL	3.015.100
GRAND TOTAL OF ALL PHASES	3.575.100

Table C-3c
Periodic Costs
Freshwater Introduction South of Hwy 82 to the Eastern Portion of Rockefeller Refuge (PME-7a)

Description	Frequency	Cost (\$)
Corps Administration	Per year	500
Monitoring	Per year	29.291

Table C-4a
Estimated Construction Cost
Southwest Lake Ponchartrain Sediment Trapping (XPO-54a)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob & Demob	1	LS	300.000	300.000
2	Concrete sheet piles	29.200	LF	148.81	4.345.252
3	Flotation canal	428	CY	5	2.140
4	Lighting	38	EA	10.000	380.000
5	Terraces	846.333	CY	2	1.692.667
6	Gallon containers of smooth cordgrass	140.400	EA	7	982.800
	CONSTRUCTION COST				7.702.859
	CONSTRUCTION COST + 25% CONTINGENCY				9.628.600

Table C-4b
Breakdown of Phased Costs
Southwest Lake Ponchartrain Sediment Trapping (XPO-54a)

Description		Amount(\$)
Phase 1 Costs		
Engineering and Design		789,400
Environmental Compliance		90,000
Land Rights		50,000
Supervision and Administration		591,430
TOTAL		1,520,830
Phase 2 Costs		
Construction + 25% Contingency		9,628,600
Inspection		100,000
TOTAL		9,728,600
GRAND TOTAL OF ALL PHASES		11,249,430

Table C-4c
Periodic Costs
Southwest Lake Ponchartrain Sediment Trapping (XPO-54a)

Description	Frequency	Cost (\$)
Inspections	Yrs. 3,8,13,18	2,928
Corps Administration	Per year	500
Monitoring	Per year	4,896

Table C-4d
Operation & Maintenance Costs
Southwest Lake Ponchartrain Sediment Trapping (XPO-54a)

Description	Cost (\$)		
	TY4	TY9	TY14
Post-Construction Costs			
Mobilization/Demobilization	10,000	10,000	10,000
Dredging	75,000	50,000	25,000
Replace all lights		380,000	380,000
10% Contingency	8,500	44,000	41,500
Total Post Construction Costs	93,500	484,000	456,500
Engineering, Design, & Administrative Costs			
Engineering and Design	8,000	36,400	34,500
Administrative	4,000	18,200	17,300
Engineering Surveys			
5 days @ \$1,250 per day	6,300	6,300	6,300
Inspection			
75 days @ \$750 per day	52,500	52,500	52,500
Total E. D. & A Costs	70,800	113,400	110,600
TOTAL OPERATION & MAINTENANCE COSTS	164,300	597,400	567,100

Table C-5a
Estimated Construction Cost
South Lake Decade Atchafalaya Freshwater/Sediment Diversion (PTE-28)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	100,000	100,000
2	Geotextile	15,255	SY	2	31,000
3	Loose Rock Riprap	31,185	TN	35	1,091,000
4	Structure Removal	1	EA	35,000	35,000
5	Vegetative Plantings	1,733	EA	10	17,000
6	Settlement Plates	5	EA	500	3,000
7	Freshwater Introduction Structure	1	EA	165,000	165,000
	CONSTRUCTION COST				1,442,000
	CONSTRUCTION COST + 25% CONTINGENCY				1,803,000

Table C-5b
Breakdown of Phased Costs
South Lake Decade Atchafalaya Freshwater/Sediment Diversion (PTE-28)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	173,000
Environmental Compliance	40,000
Land Rights	50,000
Supervision and Administration	108,000
TOTAL	371,000
Phase 2 Costs	
Construction + 25% Contingency	1,803,000
Inspection	50,000
TOTAL	1,853,000
GRAND TOTAL OF ALL PHASES	2,224,000

Table C-5c
Periodic Costs
South Lake Decade Atchafalaya Freshwater/Sediment Diversion (PTE-28)

Description	Frequency	Cost (\$)
Inspections	Per year	3,000
Corps Administration	Per year	500
Monitoring	Per year	29,291

Table C-5d
Operation & Maintenance Costs
South Lake Decade Atchafalaya Freshwater/Sediment Diversion (PTE-28)

Description	Cost (\$)	
	TY4	TY8
Post-Construction Costs		
Mobilization/Demobilization	40,000	40,000
Restore 15% of sheetpile/gated structure	24,750	24,750
Replace 10% of original rock riprap embankment	109,100	109,100
Total Post Construction Costs	173,850	173,850
Total Post Construction Costs + 10% contingency	191,000	191,000
Engineering, Design, & Administrative Costs		
Engineering and Design	15,000	15,000
Administrative	4,000	4,000
Engineering Surveys		
4 days @ \$1,250 per day	5,000	5,000
Inspection		
6 days @ \$765 per day	5,000	5,000
Total E. D. & A Costs	29,000	29,000
TOTAL OPERATION & MAINTENANCE COSTS	220,000	220,000

Table C-6a
Estimated Construction Cost
Four Mile Canal/Little White Lake Hydrologic Restoration (XTV-30)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	180,000	180,000
2	Onion Lake Terraces	72,462	CY	2	144,924
3	Little White Lake Terraces	116,176	CY	2	232,352
4	Little Vermilion Bay Terraces	355,372	CY	2	710,744
5	Little White Lake Conveyance Channel	38,556	CY	2	77,111
6	Vermilion Bay Conveyance Channel	66,667	CY	2	133,333
7	Vegetation-one gallon pots	66,204	EA	7	463,428
	Insurance & Bonds	1	LS	29,128	29,128
	CONSTRUCTION COST				1,971,020
	CONSTRUCTION COST + 25% CONTINGENCY				2,456,493

Table C-6b
Breakdown of Phased Costs
Four Mile Canal/Little White Lake Hydrologic Restoration (XTV-30)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	272,846
Environmental Compliance	40,000
Land Rights	30,000
Supervision and Administration	171,955
TOTAL	514,801
Phase 2 Costs	
Construction + 25% Contingency	2,456,493
Inspection	116,250
TOTAL	2,572,743
GRAND TOTAL OF ALL PHASES	3,087,544

Table C-6c
Periodic Costs
Four Mile Canal/Little White Lake Hydrologic Restoration (XTV-30)

Description	Frequency	Cost (\$)
Corps Administration	Per year	500
Monitoring	Per year	4,896

Table C-7a
Estimated Construction Cost
Castille Pass Channel Sediment Delivery (XAT-11)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
	Mob/Demobilization	1	LS	275,000	275,000
	Dredging	3,954,815	CY	2	7,909,630
	Pipeline relocation	1	LS	2,500,000	2,500,000
	Insurance & Bonds	1	LS	160,269	160,269
	CONSTRUCTION COST				10,844,899
	CONSTRUCTION COST + 25% CONTINGENCY				13,556,123

Table C-7b
Breakdown of Phased Costs
Castille Pass Channel Sediment Delivery (XAT-11)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	957,212
Environmental Compliance	50,000
Land Rights	30,000
Supervision and Administration	787,806
TOTAL	1,825,018
Phase 2 Costs	
Construction + 25% Contingency	13,556,123
Inspection	112,500
TOTAL	13,668,623
GRAND TOTAL OF ALL PHASES	15,493,641

Table C-7c
Periodic Costs
Castille Pass Channel Sediment Delivery (XAT-11)

Description	Frequency	Cost (\$)
Corps Administration	Per year	500
Monitoring	Per year	9,764

Table C-7d
Operation & Maintenance Costs
Castille Pass Channel Sediment Delivery (XAT-11)

Description	Cost (\$)		
	TY6	TY11	TY16
Post-Construction Costs			
Mob	275.000	275.000	275.000
Maintenance Dredging	2,362.222	2,362.222	2,362.222
Total Post Construction Costs	2,637.222	2,637.222	2,637.222
Engineering, Design, & Administrative Costs			
Engineering Surveys	8.000	8.000	8.000
Total E, D, & A Costs	8.000	8.000	8.000
TOTAL OPERATION & MAINTENANCE COSTS	2,645.222	2,645.222	2,645.222

Table C-8a
Estimated Construction Cost
LaBranche Wetlands Terracing, Planting and Shoreline Protection (PPO-7a)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	253.400	253.400
2	Shoreline Protection	1	LS	1,106.200	1,106.200
3	Floatation Canels-One at each end	30.815	CY	5	154.075
4	Hazzard Lights on Shoreline Protection	7	EA	10.000	70.000
5	Terraces in Area D	697.667	CY	2	1,395.333
6	Terraces in Area A	210.519	CY	2	421.037
7	Smooth Cordgrass on Perimeter	116.800	EA	7	817.600
8	Planting 128 acres w/gal containers	154.880	EA	7	1,084.160
9	Herbivore control during construction year	1	LS	20.000	20.000
10	Insurance & Bonds	1	LS	76.000	76.000
	CONSTRUCTION COST				5,397.805
	CONSTRUCTION COST + 25% CONTINGENCY				6,747.300

Table C-8b
Breakdown of Phased Costs
LaBranche Wetlands Terracing, Planting and Shoreline Protection (PPO-7a)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	472.400
Environmental Compliance	40.000
Land Rights	50.000
Supervision and Administration	382.200
TOTAL	944.600
Phase 2 Costs	
Construction + 25% Contingency	6,747.300
Inspection	135.000
TOTAL	6,882.300
GRAND TOTAL OF ALL PHASES	7,826.900

Table C-8c
Periodic Costs
LaBranche Wetlands Terracing, Planting and Shoreline Protection (PPO-7a)

Description	Frequency	Cost (\$)
Corps Administration	Per year	500
Monitoring	Per year	4.896

Table C-9a
Estimated Construction Cost
Black Bayou Culverts Hydrologic Restoration (CS-16)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	0	0
2	Siphon & Appurtenances	1	LS	4,200.000	4,200.000
	CONSTRUCTION COST				4,200.000
	CONSTRUCTION COST + 25% CONTINGENCY				5,250.000

Table C-9b
Breakdown of Phased Costs
Black Bayou Culverts Hydrologic Restoration (CS-16)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	394,000
Environmental Compliance	40,000
Land Rights	100,000
Supervision and Administration	315,000
TOTAL	849,000
Phase 2 Costs	
Construction + 25% Contingency	5,250,000
Inspection	50,000
TOTAL	5,300,000
GRAND TOTAL OF ALL PHASES	6,149,000

Table C-9c
Periodic Costs
Black Bayou Culverts Hydrologic Restoration (CS-16)

Description	Frequency	Cost (\$)
NRCS/DNR Inspections	Per year	3,000
Corps Administration	Per year	500
Operations	Per year	12,000
Monitoring	Per year	29,291

Table C-9d
Operation & Maintenance Costs
Black Bayou Culverts Hydrologic Restoration (CS-16)

Description	Cost (\$)	
	TY7	TY14
Post-Construction Costs		
Mobilization/Demobilization	25,000	5,000
Structure Maintenance	50,000	
Conveyance Channel Maintenance		78,000
Total Post Construction Costs	75,000	83,000
Total Post Construction Costs + 10 % contingency	83,000	91,000
Engineering, Design, & Administrative Costs		
Engineering and Design	7,000	8,000
Administrative	4,000	4,000
Engineering Surveys		
3 days @ \$1,250 per day	4,000	4,000
Inspection		
7 days @ \$750 per day	5,000	5,000
Total E. D. & A Costs	20,000	21,000
TOTAL OPERATION & MAINTENANCE COSTS	103,000	112,000

Table C-10a
Estimated Construction Cost
Perry Ridge West Bank Stabilization (PCS-26 ii)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	100,000	100,000
2	Shallow Water Terraces	17,000	LF	9	153,000
3	Loose Rock Riprap	67,860	TN	25	1,697,000
4	Settlement Plates	12	EA	500	6,000
5	Signs and Markers	1	LS	40,000	40,000
	CONSTRUCTION COST				1,996,000
	CONSTRUCTION COST + 25% CONTINGENCY				2,495,000

Table C-10b
Breakdown of Phased Costs
Perry Ridge West Bank Stabilization (PCS-26 ii)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	167,000
Environmental Compliance	15,000
Land Rights	50,000
Supervision and Administration	150,000
TOTAL	382,000
Phase 2 Costs	
Construction + 25% Contingency	2,495,000
Inspection	72,000
TOTAL	2,567,000
GRAND TOTAL OF ALL PHASES	2,949,000

Table C-10c
Periodic Costs
Perry Ridge West Bank Stabilization (PCS-26 ii)

Description	Frequency	Cost (\$)
Inspections	Per year	3,000
Corps Administration	Per year	500
Monitoring	Per year	2,434

Table C-10d
Operation & Maintenance Costs
Perry Ridge West Bank Stabilization (PCS-26 ii)

Description	Cost (\$)		
	TY7	TY10	TY14
Post-Construction Costs			
Mobilization/Demobilization	1,000	25,000	1,000
Replace Signs	7,000		7,000
Replace 4,000 tons of rock riprap section		100,000	
Replace 30% of terraces		45,900	
Total Post Construction Costs	8,000	170,900	8,000
Total Post Construction Costs + 10% Contingency	9,000	188,000	9,000
Engineering, Design, & Administrative Costs			
Engineering and Design	1,000	15,000	1,000
Administrative	4,000	9,000	4,000
Engineering Surveys			
2 days @ \$1,250 per day	3,000		3,000
3 days @ \$1,250 per day		4,000	
Inspection			
3 days @ \$765 per day	2,000		2,000
10 days @ \$765 per day		8,000	
Total E. D. & A Costs	10,000	36,000	10,000
TOTAL OPERATION & MAINTENANCE COSTS	19,000	224,000	19,000

Table C-11a
Estimated Construction Cost
Freshwater Bayou Bank Stabilization and Hydrologic Restoration (Belle Isle Canal to Lock) (XTV-27)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	60,000	60,000
2	Stone	279,722	TN	23	6,433,606
3	Geotextile	250,000	SY	3	750,000
4	Flotation Channel	1	LS	920,000	920,000
5	Marker Piles	2,700	LF	12	32,400
	CONSTRUCTION COST				8,196,006
	CONSTRUCTION COST + 25% CONTINGENCY				10,245,008

**Table C-11b
Breakdown of Phased Costs
Freshwater Bayou Bank Stabilization and Hydrologic Restoration (Belle Isle Canal to Lock) (XTV-27)**

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	614.700
Environmental Compliance	104.000
Land Rights	37.000
Supervision and Administration	512.250
TOTAL	1.267.950
Phase 2 Costs	
Construction + 25% Contingency	10.245.008
Inspection	512.250
TOTAL	10.757.258
GRAND TOTAL OF ALL PHASES	12.025.208

**Table C-11c
Operation & Maintenance Costs
Freshwater Bayou Bank Stabilization and Hydrologic Restoration (Belle Isle Canal to Lock) (XTV-27)**

Description	Cost (\$)		
	TY3	TY7	TY14
Post-Construction Costs			
Mobilization/Demobilization	60.000	60.000	60.000
Stone	1.740.381	1.740.381	1.740.381
Contingency	450.095	450.095	450.095
Total Post Construction Costs	2.250.476	2.250.476	2.250.476
Engineering, Design, & Administrative Costs			
Engineering and Design	67.514	67.514	67.514
Administrative	45.010	45.010	45.010
Inspection	112.524	112.524	112.524
Total E. D. & A Costs	225.048	225.048	225.048
TOTAL OPERATION & MAINTENANCE COSTS	2.475.524	2.475.524	2.475.524

**Table C-12a
Estimated Construction Cost
North HNC Shore/Salinity Protection Project (TE-8a)**

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
	BANK RAISING & ARMORING COSTS				
1	Mob-demob	1	LS	150.000	150.000
2	Rip-rap	233.982	TN	30	7.019.456
3	Earth	203.587	CY	4	814.349
4	Cloth	229.394	SF	3	688.182
	OTHER FEATURES				
5	Mob-demob				20.000
6	Armored earthen plug across 110' x 4' channel	1.133	CY	4	4.532
	Rip-rap	110	LF	372	
7	Earth bank repair on 264 ft of spoil bank	792	CY	4	3.168
8	Earthen plug on a 25' x 1' channel	75	CY	4	300
9	Earthen plug on a 25' x 1' channel	75	CY	4	300
10	Earthen plug on a 100' x 2' channel	600	CY	4	2.400
11	Three earthen plugs totaling 50' x 3'	300	CY	4	1.200
12	Earthen bank repair on 1800 feet of Bayou Pelton	7.740	CY	4	30.960
	WATER CONTROL STRUCTURE & CULVERET COSTS				
13	Mob-demob				20.000
14	Flaggated structure across 120' x 4' bayou				
	160' wooden sheetpile	160	LF	800	128.000
	4x4 flap/vc units	8	EA	15.000	120.000
	Walkway	160	LF	100	16.000
	Stoplogs: 32LF/unit	256	LF	3	768
15	Flaggated structure across 150' x 5' canal				
	190' wooden sheetpile	190	LF	800	152.000
	4x4 flap/vc units	8	EA	15.000	120.000
	Walkway	190	LF	100	19.000
	Stoplogs: 32LF/unit	256	LF	3	768
16	Flaggated structure across 102' x 4' canal				

	132' wooden sheetpile	132	LF	800	105,600
	4x4 flap/vc units	5	EA	15,000	75,000
	Walkway	132	LF	100	13,200
	Stoplogs: 32LF/unit	160	LF	3	480
17	Flapged/vcrest structure on 60' x 3' channel				
	100' wooden sheetpile	100	LF	800	80,000
	4x4 flap/vc units	2	EA	15,000	30,000
	Walkway	100	LF	100	10,000
	Stoplogs: 32LF/unit	64	LF	3	192
18	Install 8 24" dia. open culvert under spoil bank	8	EA	20,000	160,000
19	Two 36" dia. flapged/vcrest culverts on a 20' x 2' channel	2	EA	35,000	70,000
20	Three 36" dia. flapged/vcrest culverts on 25' x 2' channel	3	EA	35,000	105,000
21	Three 36" dia. flapged/vcrest culverts on 30' x 2' channel	3	EA	35,000	105,000
22	Two 48" dia. flapged/vcrest culverts on 30' x 4' channel	2	EA	40,000	80,000
23	Two 48" dia. flapged/vcrest culverts on 20' x 4' channel	2	EA	40,000	80,000
24	Install 2 open 48" dia. culvert in St. Louis canal road dump	2	EA	40,000	80,000
	DITCHING COSTS				
25	Reach Number 1	1,200	LF	8	9,600
26	Reach Number 2	1,000	LF	8	8,000
27	Reach Number 3	2,000	LF	8	16,000
28	Reach Number 4	2,200	LF	8	17,600
29	Reach Number 5	3,000	LF	8	24,000
30	Reach Number 6	1,200	LF	8	9,600
31	Reach Number 7	9,800	LF	11	107,800
32	Reach Number 8	4,800	LF	11	52,800
33	Reach Number 9	2,500	LF	8	20,000
34	Reach Number 10	9,200	LF	7	64,400
35	Reach Number 11	4,500	LF	7	31,500
36	Reach Number 12	10,600	LF	0	0
37	Reach Number 13	1,000	LF	7	7,000
38	Reach Number 14	1,000	LF	7	7,000
	CONSTRUCTION COST				10,676,465
	CONSTRUCTION COST + 25% CONTINGENCIES				13,345,581

Table C-12b
Breakdown of Phased Costs
North HNC Shore/Salinity Protection Project (TE-8a)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	1,484,558
Environmental Compliance	50,000
Real Estate & Permitting	105,000
Supervision and Administration	633,823
TOTAL	2,273,381
Phase 2 Costs	
Construction + 25% Contingency	13,345,581
Supervision and Inspection	200,000
TOTAL	13,545,581
GRAND TOTAL OF ALL PHASES	15,818,962

Table C-12c
Periodic Costs
North HNC Shore/Salinity Protection Project (TE-8a)

Description	Frequency	Cost (\$)
Operation costs (x 20yrs)	Per year	8,000
Inspections (x 20 years)	Per year	3,870
Corps Administration (x 20yrs)	Per year	500
Monitoring (x 20yrs)	Per year	29,200

Table C-12d
Operation & Maintenance Costs
North HNC Shore/Salinity Protection Project (TE-8a)

Description	Cost (\$)		
	TY5	TY10	TY15
Mobilization/Demobilization	70.000	70.000	20.000
Replace 10% of earth- 20.359 CY @ 4.00/CY	81.435	81.435	
Replace 10% of rock - 23.398 tons @ 30/ton	701.946	701.946	
Structure repairs	151.101	226.651	302.202
Engineering and Design	93.448	122.703	151.101
Ditch maint.- 43.400 ft @ 5/ft		217.000	
TOTAL OPERATION & MAINTENANCE COSTS	1.097.930	1.419.735	473.303

Table C-13a
Estimated Construction Cost
Little Pecan Bayou Hydrologic Restoration (XME-42a)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	200.000	200.000
2	Little Pecan Bayou Structure	1	LS	2,313.750	2,314.000
3	Earthen Plug @Mermentau	1	LS	35.000	35.000
4	Freshwater Intro Structure (Little Pecan)	1	LS	369.000	369.000
5	Water Control Structure (Little Pecan Interior)	1	LS	219.450	219.000
6	Inlet Control Structure	1	LS	229.150	229.000
7	Outlet Control Structure	1	LS	366.150	366.000
8	Conveyance Channel Excavation	500.000	CY	1.5	750.000
9	Conveyance Channel Armor	11.000	TN	35	385.000
10	Road Crossing Replacement (Bridge)	3	EA	125.000	375.000
11	Internal Drainage Structure	5	EA	25.000	125.000
12	Shallow Water Terrace (Const & Veg)	138.907	LF	9	1,250.000
	CONSTRUCTION COST				6,617.000
	CONSTRUCTION COST + 25% CONTINGENCY				8,271.000

Table C-13b
Breakdown of Phased Costs
Little Pecan Bayou Hydrologic Restoration (XME-42a)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	659.000
Environmental Compliance	40.000
Land Rights	170.000
Supervision and Administration	441.000
TOTAL	1,310.000
Phase 2 Costs	
Construction + 25% Contingency	8,271.000
Inspection	304.000
TOTAL	8,575.000
GRAND TOTAL OF ALL PHASES	9,885.000

Table C-13c
Periodic Costs
Little Pecan Bayou Hydrologic Restoration (XME-42a)

Description	Frequency	Cost (\$)
Inspections	Per year	3,000
Operations	Per year	12,000
Corps Administration	Per year	500
Monitoring	Per year	29,291

Table C-13d
Operation & Maintenance Costs
Little Pecan Bayou Hydrologic Restoration (XME-42a)

Description	Cost (\$)		
	TY7	TY10	TY14
Post-Construction Costs			
Mobilization/Demobilization	50,000	35,000	50,000
Little Pecan Structure Maintenance	110,000		110,000
Replace 1,000 cy of earthen plug @Mermentau	5,000		5,000
Interior Water Control Structure maintenance	17,000		17,000
Freshwater Introduction Structure maintenance	26,000		26,000
Inlet Control Structure maintenance	35,000		35,000
Outlet Control Structure maintenance	55,000		55,000
Conveyance Channel & Armor maintenance	75,000		75,000
Internal Drainage maintenance	19,000		19,000
Barge Bay Rehabilitation			75,000
Replace 30% of Shallow Water Terraces		375,000	
Total Post Construction Costs	392,000	410,000	467,000
Total Post Construction Costs + 10% contingency	431,000	451,000	514,000
Engineering, Design, & Administrative Costs			
Engineering and Design	33,000	34,000	38,000
Administrative	15,000	15,000	15,000
Engineering Surveys			
7 days @ \$1,250 per day	9,000		9,000
3 days @ \$1,250 per day		4,000	
Inspection			
45 days @ \$765 per day	34,000		
7 days @ \$765 per day		5,000	
48 days @ \$765 per day			37,000
Total E. D. & A Costs	91,000	58,000	99,000
TOTAL OPERATION & MAINTENANCE COSTS	522,000	509,000	613,000

Table C-14a
Estimated Construction Cost
Barataria Basin Landbridge Shoreline Protection, Ph. 3 (XBA-63 iii)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	400,000	400,000
2	Rock Bank Stabilization	40,360	LF	240	9,686,000
3	Settlement Plates	41	EA	500	21,000
	CONSTRUCTION COST				10,107,000
	CONSTRUCTION COST + 25% CONTINGENCY				12,634,000

Table C-14b
Breakdown of Phased Costs
Barataria Basin Landbridge Shoreline Protection, Ph. 3 (XBA-63 iii)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	-665,000
Environmental Compliance	0
Land Rights	75,000
Supervision and Administration	479,000
TOTAL	-111,000
Phase 2 Costs	
Construction + 25% Contingency	12,634,000
Inspection	116,000
TOTAL	12,750,000
GRAND TOTAL OF ALL PHASES	12,639,000

Table C-14c
Periodic Costs
Barataria Basin Landbridge Shoreline Protection, Ph. 3 (XBA-63 iii)

Description	Frequency	Cost (\$)
Inspections	Per year	3,000
Corps Administration	Per year	500
Monitoring	Per year	2,434

Table C-14d
Operation & Maintenance Costs
Barataria Basin Landbridge Shoreline Protection, Ph. 3 (XBA-63 iii)

Description	Cost (\$)	
	TY3	TY14
Post-Construction Costs		
Mobilization/Demobilization	75,000	75,000
Replace 25% of original rockfill/rock riprap section	2,421,500	
Replace 10% of original rockfill/rock riprap section		968,600
Total Post Construction Costs	2,496,500	1,043,600
Total Post Construction Costs + 10% contingency	2,746,000	1,148,000
Engineering, Design, & Administrative Costs		
Engineering and Design	182,000	81,000
Administrative	4,000	4,000
Engineering Surveys		
20 days @ \$1,250 per day	25,000	
8 days @ \$1,250 per day		10,000
Inspection		
44 days @ \$765 per day	34,000	
18 days @ \$765 per day		14,000
Total E. D. & A Costs	245,000	109,000
TOTAL OPERATION & MAINTENANCE COSTS	2,991,000	1,257,000

Table C-15a
Estimated Construction Cost
LA Highway 1 Marsh Creation

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mobilization and Demobilization	1	LS	200,000	200,000
2	Hydraulic dredging	2,387,436	CY	1.50	3,581,155
3	Containment dikes	22,081	CY	3.00	66,244
	CONSTRUCTION COST				3,847,399
	CONSTRUCTION COST + 25% CONTINGENCIES				4,809,249

Table C-15b
Breakdown of Phased Costs
LA Highway 1 Marsh Creation

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	307,682
Environmental Compliance	30,000
Real Estate & Permitting	528,000
Orphan Oil Wells	104,000
Supervision and Administration	288,555
TOTAL	1,258,237
Phase 2 Costs	
Construction + 25% Contingency	4,809,249
Supervision and Inspection	187,500
TOTAL	4,996,749
GRAND TOTAL OF ALL PHASES	6,254,986

Table C-15c
Periodic Costs
LA Highway 1 Marsh Creation

Description	Frequency	Cost (\$)
Operations & Maintenance	@ year 3	50,000
Corps Administration	Per year	500
Monitoring	Per year	4,896

Table C-16a
Estimated Construction Cost
Tangipahoa/Ponchartrain Shoreline Protection (PO-13)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	120.000	120.000
2	Geotextile	62.380	SY	2	125.000
3	Settlement Plates	9	EA	500	5.000
4	Loose Rock Riprap	82.625	TN	30	2,479.000
5	Navigation Warning Signs	19	EA	1.500	29.000
	CONSTRUCTION COST				2,758.000
	CONSTRUCTION COST + 25% CONTINGENCY				3,448.000

Table C-16b
Breakdown of Phased Costs
Tangipahoa/Ponchartrain Shoreline Protection (PO-13)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	225.000
Environmental Compliance	40.000
Land Rights	50.000
Supervision and Administration	207.000
TOTAL	522.000
Phase 2 Costs	
Construction + 25% Contingency	3,448.000
Inspection	33.000
TOTAL	3,481.000
GRAND TOTAL OF ALL PHASES	4,003.000

Table C-16c
Periodic Costs
Tangipahoa/Ponchartrain Shoreline Protection (PO-13)

Description	Frequency	Cost (\$)
NRCS/DNR Inspections	Per year	3,000
Corps Administration	Per year	500
Monitoring	Per year	2,434

Table C-16d
Operation & Maintenance Costs
Tangipahoa/Ponchartrain Shoreline Protection (PO-13)

Description	Cost (\$)		
	TY7	TY10	TY14
Post-Construction Costs			
Mobilization/Demobilization	1.000	40.000	1.000
Replace Signs	9.500		9.500
Restore 10% of original rockfill/rock riprap section		247.875	
Total Post Construction Costs	10.500	287.875	10.500
Total Post Construction Costs + 10% contingency	12.000	317.000	12.000
Engineering, Design, & Administrative Costs			
Engineering and Design	1.000	25.000	1.000
Administrative	4.000	4.000	4.000
Engineering Surveys			
2 days @ \$1.250 per day	3.000		3.000
5 days @ \$1.250 per day		6.000	
Inspection			
3 days @ \$765 per day	2.000		2.000
12 days @ \$765 per day		9.000	
Total E, D, & A Costs	10.000	44.000	10.000
TOTAL OPERATION & MAINTENANCE COSTS	22.000	361.000	22.000

Table C-17-1a
 Estimated Construction Cost
 Grand/White Lake Land Bridge Protection Project (PME-18)
 A-Jacks Option

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	A-Jacks Break Waters in White Lake	11,000	LF	45.5	500,500
2	Terraces in Callicon Lake (crown=10' H=6')	72,665	CY	2	145,330
3	Terraces in Callicon Lake (crown=10' H=7')	95,833	CY	2	191,666
4	Bullwhip Planting (Gallon Containers)	22,752	EA	7	159,264
5	Seashore Paspalum (Sprigs)	5,688	EA	2.5	14,220
6	Mob & Demob	1	LS	505,500	505,500
7	Insurance & Bonds	1	LS	15,200	15,200
	CONSTRUCTION COST				1,011,000
	CONSTRUCTION COST + 25% CONTINGENCY				1,784,450

Table C-17-1b
 Breakdown of Phased Costs
 Grand/White Lake Land Bridge Protection Project (PME-18)
 A-Jacks Option

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	172,000
Environmental Compliance	40,000
Land Rights	50,000
Supervision and Administration	142,800
TOTAL	354,800
Phase 2 Costs	
Construction + 25% Contingency	1,784,450
Inspection	103,700
TOTAL	1,888,150
GRAND TOTAL OF ALL PHASES	2,242,950

Table C-17-1c
 Periodic Costs
 Grand/White Lake Land Bridge Protection Project (PME-18)
 A-Jacks Option

Description	Frequency	Cost (\$)
Corps Administration	Per year	500
Monitoring	Per year	4,896
Engineering Inspection	Yrs. 2,5,9,14	2,928

Table C-17-1d
 Operation & Maintenance Costs
 Grand/White Lake Land Bridge Protection Project (PME-18)
 A-Jacks option

Description	Cost (\$)	
	TY10	TY15
Post-Construction Costs		
Mobilization/Demobilization	30,000	30,000
Terrace Const.	292,100	
A-Jack Replacement	125,125	50,050
10% Contingence	44,700	8,000
Total Post Construction Costs	491,900	88,100
Engineering, Design, & Administrative Costs		
Engineering and Design	36,900	7,600
Administrative	18,500	3,800
Engineering Surveys		
5 days @ \$1,250 per day	6,300	6,300
Inspection		
15 days @ \$700 per day	10,500	10,500
Total E, D, & A Costs	72,200	28,200
TOTAL OPERATION & MAINTENANCE COSTS	564,100	116,300

Table C-17-2a
Estimated Construction Cost
Grand/White Lake Land Bridge Protection Project (PME-18)
Segmented Break Waters Option

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Segmented Break Waters in White Lake	66.454	TN	30	1,993.630
2	Geotextile Fabric	46.063	SY	4.5	207.284
3	Terraces in Callicon Lake (crown=10' H=6')	72.665	CY	2	145.330
4	Terraces in Callicon Lake (crown =10' H=7')	95.833	CY	2	191.666
5	Bullwhip Planting (Gallon Containers)	22.752	EA	7	159.264
6	Seashore Paspalum (Sprigs)	5.688	EA	2.5	14.220
7	Mob & Demob	1	LS	135.600	135.600
8	Insurance & Bonds	1	LS	40.700	40.700
	CONSTRUCTION COST				2,711.400
	CONSTRUCTION COST + 25% CONTINGENCY				3,609.600

Table C-17-2b
Breakdown of Phased Costs
Grand/White Lake Land Bridge Protection Project (PME-18)
Segmented Break Waters Option

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	285.300
Environmental Compliance	40.000
Land Rights	50.000
Supervision and Administration	288.800
TOTAL	664.100
Phase 2 Costs	
Construction + 25% Contingency	3,609.600
Inspection	360.960
TOTAL	3,970.560
GRAND TOTAL OF ALL PHASES	4,634.660

Table C-17-2c
Periodic Costs
Grand/White Lake Land Bridge Protection Project (PME-18)
Segmented Break Waters Option

Description	Frequency	Cost (\$)
Corps Administration	Per year	500
Monitoring	Per year	4,896
Engineering Inspection	Yrs. 2.5.9.14	2,928

Table C-17-2d
Operation & Maintenance Costs
Grand/White Lake Land Bridge Protection Project (PME-18)
Segmented Break Waters Option

Description	Cost (\$)	
	TY10	TY15
Post-Construction Costs		
Mobilization/Demobilization	30,000	30,000
Terrace Const.	292,100	
Rock Replacement	550,225	220,090
10% Contingence	87,200	25,000
Total Post Construction Costs	959,500	275,100
Engineering, Design, & Administrative Costs		
Engineering and Design	68,600	21,600
Administrative	34,300	10,800
Engineering Surveys		
5 days @ \$1,250 per day	6,300	6,300
Inspection		
15 days @ \$700 per day	10,500	10,500
Total E. D. & A Costs	119,700	49,200
TOTAL OPERATION & MAINTENANCE COSTS	1,079,200	324,300

Table C-18a
Estimated Construction Cost
Raccoon Island Restoration (PTE-15-viii)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mobilization and Demobilization	1	LS		1,000.000
2	Segmented Breakwaters	1	LS	1,900.000	1,900.000
3	Containment dikes	31.000	CY	3.00	93.000
4	Dredge Material	1,000.000	CY	2.15	2,150.000
5	Vegetative Plantings	86	AC	3.000	258.000
	CONSTRUCTION COST				5,401.000
	CONSTRUCTION COST + 25% CONTINGENCIES				6,751.000

Table C-18b
Breakdown of Phased Costs
Raccoon Island Restoration (PTE-15-viii)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	433.000
Environmental Compliance	40.000
Real Estate & Permitting	15.000
Supervision and Administration	338.000
TOTAL	826.000
Phase 2 Costs	
Construction + 25% Contingency	6,751.000
Supervision and Inspection	198.000
TOTAL	6,949.000
GRAND TOTAL OF ALL PHASES	7,775.000

Table C-18c
Periodic Costs
Raccoon Island Restoration (PTE-15-viii)

Description	Frequency	Cost (\$)
Operations & Maintenance		0
NRCS/DNR Inspections	Per year	3000
Corps Administration	Per year	500
Monitoring	Per year	4,896

Table C-19a
Estimated Construction Cost
Amoretta Freshwater Diversion (BA-17a)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mobilization and Demobilization	1	LS	0	0
2	Siphon & Appurtenances	1	LS	7,002.000	7,002.000
	CONSTRUCTION COST				7,002.000
	CONSTRUCTION COST + 25% CONTINGENCIES				8,753.000

Table C-19b
Breakdown of Phased Costs
Amoretta Freshwater Diversion (BA-17a)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	589.000
Environmental Compliance	40.000
Real Estate & Permitting	800.000
Supervision and Administration	460.000
TOTAL	1,889.000
Phase 2 Costs	
Construction + 25% Contingency	8,753.000
Supervision and Inspection	99.000
TOTAL	8,852.000
GRAND TOTAL OF ALL PHASES	10,741.000

Table C-19c
Periodic Costs
Amoretta Freshwater Diversion (BA-17a)

Description	Frequency	Cost (\$)
NRCS/DNR Inspections	Per year	3000
Corps Administration	Per year	500
Monitoring	Per year	29,291
Operation	Per year	30,000
Maintenance	Per year	5,000

Table C-19d
Operation & Maintenance Costs
Amoretta Freshwater Diversion (BA-17a)

Description	Cost (\$)		
	TY5	TY10	TY15
Post-Construction Costs			
Mobilization/Demobilization	5,000	5,000	5,000
Conveyance Channel			
Remove 50 % -19,500 C.Y. @ \$4.00/C.Y.	78,000	78,000	78,000
10 % Contingency	8,000	8,000	8,000
Total Post Construction Costs	91,000	91,000	91,000
Engineering, Design, & Administrative Costs			
Engineering and Design	8,000	8,000	8,000
Administrative	4,000	4,000	4,000
Engineering Surveys			
3 days @ \$1,250 per day	4,000	4,000	4,000
Inspection			
7 days @ \$750 per day	5,250	5,250	5,250
Total E. D. & A Costs	21,000	21,000	21,000
TOTAL OPERATION & MAINTENANCE COSTS	112,000	112,000	112,000

Table C-20a
Estimated Construction Cost
East/West Grand Terre Restoration Project (XBA-1)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	1,000,000	1,000,000
2	Sand Fill	3,571,484	CY	2.30	8,214,413
3	Gulf Side Containment Levee	24,700	LF	15	370,500
4	Plantings	334	AC	3,000	1,002,000
5	Grading and Shaping	247	ST	1,000	247,000
6	Tidal Channels	7,407	CY	3	22,222
7	Internal Ponds	19,360	CY	3	58,080
8	Insurance & Bonds	1	LS	148,700	148,700
	CONSTRUCTION COST				11,062,915
	CONSTRUCTION COST + 25% CONTINGENCY				13,828,600

Table C-20b
Breakdown of Phased Costs
East/West Grand Terre Restoration Project (XBA-1)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	852,883
Environmental Compliance	40,000
Land Rights	100,000
Supervision and Administration	801,400
TOTAL	1,794,283
Phase 2 Costs	
Construction + 25% Contingency	13,828,600
Inspection	240,000
TOTAL	14,068,600
GRAND TOTAL OF ALL PHASES	15,862,883

Table C-20c
Periodic Costs
East/West Grand Terre Restoration Project (XBA-1)

Description	Frequency	Cost (\$)
Corps Administration	Per year	500
Monitoring	Per year	4,896

Table C-21a
Estimated Construction Cost
East Golden Meadow Terracing Project (XBA-77)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	65.000	65.000
2	Dredging	1,852.400	CY	3.2	5,927.680
3	Plantings	137.400	EA	8	1,099.200
	CONSTRUCTION COST				7,091.880
	CONSTRUCTION COST + 25% CONTINGENCY				8,864.850

Table C-21b
Breakdown of Phased Costs
East Golden Meadow Terracing Project (XBA-77)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	531.900
Environmental Compliance	50.100
Land Rights	144.000
Supervision and Administration	620.000
TOTAL	1,346.000
Phase 2 Costs	
Construction + 25% Contingency	8,864.850
Inspection	443.000
TOTAL	9,307.850
GRAND TOTAL OF ALL PHASES	10,653.850

Table C-21c
Periodic Costs
East Golden Meadow Terracing Project (XBA-77)

Description	Frequency	Cost (\$)
Monitoring	Per year	5,000

Table C-22a
Estimated Construction Cost
Timbalier Island Dune and Marsh Creation (XTE-45a)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mobilization and Demobilization	1	LS	1,000.000	1,000.000
2	Hydraulic dredging	3,809.556	CY	2.15	8,190.544
3	Containment dikes	68.444	CY	3.00	205.333
4	Grade and Shape	140	ST	1.000	140.000
5	Vegetation	321	AC	3.000	964.187
6	Snow Fence	14.000	LF	6.60	92.400
	CONSTRUCTION COST				10,592.465
	CONSTRUCTION COST + 25% CONTINGENCIES				12,710.958

Table C-22b
Breakdown of Phased Costs
Timbalier Island Dune and Marsh Creation (XTE-45a)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	764.893
Environmental Compliance	30.000
Real Estate & Permitting	100.000
Supervision and Administration	762.657
TOTAL	1.657.550
Phase 2 Costs	
Construction + 25% Contingency	12,710.958
Supervision and Inspection	225.000
TOTAL	12,935.958
GRAND TOTAL OF ALL PHASES	14,593.508

Table C-22c
Periodic Costs
Timbalier Island Dune and Marsh Creation (XTE-45a)

Description	Frequency	Cost (\$)
Operations & Maintenance		0
Corps Administration	Per year	500
Monitoring	Per year	4.896

Table C-23a
Estimated Construction Cost
Grand Pierre Island Restoration (XBA-1c)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mobilization and Demobilization	1	LS	1,000.000	1,000.000
2	Hydraulic dredging	1,097.492	CY	2.30	2,524.231
3	Containment dikes	38.867	CY	3.00	116.600
4	Grade and Shape	80	ST	1,000	80,000
5	Vegetation	89	AC	3,000	268,285
6	Snow Fence	7,950	LF	6.60	52,470
	CONSTRUCTION COST				4,041,586
	CONSTRUCTION COST + 25% CONTINGENCIES				4,849,903

Table C-23b
Breakdown of Phased Costs
Grand Pierre Island Restoration (XBA-1c)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	390.113
Environmental Compliance	30.000
Real Estate & Permitting	100.000
Supervision and Administration	290.994
TOTAL	811.107
Phase 2 Costs	
Construction + 25% Contingency	4,849.903
Supervision and Inspection	90.000
TOTAL	4,939.903
GRAND TOTAL OF ALL PHASES	5,751.010

Table C-23c
Periodic Costs
Grand Pierre Island Restoration (XBA-1c)

Description	Frequency	Cost (\$)
Operations & Maintenance		0
Corps Administration	Per year	500
Monitoring	Per year	4.896

Table C-24a
Estimated Construction Cost

Freshwater Bayou Canal Shoreline Stabilization and Hydrologic Restoration (Schooner Bayou to the GIWW) (XME-28/33)					
Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	60.000	60.000
2	Stone	171.226	TN	23	3,938.200
3	Geotextile	130.000	SY	3	390.000
4	2 Canal Closures	2,800	CY	6	16.800
5	Flotation Channel	1	LS	480.000	480.000
6	Marker Piles	1,500	LF	12	18.000
	CONSTRUCTION COST				4,903.000
	CONSTRUCTION COST + 25% CONTINGENCY				6,128.750

Table C-24b
Breakdown of Phased Costs

Freshwater Bayou Canal Shoreline Stabilization and Hydrologic Restoration (Schooner Bayou to the GIWW) (XME-28/33)	
Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	367.725
Environmental Compliance	103.000
Land Rights	37.000
Supervision and Administration	306.438
TOTAL	814.163
Phase 2 Costs	
Construction + 25% Contingency	6,128.750
Inspection	306.438
TOTAL	6,435.188
GRAND TOTAL OF ALL PHASES	7,249.351

Table C-24c
Operation & Maintenance Costs

Freshwater Bayou Canal Shoreline Stabilization and Hydrologic Restoration (Schooner Bayou to the GIWW) (XME-28/33)			
Description	Cost (\$)		
	TY3	TY7	TY14
Post-Construction Costs			
Mobilization/Demobilization	60,000	60,000	60,000
Canal closures	8,400	8,400	8,400
Stone	1,012,233	1,012,233	1,012,233
Contingency	270,158	270,158	270,158
Total Post Construction Costs	1,350,791	1,350,791	1,350,791
Engineering, Design, & Administrative Costs			
Engineering and Design	40,523	40,523	40,523
Administrative	27,016	27,016	27,016
Inspection	67,540	67,540	67,540
Total E. D. & A Costs	135,079	135,079	135,079
TOTAL OPERATION & MAINTENANCE COSTS	1,485,870	1,485,870	1,485,870

Table C-25a
Estimated Construction Cost
New Cut Dune and Marsh Creation (TE-11a)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mobilization and Demobilization	1	LS	1,000.000	1,000.000
2	Hydraulic dredging	1,517.475	CY	2.15	3,262.571
3	Containment dikes	12,956	CY	3.00	38,867
4	Grade and Shape	26	ST	1,000	26,000
5	Vegetation	61	AC	3,000	183,000
6	Rock Plug	2,628	TN	35	91,967
7	Snow Fence	3,000	LF	6.60	19,800
	CONSTRUCTION COST				4,622,204
	CONSTRUCTION COST + 25% CONTINGENCIES				5,777,755

Table C-25b
Breakdown of Phased Costs
New Cut Dune and Marsh Creation (TE-11a)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	365,288
Environmental Compliance	30,000
Real Estate & Permitting	50,000
Supervision and Administration	346,665
TOTAL	791,953
Phase 2 Costs	
Construction + 25% Contingency	5,777,755
Supervision and Inspection	90,000
TOTAL	5,867,755
GRAND TOTAL OF ALL PHASES	6,659,708

Table C-25c
Periodic Costs
New Cut Dune and Marsh Creation (TE-11a)

Description	Frequency	Cost (\$)
Operations & Maintenance	@ year 20	3,000
Corps Administration	Per year	500
Monitoring	Per year	4,896

Table C-26a
Estimated Construction Cost
North Bully Camp Outfall Management (XTE-58a)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Fixed crested weir w/ boat bay	1	LS	220,000	220,000
2	Sheet piling plug	1	LS	410,000	410,000
3	Fixed crested weir w/barge bay	1	LS	623,000	623,000
4	Fixed crested weir (replacement)	1	LS	66,000	66,000
5	Fixed crested weir w/barge bay	1	LS	700,000	700,000
6	Sheet piling plug	1	LS	295,000	295,000
7	Embankment Restoration <Intermittent Spoil Placement>				
	Earthfill	15,334	CY	3.00	46,000
	Geotextile	13,804	SY	3.00	42,000
	Vegetative planting	1	LS		55,000
8	Embankment Restoration II <Catfish Lake Levee>				
	Earthfill	34,316	CY	4.00	138,000
	Geotextile	25,173	SY	3.00	76,000
	Vegetative planting	1	LS		83,000
9	Mob/Demobilization	1	LS		150,000
	CONSTRUCTION COST				2,904,000
	CONSTRUCTION COST + 25% CONTINGENCY				3,630,000

Table C-26b
Breakdown of Phased Costs
North Bully Camp Outfall Management (XTE-58a)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	342,000
Environmental Compliance	40,000
Land Rights	100,000
Supervision and Administration	218,000
TOTAL	700,000
Phase 2 Costs	
Construction + 25% Contingency	3,630,000
Inspection	104,000
TOTAL	3,734,000
GRAND TOTAL OF ALL PHASES	4,434,000

Table C-26c
Periodic Costs
North Bully Camp Outfall Management (XTE-58a)

Description	Frequency	Cost (\$)
NRCS/DNR Inspections	Per year	3000
Corps Administration	Per year	500
Monitoring	Per year	29.291

Table C-26d
Operation & Maintenance Costs
North Bully Camp Outfall Management (XTE-58a)

Description	Cost (\$)			
	TY4	TY8	TY12	TY16
Post-Construction Costs				
Mobilization/Demobilization	15.000	15.000	15.000	15.000
Embankment Restoration I				
Restore 10% - 860 ft @ \$30.00/ft	25.800	25.800	25.800	25.800
Replace 25% - 3,900 C.Y. @ \$3.00/C.Y.	11.700	11.700	11.700	11.700
Embankment Restoration II				
Replace 25% - 8,600 C.Y. @ \$4.00/C.Y.	34.400	34.400	34.400	34.400
Replace NavAids, Restore Wingwalls	10.100	10.100	10.100	10.100
Total Post Construction Costs	97.000	97.000	97.000	97.000
Engineering, Design, & Administrative Costs				
Engineering and Design	8.300	8.300	8.300	8.300
Administrative	4.450	4.450	4.450	4.450
Engineering Surveys				
4 days @ \$1.250 per day	5.000	5.000	5.000	5.000
Inspection				
7 days @ \$750 per day	5.250	5.250	5.250	5.250
Total E, D, & A Costs	23.000	23.000	23.000	23.000
TOTAL OPERATION & MAINTENANCE COSTS	120.000	120.000	120.000	120.000

Table C-27a
Estimated Construction Cost
Weeks Bay Marsh Creation and Shore Protection/Commercial Canal Freshwater Re-direction (PTV-13)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mobilization and Demobilization	1	LS	60.000	60.000
2	Fixed Crest Weir w/Barge Bay	1	LS	532.300	532.300
3	Shore Protection <N Bay Shoreline> Vegetative Plantings	26.600	LF	3.50	93.100
4	Shore Protection <Isthmus> Steel Sheetpiling	12.600	LF	690	8.694.000
	CONSTRUCTION COST				9.379.400
	CONSTRUCTION COST + 25% CONTINGENCIES				11.725.000

Table C-27b
Breakdown of Phased Costs
Weeks Bay Marsh Creation and Shore Protection/Commercial Canal Freshwater Re-direction (PTV-13)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	759.000
Environmental Compliance	40.000
Real Estate & Permitting	50.000
Supervision and Administration	704.000
TOTAL	1,553.000
Phase 2 Costs	
Construction + 25% Contingency	11.725.000
Supervision and Inspection	70.000
TOTAL	11.795.000
GRAND TOTAL OF ALL PHASES	13,348.000

Table C-27c
Periodic Costs

Weeks Bay Marsh Creation and Shore Protection/Commercial Canal Freshwater Re-direction (PTV-13)

Description	Frequency	Cost (\$)
NRCS/DNR Inspections	Per year	3000
Corps Administration	Per year	500
Monitoring	Per year	2,434

Table C-27d
Operation & Maintenance Costs

Weeks Bay Marsh Creation and Shore Protection/Commercial Canal Freshwater Re-direction (PTV-13)

Description	Cost (\$)		
	TY5	TY10	TY15
Post-Construction Costs			
Mobilization/Demobilization	10,000	10,000	10,000
Shore Protection (Sheetpiling)			
Repair Cap. Repair NavAids	10,000	10,000	10,000
Commercial Canal Str			
Repair NavAids, Wingwall Reinforce	15,000	15,000	15,000
Total Post Construction Costs	35,000	35,000	35,000
Engineering, Design, & Administrative Costs			
Engineering and Design	3,000	3,000	3,000
Administrative	3,000	3,000	3,000
Engineering Surveys			
1 days @ \$1,250 per day	1,250	1,250	1,250
Inspection			
3 days @ \$750 per day	2,250	2,250	2,250
Total E. D. & A Costs	9,500	9,500	9,500
TOTAL OPERATION & MAINTENANCE COSTS	45,000	45,000	45,000

Table C-28a
Estimated Construction Cost
Shoreline Protection at Lake Borgne (PPO-b/d/h)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	60,000	60,000
2	Stone	110,000	TN	24	2,640,000
3	Core Material	40,000	CY	35	1,400,000
4	Geotextile	120,000	SY	5	600,000
5	Marker Plates	30	EA	500	10,500
6	Flotation Channel	1	LS	567,000	567,000
	CONSTRUCTION COST				5,277,500
	CONSTRUCTION COST + 25% CONTINGENCY				6,596,875

Table C-28b
Breakdown of Phased Costs
Shoreline Protection at Lake Borgne (PPO-b/d/h)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	396,000
Environmental Compliance	125,000
Land Rights	
Supervision and Administration	198,000
TOTAL	719,000
Phase 2 Costs	
Construction + 25% Contingency	6,597,000
Inspection	330,000
TOTAL	6,927,000
GRAND TOTAL OF ALL PHASES	7,646,000

Table C-28c
Operation & Maintenance Costs
Shoreline Protection at Lake Borgne (PPO-b/d/h)

Description	Cost (\$)			
	TY2	TY4	TY7	TY15
Post-Construction Costs				
Mobilization/Demobilization	60.000	60.000	60.000	60.000
Stone	840.000	1.080.000	1.080.000	1.080.000
Raise Marker Plates	3.000	3.000	3.000	3.000
Flotation Channel	567.000	567.000	567.000	567.000
Contingency	367.500	427.500	427.500	427.500
Total Post Construction Costs	1.837.500	2.137.500	2.137.500	2.137.500
Engineering, Design, & Administrative Costs				
Engineering and Design	128.000	128.000	128.000	128.000
Administrative	64.000	64.000	64.000	64.000
Inspection	107.000	107.000	107.000	107.000
Total E. D. & A Costs	299.000	299.000	299.000	299.000
TOTAL OPERATION & MAINTENANCE COSTS	2.136.500	2.436.500	2.436.500	2.436.500

Table C-29a
Estimated Construction Cost
Constriction at Lighthouse Bayou (PCS-32)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	50.000	50.000
2	Geotextile	5.600	SY	3	17.000
3	Loose Rock Riprap	3.600	TN	50	180.000
4	Embankment	3.500	CY	20	70.000
5	Vegetative Plantings	1	LS	53.000	53.000
6	Trenasse Closure	6	EA	13.000	78.000
7	Signs and Markers	2	EA	2.000	4.000
	CONSTRUCTION COST				452.000
	CONSTRUCTION COST + 25% CONTINGENCY				565.000

Table C-29b
Breakdown of Phased Costs
Constriction at Lighthouse Bayou (PCS-32)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	92.000
Environmental Compliance	55.000
Land Rights	60.000
Supervision and Administration	45.000
TOTAL	252.000
Phase 2 Costs	
Construction + 25% Contingency	565.000
Inspection	68.000
TOTAL	633.000
GRAND TOTAL OF ALL PHASES	885.000

Table C-29c
Periodic Costs
Constriction at Lighthouse Bayou (PCS-32)

Description	Frequency	Cost (\$)
Inspections	Per year	3.000
Corps Administration	Per year	500
Monitoring	Per year	29.291

Table C-29d
Operation & Maintenance Costs
Constriction at Lighthouse Bayou (PCS-32)

Description	Cost (\$)	
	TY7	TY14
Post-Construction Costs		
Mobilization/Demobilization	10,000	10,000
Replace 500 tons of rock riprap section	25,000	25,000
Replace 1,000 cy of earthen embankment	20,000	20,000
Trenasse maintenance	10,000	10,000
Replace signs	4,000	4,000
Total Post Construction Costs	69,000	69,000
Total Post Construction Costs + 10% contingency	76,000	76,000
Engineering, Design, & Administrative Costs		
Engineering and Design	7,000	7,000
Administrative	9,000	9,000
Engineering Surveys		
4 days @ \$1,250 per day	5,000	5,000
Inspection		
14 days @ \$765 per day	11,000	11,000
Total E. D. & A Costs	32,000	32,000
TOTAL OPERATION & MAINTENANCE COSTS	108,000	108,000

Table C-30a
Estimated Construction Cost
Restore Original Mermentau River Project (PME-17)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Mob/Demobilization	1	LS	350,000	350,000
2	Dredging	305,000	CY	3.2	976,000
3	Geobags	3,600	EA	75	270,000
	CONSTRUCTION COST				1,596,000
	CONSTRUCTION COST + 25% CONTINGENCY				1,995,000

Table C-30b
Breakdown of Phased Costs
Restore Original Mermentau River Project (PME-17)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	119,700
Land Rights	40,000
Supervision and Administration	159,600
TOTAL	319,300
Phase 2 Costs	
Construction + 25% Contingency	1,995,000
Inspection	150,000
TOTAL	2,145,000
GRAND TOTAL OF ALL PHASES	2,464,300

Table C-31a
Estimated Construction Cost
Lake Athanasio Oyster Reef Demonstration Project (BS-DEMO)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	CONSTRUCTION COST	1	LS	376,000	376,000
	CONSTRUCTION COST + 25% CONTINGENCY				470,000

Table C-31b
Breakdown of Phased Costs
Lake Athanasio Oyster Reef Demonstration Project (BS-DEMO)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	44.000
Environmental Compliance	20.000
Land Rights	20.000
Supervision and Administration	16.000
TOTAL	100.000
Phase 2 Costs	
Construction + 25% Contingency	376.000
Inspection	8.000
Monitoring-Post Construction	100.000
TOTAL	484.000
GRAND TOTAL OF ALL PHASES	584.000

Table C-31c
Periodic Costs
Lake Athanasio Oyster Reef Demonstration Project (BS-DEMO)

Description	Frequency	Cost (\$)
Corps Administration	Per year	500

Table C-32a
Estimated Construction Cost
Mandalay Bank Protection Demo Project (XTE-DEMO)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Planting mob-demob				10.000
2	Earth/mat work mob-demob				30.000
3	Fenced cutgrass plantings (Site H)	850	LF	65	55.250
4	Submarine armored levee(Site C)	903	LF	100	90.300
5	Unfenced cutgrass plantings (Site I)	705	LF	15	10.575
6	Willow stakes (site J)	376	LF	28	10.528
7	Armored earth levee (Site M)	567	LF	143	81.081
8	Fenced cutgrass plantings w protect (Site N)	382	LF	150	57.300
9	Undetermined (Site P)	553	LF	150	82.950
10	Fenced cutgrass plantings (on bank)	600	LF	65	39.000
11	Concr. Mats on bank w PVC berm (on bank)	600	LF	80	48.000
12	Fenced cutgrass plantings w protect (on bank)	600	LF	150	90.000
	CONSTRUCTION COST				604.984
	CONSTRUCTION COST + 25% CONTINGENCIES				756.230

Table C-32b
Breakdown of Phased Costs
Mandalay Bank Protection Demo Project (XTE-DEMO)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	125.374
Environmental Compliance	35.000
Real Estate & Permitting	85.000
Supervision and Administration	83.186
TOTAL	328.560
Phase 2 Costs	
Construction + 25% Contingency	756.230
Supervision and Inspection	18.750
TOTAL	774.980
GRAND TOTAL OF ALL PHASES	1,103.540

Table C-32c
Periodic Costs
Mandalay Bank Protection Demo Project (XTE-DEMO)

Description	Frequency	Cost (\$)
Engineering Inspections (x 3yrs)	Per year	4000
Corps Administration (x 5 yrs)	Per year	500
Monitoring	Per year	10.000

Table C-32d
Operation & Maintenance Costs
Mandalay Bank Protection Demo Project (XTE-DEMO)

Description	Cost (\$)		
	TY1	TY3	TY5
Monitoring Plan	25,000	25,000	25,000
TOTAL OPERATION & MAINTENANCE COSTS	25,000	25,000	25,000

Table C-33a
Estimated Construction Cost
Periodic Introduction of Sediment and Nutrients at Selected Diversion Sites (MR-DEMO)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Four week diversion demonstrations	3	EA	336.587	1,009.760
	CONSTRUCTION COST				1,009.760
	CONSTRUCTION COST + 25% CONTINGENCY				1,262.200

Table C-33b
Breakdown of Phased Costs
Periodic Introduction of Sediment and Nutrients at Selected Diversion Sites (MR-DEMO)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	37,270
Land Rights	10,640
Supervision and Administration	41,480
TOTAL	89,390
Phase 2 Costs	
Construction + 25% Contingency	1,262,200
Inspection	78,530
TOTAL	1,340,730
GRAND TOTAL OF ALL PHASES	1,430,120

Table C-34a
Estimated Construction Cost
Grand Temple Shoreline Protection Demonstration Project (BA-DEMO)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Shoreline Protection	2,500	LF	200	500,000
	CONSTRUCTION COST				500,000
	CONSTRUCTION COST + 25% CONTINGENCY				625,000

Table C-34b
Breakdown of Phased Costs
Grand Temple Shoreline Protection Demonstration Project (BA-DEMO)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	66,000
Environmental Compliance	40,000
Land Rights	25,000
Supervision and Administration	57,000
TOTAL	188,000
Phase 2 Costs	
Construction + 25% Contingency	625,000
Inspection	5,000
TOTAL	630,000
GRAND TOTAL OF ALL PHASES	818,000

Table C-34c
Periodic Costs
Grand Temple Shoreline Protection Demonstration Project (BA-DEMO)

Description	Frequency	Cost (\$)
Corps Administration	Per year	500
Monitoring	Per year	15,000

Table C-34d
Operation & Maintenance Costs
Grand Temple Shoreline Protection Demonstration Project (BA-DEMO)

Description	Cost (\$)		
	TY1	TY3	TY5
Engineering, Design, & Administrative Costs			
Monitoring	15,000	15,000	15,000
Total E. D. & A Costs	15,000	15,000	15,000
TOTAL OPERATION & MAINTENANCE COSTS	15,000	15,000	15,000

Table C-35a
Estimated Construction Cost
Terrebonne Bay Shore Protection Demonstration Project (XTE-DEMO)

Item	Description	Quantity	Unit	Unit Cost(\$)	Amount(\$)
1	Foreshore concr mat with PVC levee (Site A)	400	LF	67	26,800
2	Onbank concr matt (Site B)	400	LF	57	22,800
3	Single row 2' Ajacks (Site C)	400	LF	30	12,000
4	Side by side row 2' Ajacks (Site D)	400	LF	50	20,000
5	Concrete matt over PVC & earthen levee (Site E)	400	LF	143	57,200
6	Grating reef (Site F)	400	LF	70	28,000
7	Onbank concr matt (Site G)	400	LF	57	22,800
8	Single row 4' Ajacks (Site H)	400	LF	150	60,000
9	Three row 2' Ajacks (Site I)	400	LF	80	32,000
10	CEI Reefblock (Site J)	400	LF	192	76,800
	CONSTRUCTION COST				358,400
	CONSTRUCTION COST + 25% CONTINGENCIES				448,000

Table C-35b
Breakdown of Phased Costs
Terrebonne Bay Shore Protection Demonstration Project (XTE-DEMO)

Description	Amount(\$)
Phase 1 Costs	
Engineering and Design	65,840
Environmental Compliance	25,000
Real Estate & Permitting	50,000
Supervision and Administration	21,504
TOTAL	162,344
Phase 2 Costs	
Construction + 25% Contingency	448,000
Supervision and Inspection	50,000
TOTAL	498,000
GRAND TOTAL OF ALL PHASES	660,344

Table C-35c
Periodic Costs
Terrebonne Bay Shore Protection Demonstration Project (XTE-DEMO)

Description	Frequency	Cost (\$)
Engineering Inspections (x 8yrs)	Per year	4,000
Corps Administration (x 8yrs)	Per year	500
Monitoring	Per year	10,000

Table C-35d
Operation & Maintenance Costs
Terrebonne Bay Shore Protection Demonstration Project (XTE-DEMO)

Description	Cost (\$)			
	TY1	TY3	TY5	TY8
Monitoring	40,000	40,000	40,000	40,000
TOTAL OPERATION & MAINTENANCE COSTS	40,000	40,000	40,000	40,000

Coastal Wetlands Planning, Protection, and
Restoration Act

9th Priority Project List Report

Appendix D

Economics Computational Summary
For Candidate Projects

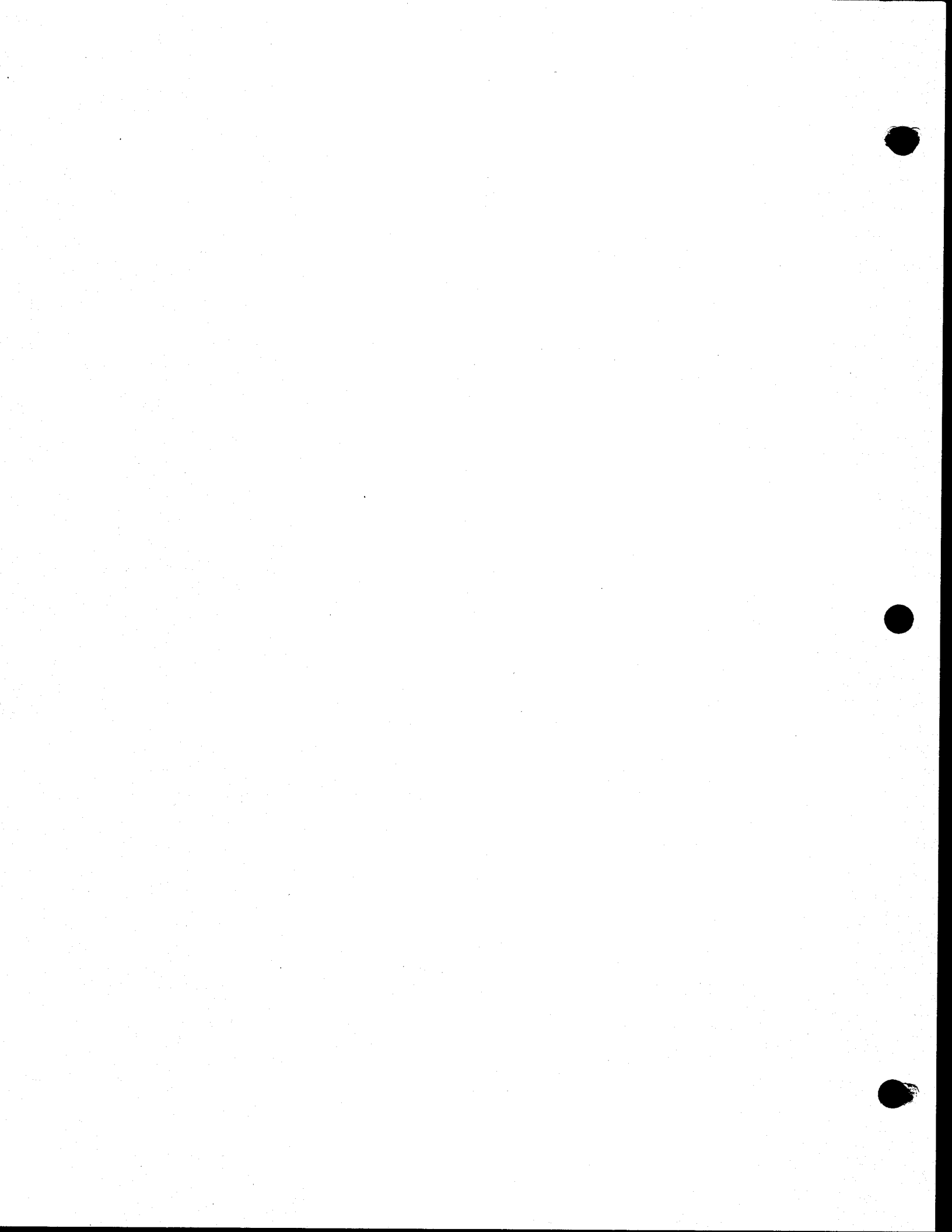


Appendix D

Economics Computational Summary For Candidate Projects

Table of Contents

<u>Project Name</u>	<u>Page Number</u>
Opportunistic Use of Bonnet Carré Spillway (XPO-55a).....	D-1
Northern Chandeleur Islands Marsh Restoration (XPO-95).....	D-5
Freshwater Introduction South of Hwy 82 to the Eastern Portion of Rockefeller Refuge Project (PME-7a)	D-9
Southwest Lake Pontchartrain Sediment Trapping Project (XPO-54a).....	D-13
South Lake Decade Atchafalaya Freshwater/Sediment Introduction (PTE-28).....	D-17
Four Mile Canal/Little White Lake Hydrologic Restoration (XTV-30)	D-21
Castille Pass Channel Sediment Delivery (XAT-11).....	D-25
LaBranche Wetlands Terracing, Planting, and Shoreline Protection (PPO-7a).....	D-29
Black Bayou Culverts Hydrologic Restoration (CS-16).....	D-33
Perry Ridge West Bank Stabilization (PCS-26 ii)	D-37
Freshwater Bayou Bank Stabilization and Hydrologic Restoration (Belle Isle Canal to Lock) (East) (XTV-27)	D-41
North Houma Navigational Channel Salinity Control Project (TE-8a)	D-45
Little Pecan Bayou Hydrologic Restoration (XME-42a).....	D-49
Barataria Basin Landbridge Shoreline Protection, Ph. 3 (XBA-63 iii-2a).....	D-53
LA Highway 1 Marsh Creation (BA-32a)	D-57
Tangipahoa/Pontchartrain Shoreline Protection (PO-13)	D-61
Grand/White Lake Land Bridge Protection Project (PME-18).....	D-65
Raccoon Island Restoration (PTE-15-viii).....	D-73
Amoretta Freshwater Diversion (BA-17a).....	D-77
East/West Grand Terre Restoration Project (XBA-1).....	D-81
East Golden Meadow Terracing Project (XBA-77).....	D-85
Timbalier Island Dune and Marsh Creation (XTE-45a)	D-89
Grand Pierre Island Restoration (XBA-1c).....	D-93
Freshwater Bayou Canal Shoreline Stabilization and Hydrologic Restoration (Schooner Bayou to the GIWW) (West) (XME-28/33)	D-97
New Cut Dune and Marsh Creation (TE-11a)	D-101
North Bully Camp Outfall Management (XTE-58).....	D-105
Weeks Bay Marsh Creation and Shore Protection/Commercial Canal Freshwater Re-Direction (PTV-13)	D-109
Shoreline Protection at Lake Borgne (PPO-b/d/h).....	D-113
Constriction at Lighthouse Bayou (PCS-32)	D-117
Restore Original Mermentau River Project (PME-17)	D-121
Lake Athanasio Oyster Reef Demonstration Project (BS-DEMO).....	D-125
Mandalay Bank Protection Demonstration Project (XTE-DEMO)	D-129
Periodic Introduction of Sediment and Nutrients at Selected Diversion Sites Demonstration Project (MR-DEMO).....	D-133
Grand Temple Shoreline Protection Demonstration Project (BA-DEMO).....	D-137
Terrebonne Bay Shore Protection Demonstration Project (XTE-DEMO).....	D-141



**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

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

Project Construction Years:	2	Total Project Years	22
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$86,854	Total Fully Funded Costs	\$1,084,080

	<u>Present Worth</u>	<u>Average Annual</u>
Annual Charges		
Interest & Amortization	\$96,783	\$8,871
Monitoring	\$435,517	\$39,919
O & M Costs	\$0	\$0
Other Costs	\$6,851	\$628
Total	\$539,200	\$49,418
Average Annual Habitat Units		121
Cost Per Habitat Unit		\$408
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

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

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2 Compound	2000	\$50,000	\$0	\$12,500	\$5,000	\$628	\$0	\$0	\$0	\$68,128
1 Compound	2001	\$0	\$0	\$12,500	\$5,000	\$628	\$0	\$0	\$0	\$18,128
TOTAL		\$50,000	\$0	\$25,000	\$10,000	\$1,256	\$0	\$0	\$0	\$86,256

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2000	\$48,714	\$0	\$0
1 Compound	2001	\$32,493	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2002	\$32,493	\$0	\$628
2 Discount	2003	\$32,493	\$0	\$628
3 Discount	2004	\$32,493	\$0	\$628
4 Discount	2005	\$32,493	\$0	\$628
5 Discount	2006	\$32,493	\$0	\$628
6 Discount	2007	\$32,493	\$0	\$628
7 Discount	2008	\$32,493	\$0	\$628
8 Discount	2009	\$32,493	\$0	\$628
9 Discount	2010	\$32,493	\$0	\$628
10 Discount	2011	\$32,493	\$0	\$628
11 Discount	2012	\$32,493	\$0	\$628
12 Discount	2013	\$32,493	\$0	\$628
13 Discount	2014	\$32,493	\$0	\$628
14 Discount	2015	\$32,493	\$0	\$628
15 Discount	2016	\$32,493	\$0	\$628
16 Discount	2017	\$32,493	\$0	\$628
17 Discount	2018	\$32,493	\$0	\$628
18 Discount	2019	\$32,493	\$0	\$628
19 Discount	2020	\$32,493	\$0	\$628
20 Discount	2021	\$0	\$0	\$628
Total		\$698,574	\$0	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

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

Present Valued Costs		Total Discounted Costs		Amortized Costs		Total First Cost					
Year	Discount Rate	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212		\$60,610	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	1.137	2000	\$0	\$0	\$14,211	\$5,684	\$714	\$0	\$0	\$0	\$77,454
1	1.066	2001	\$0	\$0	\$13,328	\$5,331	\$670	\$0	\$0	\$0	\$19,329
Total			\$60,610	\$0	\$27,539	\$11,016	\$1,384	\$0	\$0	\$0	\$96,783

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2000	\$55,382	\$0	\$0
1	1.066	2001	\$34,646	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2002	\$30,474	\$0	\$589
-2	0.880	2003	\$28,581	\$0	\$552
-3	0.825	2004	\$26,805	\$0	\$518
-4	0.774	2005	\$25,139	\$0	\$486
-5	0.726	2006	\$23,577	\$0	\$456
-6	0.681	2007	\$22,112	\$0	\$427
-7	0.638	2008	\$20,738	\$0	\$401
-8	0.599	2009	\$19,450	\$0	\$376
-9	0.561	2010	\$18,241	\$0	\$353
-10	0.527	2011	\$17,108	\$0	\$331
-11	0.494	2012	\$16,045	\$0	\$310
-12	0.463	2013	\$15,048	\$0	\$291
-13	0.434	2014	\$14,113	\$0	\$273
-14	0.407	2015	\$13,236	\$0	\$256
-15	0.382	2016	\$12,414	\$0	\$240
-16	0.358	2017	\$11,642	\$0	\$225
-17	0.336	2018	\$10,919	\$0	\$211
-18	0.315	2019	\$10,241	\$0	\$198
-19	0.296	2020	\$9,604	\$0	\$186
-20	0.277	2021	\$0	\$0	\$174
Total			\$435,517	\$0	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

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

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
		\$1,084,980				\$99,366					
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspectio	Contingency	First Cost Construction	Total First Cost
5		0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4		0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3		0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	1.000	2000	\$50,000	\$0	\$12,500	\$5,000	\$628	\$0	\$0	\$0	\$68,128
1	1.033	2001	\$0	\$0	\$12,913	\$5,165	\$649	\$0	\$0	\$0	\$18,726
TOTAL			\$50,000	\$0	\$25,413	\$10,165	\$1,277	\$0	\$0	\$0	\$86,854

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.000	2000	\$48,714	\$0	\$0
1	1.033	2001	\$33,565	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.067	2002	\$34,673	\$0	\$670
-2	1.102	2003	\$35,817	\$0	\$692
-3	1.139	2004	\$36,999	\$0	\$715
-4	1.176	2005	\$38,220	\$0	\$739
-5	1.215	2006	\$39,481	\$0	\$763
-6	1.255	2007	\$40,784	\$0	\$788
-7	1.297	2008	\$42,130	\$0	\$814
-8	1.339	2009	\$43,520	\$0	\$841
-9	1.384	2010	\$44,957	\$0	\$869
-10	1.429	2011	\$46,440	\$0	\$898
-11	1.476	2012	\$47,973	\$0	\$927
-12	1.525	2013	\$49,556	\$0	\$958
-13	1.575	2014	\$51,191	\$0	\$989
-14	1.627	2015	\$52,880	\$0	\$1,022
-15	1.681	2016	\$54,625	\$0	\$1,056
-16	1.737	2017	\$56,428	\$0	\$1,091
-17	1.794	2018	\$58,290	\$0	\$1,127
-18	1.853	2019	\$60,214	\$0	\$1,164
-19	1.914	2020	\$62,201	\$0	\$1,202
-20	1.977	2021	\$0	\$0	\$1,242
Total			\$978,659	\$0	\$18,566

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Chandeleur Island Vegetation Planting - (XPO-95)

Project Construction Years:	2	Total Project Years	22
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$1,242,237	Total Fully Funded Costs	\$1,435,066

	Present Worth	Average Annual
Annual Charges		
Interest & Amortization	\$1,295,290	\$118,726
Monitoring	\$84,942	\$7,786
O & M Costs	\$0	\$0
Other Costs	\$6,851	\$628
Total	\$1,387,100	\$127,139
Average Annual Habitat Units		194
Cost Per Habitat, Unit		655
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Chandeleur Island Vegetation Planting - (XPO-95)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2 Compound	2000	\$85,500	\$10,000	\$20,488	\$8,195	\$628	\$0	\$0	\$0	\$124,811
1 Compound	2001	\$0	\$0	\$29,268	\$11,708	\$628	\$45,000	\$199,025	\$796,100	\$1,081,729
TOTAL		\$85,500	\$10,000	\$49,756	\$19,903	\$1,256	\$45,000	\$199,025	\$796,100	\$1,206,540

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2000	\$18,828	\$0	\$0
1 Compound	2001	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2002	\$5,431	\$0	\$628
2 Discount	2003	\$5,431	\$0	\$628
3 Discount	2004	\$5,431	\$0	\$628
4 Discount	2005	\$5,431	\$0	\$628
5 Discount	2006	\$5,431	\$0	\$628
6 Discount	2007	\$5,431	\$0	\$628
7 Discount	2008	\$5,431	\$0	\$628
8 Discount	2009	\$5,431	\$0	\$628
9 Discount	2010	\$5,431	\$0	\$628
10 Discount	2011	\$5,431	\$0	\$628
11 Discount	2012	\$5,431	\$0	\$628
12 Discount	2013	\$5,431	\$0	\$628
13 Discount	2014	\$5,431	\$0	\$628
14 Discount	2015	\$5,431	\$0	\$628
15 Discount	2016	\$5,431	\$0	\$628
16 Discount	2017	\$5,431	\$0	\$628
17 Discount	2018	\$5,431	\$0	\$628
18 Discount	2019	\$5,431	\$0	\$628
19 Discount	2020	\$5,431	\$0	\$628
20 Discount	2021	\$0	\$0	\$628
Total		\$127,448	\$0	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Chandeleur Island Vegetation Planting - (XPO-95)

Present Valued Costs		Total Discounted Costs	Amortized Costs		Total First Cost						
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	1.137	2000	\$97,204	\$11,369	\$23,292	\$9,317	\$714	\$0	\$0	\$0	\$141,896
1	1.066	2001	\$0	\$0	\$31,207	\$12,483	\$670	\$47,981	\$212,210	\$848,842	\$1,153,393
Total			\$97,204	\$11,369	\$54,500	\$21,800	\$1,384	\$47,981	\$212,210	\$848,842	\$1,295,290

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2000	\$21,405	\$0	\$0
1	1.066	2001	\$5,791	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2002	\$5,094	\$0	\$589
-2	0.880	2003	\$4,777	\$0	\$552
-3	0.825	2004	\$4,480	\$0	\$518
-4	0.774	2005	\$4,202	\$0	\$486
-5	0.726	2006	\$3,941	\$0	\$456
-6	0.681	2007	\$3,696	\$0	\$427
-7	0.638	2008	\$3,466	\$0	\$401
-8	0.599	2009	\$3,251	\$0	\$376
-9	0.561	2010	\$3,049	\$0	\$353
-10	0.527	2011	\$2,859	\$0	\$331
-11	0.494	2012	\$2,682	\$0	\$310
-12	0.463	2013	\$2,515	\$0	\$291
-13	0.434	2014	\$2,359	\$0	\$273
-14	0.407	2015	\$2,212	\$0	\$256
-15	0.382	2016	\$2,075	\$0	\$240
-16	0.358	2017	\$1,946	\$0	\$225
-17	0.336	2018	\$1,825	\$0	\$211
-18	0.315	2019	\$1,712	\$0	\$198
-19	0.296	2020	\$1,605	\$0	\$186
-20	0.277	2021	\$0	\$0	\$174
Total			\$84,942	\$0	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Chandeleur Island Vegetation Planting - (XPO-95)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	1.000	2000	\$85,500	\$10,000	\$20,488	\$8,195	\$628	\$0	\$0	\$0	\$124,811
1	1.033	2001	\$0	\$0	\$30,234	\$12,094	\$649	\$46,485	\$205,593	\$822,371	\$1,117,426
TOTAL			\$85,500	\$10,000	\$50,722	\$20,289	\$1,277	\$46,485	\$205,593	\$822,371	\$1,242,237

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.000	2000	\$18,828	\$0	\$0
1	1.033	2001	\$5,610	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.067	2002	\$5,795	\$0	\$670
-2	1.102	2003	\$5,987	\$0	\$692
-3	1.139	2004	\$6,184	\$0	\$715
-4	1.176	2005	\$6,388	\$0	\$739
-5	1.215	2006	\$6,599	\$0	\$763
-6	1.255	2007	\$6,817	\$0	\$788
-7	1.297	2008	\$7,042	\$0	\$814
-8	1.339	2009	\$7,274	\$0	\$841
-9	1.384	2010	\$7,514	\$0	\$869
-10	1.429	2011	\$7,762	\$0	\$898
-11	1.476	2012	\$8,018	\$0	\$927
-12	1.525	2013	\$8,283	\$0	\$958
-13	1.575	2014	\$8,556	\$0	\$989
-14	1.627	2015	\$8,839	\$0	\$1,022
-15	1.681	2016	\$9,130	\$0	\$1,056
-16	1.737	2017	\$9,432	\$0	\$1,091
-17	1.794	2018	\$9,743	\$0	\$1,127
-18	1.853	2019	\$10,064	\$0	\$1,164
-19	1.914	2020	\$10,396	\$0	\$1,202
-20	1.977	2021	\$0	\$0	\$1,242
Total			\$174,263	\$0	\$18,566

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Highway 82 Freshwater Introduction (PME-7a)

Project Construction Years:	5	Total Project Years	25
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$3,897,222	Total Fully Funded Costs	\$5,887,199

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$3,966,259	\$363,545
Monitoring	\$471,438	\$43,212
O & M Costs	\$307,625	\$28,197
Other Costs	\$6,851	\$628
Total	\$4,752,200	\$435,582
Average Annual Habitat Units		553
Cost Per Habitat Unit		\$788
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Highway 82 Freshwater Introduction (PME-7a)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Construction Cost	Total First Cost
5 Compound	2000	\$61,282	\$12,727	\$21,543	\$8,614	\$628	\$0	\$0	\$0	\$104,794
4 Compound	2001	\$105,055	\$21,818	\$36,931	\$14,767	\$628	\$0	\$0	\$0	\$179,199
3 Compound	2002	\$105,055	\$21,818	\$36,931	\$14,767	\$628	\$0	\$0	\$0	\$179,199
2 Compound	2003	\$17,509	\$3,636	\$36,931	\$14,767	\$628	\$133,269	\$291,388	\$1,165,554	\$1,663,683
1 Compound	2004	\$0	\$0	\$18,465	\$7,384	\$628	\$114,231	\$249,762	\$999,046	\$1,389,515
TOTAL		\$288,900	\$60,000	\$150,800	\$60,300	\$3,140	\$247,500	\$541,150	\$2,164,600	\$3,516,390

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2002	\$52,769	\$0	\$0
2 Compound	2003	\$32,493	\$0	\$0
1 Compound	2004	\$32,493	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2005	\$32,493	\$1,950	\$628
2 Discount	2006	\$32,493	\$1,950	\$628
3 Discount	2007	\$32,493	\$1,950	\$628
4 Discount	2008	\$32,493	\$1,950	\$628
5 Discount	2009	\$32,493	\$5,595	\$628
6 Discount	2010	\$32,493	\$1,950	\$628
7 Discount	2011	\$32,493	\$1,950	\$628
8 Discount	2012	\$32,493	\$1,950	\$628
9 Discount	2013	\$32,493	\$5,595	\$628
10 Discount	2014	\$32,493	\$531,156	\$628
11 Discount	2015	\$32,493	\$5,595	\$628
12 Discount	2016	\$32,493	\$1,950	\$628
13 Discount	2017	\$32,493	\$1,950	\$628
14 Discount	2018	\$32,493	\$1,950	\$628
15 Discount	2019	\$32,493	\$1,950	\$628
16 Discount	2020	\$32,493	\$1,950	\$628
17 Discount	2021	\$32,493	\$5,595	\$628
18 Discount	2022	\$32,493	\$1,950	\$628
19 Discount	2023	\$0	\$1,950	\$628
20 Discount	2024	\$0	\$1,950	\$628
Total		\$702,629	\$582,786	\$12,560

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Highway 82 Freshwater Introduction (PME-7a)

Present Valued Costs		Total Discounted Costs		Amortized Costs		Total First Cost					
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Construction	Total First Cost
5	1.378	2000	\$84,455	\$17,540	\$29,689	\$11,872	\$865	\$0	\$0	\$0	\$144,422
4	1.293	2001	\$135,785	\$28,200	\$47,733	\$19,087	\$812	\$0	\$0	\$0	\$231,617
3	1.212	2002	\$127,348	\$26,448	\$44,768	\$17,901	\$761	\$0	\$0	\$0	\$217,226
2	1.137	2003	\$19,906	\$4,134	\$41,986	\$16,789	\$714	\$151,512	\$331,276	\$1,325,105	\$1,891,423
1	1.066	2004	\$0	\$0	\$19,689	\$7,873	\$670	\$121,799	\$266,308	\$1,065,233	\$1,481,571
Total			\$367,494	\$76,323	\$183,865	\$73,522	\$3,822	\$273,311	\$597,585	\$2,390,338	\$3,966,259

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2002	\$63,967	\$0	\$0
2	1.137	2003	\$36,941	\$0	\$0
1	1.066	2004	\$34,646	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2005	\$30,474	\$1,829	\$589
-2	0.880	2006	\$28,581	\$1,715	\$552
-3	0.825	2007	\$26,805	\$1,609	\$518
-4	0.774	2008	\$25,139	\$1,509	\$486
-5	0.726	2009	\$23,577	\$4,060	\$456
-6	0.681	2010	\$22,112	\$1,327	\$427
-7	0.638	2011	\$20,738	\$1,245	\$401
-8	0.599	2012	\$19,450	\$1,167	\$376
-9	0.561	2013	\$18,241	\$3,141	\$353
-10	0.527	2014	\$17,108	\$279,661	\$331
-11	0.494	2015	\$16,045	\$2,763	\$310
-12	0.463	2016	\$15,048	\$903	\$291
-13	0.434	2017	\$14,113	\$847	\$273
-14	0.407	2018	\$13,236	\$794	\$256
-15	0.382	2019	\$12,414	\$745	\$240
-16	0.358	2020	\$11,642	\$699	\$225
-17	0.336	2021	\$10,919	\$1,880	\$211
-18	0.315	2022	\$10,241	\$615	\$198
-19	0.296	2023	\$0	\$576	\$186
-20	0.277	2024	\$0	\$541	\$174
Total			\$471,438	\$307,625	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Highway 82 Freshwater Introduction (PME-7a)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs					Total First Cost			
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.000	2000	\$61,282	\$12,727	\$21,543	\$8,614	\$628	\$0	\$0	\$0	\$104,794
4	1.033	2001	\$108,521	\$22,538	\$38,149	\$15,255	\$649	\$0	\$0	\$0	\$185,112
3	1.067	2002	\$112,103	\$23,282	\$39,408	\$15,758	\$670	\$0	\$0	\$0	\$191,221
2	1.102	2003	\$19,300	\$4,008	\$40,709	\$16,278	\$692	\$146,903	\$321,198	\$1,284,793	\$1,833,883
1	1.139	2004	\$0	\$0	\$21,026	\$8,408	\$715	\$130,072	\$284,398	\$1,137,593	\$1,582,212
TOTAL			\$301,206	\$62,556	\$160,835	\$64,313	\$3,354	\$276,975	\$605,597	\$2,422,386	\$539,618

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.067	2002	\$56,309	\$0	\$0
2	1.102	2003	\$35,817	\$0	\$0
1	1.139	2004	\$36,999	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.176	2005	\$38,220	\$2,294	\$739
-2	1.215	2006	\$39,481	\$2,369	\$763
-3	1.255	2007	\$40,784	\$2,448	\$788
-4	1.297	2008	\$42,130	\$2,528	\$814
-5	1.339	2009	\$43,520	\$7,494	\$841
-6	1.384	2010	\$44,957	\$2,698	\$869
-7	1.429	2011	\$46,440	\$2,787	\$898
-8	1.476	2012	\$47,973	\$2,879	\$927
-9	1.525	2013	\$49,556	\$8,533	\$958
-10	1.575	2014	\$51,191	\$836,810	\$989
-11	1.627	2015	\$52,880	\$9,106	\$1,022
-12	1.681	2016	\$54,625	\$3,278	\$1,056
-13	1.737	2017	\$56,428	\$3,386	\$1,091
-14	1.794	2018	\$58,290	\$3,498	\$1,127
-15	1.853	2019	\$60,214	\$3,614	\$1,164
-16	1.914	2020	\$62,201	\$3,733	\$1,202
-17	1.977	2021	\$64,253	\$11,064	\$1,242
-18	2.043	2022	\$66,374	\$3,983	\$1,283
-19	2.110	2023	\$0	\$4,115	\$1,325
-20	2.180	2024	\$0	\$4,251	\$1,369
Total			\$1,048,644	\$920,867	\$20,466

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Sediment Trapping at the Mouth of the Bonnet Carré (XPO-54a)

Project Construction Years:	5	Total Project Years	25
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$12,459,078	Total Fully Funded Costs	\$14,640,729

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$12,612,197	\$1,156,028
Monitoring	\$90,930	\$8,335
O & M Costs	\$637,409	\$58,425
Other Costs	\$6,851	\$628
Total	\$13,347,400	\$1,223,415
Average Annual Habitat Units		694
Cost Per Habitat Unit		\$1,763
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Sediment Trapping at the Mouth of the Bonnet Carre' (XPO-54a)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound	2000	\$186,539	\$4,242	\$68,776	\$15,714	\$628	\$0	\$0	\$0	\$275,900
4 Compound	2001	\$319,782	\$7,273	\$117,901	\$26,939	\$628	\$0	\$0	\$0	\$472,523
3 Compound	2002	\$319,782	\$7,273	\$117,901	\$26,939	\$628	\$0	\$0	\$0	\$472,523
2 Compound	2003	\$53,297	\$1,212	\$117,901	\$26,939	\$628	\$53,846	\$1,036,929	\$4,147,715	\$5,438,467
1 Compound	2004	\$0	\$0	\$58,951	\$13,469	\$628	\$46,154	\$888,796	\$3,555,185	\$4,563,183
TOTAL		\$879,400	\$20,000	\$481,430	\$110,000	\$3,140	\$100,000	\$1,925,725	\$7,702,900	\$11,232,595

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2002	\$18,828	\$0	\$0
2 Compound	2003	\$5,431	\$0	\$0
1 Compound	2004	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2005	\$5,431	\$0	\$628
2 Discount	2006	\$5,431	\$0	\$628
3 Discount	2007	\$5,431	\$3,645	\$628
4 Discount	2008	\$5,431	\$135,362	\$628
5 Discount	2009	\$5,431	\$0	\$628
6 Discount	2010	\$5,431	\$0	\$628
7 Discount	2011	\$5,431	\$0	\$628
8 Discount	2012	\$5,431	\$3,645	\$628
9 Discount	2013	\$5,431	\$553,252	\$628
10 Discount	2014	\$5,431	\$0	\$628
11 Discount	2015	\$5,431	\$0	\$628
12 Discount	2016	\$5,431	\$0	\$628
13 Discount	2017	\$5,431	\$3,645	\$628
14 Discount	2018	\$5,431	\$525,752	\$628
15 Discount	2019	\$5,431	\$0	\$628
16 Discount	2020	\$5,431	\$0	\$628
17 Discount	2021	\$5,431	\$0	\$628
18 Discount	2022	\$5,431	\$3,645	\$628
19 Discount	2023	\$0	\$0	\$628
20 Discount	2024	\$0	\$0	\$628
Total		\$127,448	\$1,228,947	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX
Sediment Trapping at the Mouth of the Bonnet Carré (XPO-54a)**

Present Valued Costs		Total Discounted Costs	Amortized Costs						
Year	Compound Rates	Fiscal Year	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378	2000	\$5,847	\$21,657	\$865	\$0	\$0	\$0	\$380,230
4	1.293	2001	\$9,400	\$34,819	\$812	\$0	\$0	\$0	\$610,743
3	1.212	2002	\$8,816	\$32,655	\$761	\$0	\$0	\$0	\$572,796
2	1.137	2003	\$1,378	\$30,626	\$714	\$61,217	\$1,178,873	\$4,715,492	\$6,182,934
1	1.066	2004	\$0	\$14,362	\$670	\$49,212	\$947,679	\$3,790,716	\$4,865,493
Total			\$25,441	\$134,119	\$3,822	\$110,429	\$2,126,552	\$8,506,208	\$12,612,197

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2002	\$22,823	\$0	\$0
2	1.137	2003	\$6,174	\$0	\$0
1	1.066	2004	\$5,791	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2005	\$5,094	\$0	\$589
-2	0.880	2006	\$4,777	\$0	\$552
-3	0.825	2007	\$4,480	\$3,007	\$518
-4	0.774	2008	\$4,202	\$104,728	\$486
-5	0.726	2009	\$3,941	\$0	\$456
-6	0.681	2010	\$3,696	\$0	\$427
-7	0.638*	2011	\$3,466	\$0	\$401
-8	0.599	2012	\$3,251	\$2,182	\$376
-9	0.561	2013	\$3,049	\$310,593	\$353
-10	0.527	2014	\$2,859	\$0	\$331
-11	0.494	2015	\$2,682	\$0	\$310
-12	0.463	2016	\$2,515	\$0	\$291
-13	0.434	2017	\$2,359	\$1,583	\$273
-14	0.407	2018	\$2,212	\$214,168	\$256
-15	0.382	2019	\$2,075	\$0	\$240
-16	0.358	2020	\$1,946	\$0	\$225
-17	0.336	2021	\$1,825	\$0	\$211
-18	0.315	2022	\$1,712	\$1,149	\$198
-19	0.296	2023	\$0	\$0	\$186
-20	0.277	2024	\$0	\$0	\$174
Total			\$90,930	\$637,409	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Sediment Trapping at the Mouth of the Bonnet Carre' (XPO-54a)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs					Total First Cost			
		\$14,640,729						\$1,341,962			
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.000	2000	\$186,539	\$4,242	\$68,776	\$15,714	\$628	\$0	\$0	\$0	\$275,900
4	1.033	2001	\$330,335	\$7,513	\$121,792	\$27,828	\$649	\$0	\$0	\$0	\$488,116
3	1.067	2002	\$341,236	\$7,761	\$125,811	\$28,746	\$670	\$0	\$0	\$0	\$504,224
2	1.102	2003	\$58,749	\$1,336	\$129,963	\$29,695	\$692	\$59,355	\$1,143,010	\$4,572,039	\$5,994,839
1	1.139	2004	\$0	\$0	\$67,126	\$15,337	\$715	\$52,554	\$1,012,053	\$4,048,214	\$5,196,000
TOTAL		\$916,859	\$20,852	\$513,467	\$117,320	\$3,354	\$111,909	\$2,155,063	\$8,620,253	\$12,459,078	

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.067	2002	\$20,091	\$0	\$0
2	1.102	2003	\$5,987	\$0	\$0
1	1.139	2004	\$6,184	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2005	\$5,987	\$0	\$692
-2	1.139	2006	\$6,184	\$0	\$715
-3	1.176	2007	\$6,388	\$4,575	\$739
-4	1.215	2008	\$6,599	\$175,509	\$763
-5	1.255	2009	\$6,817	\$0	\$788
-6	1.297	2010	\$7,042	\$0	\$814
-7	1.339	2011	\$7,274	\$0	\$841
-8	1.384	2012	\$7,514	\$5,381	\$869
-9	1.429	2013	\$7,762	\$843,776	\$898
-10	1.476	2014	\$8,018	\$0	\$927
-11	1.525	2015	\$8,283	\$0	\$958
-12	1.575	2016	\$8,556	\$0	\$989
-13	1.627	2017	\$8,839	\$6,330	\$1,022
-14	1.681	2018	\$9,130	\$943,163	\$1,056
-15	1.737	2019	\$9,432	\$0	\$1,091
-16	1.794	2020	\$9,743	\$0	\$1,127
-17	1.853	2021	\$10,064	\$0	\$1,164
-18	1.914	2022	\$10,396	\$7,446	\$1,202
-19	1.977	2023	\$0	\$0	\$1,242
-20	2.043	2024	\$0	\$0	\$1,283
Total			\$176,291	\$1,986,181	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

South Lake Decade Freshwater Introduction (PTE-28)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$2,358,764	Total Fully Funded Costs	\$3,968,577

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$2,406,711	\$220,598
Monitoring	\$352,097	\$32,273
O & M Costs	\$270,732	\$24,815
Other Costs	<u>\$6,851</u>	<u>\$628</u>
Total	\$3,036,400	\$278,314
Average Annual Habitat Units		107
Cost Per Habitat Unit		\$2,601
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

South Lake Decade Freshwater Introduction (PTE-28)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$82,833	\$19,444	\$18,667	\$9,333	\$628	\$0	\$0	\$0	\$130,906
2 Compound	2001	\$130,167	\$30,556	\$32,000	\$16,000	\$628	\$0	\$0	\$0	\$209,350
1 Compound	2002	\$0	\$0	\$21,333	\$10,667	\$628	\$50,000	\$360,500	\$1,442,000	\$1,885,128
TOTAL		\$213,000	\$50,000	\$72,000	\$36,000	\$1,884	\$50,000	\$360,500	\$1,442,000	\$2,225,384

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2001	\$42,215	\$0	\$0
1 Compound	2002	\$25,994	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$25,994	\$3,645	\$628
2 Discount	2004	\$25,994	\$3,645	\$628
3 Discount	2005	\$25,994	\$3,645	\$628
4 Discount	2006	\$25,994	\$3,645	\$628
5 Discount	2007	\$25,994	\$3,645	\$628
6 Discount	2008	\$25,994	\$3,645	\$628
7 Discount	2009	\$25,994	\$224,538	\$628
8 Discount	2010	\$25,994	\$3,645	\$628
9 Discount	2011	\$25,994	\$3,645	\$628
10 Discount	2012	\$25,994	\$3,645	\$628
11 Discount	2013	\$25,994	\$3,645	\$628
12 Discount	2014	\$25,994	\$3,645	\$628
13 Discount	2015	\$25,994	\$3,645	\$628
14 Discount	2016	\$25,994	\$224,538	\$628
15 Discount	2017	\$25,994	\$3,645	\$628
16 Discount	2018	\$25,994	\$3,645	\$628
17 Discount	2019	\$25,994	\$3,645	\$628
18 Discount	2020	\$25,994	\$3,645	\$628
19 Discount	2021	\$25,994	\$3,645	\$628
20 Discount	2022	\$0	\$3,645	\$628
Total		\$562,095	\$514,686	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

Page 2

November 24, 1999

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

South Lake Decade Freshwater Introduction (PTE-28)

Present Valued Costs		Total Discounted Costs	Amortized Costs					Total First Cost			
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$100,411	\$23,571	\$22,628	\$11,314	\$761	\$0	\$0	\$0	\$158,685
2	1.137	2001	\$147,985	\$34,738	\$36,380	\$18,190	\$714	\$0	\$0	\$0	\$238,008
1	1.066	2002	\$0	\$0	\$22,747	\$11,373	\$670	\$53,313	\$384,383	\$1,537,533	\$2,010,018
Total			\$248,396	\$58,309	\$81,755	\$40,877	\$2,145	\$53,313	\$384,383	\$1,537,533	\$2,406,711

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$47,994	\$0	\$0
1	1.066	2002	\$27,716	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$24,379	\$3,419	\$589
-2	0.880	2004	\$22,864	\$3,206	\$552
-3	0.825	2005	\$21,444	\$3,007	\$518
-4	0.774	2006	\$20,111	\$2,820	\$486
-5	0.726	2007	\$18,862	\$2,645	\$456
-6	0.681	2008	\$17,690	\$2,481	\$427
-7	0.638	2009	\$16,591	\$143,310	\$401
-8	0.599	2010	\$15,560	\$2,182	\$376
-9	0.561	2011	\$14,593	\$2,046	\$353
-10	0.527	2012	\$13,686	\$1,919	\$331
-11	0.494	2013	\$12,836	\$1,800	\$310
-12	0.463	2014	\$12,038	\$1,688	\$291
-13	0.434	2015	\$11,290	\$1,583	\$273
-14	0.407	2016	\$10,589	\$91,467	\$256
-15	0.382	2017	\$9,931	\$1,393	\$240
-16	0.358	2018	\$9,314	\$1,306	\$225
-17	0.336	2019	\$8,735	\$1,225	\$211
-18	0.315	2020	\$8,192	\$1,149	\$198
-19	0.296	2021	\$7,683	\$1,077	\$186
-20	0.277	2022	\$0	\$1,010	\$174
Total			\$352,097	\$270,732	\$6,851

Coastal Wetlands Conservation and Restoration Plan Priority Project List IX

South Lake Decade Freshwater Introduction (PTE-28)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$82,833	\$19,444	\$18,667	\$9,333	\$628	\$0	\$0	\$0	\$130,906
2	1.033	2001	\$134,462	\$31,564	\$33,056	\$16,528	\$649	\$0	\$0	\$0	\$216,259
1	1.067	2002	\$0	\$0	\$22,765	\$11,382	\$670	\$53,354	\$384,686	\$1,538,742	\$2,011,599
TOTAL			\$217,296	\$51,008	\$74,487	\$37,244	\$1,947	\$53,354	\$384,686	\$1,538,742	\$2,358,764

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$43,608	\$0	\$0
1	1.067	2002	\$27,738	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$28,653	\$4,018	\$692
-2	1.139	2004	\$29,599	\$4,150	\$715
-3	1.176	2005	\$30,576	\$4,287	\$739
-4	1.215	2006	\$31,585	\$4,429	\$763
-5	1.255	2007	\$32,627	\$4,575	\$788
-6	1.297	2008	\$33,704	\$4,726	\$814
-7	1.339	2009	\$34,816	\$300,741	\$841
-8	1.384	2010	\$35,965	\$5,043	\$869
-9	1.429	2011	\$37,152	\$5,210	\$898
-10	1.476	2012	\$38,378	\$5,381	\$927
-11	1.525	2013	\$39,644	\$5,559	\$958
-12	1.575	2014	\$40,952	\$5,743	\$989
-13	1.627	2015	\$42,304	\$5,932	\$1,022
-14	1.681	2016	\$43,700	\$377,481	\$1,056
-15	1.737	2017	\$45,142	\$6,330	\$1,091
-16	1.794	2018	\$46,631	\$6,539	\$1,127
-17	1.853	2019	\$48,170	\$6,755	\$1,164
-18	1.914	2020	\$49,760	\$6,978	\$1,202
-19	1.977	2021	\$51,402	\$7,208	\$1,242
-20	2.043	2022	\$0	\$7,446	\$1,283
Total			\$812,103	\$778,531	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Four Mile Canal & Little White Lake Terrace and Sediment Trapping - (XTV-30/PTV-22)

Project Construction Years:	3	Total Project Years	7
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$3,233,370	Total Fully Funded Costs	\$5,086,511

Annual Charges	Present Worth
Interest & Amortization	\$3,451,407
Monitoring	\$84,135
O & M Costs	\$589,862
Other Costs	\$6,851
Total	\$4,132,300

Average Annual
\$316,354
\$7,712
\$54,066
\$628

Average Annual Habitat Units	116
Cost Per Habitat Unit	3,265
Average Annual Acres of Emergent Marsh	NA

Coastal Wetlands Conservation and Restoration Plan Priority Project List IX

Four Mile Canal & Little White Lake Terrace and Sediment Trapping - (XTV-30/PTV-22)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$243,325	\$23,333	\$37,382	\$14,953	\$628	\$0	\$0	\$0	\$319,620
2 Compound	2001	\$69,521	\$6,667	\$64,083	\$25,633	\$628	\$58,125	\$246,378	\$985,510	\$1,456,544
1 Compound	2002	\$0	\$0	\$21,361	\$8,544	\$628	\$58,125	\$246,378	\$985,510	\$1,320,546
TOTAL		\$312,846	\$30,000	\$122,825	\$49,130	\$1,884	\$116,250	\$492,755	\$1,971,020	\$3,096,710

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2001	\$18,118	\$0	\$0
1 Compound	2002	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$5,431	\$0	\$628
2 Discount	2004	\$5,431	\$0	\$628
3 Discount	2005	\$5,431	\$3,645	\$628
4 Discount	2006	\$5,431	\$0	\$628
5 Discount	2007	\$5,431	\$0	\$628
6 Discount	2008	\$5,431	\$3,645	\$628
7 Discount	2009	\$5,431	\$0	\$628
8 Discount	2010	\$5,431	\$0	\$628
9 Discount	2011	\$5,431	\$3,645	\$628
10 Discount	2012	\$5,431	\$1,098,026	\$628
11 Discount	2013	\$5,431	\$3,645	\$628
12 Discount	2014	\$5,431	\$0	\$628
13 Discount	2015	\$5,431	\$0	\$628
14 Discount	2016	\$5,431	\$0	\$628
15 Discount	2017	\$5,431	\$3,645	\$628
16 Discount	2018	\$5,431	\$0	\$628
17 Discount	2019	\$5,431	\$0	\$628
18 Discount	2020	\$5,431	\$0	\$628
19 Discount	2021	\$5,431	\$0	\$628
20 Discount	2022	\$0	\$3,645	\$628
Total		\$126,738	\$1,119,896	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Four Mile Canal & Little White Lake Terrace and Sediment Trapping - (XTV-30/PTV-22)

Present Valued Costs		Total Discounted Costs	Amortized Costs		Total First Cost						
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$294,960	\$28,285	\$45,314	\$18,126	\$761	\$0	\$0	\$0	\$387,446
2	1.137	2001	\$79,038	\$7,579	\$72,855	\$29,142	\$714	\$66,082	\$280,104	\$1,120,416	\$1,655,929
1	1.066	2002	\$0	\$0	\$22,776	\$9,110	\$670	\$61,976	\$262,700	\$1,050,800	\$1,408,032
Total			\$373,998	\$35,864	\$140,945	\$56,378	\$2,145	\$128,057	\$542,804	\$2,171,216	\$3,451,407

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$20,598	\$0	\$0
1	1.066	2002	\$5,791	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$5,094	\$0	\$589
-2	0.880	2004	\$4,777	\$0	\$552
-3	0.825	2005	\$4,480	\$3,007	\$518
-4	0.774	2006	\$4,202	\$0	\$486
-5	0.726	2007	\$3,941	\$0	\$456
-6	0.681	2008	\$3,696	\$2,481	\$427
-7	0.638	2009	\$3,466	\$0	\$401
-8	0.599	2010	\$3,251	\$0	\$376
-9	0.561	2011	\$3,049	\$2,046	\$353
-10	0.527	2012	\$2,859	\$578,125	\$331
-11	0.494	2013	\$2,682	\$1,800	\$310
-12	0.463	2014	\$2,515	\$0	\$291
-13	0.434	2015	\$2,359	\$0	\$273
-14	0.407	2016	\$2,212	\$0	\$256
-15	0.382	2017	\$2,075	\$1,393	\$240
-16	0.358	2018	\$1,946	\$0	\$225
-17	0.336	2019	\$1,825	\$0	\$211
-18	0.315	2020	\$1,712	\$0	\$198
-19	0.296	2021	\$1,605	\$0	\$186
-20	0.277	2022	\$0	\$1,010	\$174
Total			\$84,135	\$589,862	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Four Mile Canal & Little White Lake Terrace and Sediment Trapping - (XTV-30/PTV-22)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs					\$466,227			
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$243,325	\$23,333	\$37,382	\$14,953	\$628	\$0	\$0	\$0	\$319,620
2	1.033	2001	\$71,816	\$6,887	\$66,197	\$26,479	\$649	\$60,043	\$254,508	\$1,018,032	\$1,504,610
1	1.067	2002	\$0	\$0	\$22,794	\$9,118	\$670	\$62,025	\$262,907	\$1,051,627	\$1,409,140
TOTAL			\$315,140	\$30,220	\$126,373	\$50,549	\$1,947	\$122,068	\$517,415	\$2,069,659	\$3,233,370

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$18,716	\$0	\$0
1	1.067	2002	\$5,795	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$5,987	\$0	\$692
-2	1.139	2004	\$6,184	\$0	\$715
-3	1.176	2005	\$6,388	\$4,287	\$739
-4	1.215	2006	\$6,599	\$0	\$763
-5	1.255	2007	\$6,817	\$0	\$788
-6	1.297	2008	\$7,042	\$4,726	\$814
-7	1.339	2009	\$7,274	\$0	\$841
-8	1.384	2010	\$7,514	\$0	\$869
-9	1.429	2011	\$7,762	\$5,210	\$898
-10	1.476	2012	\$8,018	\$1,621,124	\$927
-11	1.525	2013	\$8,283	\$5,559	\$958
-12	1.575	2014	\$8,556	\$0	\$989
-13	1.627	2015	\$8,839	\$0	\$1,022
-14	1.681	2016	\$9,130	\$0	\$1,056
-15	1.737	2017	\$9,432	\$6,330	\$1,091
-16	1.794	2018	\$9,743	\$0	\$1,127
-17	1.853	2019	\$10,064	\$0	\$1,164
-18	1.914	2020	\$10,396	\$0	\$1,202
-19	1.977	2021	\$10,740	\$0	\$1,242
-20	2.043	2022	\$0	\$7,446	\$1,283
Total			\$179,280	\$1,654,682	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Castille Pass Sediment Delivery (XAT-11)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$16,179,071	Total Fully Funded Costs	\$31,084,397

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$17,267,839	\$1,582,762
Monitoring	\$139,025	\$12,743
O & M Costs	\$4,830,804	\$442,789
Other Costs	\$6,851	\$628
Total	\$22,244,500	\$2,038,922
Average Annual Habitat Units		296
Cost Per Habitat Unit		\$6,888
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Castille Pass Sediment Delivery (XAT-11)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights Administration	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$881,311	\$26,250	\$206,289	\$33,478	\$628	\$0	\$0	\$0	\$1,147,956
2 Compound	2001	\$125,902	\$3,750	\$353,638	\$57,391	\$628	\$48,214	\$1,519,096	\$6,076,385	\$8,185,005
1 Compound	2002	\$0	\$0	\$117,879	\$19,130	\$628	\$64,286	\$1,192,128	\$4,768,514	\$6,162,566
TOTAL		\$1,007,212	\$30,000	\$677,806	\$110,000	\$1,884	\$112,500	\$2,711,225	\$10,844,899	\$15,495,526

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2000	\$14,142	\$0	\$0
2 Compound	2001	\$10,831	\$0	\$0
1 Compound	2002	\$10,831	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$10,831	\$0	\$628
2 Discount	2004	\$10,831	\$0	\$628
3 Discount	2005	\$10,831	\$0	\$628
4 Discount	2006	\$10,831	\$0	\$628
5 Discount	2007	\$10,831	\$3,645	\$628
6 Discount	2008	\$10,831	\$3,147,416	\$628
7 Discount	2009	\$10,831	\$0	\$628
8 Discount	2010	\$10,831	\$0	\$628
9 Discount	2011	\$10,831	\$0	\$628
10 Discount	2012	\$10,831	\$3,645	\$628
11 Discount	2013	\$10,831	\$3,147,416	\$628
12 Discount	2014	\$10,831	\$0	\$628
13 Discount	2015	\$10,831	\$0	\$628
14 Discount	2016	\$10,831	\$0	\$628
15 Discount	2017	\$10,831	\$3,645	\$628
16 Discount	2018	\$10,831	\$3,147,416	\$628
17 Discount	2019	\$10,831	\$0	\$628
18 Discount	2020	\$10,831	\$0	\$628
19 Discount	2021	\$10,831	\$0	\$628
20 Discount	2022	\$0	\$3,645	\$628
Total		\$227,451	\$9,456,829	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Castille Pass Sediment Delivery (XAT-11)

Present Valued Costs		Total Discounted Costs	Amortized Costs					Total First Cost			
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspectio	Contingency	First Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$1,068,332	\$31,820	\$250,065	\$40,583	\$761	\$0	\$0	\$0	\$1,391,561
2	1.137	2001	\$143,136	\$4,263	\$402,047	\$65,248	\$714	\$54,814	\$1,727,044	\$6,908,176	\$9,305,442
1	1.066	2002	\$0	\$0	\$125,689	\$20,398	\$670	\$68,545	\$1,271,107	\$5,084,428	\$6,570,836
Total			\$1,211,468	\$36,084	\$777,801	\$126,228	\$2,145	\$123,359	\$2,998,151	\$11,992,604	\$17,267,839

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2000	\$17,143	\$0	\$0
2	1.137	2001	\$12,314	\$0	\$0
1	1.066	2002	\$11,549	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$10,158	\$0	\$589
-2	0.880	2004	\$9,527	\$0	\$552
-3	0.825	2005	\$8,935	\$0	\$518
-4	0.774	2006	\$8,380	\$0	\$486
-5	0.726	2007	\$7,859	\$2,645	\$456
-6	0.681	2008	\$7,371	\$2,141,904	\$427
-7	0.638	2009	\$6,913	\$0	\$401
-8	0.599	2010	\$6,483	\$0	\$376
-9	0.561	2011	\$6,080	\$0	\$353
-10	0.527	2012	\$5,703	\$1,919	\$331
-11	0.494	2013	\$5,348	\$1,554,192	\$310
-12	0.463	2014	\$5,016	\$0	\$291
-13	0.434	2015	\$4,704	\$0	\$273
-14	0.407	2016	\$4,412	\$0	\$256
-15	0.382	2017	\$4,138	\$1,393	\$240
-16	0.358	2018	\$3,881	\$1,127,741	\$225
-17	0.336	2019	\$3,640	\$0	\$211
-18	0.315	2020	\$3,414	\$0	\$198
-19	0.296	2021	\$3,201	\$0	\$186
-20	0.277	2022	\$0	\$1,010	\$174
Total			\$139,025	\$4,830,804	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Castille Pass Sediment Delivery (XAT-11)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$881,311	\$26,250	\$206,289	\$33,478	\$628	\$0	\$0	\$0	\$1,147,956
2	1.033	2001	\$130,056	\$3,874	\$365,308	\$59,285	\$649	\$49,805	\$1,569,227	\$6,276,906	\$8,455,110
1	1.067	2002	\$0	\$0	\$125,788	\$20,414	\$670	\$68,599	\$1,272,107	\$5,088,429	\$6,576,006
TOTAL			\$1,011,367	\$30,124	\$697,384	\$113,177	\$1,947	\$118,404	\$2,841,334	\$11,365,335	\$2,849,181

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.000	2000	\$14,142	\$0	\$0
2	1.033	2001	\$11,188	\$0	\$0
1	1.067	2002	\$11,558	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.067	2003	\$11,558	\$0	\$670
-2	1.102	2004	\$11,939	\$0	\$692
-3	1.139	2005	\$12,333	\$0	\$715
-4	1.176	2006	\$12,740	\$0	\$739
-5	1.215	2007	\$13,160	\$4,575	\$763
-6	1.255	2008	\$13,595	\$4,080,908	\$788
-7	1.297**	2009	\$14,043	\$0	\$814
-8	1.339	2010	\$14,507	\$0	\$841
-9	1.384	2011	\$14,986	\$0	\$869
-10	1.429	2012	\$15,480	\$5,381	\$898
-11	1.476	2013	\$15,991	\$4,800,189	\$927
-12	1.525	2014	\$16,519	\$0	\$958
-13	1.575	2015	\$17,064	\$0	\$989
-14	1.627	2016	\$17,627	\$0	\$1,022
-15	1.681	2017	\$18,208	\$6,330	\$1,056
-16	1.737	2018	\$18,809	\$5,646,248	\$1,091
-17	1.794	2019	\$19,430	\$0	\$1,127
-18	1.853	2020	\$20,071	\$0	\$1,164
-19	1.914	2021	\$20,734	\$0	\$1,202
-20	1.977	2022	\$0	\$7,446	\$1,242
Total			\$335,681	\$14,551,077	\$18,566

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Labranche Wetlands Terracing and Plantings (PPO-7a)

Project Construction Years:	5	Total Project Years	25
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$8,699,214	Total Fully Funded Costs	\$9,496,951

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$8,785,198	\$805,247
Monitoring	\$88,248	\$8,089
O & M Costs	\$200,770	\$18,403
Other Costs	\$6,851	\$628
Total	\$9,081,100	\$832,367

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

198
\$4,204
NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Labranche Wetlands Terracing and Plantings (PPO-7a)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound	2000	\$108,691	\$10,606	\$38,886	\$15,714	\$628	\$0	\$0	\$0	\$174,525
4 Compound	2001	\$186,327	\$18,182	\$66,661	\$26,939	\$628	\$0	\$0	\$0	\$298,737
3 Compound	2002	\$186,327	\$18,182	\$66,661	\$26,939	\$628	\$0	\$0	\$0	\$298,737
2 Compound	2003	\$31,055	\$3,030	\$66,661	\$26,939	\$628	\$72,692	\$726,627	\$2,906,508	\$3,834,140
1 Compound	2004	\$0	\$0	\$33,331	\$13,469	\$628	\$62,308	\$622,823	\$2,491,292	\$3,223,851
TOTAL		\$512,400	\$50,000	\$272,200	\$110,000	\$3,140	\$135,000	\$1,349,450	\$5,397,800	\$7,828,990

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2002	\$16,616	\$0	\$0
2 Compound	2003	\$5,431	\$0	\$0
1 Compound	2004	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2005	\$5,431	\$22,000	\$628
2 Discount	2006	\$5,431	\$0	\$628
3 Discount	2007	\$5,431	\$3,645	\$628
4 Discount	2008	\$5,431	\$0	\$628
5 Discount	2009	\$5,431	\$0	\$628
6 Discount	2010	\$5,431	\$3,645	\$628
7 Discount	2011	\$5,431	\$156,177	\$628
8 Discount	2012	\$5,431	\$0	\$628
9 Discount	2013	\$5,431	\$0	\$628
10 Discount	2014	\$5,431	\$0	\$628
11 Discount	2015	\$5,431	\$0	\$628
12 Discount	2016	\$5,431	\$22,000	\$628
13 Discount	2017	\$5,431	\$3,645	\$628
14 Discount	2018	\$5,431	\$134,177	\$628
15 Discount	2019	\$5,431	\$0	\$628
16 Discount	2020	\$5,431	\$0	\$628
17 Discount	2021	\$5,431	\$22,000	\$628
18 Discount	2022	\$5,431	\$3,645	\$628
19 Discount	2023	\$0	\$0	\$628
20 Discount	2024	\$0	\$0	\$628
Total		\$125,236	\$370,933	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Labranche Wetlands Terracing and Plantings (PPO-7a)

Present Valued Costs		Total Discounted Costs		Amortized Costs		Total First Cost					
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights Administration	Federal Supervision & Administration	LDNR Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378	2000	\$149,792	\$14,617	\$53,590	\$21,657	\$865	\$0	\$0	\$0	\$240,521
4	1.293	2001	\$240,831	\$23,500	\$86,161	\$34,819	\$812	\$0	\$0	\$0	\$386,123
3	1.212	2002	\$225,867	\$22,040	\$80,807	\$32,655	\$761	\$0	\$0	\$0	\$362,131
2	1.137	2003	\$35,306	\$3,445	\$75,786	\$30,626	\$714	\$82,643	\$826,094	\$3,304,377	\$4,358,992
1	1.066	2004	\$0	\$0	\$35,539	\$14,362	\$670	\$66,436	\$664,085	\$2,656,340	\$3,437,431
Total			\$651,796	\$63,602	\$331,883	\$134,119	\$3,822	\$149,079	\$1,490,179	\$5,960,717	\$8,785,198

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2002	\$20,142	\$0	\$0
2	1.137	2003	\$6,174	\$0	\$0
1	1.066	2004	\$5,791	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2005	\$5,094	\$20,633	\$589
-2	0.880	2006	\$4,777	\$0	\$552
-3	0.825	2007	\$4,480	\$3,007	\$518
-4	0.774	2008	\$4,202	\$0	\$486
-5	0.726	2009	\$3,941	\$0	\$456
-6	0.681	2010	\$3,696	\$2,481	\$427
-7	0.638	2011	\$3,466	\$99,679	\$401
-8	0.599	2012	\$3,251	\$0	\$376
-9	0.561	2013	\$3,049	\$0	\$353
-10	0.527	2014	\$2,859	\$0	\$331
-11	0.494	2015	\$2,682	\$0	\$310
-12	0.463	2016	\$2,515	\$10,189	\$291
-13	0.434	2017	\$2,359	\$1,583	\$273
-14	0.407	2018	\$2,212	\$54,658	\$256
-15	0.382	2019	\$2,075	\$0	\$240
-16	0.358	2020	\$1,946	\$0	\$225
-17	0.336	2021	\$1,825	\$7,393	\$211
-18	0.315	2022	\$1,712	\$1,149	\$198
-19	0.296	2023	\$0	\$0	\$186
-20	0.277	2024	\$0	\$0	\$174
Total			\$88,248	\$200,770	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Labranche Wetlands Terracing and Plantings (PPO-7a)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.000	2000	\$108,691	\$10,606	\$38,886	\$15,714	\$628	\$0	\$0	\$0	\$174,525
4	1.033	2001	\$192,476	\$18,782	\$68,861	\$27,828	\$649	\$0	\$0	\$0	\$308,595
3	1.067	2002	\$198,828	\$19,402	\$71,133	\$28,746	\$670	\$0	\$0	\$0	\$318,779
2	1.102	2003	\$34,232	\$3,340	\$73,481	\$29,695	\$692	\$80,129	\$800,963	\$3,203,852	\$4,226,384
1	1.139	2004	\$0	\$0	\$37,953	\$15,337	\$715	\$70,948	\$709,196	\$2,836,782	\$3,670,931
TOTAL			\$534,226	\$52,130	\$290,314	\$117,320	\$3,354	\$151,077	\$1,510,159	\$6,040,634	\$8,699,214

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.067	2002	\$17,731	\$0	\$0
2	1.102	2003	\$5,987	\$0	\$0
1	1.139	2004	\$6,184	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.176	2005	\$6,388	\$25,878	\$739
-2	1.215	2006	\$6,599	\$0	\$763
-3	1.255	2007	\$6,817	\$4,575	\$788
-4	1.297	2008	\$7,042	\$0	\$814
-5	1.339	2009	\$7,274	\$0	\$841
-6	1.384	2010	\$7,514	\$5,043	\$869
-7	1.429	2011	\$7,762	\$223,213	\$898
-8	1.476	2012	\$8,018	\$0	\$927
-9	1.525	2013	\$8,283	\$0	\$958
-10	1.575	2014	\$8,556	\$0	\$989
-11	1.627	2015	\$8,839	\$0	\$1,022
-12	1.681	2016	\$9,130	\$36,985	\$1,056
-13	1.737	2017	\$9,432	\$6,330	\$1,091
-14	1.794	2018	\$9,743	\$240,704	\$1,127
-15	1.853	2019	\$10,064	\$0	\$1,164
-16	1.914	2020	\$10,396	\$0	\$1,202
-17	1.977	2021	\$10,740	\$43,504	\$1,242
-18	2.043	2022	\$11,094	\$7,446	\$1,283
-19	2.110	2023	\$0	\$0	\$1,325
-20	2.180	2024	\$0	\$0	\$1,369
Total			\$183,593	\$593,678	\$20,466

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Black Bayou Culverts (CS-16)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$6,531,248	Total Fully Funded Costs	\$8,377,604

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$6,627,082	\$607,435
Monitoring	\$439,094	\$40,247
O & M Costs	\$285,175	\$26,139
Other Costs	<u>\$6,851</u>	<u>\$628</u>
Total	\$7,358,200	\$674,449
Average Annual Habitat Units		162
Cost Per Habitat Unit		\$4,163
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Black Bayou Culverts (CS-16)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$144,667	\$33,333	\$52,500	\$26,250	\$628	\$0	\$0	\$0	\$257,378
2 Compound	2001	\$248,000	\$57,143	\$90,000	\$45,000	\$628	\$0	\$0	\$0	\$440,771
1 Compound	2002	\$41,333	\$9,524	\$67,500	\$33,750	\$628	\$50,000	\$1,050,000	\$4,200,000	\$5,452,735
TOTAL		\$434,000	\$100,000	\$210,000	\$105,000	\$1,884	\$50,000	\$1,050,000	\$4,200,000	\$5,450,884

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2001	\$51,860	\$0	\$0
1 Compound	2002	\$32,493	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$32,493	\$15,645	\$628
2 Discount	2004	\$32,493	\$15,645	\$628
3 Discount	2005	\$32,493	\$15,645	\$628
4 Discount	2006	\$32,493	\$15,645	\$628
5 Discount	2007	\$32,493	\$15,645	\$628
6 Discount	2008	\$32,493	\$15,645	\$628
7 Discount	2009	\$32,493	\$121,713	\$628
8 Discount	2010	\$32,493	\$15,645	\$628
9 Discount	2011	\$32,493	\$15,645	\$628
10 Discount	2012	\$32,493	\$15,645	\$628
11 Discount	2013	\$32,493	\$15,645	\$628
12 Discount	2014	\$32,493	\$15,645	\$628
13 Discount	2015	\$32,493	\$15,645	\$628
14 Discount	2016	\$32,493	\$130,513	\$628
15 Discount	2017	\$32,493	\$15,645	\$628
16 Discount	2018	\$32,493	\$15,645	\$628
17 Discount	2019	\$32,493	\$15,645	\$628
18 Discount	2020	\$32,493	\$15,645	\$628
19 Discount	2021	\$32,493	\$15,645	\$628
20 Discount	2022	\$0	\$15,645	\$628
Total		\$701,720	\$533,836	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Black Bayou Culverts (CS-16)

Present Valued Costs		Total Discounted Costs		Amortized Costs		Total First Cost		
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Supervision & Inspection	Contingency	Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$175,366	\$40,407	\$63,641	\$0	\$0	\$311,996
2	1.137	2001	\$281,948	\$64,965	\$102,320	\$0	\$0	\$501,108
1	1.066	2002	\$44,072	\$10,155	\$71,972	\$0	\$0	\$5,813,979
Total			\$501,386	\$115,527	\$237,933	\$118,966	\$2,145	\$4,478,250

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$58,959	\$0	\$0
1	1.066	2002	\$34,646	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$30,474	\$14,673	\$589
-2	0.880	2004	\$28,581	\$13,761	\$552
-3	0.825	2005	\$26,805	\$12,906	\$518
-4	0.774	2006	\$25,139	\$12,104	\$486
-5	0.726	2007	\$23,577	\$11,352	\$456
-6	0.681	2008	\$22,112	\$10,647	\$427
-7	0.638	2009	\$20,738	\$7,683	\$401
-8	0.599	2010	\$19,450	\$9,365	\$376
-9	0.561	2011	\$18,241	\$8,783	\$353
-10	0.527	2012	\$17,108	\$8,237	\$331
-11	0.494	2013	\$16,045	\$7,725	\$310
-12	0.463	2014	\$15,048	\$7,245	\$291
-13	0.434	2015	\$14,113	\$6,795	\$273
-14	0.407	2016	\$13,236	\$5,365	\$256
-15	0.382	2017	\$12,414	\$5,977	\$240
-16	0.358	2018	\$11,642	\$5,606	\$225
-17	0.336	2019	\$10,919	\$5,257	\$211
-18	0.315	2020	\$10,241	\$4,931	\$198
-19	0.296	2021	\$9,604	\$4,624	\$186
-20	0.277	2022	\$0	\$4,337	\$174
Total			\$439,094	\$285,175	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Black Bayou Culverts (CS-16)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost				
Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	\$144,667	\$33,333	\$52,500	\$26,250	\$628	\$0	\$0	\$0	\$257,378
2	1.033	\$256,184	\$59,029	\$92,970	\$46,485	\$649	\$0	\$0	\$0	\$455,316
1	1.067	\$44,106	\$10,163	\$72,029	\$36,014	\$670	\$53,354	\$1,120,443	\$4,481,774	\$5,818,554
TOTAL		\$444,957	\$102,525	\$217,499	\$108,749	\$1,947	\$53,354	\$1,120,443	\$4,481,774	\$6,531,248

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$53,571	\$0	\$0
1	1.067	2002	\$34,673	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$35,817	\$17,246	\$692
-2	1.139	2004	\$36,999	\$17,815	\$715
-3	1.176	2005	\$38,220	\$18,403	\$739
-4	1.215	2006	\$39,481	\$19,010	\$763
-5	1.255	2007	\$40,784	\$19,637	\$788
-6	1.297	2008	\$42,130	\$20,285	\$814
-7	1.339	2009	\$43,520	\$163,020	\$841
-8	1.384	2010	\$44,957	\$21,646	\$869
-9	1.429	2011	\$46,440	\$22,360	\$898
-10	1.476	2012	\$47,973	\$23,098	\$927
-11	1.525	2013	\$49,556	\$23,861	\$958
-12	1.575	2014	\$51,191	\$24,648	\$989
-13	1.627	2015	\$52,880	\$25,461	\$1,022
-14	1.681	2016	\$54,625	\$219,411	\$1,056
-15	1.737	2017	\$56,428	\$27,169	\$1,091
-16	1.794	2018	\$58,290	\$28,066	\$1,127
-17	1.853	2019	\$60,214	\$28,992	\$1,164
-18	1.914	2020	\$62,201	\$29,949	\$1,202
-19	1.977	2021	\$64,253	\$30,937	\$1,242
-20	2.043	2022	\$0	\$31,958	\$1,283
Total			\$1,014,205	\$812,972	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Perry Ridge to Texas Shoreline Protection (PCS-26ii)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$3,118,043	Total Fully Funded Costs	\$3,742,451

	<u>Present Worth</u>	<u>Average Annual</u>
Annual Charges		
Interest & Amortization	\$3,161,887	\$289,817
Monitoring	\$47,373	\$4,342
O & M Costs	\$181,598	\$16,645
Other Costs	\$6,851	\$628
Total	\$3,397,700	\$311,432
Average Annual Habitat Units		40
Cost Per Habitat Unit		\$7,786
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Perry Ridge to Texas Shoreline Protection (PCS-26ii)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$67,053	\$12,895	\$25,000	\$12,500	\$628	\$0	\$0	\$0	\$118,075
2 Compound	2001	\$114,947	\$22,105	\$42,857	\$21,429	\$628	\$0	\$0	\$0	\$201,966
1 Compound	2002	\$0	\$0	\$32,143	\$16,071	\$628	\$72,000	\$499,000	\$1,996,000	\$2,615,842
TOTAL		\$182,000	\$35,000	\$100,000	\$50,000	\$1,884	\$72,000	\$499,000	\$1,996,000	\$2,935,884

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2001	\$13,885	\$0	\$0
1 Compound	2002	\$2,700	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$2,700	\$3,645	\$628
2 Discount	2004	\$2,700	\$3,645	\$628
3 Discount	2005	\$2,700	\$3,645	\$628
4 Discount	2006	\$2,700	\$3,645	\$628
5 Discount	2007	\$2,700	\$3,645	\$628
6 Discount	2008	\$2,700	\$3,645	\$628
7 Discount	2009	\$2,700	\$26,604	\$628
8 Discount	2010	\$2,700	\$3,645	\$628
9 Discount	2011	\$2,700	\$3,645	\$628
10 Discount	2012	\$2,700	\$227,429	\$628
11 Discount	2013	\$2,700	\$3,645	\$628
12 Discount	2014	\$2,700	\$3,645	\$628
13 Discount	2015	\$2,700	\$3,645	\$628
14 Discount	2016	\$2,700	\$26,604	\$628
15 Discount	2017	\$2,700	\$3,645	\$628
16 Discount	2018	\$2,700	\$3,645	\$628
17 Discount	2019	\$2,700	\$3,645	\$628
18 Discount	2020	\$2,700	\$3,645	\$628
19 Discount	2021	\$2,700	\$3,645	\$628
20 Discount	2022	\$0	\$3,645	\$628
Total		\$67,885	\$342,602	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Perry Ridge to Texas Shoreline Protection (PCS-26ii)

Present Valued Costs		Total Discounted Costs	\$3,397,710	Amortized Costs		\$311,432						
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	First Cost	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$81,282	\$15,631	\$30,305	\$15,153	\$0	\$761	\$0	\$0	\$0	\$143,132
2	1.137	2001	\$130,682	\$25,131	\$48,724	\$24,362	\$714	\$0	\$0	\$0	\$0	\$229,613
1	1.066	2002	\$0	\$0	\$34,272	\$17,136	\$670	\$76,770	\$532,059	\$2,128,235	\$2,789,142	\$2,789,142
Total			\$211,954	\$40,762	\$113,301	\$56,651	\$2,145	\$76,770	\$532,059	\$2,128,235	\$3,161,887	

Discount Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$15,786	\$0	\$0
1	1.066	2002	\$2,879	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$2,532	\$3,419	\$589
-2	0.880	2004	\$2,375	\$3,206	\$552
-3	0.825	2005	\$2,227	\$3,007	\$518
-4	0.774	2006	\$2,089	\$2,820	\$486
-5	0.726	2007	\$1,959	\$2,645	\$456
-6	0.681	2008	\$1,837	\$2,481	\$427
-7	0.638	2009	\$1,723	\$16,980	\$401
-8	0.599	2010	\$1,616	\$2,182	\$376
-9	0.561	2011	\$1,516	\$2,046	\$353
-10	0.527	2012	\$1,422	\$119,744	\$331
-11	0.494	2013	\$1,333	\$1,800	\$310
-12	0.463	2014	\$1,250	\$1,688	\$291
-13	0.434	2015	\$1,173	\$1,583	\$273
-14	0.407	2016	\$1,100	\$10,837	\$256
-15	0.382	2017	\$1,032	\$1,393	\$240
-16	0.358	2018	\$967	\$1,306	\$225
-17	0.336	2019	\$907	\$1,225	\$211
-18	0.315	2020	\$851	\$1,149	\$198
-19	0.296	2021	\$798	\$1,077	\$186
-20	0.277	2022	\$0	\$1,010	\$174
Total			\$47,373	\$181,598	\$6,851

Coastal Wetlands Conservation and Restoration Plan Priority Project List IX

Perry Ridge to Texas Shoreline Protection (PCS-26ii)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs					Total First Cost			
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$67,053	\$12,895	\$25,000	\$12,500	\$628	\$0	\$0	\$0	\$118,075
2	1.033	2001	\$118,741	\$22,835	\$44,271	\$22,136	\$649	\$0	\$0	\$0	\$208,631
1	1.067	2002	\$0	\$0	\$34,299	\$17,150	\$670	\$76,930	\$532,477	\$2,129,910	\$2,791,337
TOTAL			\$185,793	\$35,729	\$103,571	\$51,785	\$1,947	\$76,930	\$532,477	\$2,129,910	\$3,118,043

\$3,742,451

\$343,031

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$14,343	\$0	\$0
1	1.067	2002	\$2,881	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$2,976	\$4,018	\$692
-2	1.139	2004	\$3,074	\$4,150	\$715
-3	1.176	2005	\$3,176	\$4,287	\$739
-4	1.215	2006	\$3,281	\$4,429	\$763
-5	1.255	2007	\$3,389	\$4,575	\$788
-6	1.297	2008	\$3,501	\$4,726	\$814
-7	1.339	2009	\$3,616	\$35,633	\$841
-8	1.384	2010	\$3,736	\$5,043	\$869
-9	1.429	2011	\$3,859	\$5,210	\$898
-10	1.476	2012	\$3,986	\$335,776	\$927
-11	1.525	2013	\$4,118	\$5,559	\$958
-12	1.575	2014	\$4,254	\$5,743	\$989
-13	1.627	2015	\$4,394	\$5,932	\$1,022
-14	1.681	2016	\$4,539	\$44,726	\$1,056
-15	1.737	2017	\$4,689	\$6,330	\$1,091
-16	1.794	2018	\$4,844	\$6,539	\$1,127
-17	1.853	2019	\$5,003	\$6,755	\$1,164
-18	1.914	2020	\$5,169	\$6,978	\$1,202
-19	1.977	2021	\$5,339	\$7,208	\$1,242
-20	2.043	2022	\$0	\$7,446	\$1,283
Total			\$94,167	\$511,061	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Freshwater Bayou on Belle Isle to Lock (XTV-27)

Project Construction Years:	4	Total Project Years	24
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$13,263,340	Total Fully Funded Costs	\$25,071,556

	Present Worth	Average Annual
Annual Charges		
Interest & Amortization	\$13,657,604	\$1,251,850
Monitoring	\$407,471	\$37,349
O & M Costs	\$4,648,309	\$426,062
Other Costs	<u>\$6,851</u>	<u>\$628</u>
Total	\$18,720,200	\$1,715,888
Average Annual Habitat Units		252
Cost Per Habitat Unit		\$6,809
Average Annual Acres of Emergent Marsh		NA

Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX

Freshwater Bayou on Belle Isle to Lock (XTV-27)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound	2000	\$334,667	\$12,333	\$84,350	\$19,250	\$628	\$0	\$0	\$0	\$451,228
3 Compound	2001	\$573,714	\$21,143	\$144,600	\$33,000	\$628	\$0	\$0	\$0	\$773,085
2 Compound	2002	\$95,619	\$3,524	\$144,600	\$33,000	\$628	\$175,000	\$896,438	\$3,585,750	\$4,934,558
1 Compound	2003	\$0	\$0	\$108,450	\$24,750	\$628	\$225,000	\$1,152,563	\$4,610,250	\$6,121,641
TOTAL		\$1,004,000	\$37,000	\$482,000	\$110,000	\$2,512	\$400,000	\$2,049,000	\$8,196,000	\$12,280,512

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2001	\$46,635	\$0	\$0
2 Compound	2002	\$32,493	\$0	\$0
1 Compound	2003	\$32,493	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2004	\$32,493	\$0	\$628
2 Discount	2005	\$32,493	\$4,407	\$628
3 Discount	2006	\$32,493	\$2,475,524	\$628
4 Discount	2007	\$32,493	\$4,407	\$628
5 Discount	2008	\$32,493	\$0	\$628
6 Discount	2009	\$32,493	\$4,407	\$628
7 Discount	2010	\$32,493	\$2,475,524	\$628
8 Discount	2011	\$32,493	\$4,407	\$628
9 Discount	2012	\$32,493	\$0	\$628
10 Discount	2013	\$32,493	\$0	\$628
11 Discount	2014	\$32,493	\$0	\$628
12 Discount	2015	\$32,493	\$0	\$628
13 Discount	2016	\$32,493	\$4,407	\$628
14 Discount	2017	\$32,493	\$2,475,524	\$628
15 Discount	2018	\$32,493	\$4,407	\$628
16 Discount	2019	\$32,493	\$0	\$628
17 Discount	2020	\$32,493	\$0	\$628
18 Discount	2021	\$32,493	\$0	\$628
19 Discount	2022	\$0	\$0	\$628
20 Discount	2023	\$0	\$4,407	\$628
Total		\$649,860	\$7,457,420	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Freshwater Bayou on Belle Isle to Lock (XTV-27)

Present Valued Costs Total Discounted Costs \$18,720,236 Amortized Costs \$1,715,868

Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293	2000	\$432,562	\$15,941	\$109,024	\$24,881	\$812	\$0	\$0	\$0	\$583,220
3	1.212	2001	\$695,461	\$25,630	\$175,285	\$40,003	\$761	\$0	\$0	\$0	\$937,140
2	1.137	2002	\$108,708	\$4,006	\$164,394	\$37,517	\$714	\$198,956	\$1,019,150	\$4,076,800	\$5,610,045
1	1.066	2003	\$0	\$0	\$115,635	\$26,390	\$670	\$239,906	\$1,228,920	\$4,915,679	\$6,527,199
Total			\$1,236,732	\$45,577	\$564,338	\$128,791	\$2,957	\$438,862	\$2,248,070	\$8,992,279	\$13,657,604

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2002	\$36,941	\$0	\$0
1	1.066	2003	\$34,646	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2004	\$30,474	\$0	\$589
-2	0.880	2005	\$28,581	\$3,876	\$552
-3	0.825	2006	\$26,805	\$2,042,161	\$518
-4	0.774	2007	\$25,139	\$3,410	\$486
-5	0.726	2008	\$23,577	\$0	\$456
-6	0.681	2009	\$22,112	\$2,999	\$427
-7	0.638	2010	\$20,738	\$1,579,988	\$401
-8	0.599	2011	\$19,450	\$2,638	\$376
-9	0.561	2012	\$18,241	\$0	\$353
-10	0.527	2013	\$17,108	\$0	\$331
-11	0.494	2014	\$16,045	\$0	\$310
-12	0.463	2015	\$15,048	\$0	\$291
-13	0.434	2016	\$14,113	\$1,914	\$273
-14	0.407	2017	\$13,236	\$1,008,418	\$256
-15	0.382	2018	\$12,414	\$1,684	\$240
-16	0.358	2019	\$11,642	\$0	\$225
-17	0.336	2020	\$10,919	\$0	\$211
-18	0.315	2021	\$10,241	\$0	\$198
-19	0.296	2022	\$0	\$0	\$186
-20	0.277	2023	\$0	\$1,222	\$174
Total			\$407,471	\$4,648,309	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Freshwater Bayou on Belle Isle to Lock (XTV-27)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs								
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.000	2000	\$334,667	\$12,333	\$84,350	\$19,250	\$628	\$0	\$0	\$0	\$0
3	1.033	2001	\$592,647	\$21,841	\$149,372	\$34,089	\$649	\$0	\$0	\$0	\$451,228
2	1.067	2002	\$102,034	\$3,760	\$154,301	\$35,214	\$670	\$186,741	\$956,579	\$3,826,314	\$798,597
1	1.102	2003	\$0	\$0	\$119,545	\$27,282	\$692	\$248,018	\$1,270,473	\$5,081,892	\$5,265,613
TOTAL			\$1,029,348	\$37,934	\$507,568	\$115,835	\$2,639	\$434,759	\$2,227,052	\$8,908,206	\$13,263,340

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.033	2001	\$48,174	\$0	\$0
2	1.067	2002	\$34,673	\$0	\$0
1	1.102	2003	\$35,817	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.139	2004	\$36,999	\$0	\$715
-2	1.176	2005	\$38,220	\$5,184	\$739
-3	1.215	2006	\$39,481	\$3,007,939	\$763
-4	1.255	2007	\$40,784	\$5,532	\$788
-5	1.297	2008	\$42,130	\$0	\$814
-6	1.339	2009	\$43,520	\$5,903	\$841
-7	1.384	2010	\$44,957	\$3,425,077	\$869
-8	1.429	2011	\$46,440	\$6,299	\$898
-9	1.476	2012	\$47,973	\$0	\$927
-10	1.525	2013	\$49,556	\$0	\$958
-11	1.575	2014	\$51,191	\$0	\$989
-12	1.627	2015	\$52,880	\$0	\$1,022
-13	1.681	2016	\$54,625	\$7,409	\$1,056
-14	1.737	2017	\$56,428	\$4,299,051	\$1,091
-15	1.794	2018	\$58,290	\$7,906	\$1,127
-16	1.853	2019	\$60,214	\$0	\$1,164
-17	1.914	2020	\$62,201	\$0	\$1,202
-18	1.977	2021	\$64,253	\$0	\$1,242
-19	2.043	2022	\$0	\$0	\$1,283
-20	2.110	2023	\$0	\$9,299	\$1,325
Total			\$1,008,808	\$10,779,597	\$19,812

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

North Houma Navigational Canal Salinity Control (TE-8a)

Project Construction Years:	4	Total Project Years	24
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$16,668,350	Total Fully Funded Costs	\$22,758,646

	<u>Present Worth</u>	<u>Average Annual</u>
Annual Charges		
Interest & Amortization	\$17,161,090	\$1,572,978
Monitoring	\$464,003	\$42,530
O & M Costs	\$1,989,095	\$182,320
Other Costs	\$6,851	\$628
Total	\$19,621,000	\$1,798,455
Average Annual Habitat Units		331
Cost Per Habitat Unit		\$5,433
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

North Houma Navigational Canal Salinity Control (TE-8a)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound	2000	\$329,050	\$47,727	\$98,336	\$20,263	\$628	\$0	\$0	\$0	\$496,004
3 Compound	2001	\$564,085	\$81,818	\$168,576	\$34,737	\$628	\$0	\$0	\$0	\$849,844
2 Compound	2002	\$141,021	\$20,455	\$168,576	\$34,737	\$628	\$92,308	\$1,237,163	\$4,948,650	\$6,643,537
1 Compound	2003	\$0	\$0	\$98,336	\$20,263	\$628	\$107,692	\$1,443,356	\$5,773,425	\$7,443,701
TOTAL		\$1,034,156	\$150,000	\$533,823	\$110,000	\$2,512	\$200,000	\$2,680,519	\$10,722,075	\$15,433,085

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2001	\$46,635	\$0	\$0
2 Compound	2002	\$32,493	\$0	\$0
1 Compound	2003	\$32,493	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2004	\$32,493	\$12,911	\$628
2 Discount	2005	\$32,493	\$12,911	\$628
3 Discount	2006	\$32,493	\$12,911	\$628
4 Discount	2007	\$32,493	\$12,911	\$628
5 Discount	2008	\$32,493	\$1,220,259	\$628
6 Discount	2009	\$32,493	\$12,911	\$628
7 Discount	2010	\$32,493	\$12,911	\$628
8 Discount	2011	\$32,493	\$12,911	\$628
9 Discount	2012	\$32,493	\$12,911	\$628
10 Discount	2013	\$32,493	\$1,571,221	\$628
11 Discount	2014	\$32,493	\$12,911	\$628
12 Discount	2015	\$32,493	\$12,911	\$628
13 Discount	2016	\$32,493	\$12,911	\$628
14 Discount	2017	\$32,493	\$12,911	\$628
15 Discount	2018	\$32,493	\$409,982	\$628
16 Discount	2019	\$32,493	\$12,911	\$628
17 Discount	2020	\$32,493	\$12,911	\$628
18 Discount	2021	\$32,493	\$12,911	\$628
19 Discount	2022	\$0	\$12,911	\$628
20 Discount	2023	\$0	\$12,911	\$628
Total		\$696,495	\$3,420,949	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

North Houma Navigational Canal Salinity Control (TE-8a)

Present Valued Costs		Total Discounted Costs	\$19,621,040	Amortized Costs				\$1,798,455			
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293	2000	\$425,302	\$61,688	\$127,101	\$26,190	\$812	\$0	\$0	\$0	\$641,093
3	1.212	2001	\$683,786	\$99,181	\$204,349	\$42,108	\$761	\$0	\$0	\$0	\$1,030,187
2	1.137	2002	\$160,326	\$23,255	\$191,652	\$39,492	\$714	\$104,944	\$1,406,517	\$5,626,066	\$7,552,964
1	1.066	2003	\$0	\$0	\$104,951	\$21,606	\$670	\$114,827	\$1,538,979	\$6,155,914	\$7,936,846
Total			\$1,269,416	\$184,123	\$627,952	\$129,396	\$2,957	\$219,771	\$2,945,495	\$11,781,980	\$17,161,090

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2001	\$56,531	\$0	\$0
2	1.137	2002	\$36,941	\$0	\$0
1	1.066	2003	\$34,646	\$0	\$0
0		Base Year	\$0	\$0	\$0
-1	0.938	2004	\$30,474	\$12,109	\$589
-2	0.880	2005	\$28,581	\$11,356	\$552
-3	0.825	2006	\$26,805	\$10,651	\$518
-4	0.774	2007	\$25,139	\$9,989	\$486
-5	0.726	2008	\$23,577	\$8,854	\$456
-6	0.681	2009	\$22,112	\$8,786	\$427
-7	0.638	2010	\$20,738	\$8,240	\$401
-8	0.599	2011	\$19,450	\$7,728	\$376
-9	0.561	2012	\$18,241	\$7,248	\$353
-10	0.527	2013	\$17,108	\$6,799	\$331
-11	0.494	2014	\$16,045	\$6,375	\$310
-12	0.463	2015	\$15,048	\$5,979	\$291
-13	0.434	2016	\$14,113	\$5,608	\$273
-14	0.407	2017	\$13,236	\$5,259	\$256
-15	0.382	2018	\$12,414	\$4,931	\$240
-16	0.358	2019	\$11,642	\$4,626	\$225
-17	0.336	2020	\$10,919	\$4,339	\$211
-18	0.315	2021	\$10,241	\$4,069	\$198
-19	0.296	2022	\$0	\$3,816	\$186
-20	0.277	2023	\$0	\$3,579	\$174
Total			\$464,003	\$1,989,095	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

North Houma Navigational Canal Salinity Control (TE-8a)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs							Total First Cost
Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Cost
5		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1000	\$329,050	\$47,727	\$98,336	\$20,263	\$628	\$0	\$0	\$0	\$496,004
3	1033	\$582,700	\$84,518	\$174,139	\$35,883	\$649	\$0	\$0	\$0	\$877,889
2	1067	\$150,482	\$21,827	\$179,885	\$37,067	\$670	\$98,501	\$1,320,162	\$5,280,650	\$7,089,245
1	1102	\$0	\$0	\$108,396	\$22,336	\$692	\$118,710	\$1,591,016	\$6,364,063	\$8,205,213
	TOTAL	\$1,062,232	\$154,072	\$560,756	\$115,550	\$2,639	\$217,210	\$2,911,178	\$11,644,713	\$16,668,350

Fully Funded Costs Total Fully Funded Costs \$22,758,646 Amortized Costs \$2,088,047

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1033	2001	\$48,174	\$0	\$0
2	1067	2002	\$34,673	\$0	\$0
1	1102	2003	\$35,817	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1139	2004	\$36,999	\$14,701	\$715
-2	1176	2005	\$38,220	\$15,187	\$739
-3	1215	2006	\$39,481	\$15,688	\$763
-4	1255	2007	\$40,784	\$16,205	\$788
-5	1297	2008	\$42,130	\$1,582,175	\$814
-6	1339	2009	\$43,520	\$17,293	\$841
-7	1384	2010	\$44,957	\$17,863	\$869
-8	1429	2011	\$46,440	\$18,453	\$898
-9	1476	2012	\$47,973	\$19,062	\$927
-10	1525	2013	\$49,556	\$2,396,301	\$958
-11	1575	2014	\$51,191	\$20,341	\$989
-12	1627	2015	\$52,880	\$21,012	\$1,022
-13	1681	2016	\$54,625	\$21,705	\$1,056
-14	1737	2017	\$56,428	\$22,422	\$1,091
-15	1794	2018	\$58,290	\$735,479	\$1,127
-16	1853	2019	\$60,214	\$23,926	\$1,164
-17	1914	2020	\$62,201	\$24,715	\$1,202
-18	1977	2021	\$64,253	\$25,531	\$1,242
-19	2043	2022	\$0	\$26,373	\$1,283
-20	2110	2023	\$0	\$27,244	\$1,325
	Total		\$1,008,808	\$5,061,676	\$19,812

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Little Pecan Bayou (XME-42a)

Project Construction Years:	5	Total Project Years	25
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$11,008,599	Total Fully Funded Costs	\$15,274,025

	<u>Present Worth</u>	<u>Average Annual</u>
Annual Charges		
Interest & Amortization	\$10,988,056	\$1,007,160
Monitoring	\$476,127	\$43,642
O & M Costs	\$1,014,277	\$92,968
Other Costs	\$6,851	\$628
Total	\$12,485,300	\$1,144,398
Average Annual Habitat Units		224
Cost Per Habitat Unit		\$5,109
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Little Pecan Bayou (XME-42a)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5 Compound	2000	\$157,839	\$33,871	\$42,127	\$14,000	\$628	\$0	\$0	\$0	\$248,465
4 Compound	2001	\$270,581	\$58,065	\$72,218	\$24,000	\$628	\$0	\$0	\$0	\$425,491
3 Compound	2002	\$270,581	\$58,065	\$72,218	\$24,000	\$628	\$0	\$0	\$0	\$425,491
2 Compound	2003	\$0	\$0	\$72,218	\$24,000	\$628	\$112,000	\$609,461	\$2,437,842	\$3,256,149
1 Compound	2004	\$0	\$0	\$72,218	\$24,000	\$628	\$192,000	\$1,044,789	\$4,179,158	\$5,512,794
TOTAL		\$699,000	\$150,000	\$331,000	\$110,000	\$3,140	\$304,000	\$1,654,250	\$6,617,000	\$9,868,390

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2002	\$48,714	\$0	\$0
2 Compound	2003	\$32,493	\$0	\$0
1 Compound	2004	\$32,493	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2005	\$32,493	\$15,645	\$628
2 Discount	2006	\$32,493	\$15,645	\$628
3 Discount	2007	\$32,493	\$15,645	\$628
4 Discount	2008	\$32,493	\$15,645	\$628
5 Discount	2009	\$32,493	\$15,645	\$628
6 Discount	2010	\$32,493	\$15,645	\$628
7 Discount	2011	\$32,493	\$534,861	\$628
8 Discount	2012	\$32,493	\$15,645	\$628
9 Discount	2013	\$32,493	\$15,645	\$628
10 Discount	2014	\$32,493	\$520,903	\$628
11 Discount	2015	\$32,493	\$15,645	\$628
12 Discount	2016	\$32,493	\$15,645	\$628
13 Discount	2017	\$32,493	\$15,645	\$628
14 Discount	2018	\$32,493	\$619,981	\$628
15 Discount	2019	\$32,493	\$15,645	\$628
16 Discount	2020	\$32,493	\$15,645	\$628
17 Discount	2021	\$32,493	\$15,645	\$628
18 Discount	2022	\$32,493	\$15,645	\$628
19 Discount	2023	\$32,493	\$15,645	\$628
20 Discount	2024	\$0	\$15,645	\$628
Total		\$731,067	\$1,941,710	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Little Pecan Bayou (XME-42a)

Present Valued Costs		Total Discounted Costs	\$12,485,311	Amortized Costs	\$1,144,398						
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378	2000	\$217,525	\$46,679	\$58,058	\$19,294	\$865	\$0	\$0	\$0	\$342,421
4	1.293	2001	\$349,730	\$75,049	\$93,343	\$31,020	\$812	\$0	\$0	\$0	\$549,955
3	1.212	2002	\$0	\$70,386	\$87,543	\$29,093	\$761	\$0	\$0	\$0	\$515,784
2	1.137	2003	\$0	\$0	\$82,104	\$27,285	\$714	\$127,332	\$692,889	\$2,771,556	\$3,701,880
1	1.066	2004	\$0	\$0	\$77,003	\$25,590	\$670	\$204,720	\$1,114,007	\$4,456,027	\$5,878,016
Total			\$567,255	\$192,115	\$398,051	\$132,283	\$3,822	\$332,052	\$1,806,896	\$7,227,583	\$10,988,056

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2002	\$59,051	\$0	\$0
2	1.137	2003	\$36,941	\$0	\$0
1	1.066	2004	\$34,646	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2005	\$30,474	\$14,673	\$589
-2	0.880	2006	\$28,581	\$13,761	\$552
-3	0.825	2007	\$26,805	\$12,906	\$518
-4	0.774	2008	\$25,139	\$12,104	\$486
-5	0.726	2009	\$23,577	\$11,352	\$456
-6	0.681	2010	\$22,112	\$10,647	\$427
-7	0.638	2011	\$20,738	\$341,372	\$401
-8	0.599	2012	\$19,450	\$9,365	\$376
-9	0.561	2013	\$18,241	\$8,783	\$353
-10	0.527	2014	\$17,108	\$274,263	\$331
-11	0.494	2015	\$16,045	\$7,225	\$310
-12	0.463	2016	\$15,048	\$7,245	\$291
-13	0.434	2017	\$14,113	\$6,795	\$273
-14	0.407	2018	\$13,236	\$252,553	\$256
-15	0.382	2019	\$12,414	\$5,977	\$240
-16	0.358	2020	\$11,642	\$5,606	\$225
-17	0.336	2021	\$10,919	\$5,257	\$211
-18	0.315	2022	\$10,241	\$4,931	\$198
-19	0.296	2023	\$9,604	\$4,624	\$186
-20	0.277	2024	\$0	\$4,337	\$174
Total			\$476,127	\$1,014,277	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Little Pecan Bayou (XME-42a)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.000	2000	\$157,839	\$33,871	\$42,127	\$14,000	\$628	\$0	\$0	\$0	\$248,465
4	1.033	2001	\$279,510	\$59,981	\$74,601	\$24,792	\$649	\$0	\$0	\$0	\$439,533
3	1.067	2002	\$288,734	\$61,960	\$77,063	\$25,610	\$670	\$0	\$0	\$0	\$454,037
2	1.102	2003	\$0	\$0	\$79,606	\$26,455	\$692	\$123,458	\$671,810	\$2,687,241	\$3,589,262
1	1.139	2004	\$0	\$0	\$82,233	\$27,328	\$715	\$218,626	\$1,189,680	\$4,758,719	\$6,277,302
TOTAL			\$726,082	\$155,812	\$355,632	\$118,186	\$3,354	\$342,084	\$1,861,490	\$7,445,960	\$11,008,599

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.067	2002	\$51,982	\$0	\$0
2	1.102	2003	\$35,817	\$0	\$0
1	1.139	2004	\$36,999	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.176	2005	\$38,220	\$18,403	\$739
-2	1.215	2006	\$39,481	\$19,010	\$763
-3	1.255	2007	\$40,784	\$19,637	\$788
-4	1.297	2008	\$42,130	\$20,285	\$814
-5	1.339	2009	\$43,520	\$20,955	\$841
-6	1.384	2010	\$44,957	\$21,646	\$869
-7	1.429	2011	\$46,440	\$21,646	\$898
-8	1.476	2012	\$47,973	\$23,098	\$927
-9	1.525	2013	\$49,556	\$23,861	\$958
-10	1.575	2014	\$51,191	\$24,656	\$989
-11	1.627	2015	\$52,880	\$25,461	\$1,022
-12	1.681	2016	\$54,625	\$26,302	\$1,056
-13	1.737	2017	\$56,428	\$27,169	\$1,091
-14	1.794	2018	\$58,290	\$1,112,203	\$1,127
-15	1.853	2019	\$60,214	\$28,992	\$1,164
-16	1.914	2020	\$62,201	\$29,949	\$1,202
-17	1.977	2021	\$64,253	\$30,937	\$1,242
-18	2.043	2022	\$66,374	\$31,958	\$1,283
-19	2.110	2023	\$68,564	\$33,013	\$1,325
-20	2.180	2024	\$0	\$34,102	\$1,369
Total			\$1,112,881	\$3,132,080	\$20,466

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Barataria Land Bridge Shore Protection - Phase 3 (BA-27 Ph 3)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$14,883,705	Total Fully Funded Costs	\$20,745,106

Annual Charges	<u>Present Worth</u>
Interest & Amortization	\$15,024,422
Monitoring	\$47,076
O & M Costs	\$3,024,645
Other Costs	\$6,851
Total	\$18,103,000

Average Annual	<u>Annual</u>
	\$1,377,132
	\$4,315
	\$277,238
	\$628
	\$1,659,312

Average Annual Habitat Units
101

Cost Per Habitat Unit
\$16,429

Average Annual Acres of Emergent Marsh
NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Barataria Land Bridge Shore Protection - Phase 3 (BA-27 Ph 3)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$249,789	\$27,632	\$85,581	\$24,839	\$628	\$0	\$0	\$0	\$388,468
2 Compound	2001	\$428,211	\$47,368	\$146,710	\$42,581	\$628	\$0	\$0	\$0	\$665,497
1 Compound	2002	\$0	\$0	\$146,710	\$42,581	\$628	\$116,000	\$2,526,750	\$10,107,000	\$12,939,668
TOTAL		\$678,000	\$75,000	\$379,000	\$110,000	\$1,884	\$116,000	\$2,526,750	\$10,107,000	\$13,993,634

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2001	\$13,624	\$0	\$0
1 Compound	2002	\$2,700	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$2,700	\$3,645	\$628
2 Discount	2004	\$2,700	\$3,645	\$628
3 Discount	2005	\$2,700	\$3,002,185	\$628
4 Discount	2006	\$2,700	\$3,645	\$628
5 Discount	2007	\$2,700	\$3,645	\$628
6 Discount	2008	\$2,700	\$3,645	\$628
7 Discount	2009	\$2,700	\$3,645	\$628
8 Discount	2010	\$2,700	\$3,645	\$628
9 Discount	2011	\$2,700	\$3,645	\$628
10 Discount	2012	\$2,700	\$3,645	\$628
11 Discount	2013	\$2,700	\$3,645	\$628
12 Discount	2014	\$2,700	\$3,645	\$628
13 Discount	2015	\$2,700	\$3,645	\$628
14 Discount	2016	\$2,700	\$1,258,717	\$628
15 Discount	2017	\$2,700	\$3,645	\$628
16 Discount	2018	\$2,700	\$3,645	\$628
17 Discount	2019	\$2,700	\$3,645	\$628
18 Discount	2020	\$2,700	\$3,645	\$628
19 Discount	2021	\$2,700	\$3,645	\$628
20 Discount	2022	\$0	\$3,645	\$628
Total		\$67,624	\$4,326,512	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Barataria Land Bridge Shore Protection - Phase 3 (BA-27 Ph 3)

Present Valued Costs		Total Discounted Costs	Amortized Costs									
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Construction	Total First Cost	
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
3	1.212	2000	\$302,797	\$33,495	\$103,742	\$30,110	\$761	\$0	\$0	\$0	\$470,904	
2	1.137	2001	\$486,828	\$53,853	\$166,793	\$48,409	\$714	\$0	\$0	\$0	\$756,597	
1	1.066	2002	\$0	\$0	\$156,429	\$45,402	\$670	\$123,685	\$2,694,147	\$10,776,589	\$13,796,921	
Total			\$789,625	\$87,348	\$426,963	\$123,921	\$2,145	\$123,685	\$2,694,147	\$10,776,589	\$15,024,422	

\$18,102,995

\$1,659,312

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$15,489	\$0	\$0
1	1.066	2002	\$2,879	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$2,532	\$3,419	\$589
-2	0.880	2004	\$2,375	\$3,206	\$552
-3	0.825	2005	\$2,227	\$2,476,625	\$518
-4	0.774	2006	\$2,089	\$2,820	\$486
-5	0.726	2007	\$1,959	\$2,645	\$456
-6	0.681	2008	\$1,837	\$2,481	\$427
-7	0.638	2009	\$1,723	\$2,326	\$401
-8	0.599	2010	\$1,616	\$2,182	\$376
-9	0.561	2011	\$1,516	\$2,046	\$353
-10	0.527	2012	\$1,422	\$1,919	\$331
-11	0.494	2013	\$1,333	\$1,800	\$310
-12	0.463	2014	\$1,250	\$1,688	\$291
-13	0.434	2015	\$1,173	\$1,583	\$273
-14	0.407	2016	\$1,100	\$512,745	\$256
-15	0.382	2017	\$1,032	\$1,393	\$240
-16	0.358	2018	\$967	\$1,306	\$225
-17	0.336	2019	\$907	\$1,225	\$211
-18	0.315	2020	\$851	\$1,149	\$198
-19	0.296	2021	\$798	\$1,077	\$186
-20	0.277	2022	\$0	\$1,010	\$174
Total			\$47,076	\$3,024,645	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Barataria Land Bridge Shore Protection - Phase 3 (BA-27 Ph 3)

Fully Funded Costs Total Fully Funded Costs \$20,745,106 Amortized Costs \$1,901,487

Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$249,789	\$27,632	\$85,581	\$24,639	\$628	\$0	\$0	\$0	\$388,468
2	1.033	2001	\$442,341	\$48,932	\$151,551	\$43,986	\$649	\$0	\$0	\$0	\$687,459
1	1.067	2002	\$0	\$0	\$156,552	\$45,437	\$670	\$123,782	\$2,696,267	\$10,785,069	\$13,807,778
		TOTAL	\$692,131	\$76,563	\$393,684	\$114,262	\$1,947	\$123,782	\$2,696,267	\$10,785,069	\$14,883,705

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$14,074	\$0	\$0
1	1.067	2002	\$2,881	\$0	\$0
0		Base Year	\$0	\$0	\$0
-1	1.102	2003	\$2,976	\$4,018	\$692
-2	1.139	2004	\$3,074	\$4,150	\$715
-3	1.176	2005	\$3,176	\$3,531,336	\$739
-4	1.215	2006	\$3,281	\$4,429	\$763
-5	1.255	2007	\$3,389	\$4,575	\$788
-6	1.297	2008	\$3,501	\$4,726	\$814
-7	1.339	2009	\$3,616	\$4,882	\$841
-8	1.384	2010	\$3,736	\$5,043	\$869
-9	1.429	2011	\$3,859	\$5,210	\$898
-10	1.476	2012	\$3,986	\$5,381	\$927
-11	1.525	2013	\$4,118	\$5,559	\$958
-12	1.575	2014	\$4,254	\$5,743	\$989
-13	1.627	2015	\$4,394	\$5,932	\$1,022
-14	1.681	2016	\$4,539	\$2,116,086	\$1,056
-15	1.737	2017	\$4,689	\$6,330	\$1,091
-16	1.794	2018	\$4,844	\$6,539	\$1,127
-17	1.853	2019	\$5,003	\$6,755	\$1,164
-18	1.914	2020	\$5,169	\$6,978	\$1,202
-19	1.977	2021	\$5,339	\$7,208	\$1,242
-20	2.043	2022	\$0	\$7,446	\$1,283
		Total	\$93,897	\$5,748,325	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Marsh Creation South of Leeville (BA-32a)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$6,610,450	Total Fully Funded Costs	\$6,897,502

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$6,814,227	\$624,589
Monitoring	\$84,797	\$7,772
O & M Costs	\$62,891	\$5,765
Other Costs	\$6,851	\$628
Total	\$6,968,800	\$638,754
Average Annual Habitat Units		86
Cost Per Habitat Unit		\$7,427
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Marsh Creation South of Leeville (BA-32a)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$262,642	\$491,556	\$43,438	\$21,719	\$628	\$0	\$0	\$0	\$819,983
2 Compound	2001	\$75,040	\$140,444	\$74,466	\$37,233	\$628	\$0	\$0	\$0	\$327,812
1 Compound	2002	\$0	\$0	\$74,466	\$37,233	\$628	\$187,500	\$961,850	\$3,847,399	\$5,109,075
TOTAL		\$337,682	\$632,000	\$192,370	\$96,185	\$1,884	\$187,500	\$961,850	\$3,847,399	\$6,256,870

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2000	\$12,445	\$0	\$0
2 Compound	2001	\$5,431	\$0	\$0
1 Compound	2002	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$5,431	\$0	\$628
2 Discount	2004	\$5,431	\$3,645	\$628
3 Discount	2005	\$5,431	\$72,351	\$628
4 Discount	2006	\$5,431	\$0	\$628
5 Discount	2007	\$5,431	\$0	\$628
6 Discount	2008	\$5,431	\$0	\$628
7 Discount	2009	\$5,431	\$0	\$628
8 Discount	2010	\$5,431	\$0	\$628
9 Discount	2011	\$5,431	\$0	\$628
10 Discount	2012	\$5,431	\$0	\$628
11 Discount	2013	\$5,431	\$0	\$628
12 Discount	2014	\$5,431	\$0	\$628
13 Discount	2015	\$5,431	\$0	\$628
14 Discount	2016	\$5,431	\$0	\$628
15 Discount	2017	\$5,431	\$0	\$628
16 Discount	2018	\$5,431	\$0	\$628
17 Discount	2019	\$5,431	\$0	\$628
18 Discount	2020	\$5,431	\$0	\$628
19 Discount	2021	\$5,431	\$0	\$628
20 Discount	2022	\$0	\$0	\$628
Total		\$126,496	\$75,996	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Marsh Creation South of Leeville (BA-32a)

Present Valued Costs		Total Discounted Costs	Amortized Costs		Total First Cost				
Year	Compound Rates	Fiscal Year	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$318,376	\$595,868	\$26,328	\$761	\$0	\$0	\$993,990
2	1.137	2001	\$85,313	\$159,670	\$42,330	\$714	\$0	\$0	\$372,685
1	1.066	2002	\$0	\$0	\$39,700	\$670	\$1,025,572	\$4,102,289	\$5,447,552
Total			\$403,689	\$755,537	\$108,357	\$2,145	\$1,025,572	\$4,102,289	\$6,814,227

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2000	\$15,086	\$0	\$0
2	1.137	2001	\$6,174	\$0	\$0
1	1.066	2002	\$5,791	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2002	\$5,094	\$0	\$589
-2	0.880	2003	\$4,777	\$3,206	\$552
-3	0.825	2004	\$4,480	\$59,685	\$518
-4	0.774	2005	\$4,202	\$0	\$486
-5	0.726	2006	\$3,941	\$0	\$456
-6	0.681	2007	\$3,696	\$0	\$427
-7	0.638	2008	\$3,466	\$0	\$401
-8	0.599	2009	\$3,251	\$0	\$376
-9	0.561	2010	\$3,049	\$0	\$353
-10	0.527	2011	\$2,859	\$0	\$331
-11	0.494	2012	\$2,682	\$0	\$310
-12	0.463	2013	\$2,515	\$0	\$291
-13	0.434	2014	\$2,359	\$0	\$273
-14	0.407	2015	\$2,212	\$0	\$256
-15	0.382	2016	\$2,075	\$0	\$240
-16	0.358	2017	\$1,946	\$0	\$225
-17	0.336	2018	\$1,825	\$0	\$211
-18	0.315	2019	\$1,712	\$0	\$198
-19	0.296	2020	\$1,605	\$0	\$186
-20	0.277	2021	\$0	\$0	\$174
Total			\$84,797	\$62,891	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Marsh Creation South of Leeville (BA-32a)

Fully Funded Costs		Total Fully Funded Costs				Amortized Costs				Total First Cost	
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$262,642	\$491,556	\$43,438	\$21,719	\$628	\$0	\$0	\$0	\$819,983
2	1.033	2001	\$77,517	\$145,079	\$76,923	\$38,462	\$649	\$0	\$0	\$0	\$338,629
1	1.067	2002	\$0	\$0	\$79,462	\$39,731	\$670	\$200,079	\$1,026,379	\$4,105,517	\$5,451,838
TOTAL			\$340,158	\$636,635	\$199,823	\$99,912	\$1,947	\$200,079	\$1,026,379	\$4,105,517	\$6,610,450

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.000	2000	\$12,445	\$0	\$0
2	1.033	2001	\$5,610	\$0	\$0
1	1.067	2002	\$5,795	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$5,987	\$0	\$692
-2	1.139	2004	\$6,184	\$4,150	\$715
-3	1.176	2005	\$6,388	\$85,103	\$739
-4	1.215	2006	\$6,599	\$0	\$763
-5	1.255	2007	\$6,817	\$0	\$788
-6	1.297	2008	\$7,042	\$0	\$814
-7	1.339	2009	\$7,274	\$0	\$841
-8	1.384	2010	\$7,514	\$0	\$869
-9	1.429	2011	\$7,762	\$0	\$898
-10	1.476	2012	\$8,018	\$0	\$927
-11	1.525	2013	\$8,283	\$0	\$958
-12	1.575	2014	\$8,556	\$0	\$989
-13	1.627	2015	\$8,839	\$0	\$1,022
-14	1.681	2016	\$9,130	\$0	\$1,056
-15	1.737	2017	\$9,432	\$0	\$1,091
-16	1.794	2018	\$9,743	\$0	\$1,127
-17	1.853	2019	\$10,064	\$0	\$1,164
-18	1.914	2020	\$10,396	\$0	\$1,202
-19	1.977	2021	\$10,740	\$0	\$1,242
-20	2.043	2022	\$0	\$0	\$1,283
Total			\$178,619	\$89,253	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

North Shore Tangipahoa Shoreline Protection (PO-13)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$4,250,689	Total Fully Funded Costs	\$5,092,305

Annual Charges	Present Worth
Interest & Amortization	\$4,317,325
Monitoring	\$47,076
O & M Costs	\$259,068
Other Costs	\$6,851
Total	\$4,630,300

Average
Annual

\$395,724
\$4,315
\$23,746
\$628

\$424,413

Average Annual Habitat Units

34

Cost Per Habitat Unit

\$12,483

Average Annual Acres of Emergent Marsh

NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

North Shore Tangipahoa Shoreline Protection (PO-13)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	First Cost	Total First Cost
5	Compound	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	Compound	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Compound	\$115,938	\$21,875	\$37,154	\$18,577	\$628	\$0	\$0	\$0	\$194,171	\$194,171
2	Compound	\$149,063	\$28,125	\$63,692	\$31,846	\$628	\$0	\$0	\$0	\$273,354	\$273,354
1	Compound	\$0	\$0	\$37,154	\$18,577	\$628	\$33,000	\$689,500	\$2,758,000	\$3,536,859	\$3,536,859
TOTAL		\$265,000	\$50,000	\$138,000	\$69,000	\$1,884	\$33,000	\$689,500	\$2,758,000	\$4,004,384	\$4,004,384

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	Compound	\$13,624	\$0	\$0
1	Compound	\$2,700	\$0	\$0
0	Base Year	\$0	\$0	\$0
1	Discount	\$2,700	\$3,645	\$628
2	Discount	\$2,700	\$3,645	\$628
3	Discount	\$2,700	\$3,645	\$628
4	Discount	\$2,700	\$3,645	\$628
5	Discount	\$2,700	\$3,645	\$628
6	Discount	\$2,700	\$3,645	\$628
7	Discount	\$2,700	\$29,354	\$628
8	Discount	\$2,700	\$3,645	\$628
9	Discount	\$2,700	\$3,645	\$628
10	Discount	\$2,700	\$369,106	\$628
11	Discount	\$2,700	\$3,645	\$628
12	Discount	\$2,700	\$3,645	\$628
13	Discount	\$2,700	\$3,645	\$628
14	Discount	\$2,700	\$29,354	\$628
15	Discount	\$2,700	\$3,645	\$628
16	Discount	\$2,700	\$3,645	\$628
17	Discount	\$2,700	\$3,645	\$628
18	Discount	\$2,700	\$3,645	\$628
19	Discount	\$2,700	\$3,645	\$628
20	Discount	\$2,700	\$3,645	\$628
21	Discount	\$2,700	\$3,645	\$628
22	Discount	\$0	\$3,645	\$628
Total		\$67,624	\$489,779	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

North Shore Tangipahoa Shoreline Protection (PO-13)

Present Valued Costs		Total Discounted Costs	Amortized Costs		Total First Cost						
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$140,540	\$26,517	\$45,038	\$22,519	\$761	\$0	\$0	\$0	\$235,376
2	1.137	2001	\$169,468	\$31,975	\$72,411	\$36,206	\$714	\$0	\$0	\$0	\$310,773
1	1.066	2002	\$0	\$0	\$39,615	\$19,808	\$670	\$35,186	\$735,179	\$2,940,718	\$3,771,176
Total			\$310,008	\$58,492	\$157,065	\$78,532	\$2,145	\$35,186	\$735,179	\$2,940,718	\$4,317,325

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$15,489	\$0	\$0
1	1.066	2002	\$2,879	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$2,532	\$3,419	\$589
-2	0.880	2004	\$2,375	\$3,206	\$552
-3	0.825	2005	\$2,227	\$3,007	\$518
-4	0.774	2006	\$2,089	\$2,820	\$486
-5	0.726	2007	\$1,959	\$2,645	\$456
-6	0.681	2008	\$1,837	\$2,481	\$427
-7	0.638	2009	\$1,723	\$18,735	\$401
-8	0.599	2010	\$1,616	\$2,182	\$376
-9	0.561	2011	\$1,516	\$2,046	\$353
-10	0.527	2012	\$1,422	\$194,339	\$331
-11	0.494	2013	\$1,333	\$1,800	\$310
-12	0.463	2014	\$1,250	\$1,688	\$291
-13	0.434	2015	\$1,173	\$1,583	\$273
-14	0.407	2016	\$1,100	\$11,958	\$256
-15	0.382	2017	\$1,032	\$1,393	\$240
-16	0.358	2018	\$967	\$1,306	\$225
-17	0.336	2019	\$907	\$1,225	\$211
-18	0.315	2020	\$851	\$1,149	\$198
-19	0.296	2021	\$798	\$1,077	\$186
-20	0.277	2022	\$0	\$1,010	\$174
Total			\$47,076	\$259,068	\$6,851

Coastal Wetlands Conservation and Restoration Plan Priority Project List IX

North Shore Tangipahoa Shoreline Protection (PO-13)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs					Total First Cost			
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$115,938	\$21,875	\$37,154	\$18,577	\$628	\$0	\$0	\$0	\$194,171
2	1.033	2001	\$153,982	\$29,053	\$65,794	\$32,897	\$649	\$0	\$0	\$0	\$282,375
1	1.067	2002	\$0	\$0	\$39,646	\$19,823	\$670	\$35,214	\$735,758	\$2,943,031	\$3,774,143
TOTAL			\$269,919	\$50,928	\$142,594	\$71,297	\$1,947	\$35,214	\$735,758	\$2,943,031	\$4,250,689

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$14,074	\$0	\$0
1	1.067	2002	\$2,881	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$2,976	\$4,018	\$692
-2	1.139	2004	\$3,074	\$4,150	\$715
-3	1.176	2005	\$3,176	\$4,287	\$739
-4	1.215	2006	\$3,281	\$4,429	\$763
-5	1.255	2007	\$3,389	\$4,575	\$788
-6	1.297	2008	\$3,501	\$4,726	\$814
-7	1.339	2009	\$3,616	\$39,316	\$841
-8	1.384	2010	\$3,736	\$5,043	\$869
-9	1.429	2011	\$3,859	\$5,210	\$898
-10	1.476	2012	\$3,986	\$544,947	\$927
-11	1.525	2013	\$4,118	\$5,559	\$958
-12	1.575	2014	\$4,254	\$5,743	\$989
-13	1.627	2015	\$4,394	\$5,932	\$1,022
-14	1.681	2016	\$4,539	\$49,349	\$1,056
-15	1.737	2017	\$4,689	\$6,330	\$1,091
-16	1.794	2018	\$4,844	\$6,539	\$1,127
-17	1.853	2019	\$5,003	\$6,755	\$1,164
-18	1.914	2020	\$5,169	\$6,978	\$1,202
-19	1.977	2021	\$5,339	\$7,208	\$1,242
-20	2.043	2022	\$0	\$7,446	\$1,283
Total			\$93,897	\$728,539	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Grand and White Lake Land Bridge Protection - Breakwaters (PME-18a)

Project Construction Years:	5	Total Project Years	25
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$5,130,470	Total Fully Funded Costs	\$7,603,732

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$5,198,926	\$476,531
Monitoring	\$88,248	\$8,089
O & M Costs	\$685,636	\$62,845
Other Costs	\$6,851	\$628
Total	\$5,979,700	\$548,093
Average Annual Habitat Units		38
Cost Per Habitat Unit		\$14,424
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Grand and White Lake Land Bridge Protection - Breakwaters (PME-18a)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound	2000	\$69,003	\$7,424	\$30,943	\$10,314	\$628	\$0	\$0	\$0	\$118,312
4 Compound	2001	\$118,291	\$12,727	\$53,045	\$17,682	\$628	\$0	\$0	\$0	\$202,373
3 Compound	2002	\$118,291	\$12,727	\$53,045	\$17,682	\$628	\$0	\$0	\$0	\$202,373
2 Compound	2003	\$19,715	\$2,121	\$53,045	\$17,682	\$628	\$194,363	\$388,729	\$1,554,915	\$2,231,198
1 Compound	2004	\$0	\$0	\$26,522	\$8,841	\$628	\$166,597	\$333,196	\$1,332,785	\$1,868,569
TOTAL		\$325,300	\$35,000	\$216,600	\$72,200	\$3,140	\$360,960	\$721,925	\$2,887,700	\$4,622,825

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2002	\$16,616	\$0	\$0
2 Compound	2003	\$5,431	\$0	\$0
1 Compound	2004	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2005	\$5,431	\$0	\$628
2 Discount	2006	\$5,431	\$3,645	\$628
3 Discount	2007	\$5,431	\$0	\$628
4 Discount	2008	\$5,431	\$0	\$628
5 Discount	2009	\$5,431	\$3,645	\$628
6 Discount	2010	\$5,431	\$0	\$628
7 Discount	2011	\$5,431	\$0	\$628
8 Discount	2012	\$5,431	\$0	\$628
9 Discount	2013	\$5,431	\$3,645	\$628
10 Discount	2014	\$5,431	\$1,055,169	\$628
11 Discount	2015	\$5,431	\$0	\$628
12 Discount	2016	\$5,431	\$0	\$628
13 Discount	2017	\$5,431	\$0	\$628
14 Discount	2018	\$5,431	\$3,645	\$628
15 Discount	2019	\$5,431	\$315,913	\$628
16 Discount	2020	\$5,431	\$0	\$628
17 Discount	2021	\$5,431	\$0	\$628
18 Discount	2022	\$5,431	\$0	\$628
19 Discount	2023	\$0	\$0	\$628
20 Discount	2024	\$0	\$0	\$628
Total		\$125,236	\$1,385,662	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX
Grand and White Lake Land Bridge Protection - Breakwaters (PME-18a)**

Present Valued Costs		Total Discounted Costs	Amortized Costs		Total First Cost						
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Construction Cost	Total First Cost
5	1.378	2000	\$95,096	\$10,232	\$42,644	\$14,215	\$865	\$0	\$0	\$0	\$163,052
4	1.293	2001	\$152,893	\$16,450	\$68,561	\$22,854	\$812	\$0	\$0	\$0	\$261,570
3	1.212	2002	\$143,393	\$15,428	\$64,301	\$21,434	\$761	\$0	\$0	\$0	\$245,318
2	1.137	2003	\$22,414	\$2,412	\$60,306	\$20,102	\$714	\$220,969	\$441,942	\$1,767,766	\$2,536,625
1	1.066	2004	\$0	\$0	\$28,280	\$9,427	\$670	\$177,634	\$355,270	\$1,421,082	\$1,992,362
Total			\$413,796	\$44,522	\$264,092	\$88,031	\$3,822	\$398,603	\$797,212	\$3,188,848	\$5,198,926

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2002	\$20,142	\$0	\$0
2	1.137	2003	\$6,174	\$0	\$0
1	1.066	2004	\$5,791	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2005	\$5,094	\$0	\$589
-2	0.880	2006	\$4,777	\$3,206	\$552
-3	0.825	2007	\$4,480	\$0	\$518
-4	0.774	2008	\$4,202	\$0	\$486
-5	0.726	2009	\$3,941	\$2,645	\$456
-6	0.681	2010	\$3,696	\$0	\$427
-7	0.638	2011	\$3,466	\$0	\$401
-8	0.599	2012	\$3,251	\$0	\$376
-9	0.561	2013	\$3,049	\$2,046	\$353
-10	0.527	2014	\$2,859	\$555,561	\$331
-11	0.494	2015	\$2,682	\$0	\$310
-12	0.463	2016	\$2,515	\$0	\$291
-13	0.434	2017	\$2,359	\$0	\$273
-14	0.407	2018	\$2,212	\$1,485	\$256
-15	0.382	2019	\$2,075	\$120,693	\$240
-16	0.358	2020	\$1,946	\$0	\$225
-17	0.336	2021	\$1,825	\$0	\$211
-18	0.315	2022	\$1,712	\$0	\$198
-19	0.296	2023	\$0	\$0	\$186
-20	0.277	2024	\$0	\$0	\$174
Total			\$88,248	\$685,636	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Grand and White Lake Land Bridge Protection - Breakwaters (PME-18a)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.000	2000	\$69,003	\$7,424	\$30,943	\$10,314	\$628	\$0	\$0	\$0	\$118,312
4	1.033	2001	\$122,195	\$13,147	\$54,795	\$18,265	\$649	\$0	\$0	\$0	\$209,051
3	1.067	2002	\$126,227	\$13,581	\$56,604	\$18,868	\$670	\$0	\$0	\$0	\$215,950
2	1.102	2003	\$21,732	\$2,338	\$8,472	\$19,491	\$692	\$214,247	\$428,497	\$1,713,988	\$2,459,456
1	1.139	2004	\$0	\$0	\$30,201	\$10,067	\$715	\$189,700	\$379,403	\$1,517,614	\$2,127,700
TOTAL			\$339,157	\$36,491	\$231,014	\$77,005	\$3,354	\$403,947	\$807,900	\$3,231,602	\$5,130,470

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.067	2002	\$17,731	\$0	\$0
2	1.102	2003	\$5,987	\$0	\$0
1	1.139	2004	\$6,184	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.176	2005	\$6,388	\$0	\$739
-2	1.215	2006	\$6,599	\$4,429	\$763
-3	1.255	2007	\$6,817	\$0	\$788
-4	1.297	2008	\$7,042	\$0	\$814
-5	1.339	2009	\$7,274	\$4,882	\$841
-6	1.384	2010	\$7,514	\$0	\$869
-7	1.429	2011	\$7,762	\$0	\$898
-8	1.476	2012	\$8,018	\$0	\$927
-9	1.525	2013	\$8,283	\$5,559	\$958
-10	1.575	2014	\$8,556	\$1,662,366	\$989
-11	1.627	2015	\$8,839	\$0	\$1,022
-12	1.681	2016	\$9,130	\$0	\$1,056
-13	1.737	2017	\$9,432	\$0	\$1,091
-14	1.794	2018	\$9,743	\$6,539	\$1,127
-15	1.853	2019	\$10,064	\$585,428	\$1,164
-16	1.914	2020	\$10,396	\$0	\$1,202
-17	1.977	2021	\$10,740	\$0	\$1,242
-18	2.043	2022	\$11,094	\$0	\$1,283
-19	2.110	2023	\$0	\$0	\$1,325
-20	2.180	2024	\$0	\$0	\$1,369
Total			\$183,593	\$2,269,203	\$20,466

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Grand and White Lake Land Bridge Protection - A-Jacks (PME-18b)

Project Construction Years:	5	Total Project Years	25
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$2,671,869	Total Fully Funded Costs	\$3,970,799

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$2,720,937	\$249,400
Monitoring	\$88,248	\$8,089
O & M Costs	\$343,430	\$31,479
Other Costs	\$6,851	\$628
Total	\$3,159,500	\$289,595
Average Annual Habitat Units		32
Cost Per Habitat Unit		\$9,050
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Grand and White Lake Land Bridge Protection - A-Jacks (PME-18b)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	First Cost	Total First Cost
5 Compound	2000	\$44,970	\$7,424	\$15,300	\$5,100	\$628	\$0	\$0	\$0	\$0	\$73,422
4 Compound	2001	\$77,091	\$12,727	\$26,229	\$8,743	\$628	\$0	\$0	\$0	\$0	\$125,418
3 Compound	2002	\$77,091	\$12,727	\$26,229	\$8,743	\$628	\$0	\$0	\$0	\$0	\$125,418
2 Compound	2003	\$12,848	\$2,121	\$26,229	\$8,743	\$628	\$55,838	\$206,190	\$824,762	\$824,762	\$1,137,360
1 Compound	2004	\$0	\$0	\$13,114	\$4,371	\$628	\$47,862	\$176,735	\$706,938	\$706,938	\$949,648
TOTAL		\$212,000	\$35,000	\$107,100	\$35,700	\$3,140	\$103,700	\$382,925	\$1,531,700	\$1,531,700	\$2,433,265

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2002	\$16,616	\$0	\$0
2 Compound	2003	\$5,431	\$0	\$0
1 Compound	2004	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2005	\$5,431	\$0	\$628
2 Discount	2006	\$5,431	\$3,645	\$628
3 Discount	2007	\$5,431	\$0	\$628
4 Discount	2008	\$5,431	\$0	\$628
5 Discount	2009	\$5,431	\$3,645	\$628
6 Discount	2010	\$5,431	\$0	\$628
7 Discount	2011	\$5,431	\$0	\$628
8 Discount	2012	\$5,431	\$0	\$628
9 Discount	2013	\$5,431	\$3,645	\$628
10 Discount	2014	\$5,431	\$558,908	\$628
11 Discount	2015	\$5,431	\$0	\$628
12 Discount	2016	\$5,431	\$0	\$628
13 Discount	2017	\$5,431	\$0	\$628
14 Discount	2018	\$5,431	\$3,645	\$628
15 Discount	2019	\$5,431	\$104,110	\$628
16 Discount	2020	\$5,431	\$0	\$628
17 Discount	2021	\$5,431	\$0	\$628
18 Discount	2022	\$5,431	\$0	\$628
19 Discount	2023	\$0	\$0	\$628
20 Discount	2024	\$0	\$0	\$628
Total		\$125,236	\$677,598	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX
Grand and White Lake Land Bridge Protection - A-Jacks (PME-18b)**

Present Valued Costs		Total Discounted Costs		Amortized Costs							
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378	2000	\$61,975	\$10,232	\$21,086	\$7,029	\$865	\$0	\$0	\$0	\$101,186
4	1.293	2001	\$99,641	\$16,450	\$33,901	\$11,300	\$812	\$0	\$0	\$0	\$162,104
3	1.212	2002	\$93,450	\$15,428	\$31,794	\$10,598	\$761	\$0	\$0	\$0	\$152,032
2	1.137	2003	\$14,607	\$2,412	\$29,819	\$9,940	\$714	\$63,482	\$234,416	\$937,662	\$1,293,052
1	1.066	2004	\$0	\$0	\$13,983	\$4,661	\$670	\$51,032	\$188,443	\$753,773	\$1,012,563
Total			\$269,674	\$44,522	\$130,583	\$43,528	\$3,822	\$114,515	\$422,859	\$1,691,436	\$2,720,937

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2002	\$20,142	\$0	\$0
2	1.137	2003	\$6,174	\$0	\$0
1	1.066	2004	\$5,791	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2005	\$5,094	\$0	\$589
-2	0.880	2006	\$4,777	\$3,206	\$552
-3	0.825	2007	\$4,480	\$0	\$518
-4	0.774	2008	\$4,202	\$0	\$486
-5	0.726	2009	\$3,941	\$2,645	\$456
-6	0.681	2010	\$3,696	\$0	\$427
-7	0.638	2011	\$3,466	\$0	\$401
-8	0.599	2012	\$3,251	\$0	\$376
-9	0.561	2013	\$3,049	\$2,046	\$353
-10	0.527	2014	\$2,859	\$294,273	\$331
-11	0.494	2015	\$2,682	\$0	\$310
-12	0.463	2016	\$2,515	\$0	\$291
-13	0.434	2017	\$2,359	\$0	\$273
-14	0.407	2018	\$2,212	\$1,485	\$256
-15	0.382	2019	\$2,075	\$39,775	\$240
-16	0.358	2020	\$1,946	\$0	\$225
-17	0.336	2021	\$1,825	\$0	\$211
-18	0.315	2022	\$1,712	\$0	\$198
-19	0.296	2023	\$0	\$0	\$186
-20	0.277	2024	\$0	\$0	\$174
Total			\$88,248	\$343,430	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Grand and White Lake Land Bridge Protection - A-Jacks (PME-18b)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs					Total First Cost			
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.000	2000	\$44,970	\$7,424	\$15,300	\$5,100	\$628	\$0	\$0	\$0	\$73,422
4	1.033	2001	\$79,635	\$13,147	\$27,094	\$9,031	\$649	\$0	\$0	\$0	\$129,556
3	1.067	2002	\$82,263	\$13,581	\$27,988	\$9,329	\$670	\$0	\$0	\$0	\$133,832
2	1.102	2003	\$14,163	\$2,338	\$28,912	\$9,637	\$692	\$61,551	\$227,284	\$909,137	\$1,253,715
1	1.139	2004	\$0	\$0	\$14,933	\$4,978	\$715	\$54,499	\$201,244	\$804,976	\$1,081,345
TOTAL			\$221,030	\$36,491	\$114,227	\$38,076	\$3,354	\$116,050	\$428,528	\$1,714,113	\$2,671,869

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.067	2002	\$17,731	\$0	\$0
2	1.102	2003	\$5,987	\$0	\$0
1	1.139	2004	\$6,184	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.176	2005	\$6,388	\$0	\$739
-2	1.215	2006	\$6,599	\$4,429	\$763
-3	1.255	2007	\$6,817	\$0	\$788
-4	1.297	2008	\$7,042	\$0	\$814
-5	1.339	2009	\$7,274	\$4,882	\$841
-6	1.384	2010	\$7,514	\$0	\$869
-7	1.429	2011	\$7,762	\$0	\$898
-8	1.476	2012	\$8,018	\$0	\$927
-9	1.525	2013	\$8,283	\$5,559	\$958
-10	1.575	2014	\$8,556	\$880,532	\$989
-11	1.627	2015	\$8,839	\$0	\$1,022
-12	1.681	2016	\$9,130	\$0	\$1,056
-13	1.737	2017	\$9,432	\$0	\$1,091
-14	1.794	2018	\$9,743	\$6,539	\$1,127
-15	1.853	2019	\$10,064	\$192,930	\$1,164
-16	1.914	2020	\$10,396	\$0	\$1,202
-17	1.977	2021	\$10,740	\$0	\$1,242
-18	2.043	2022	\$11,094	\$0	\$1,283
-19	2.110	2023	\$0	\$0	\$1,325
-20	2.180	2024	\$0	\$0	\$1,369
Total			\$183,593	\$1,094,870	\$20,466

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Raccoon Island II (PTE-15viii)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$8,241,316	Total Fully Funded Costs	\$8,467,281

	Present Worth	Average Annual
Annual Charges		
Interest & Amortization	\$8,331,455	\$763,657
Monitoring	\$48,805	\$4,473
O & M Costs	\$39,767	\$3,645
Other Costs	\$6,851	\$628
Total	\$8,426,900	\$772,404
Average Annual Habitat Units		83
Cost Per Habitat Unit		\$9,306
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Raccoon Island II (PTE-15viii)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5	Compound	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	Compound	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Compound	2000	\$165,550	\$47,367	\$27,500	\$628	\$0	\$0	\$0	\$246,295
2	Compound	2001	\$283,800	\$9,000	\$81,200	\$47,143	\$628	\$0	\$0	\$421,771
1	Compound	2002	\$23,650	\$750	\$74,433	\$35,357	\$628	\$1,350,250	\$5,401,000	\$7,084,068
	TOTAL		\$473,000	\$15,000	\$203,000	\$110,000	\$1,884	\$198,000	\$1,350,250	\$7,752,134

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	Compound	2001	\$15,145	\$0
1	Compound	2002	\$2,700	\$0
0	Base Year		\$0	\$0
1	Discount	2003	\$2,700	\$3,645
2	Discount	2004	\$2,700	\$3,645
3	Discount	2005	\$2,700	\$3,645
4	Discount	2006	\$2,700	\$3,645
5	Discount	2007	\$2,700	\$3,645
6	Discount	2008	\$2,700	\$3,645
7	Discount	2009	\$2,700	\$3,645
8	Discount	2010	\$2,700	\$3,645
9	Discount	2011	\$2,700	\$3,645
10	Discount	2012	\$2,700	\$3,645
11	Discount	2013	\$2,700	\$3,645
12	Discount	2014	\$2,700	\$3,645
13	Discount	2015	\$2,700	\$3,645
14	Discount	2016	\$2,700	\$3,645
15	Discount	2017	\$2,700	\$3,645
16	Discount	2018	\$2,700	\$3,645
17	Discount	2019	\$2,700	\$3,645
18	Discount	2020	\$2,700	\$3,645
19	Discount	2021	\$2,700	\$3,645
20	Discount	2022	\$0	\$3,645
	Total	\$69,145	\$72,900	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Raccoon Island II (PTE-15viii)

Present Valued Costs		Total Discounted Costs	Amortized Costs						
Year	Compound Rates	Fiscal Year	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$200,681	\$6,364	\$57,418	\$33,336	\$0	\$0	\$298,560
2	1.137	2001	\$322,649	\$10,232	\$92,315	\$53,596	\$714	\$0	\$479,507
1	1.066	2002	\$25,217	\$800	\$79,365	\$37,700	\$670	\$1,439,704	\$7,553,388
Total			\$548,547	\$17,396	\$229,098	\$124,631	\$2,145	\$1,439,704	\$8,331,455

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$17,218	\$0	\$0
1	1.066	2002	\$2,879	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$2,532	\$3,419	\$589
-2	0.880	2004	\$2,375	\$3,206	\$552
-3	0.825	2005	\$2,227	\$3,007	\$518
-4	0.774	2006	\$2,089	\$2,820	\$486
-5	0.726	2007	\$1,959	\$2,645	\$456
-6	0.681	2008	\$1,837	\$2,481	\$427
-7	0.638	2009	\$1,723	\$2,326	\$401
-8	0.599	2010	\$1,616	\$2,182	\$376
-9	0.561	2011	\$1,516	\$2,046	\$353
-10	0.527	2012	\$1,422	\$1,919	\$331
-11	0.494	2013	\$1,333	\$1,800	\$310
-12	0.463	2014	\$1,250	\$1,688	\$291
-13	0.434	2015	\$1,173	\$1,583	\$273
-14	0.407	2016	\$1,100	\$1,485	\$256
-15	0.382	2017	\$1,032	\$1,393	\$240
-16	0.358	2018	\$967	\$1,306	\$225
-17	0.336	2019	\$907	\$1,225	\$211
-18	0.315	2020	\$851	\$1,149	\$198
-19	0.296	2021	\$798	\$1,077	\$186
-20	0.277	2022	\$0	\$1,010	\$174
Total			\$48,805	\$39,767	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Raccoon Island II (PTE-15viii)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs					Total First Cost			
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$165,550	\$5,250	\$47,367	\$27,500	\$628	\$0	\$0	\$0	\$246,295
2	1.033	2001	\$293,165	\$9,297	\$83,880	\$48,699	\$649	\$0	\$0	\$0	\$435,689
1	1.067	2002	\$25,237	\$800	\$79,427	\$37,729	\$670	\$211,284	\$1,440,837	\$5,763,348	\$7,559,332
TOTAL			\$483,952	\$15,347	\$210,673	\$113,928	\$1,947	\$211,284	\$1,440,837	\$5,763,348	\$8,241,316

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$15,645	\$0	\$0
1	1.067	2002	\$2,881	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$2,976	\$4,018	\$692
-2	1.139	2004	\$3,074	\$4,150	\$715
-3	1.176	2005	\$3,176	\$4,287	\$739
-4	1.215	2006	\$3,281	\$4,429	\$763
-5	1.255	2007	\$3,389	\$4,575	\$788
-6	1.297	2008	\$3,501	\$4,726	\$814
-7	1.339	2009	\$3,616	\$4,882	\$841
-8	1.384	2010	\$3,736	\$5,043	\$869
-9	1.429	2011	\$3,859	\$5,210	\$898
-10	1.476	2012	\$3,986	\$5,381	\$927
-11	1.525	2013	\$4,118	\$5,559	\$958
-12	1.575	2014	\$4,254	\$5,743	\$989
-13	1.627	2015	\$4,394	\$5,932	\$1,022
-14	1.681	2016	\$4,539	\$6,128	\$1,056
-15	1.737	2017	\$4,689	\$6,330	\$1,091
-16	1.794	2018	\$4,844	\$6,539	\$1,127
-17	1.853	2019	\$5,003	\$6,755	\$1,164
-18	1.914	2020	\$5,169	\$6,978	\$1,202
-19	1.977	2021	\$5,339	\$7,208	\$1,242
-20	2.043	2022	\$0	\$7,446	\$1,283
Total			\$95,468	\$111,318	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Amoretta Freshwater Diversion (BA-17)

Project Construction Years:	5	Total Project Years	25
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$16,827,779	Total Fully Funded Costs	\$19,339,342

Annual Charges	Present Worth
Interest & Amortization	\$18,253,171
Monitoring	\$376,097
O & M Costs	\$578,275
Other Costs	\$6,851
Total	\$19,214,400

Average Annual
\$1,673,077
\$34,473
\$53,004
\$628
Total
\$1,761,182
133
\$13,242
NA

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Amoretta Freshwater Diversion (BA-17)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
3 Compound	2000	\$115,868	\$1,013,158	\$54,444	\$17,111	\$628	\$0	\$0	\$0	\$1,201,210
4 Compound	2001	\$198,632	\$1,736,842	\$93,333	\$29,333	\$628	\$0	\$0	\$0	\$2,058,768
3 Compound	2002	\$198,632	\$1,736,842	\$93,333	\$29,333	\$628	\$0	\$0	\$0	\$2,058,768
2 Compound	2003	\$115,868	\$1,013,158	\$93,333	\$29,333	\$628	\$126,000	\$1,361,500	\$5,446,000	\$8,185,821
1 Compound	2004	\$0	\$0	\$15,556	\$4,899	\$628	\$36,000	\$389,000	\$1,556,000	\$2,002,072
TOTAL		\$629,000	\$5,500,000	\$350,000	\$110,000	\$3,140	\$162,000	\$1,750,500	\$7,002,000	\$15,308,640

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2002	\$41,350	\$0	\$0
2 Compound	2003	\$25,994	\$0	\$0
1 Compound	2004	\$25,994	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2005	\$25,994	\$38,645	\$628
2 Discount	2006	\$25,994	\$38,645	\$628
3 Discount	2007	\$25,994	\$38,645	\$628
4 Discount	2008	\$25,994	\$38,645	\$628
5 Discount	2009	\$25,994	\$154,569	\$628
6 Discount	2010	\$25,994	\$38,645	\$628
7 Discount	2011	\$25,994	\$38,645	\$628
8 Discount	2012	\$25,994	\$38,645	\$628
9 Discount	2013	\$25,994	\$38,645	\$628
10 Discount	2014	\$25,994	\$154,569	\$628
11 Discount	2015	\$25,994	\$38,645	\$628
12 Discount	2016	\$25,994	\$38,645	\$628
13 Discount	2017	\$25,994	\$38,645	\$628
14 Discount	2018	\$25,994	\$38,645	\$628
15 Discount	2019	\$25,994	\$68,769	\$628
16 Discount	2020	\$25,994	\$38,645	\$628
17 Discount	2021	\$25,994	\$38,645	\$628
18 Discount	2022	\$25,994	\$38,645	\$628
19 Discount	2023	\$0	\$38,645	\$628
20 Discount	2024	\$0	\$38,645	\$628
Total		\$561,230	\$1,034,872	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Amoretta Freshwater Diversion (BA-17)

Present Valued Costs		Total Discounted Costs	\$19,214,394	Amortized Costs	\$1,761,192						
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights Administration	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378	2000	\$159,684	\$1,396,279	\$75,032	\$23,582	\$865	\$0	\$0	\$0	\$1,655,443
4	1.293	2001	\$256,735	\$2,244,897	\$120,635	\$37,914	\$812	\$0	\$0	\$0	\$2,660,993
3	1.212	2002	\$140,457	\$2,105,414	\$113,139	\$35,558	\$761	\$0	\$0	\$0	\$2,495,655
2	1.137	2003	\$0	\$1,151,848	\$106,110	\$33,349	\$714	\$143,248	\$1,547,874	\$6,191,498	\$9,306,370
1	1.066	2004	\$0	\$0	\$16,586	\$5,213	\$670	\$38,385	\$414,771	\$1,659,085	\$2,134,710
Total			\$556,875	\$6,898,439	\$431,502	\$135,615	\$3,822	\$181,633	\$1,962,646	\$7,850,583	\$18,253,171

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2002	\$50,125	\$0	\$0
2	1.137	2003	\$29,552	\$0	\$0
1	1.066	2004	\$27,716	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2005	\$24,379	\$36,244	\$589
-2	0.880	2006	\$22,864	\$33,992	\$552
-3	0.825	2007	\$21,444	\$31,880	\$518
-4	0.774	2008	\$20,111	\$29,899	\$486
-5	0.726	2009	\$18,862	\$112,157	\$456
-6	0.681	2010	\$17,690	\$26,299	\$427
-7	0.638	2011	\$16,591	\$24,665	\$401
-8	0.599	2012	\$15,560	\$23,132	\$376
-9	0.561	2013	\$14,593	\$21,695	\$353
-10	0.527	2014	\$13,686	\$81,383	\$331
-11	0.494	2015	\$12,836	\$19,083	\$310
-12	0.463	2016	\$12,038	\$17,897	\$291
-13	0.434	2017	\$11,290	\$16,785	\$273
-14	0.407	2018	\$10,589	\$15,742	\$256
-15	0.382	2019	\$9,931	\$26,273	\$240
-16	0.358	2020	\$9,314	\$13,847	\$225
-17	0.336	2021	\$8,735	\$12,986	\$211
-18	0.315	2022	\$8,192	\$12,180	\$198
-19	0.296	2023	\$0	\$11,423	\$186
-20	0.277	2024	\$0	\$10,713	\$174
Total			\$376,097	\$578,275	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Amoretta Freshwater Diversion (BA-17)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs					Total First Cost			
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Cost
5	1.000	2000	\$115,868	\$1,013,158	\$54,444	\$17,111	\$628	\$0	\$0	\$0	\$1,201,210
4	1.033	2001	\$205,186	\$1,794,158	\$96,413	\$30,301	\$649	\$0	\$0	\$0	\$2,126,708
3	1.067	2002	\$211,958	\$1,853,365	\$99,595	\$31,301	\$670	\$0	\$0	\$0	\$2,196,889
2	1.102	2003	\$127,722	\$1,116,807	\$102,882	\$32,334	\$692	\$138,890	\$1,500,785	\$6,003,142	\$9,023,255
1	1.139	2004	\$0	\$0	\$17,713	\$5,567	\$715	\$40,992	\$442,946	\$1,771,784	\$2,279,718
TOTAL			\$660,735	\$5,777,488	\$371,047	\$116,615	\$3,354	\$179,883	\$1,943,732	\$7,774,926	\$16,827,779

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.067	2002	\$44,124	\$0	\$0
2	1.102	2003	\$28,653	\$0	\$0
1	1.139	2004	\$29,599	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.176	2005	\$30,576	\$45,456	\$739
-2	1.215	2006	\$31,585	\$46,956	\$763
-3	1.255	2007	\$32,627	\$48,506	\$788
-4	1.297	2008	\$33,704	\$50,107	\$814
-5	1.339	2009	\$34,816	\$207,026	\$841
-6	1.384	2010	\$35,965	\$53,468	\$869
-7	1.429	2011	\$37,152	\$55,233	\$898
-8	1.476	2012	\$38,378	\$57,055	\$927
-9	1.525	2013	\$39,644	\$58,938	\$958
-10	1.575	2014	\$40,952	\$243,516	\$989
-11	1.627	2015	\$42,304	\$62,892	\$1,022
-12	1.681	2016	\$43,700	\$64,968	\$1,056
-13	1.737	2017	\$45,142	\$67,112	\$1,091
-14	1.794	2018	\$46,631	\$69,326	\$1,127
-15	1.853	2019	\$48,170	\$127,438	\$1,164
-16	1.914	2020	\$49,760	\$73,978	\$1,202
-17	1.977	2021	\$51,402	\$76,419	\$1,242
-18	2.043	2022	\$53,098	\$78,941	\$1,283
-19	2.110	2023	\$0	\$81,546	\$1,325
-20	2.180	2024	\$0	\$84,237	\$1,369
Total			\$837,979	\$1,653,118	\$20,466

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

East West Grand Terre Island Restoration (XBA-1a)

Project Construction Years:	5	Total Project Years	25
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$17,998,083	Total Fully Funded Costs	\$18,203,486

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$18,219,851	\$1,670,023
Monitoring	\$89,776	\$8,229
O & M Costs	\$0	\$0
Other Costs	\$6,851	\$628
Total	\$18,316,500	\$1,678,880
Average Annual Habitat Units		183
Cost Per Habitat Unit		\$9,174
Average Annual Acres of Emergent Marsh		NA

Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX

East West Grand Terre Island Restoration (XBA-1a)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound	2000	\$189,399	\$94,606	\$98,771	\$15,714	\$628	\$0	\$0	\$0	\$399,119
4 Compound	2001	\$324,685	\$162,182	\$169,322	\$26,939	\$628	\$0	\$0	\$0	\$683,756
3 Compound	2002	\$324,685	\$162,182	\$169,322	\$26,939	\$628	\$0	\$0	\$0	\$683,756
2 Compound	2003	\$54,114	\$27,030	\$169,322	\$26,939	\$628	\$129,231	\$1,489,237	\$5,956,946	\$7,853,447
1 Compound	2004	\$0	\$0	\$84,661	\$13,469	\$628	\$110,769	\$1,276,488	\$5,105,954	\$6,591,970
TOTAL		\$892,883	\$446,000	\$691,400	\$110,000	\$3,140	\$240,000	\$2,765,725	\$11,062,900	\$16,212,048

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2002	\$17,876	\$0	\$0
2 Compound	2003	\$5,431	\$0	\$0
1 Compound	2004	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2005	\$5,431	\$0	\$628
2 Discount	2006	\$5,431	\$0	\$628
3 Discount	2007	\$5,431	\$0	\$628
4 Discount	2008	\$5,431	\$0	\$628
5 Discount	2009	\$5,431	\$0	\$628
6 Discount	2010	\$5,431	\$0	\$628
7 Discount	2011	\$5,431	\$0	\$628
8 Discount	2012	\$5,431	\$0	\$628
9 Discount	2013	\$5,431	\$0	\$628
10 Discount	2014	\$5,431	\$0	\$628
11 Discount	2015	\$5,431	\$0	\$628
12 Discount	2016	\$5,431	\$0	\$628
13 Discount	2017	\$5,431	\$0	\$628
14 Discount	2018	\$5,431	\$0	\$628
15 Discount	2019	\$5,431	\$0	\$628
16 Discount	2020	\$5,431	\$0	\$628
17 Discount	2021	\$5,431	\$0	\$628
18 Discount	2022	\$5,431	\$0	\$628
19 Discount	2023	\$0	\$0	\$628
20 Discount	2024	\$0	\$0	\$628
Total		\$126,496	\$0	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

East West Grand Terre Island Restoration (XBA-1a)

Present Valued Costs		Total Discounted Costs	\$18,316,478	Amortized Costs	\$1,678,880						
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378	2000	\$261,020	\$130,381	\$136,121	\$21,657	\$865	\$0	\$0	\$0	\$550,045
4	1.293	2001	\$419,660	\$209,623	\$218,852	\$34,819	\$812	\$0	\$0	\$0	\$883,766
3	1.212	2002	\$393,585	\$196,598	\$205,254	\$32,655	\$761	\$0	\$0	\$0	\$828,854
2	1.137	2003	\$61,522	\$30,730	\$192,501	\$30,626	\$714	\$146,921	\$1,693,097	\$6,772,387	\$8,928,498
1	1.066	2004	\$0	\$0	\$90,270	\$14,362	\$670	\$118,108	\$1,361,056	\$5,444,223	\$7,028,688
Total			\$1,135,788	\$567,332	\$842,998	\$134,119	\$3,822	\$265,029	\$3,054,153	\$12,216,610	\$18,219,851

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2002	\$21,669	\$0	\$0
2	1.137	2003	\$6,174	\$0	\$0
1	1.066	2004	\$5,791	\$0	\$0
0		Base Year	\$0	\$0	\$0
-1	0.938	2005	\$5,094	\$0	\$589
-2	0.880	2006	\$4,777	\$0	\$552
-3	0.825	2007	\$4,480	\$0	\$518
-4	0.774	2008	\$4,202	\$0	\$486
-5	0.726	2009	\$3,941	\$0	\$456
-6	0.681	2010	\$3,696	\$0	\$427
-7	0.638	2011	\$3,466	\$0	\$401
-8	0.599	2012	\$3,251	\$0	\$376
-9	0.561	2013	\$3,049	\$0	\$353
-10	0.527	2014	\$2,859	\$0	\$331
-11	0.494	2015	\$2,682	\$0	\$310
-12	0.463	2016	\$2,515	\$0	\$291
-13	0.434	2017	\$2,359	\$0	\$273
-14	0.407	2018	\$2,212	\$0	\$256
-15	0.382	2019	\$2,075	\$0	\$240
-16	0.358	2020	\$1,946	\$0	\$225
-17	0.336	2021	\$1,825	\$0	\$211
-18	0.315	2022	\$1,712	\$0	\$198
-19	0.296	2023	\$0	\$0	\$186
-20	0.277	2024	\$0	\$0	\$174
Total			\$89,776	\$0	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

East West Grand Terre Island Restoration (XBA-1a)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs						Total First Cost		
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.000	2000	\$189,399	\$94,606	\$98,771	\$15,714	\$628	\$0	\$0	\$0	\$399,119
4	1.033	2001	\$335,399	\$167,534	\$174,910	\$27,828	\$649	\$0	\$0	\$0	\$706,320
3	1.067	2002	\$346,468	\$173,062	\$180,662	\$28,746	\$670	\$0	\$0	\$0	\$729,628
2	1.102	2003	\$59,650	\$29,796	\$186,645	\$29,695	\$692	\$142,451	\$1,641,590	\$6,566,359	\$8,656,878
1	1.139	2004	\$0	\$0	\$96,402	\$15,337	\$715	\$126,131	\$1,453,511	\$5,814,042	\$7,506,138
TOTAL			\$930,916	\$464,998	\$737,410	\$117,320	\$3,354	\$268,582	\$3,095,100	\$12,380,401	\$17,998,083

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.067	2002	\$19,075	\$0	\$0
2	1.102	2003	\$5,987	\$0	\$0
1	1.139	2004	\$6,184	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.176	2005	\$6,388	\$0	\$739
-2	1.215	2006	\$6,599	\$0	\$763
-3	1.255	2007	\$6,817	\$0	\$788
-4	1.297	2008	\$7,042	\$0	\$814
-5	1.339	2009	\$7,274	\$0	\$841
-6	1.384	2010	\$7,514	\$0	\$869
-7	1.429	2011	\$7,762	\$0	\$898
-8	1.476	2012	\$8,018	\$0	\$927
-9	1.525	2013	\$8,283	\$0	\$958
-10	1.575	2014	\$8,556	\$0	\$989
-11	1.627	2015	\$8,839	\$0	\$1,022
-12	1.681	2016	\$9,130	\$0	\$1,056
-13	1.737	2017	\$9,432	\$0	\$1,091
-14	1.794	2018	\$9,743	\$0	\$1,127
-15	1.853	2019	\$10,064	\$0	\$1,164
-16	1.914	2020	\$10,396	\$0	\$1,202
-17	1.977	2021	\$10,740	\$0	\$1,242
-18	2.043	2022	\$11,094	\$0	\$1,283
-19	2.110	2023	\$0	\$0	\$1,325
-20	2.180	2024	\$0	\$0	\$1,369
Total			\$184,938	\$0	\$20,466

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

East Golden Meadow Terracing (XBA-77)

Project Construction Years:	4	Total Project Years	24
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$11,490,282	Total Fully Funded Costs	\$16,155,909

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$11,700,974	\$1,072,506
Monitoring	\$69,712	\$6,390
O & M Costs	\$1,546,451	\$141,747
Other Costs	<u>\$6,851</u>	<u>\$628</u>
Total	\$13,324,000	\$1,221,271
Average Annual Habitat Units		108
Cost Per Habitat Unit		\$11,308
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

East Golden Meadow Terracing (XBA-77)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound	2000	\$194,000	\$48,000	\$86,139	\$21,389	\$628	\$0	\$0	\$0	\$350,156
3 Compound	2001	\$332,571	\$82,286	\$147,667	\$36,667	\$628	\$0	\$0	\$0	\$599,818
2 Compound	2002	\$55,429	\$13,714	\$147,667	\$36,667	\$628	\$175,000	\$1,034,250	\$4,137,900	\$5,600,354
1 Compound	2003	\$0	\$0	\$61,528	\$15,278	\$628	\$125,000	\$738,750	\$2,955,000	\$3,896,184
TOTAL		\$582,000	\$144,000	\$443,000	\$110,000	\$2,512	\$300,000	\$1,773,000	\$7,092,000	\$10,448,372

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2001	\$17,118	\$0	\$0
2 Compound	2002	\$5,431	\$0	\$0
1 Compound	2003	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2004	\$5,431	\$0	\$628
2 Discount	2005	\$5,431	\$0	\$628
3 Discount	2006	\$5,431	\$0	\$628
4 Discount	2007	\$5,431	\$0	\$628
5 Discount	2008	\$5,431	\$0	\$628
6 Discount	2009	\$5,431	\$0	\$628
7 Discount	2010	\$5,431	\$0	\$628
8 Discount	2011	\$5,431	\$0	\$628
9 Discount	2012	\$5,431	\$4,407	\$628
10 Discount	2013	\$5,431	\$2,926,000	\$628
11 Discount	2014	\$5,431	\$4,407	\$628
12 Discount	2015	\$5,431	\$0	\$628
13 Discount	2016	\$5,431	\$0	\$628
14 Discount	2017	\$5,431	\$0	\$628
15 Discount	2018	\$5,431	\$0	\$628
16 Discount	2019	\$5,431	\$0	\$628
17 Discount	2020	\$5,431	\$0	\$628
18 Discount	2021	\$5,431	\$0	\$628
19 Discount	2022	\$5,431	\$0	\$628
20 Discount	2023	\$0	\$4,407	\$628
Total		\$114,051	\$2,939,221	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

East Golden Meadow Terracing (XBA-77)

Present Valued Costs		Total Discounted Costs		Amortized Costs		Total First Cost					
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293	2000	\$250,748	\$62,041	\$111,336	\$27,645	\$812	\$0	\$0	\$0	\$452,582
3	1.212	2001	\$403,146	\$99,747	\$179,003	\$44,448	\$761	\$0	\$0	\$0	\$727,105
2	1.137	2002	\$63,016	\$15,592	\$167,981	\$41,686	\$714	\$198,956	\$1,175,828	\$4,703,310	\$6,366,981
1	1.066	2003	\$0	\$0	\$65,604	\$16,290	\$670	\$133,281	\$787,692	\$3,150,769	\$4,154,306
Total			\$716,910	\$177,380	\$523,823	\$130,069	\$2,957	\$332,237	\$1,963,520	\$7,854,079	\$11,700,974

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2001	\$20,751	\$0	\$0
2	1.137	2002	\$6,174	\$0	\$0
1	1.066	2003	\$5,791	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2004	\$5,094	\$0	\$589
-2	0.880	2005	\$4,777	\$0	\$552
-3	0.825	2006	\$4,480	\$0	\$518
-4	0.774	2007	\$4,202	\$0	\$486
-5	0.726	2008	\$3,941	\$0	\$456
-6	0.681	2009	\$3,696	\$0	\$427
-7	0.639	2010	\$3,466	\$0	\$401
-8	0.599	2011	\$3,251	\$0	\$376
-9	0.561	2012	\$3,049	\$2,474	\$353
-10	0.527	2013	\$2,859	\$1,540,579	\$331
-11	0.494	2014	\$2,682	\$2,176	\$310
-12	0.463	2015	\$2,515	\$0	\$291
-13	0.434	2016	\$2,359	\$0	\$273
-14	0.407	2017	\$2,212	\$0	\$256
-15	0.382	2018	\$2,075	\$0	\$240
-16	0.358	2019	\$1,946	\$0	\$225
-17	0.336	2020	\$1,825	\$0	\$211
-18	0.315	2021	\$1,712	\$0	\$198
-19	0.296	2022	\$1,605	\$0	\$186
-20	0.277	2023	\$0	\$1,222	\$174
Total			\$69,712	\$1,546,451	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

East Golden Meadow Terracing (XBA-77)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.000	2000	\$332,571	\$82,286	\$147,667	\$36,667	\$628	\$0	\$0	\$0	\$599,818
3	1.033	2001	\$343,546	\$85,001	\$152,540	\$37,877	\$649	\$0	\$0	\$0	\$619,612
2	1.067	2002	\$59,147	\$14,634	\$157,573	\$39,127	\$670	\$186,741	\$1,103,637	\$4,414,547	\$5,976,076
1	1.102	2003	\$0	\$0	\$67,822	\$16,841	\$692	\$137,788	\$814,326	\$3,257,305	\$4,294,775
TOTAL			\$735,265	\$181,921	\$525,602	\$130,511	\$2,639	\$324,528	\$1,917,963	\$7,671,852	\$11,490,282

\$1,480,843

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
1	1.033	2001	\$17,683	\$0	\$0
2	1.067	2002	\$5,795	\$0	\$0
1	1.102	2003	\$5,987	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.139	2004	\$6,184	\$0	\$715
-2	1.176	2005	\$6,388	\$0	\$739
-3	1.215	2006	\$6,599	\$0	\$763
-4	1.255	2007	\$6,817	\$0	\$788
-5	1.297	2008	\$7,042	\$0	\$814
-6	1.339	2009	\$7,274	\$0	\$841
-7	1.384	2010	\$7,514	\$0	\$869
-8	1.429	2011	\$7,762	\$0	\$898
-9	1.476	2012	\$8,018	\$6,506	\$927
-10	1.525	2013	\$8,283	\$4,462,503	\$958
-11	1.575	2014	\$8,556	\$6,943	\$989
-12	1.627	2015	\$8,839	\$0	\$1,022
-13	1.681	2016	\$9,130	\$0	\$1,056
-14	1.737	2017	\$9,432	\$0	\$1,091
-15	1.794	2018	\$9,743	\$0	\$1,127
-16	1.853	2019	\$10,064	\$0	\$1,164
-17	1.914	2020	\$10,396	\$0	\$1,202
-18	1.977	2021	\$10,740	\$0	\$1,242
-19	2.043	2022	\$0	\$0	\$1,283
-20	2.110	2023	\$0	\$9,299	\$1,325
Total			\$160,564	\$4,485,252	\$19,812

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Timbalier Island Dune/Marsh Creation - (XTE-45a)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$16,036,470	Total Fully Funded Costs	\$16,234,679

Annual Charges	<u>Present Worth</u>
Interest & Amortization	\$16,227,601
Monitoring	\$83,860
O & M Costs	\$0
Other Costs	<u>\$6,851</u>
Total	\$16,318,300

	<u>Average Annual</u>
	\$1,487,414
	\$7,687
	\$0
	<u>\$628</u>
	\$1,495,729
	124
	\$12,062
	NA

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Timballer Island Dune/Marsh Creation - (XTE-45a)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$339,581	\$65,471	\$119,579	\$24,839	\$628	\$0	\$0	\$0	\$550,097
2 Compound	2001	\$485,115	\$93,529	\$204,993	\$42,581	\$628	\$0	\$0	\$0	\$826,846
1 Compound	2002	\$0	\$0	\$204,993	\$42,581	\$628	\$225,000	\$2,647,819	\$10,591,277	\$13,712,297
TOTAL		\$824,696	\$159,000	\$529,564	\$110,000	\$1,884	\$225,000	\$2,647,819	\$10,591,277	\$15,089,240

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2001	\$17,876	\$0	\$0
1 Compound	2002	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$5,431	\$0	\$628
2 Discount	2004	\$5,431	\$0	\$628
3 Discount	2005	\$5,431	\$0	\$628
4 Discount	2006	\$5,431	\$0	\$628
5 Discount	2007	\$5,431	\$0	\$628
6 Discount	2008	\$5,431	\$0	\$628
7 Discount	2009	\$5,431	\$0	\$628
8 Discount	2010	\$5,431	\$0	\$628
9 Discount	2011	\$5,431	\$0	\$628
10 Discount	2012	\$5,431	\$0	\$628
11 Discount	2013	\$5,431	\$0	\$628
12 Discount	2014	\$5,431	\$0	\$628
13 Discount	2015	\$5,431	\$0	\$628
14 Discount	2016	\$5,431	\$0	\$628
15 Discount	2017	\$5,431	\$0	\$628
16 Discount	2018	\$5,431	\$0	\$628
17 Discount	2019	\$5,431	\$0	\$628
18 Discount	2020	\$5,431	\$0	\$628
19 Discount	2021	\$5,431	\$0	\$628
20 Discount	2022	\$0	\$0	\$628
Total		\$126,496	\$0	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Timbalier Island Dune/Marsh Creation - (XTE-45a)

Present Valued Costs		Total Discounted Costs	\$16,318,313	Amortized Costs					\$1,295,732		
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$411,642	\$79,364	\$144,955	\$30,110	\$761	\$0	\$0	\$0	\$666,832
2	1.137	2001	\$551,522	\$106,333	\$233,054	\$48,409	\$714	\$0	\$0	\$0	\$940,032
1	1.066	2002	\$0	\$0	\$218,573	\$45,402	\$670	\$239,906	\$2,823,237	\$11,292,949	\$14,620,737
		Total	\$963,165	\$185,697	\$596,582	\$123,921	\$2,145	\$239,906	\$2,823,237	\$11,292,949	\$16,227,601

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$20,323	\$0	\$0
1	1.066	2002	\$5,791	\$0	\$0
0		Base Year	\$0	\$0	\$0
-1	0.938	2003	\$5,094	\$0	\$589
-2	0.880	2004	\$4,777	\$0	\$552
-3	0.825	2005	\$4,480	\$0	\$518
-4	0.774	2006	\$4,202	\$0	\$486
-5	0.726	2007	\$3,941	\$0	\$456
-6	0.681	2008	\$3,696	\$0	\$427
-7	0.638	2009	\$3,466	\$0	\$401
-8	0.599	2010	\$3,251	\$0	\$376
-9	0.561	2011	\$3,049	\$0	\$353
-10	0.527	2012	\$2,859	\$0	\$331
-11	0.494	2013	\$2,682	\$0	\$310
-12	0.463	2014	\$2,515	\$0	\$291
-13	0.434	2015	\$2,359	\$0	\$273
-14	0.407	2016	\$2,212	\$0	\$256
-15	0.382	2017	\$2,075	\$0	\$240
-16	0.358	2018	\$1,946	\$0	\$225
-17	0.336	2019	\$1,825	\$0	\$211
-18	0.315	2020	\$1,712	\$0	\$198
-19	0.296	2021	\$1,605	\$0	\$186
-20	0.277	2022	\$0	\$0	\$174
		Total	\$83,860	\$0	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Timballer Island Dune/Marsh Creation - (XTE-45a)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
		\$16,234,679		\$1,488,063							
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$339,581	\$65,471	\$119,579	\$24,839	\$628	\$0	\$0	\$0	\$550,097
2	1.033	2001	\$501,124	\$96,616	\$211,757	\$43,986	\$649	\$0	\$0	\$0	\$854,132
1	1.067	2002	\$0	\$0	\$218,745	\$45,437	\$670	\$240,095	\$2,825,459	\$11,301,835	\$14,632,242
TOTAL			\$840,705	\$162,086	\$550,081	\$114,262	\$1,947	\$240,095	\$2,825,459	\$11,301,835	\$16,036,470

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$18,466	\$0	\$0
1	1.067	2002	\$5,795	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$5,987	\$0	\$692
-2	1.139	2004	\$6,184	\$0	\$715
-3	1.176	2005	\$6,388	\$0	\$739
-4	1.215	2006	\$6,599	\$0	\$763
-5	1.255	2007	\$6,817	\$0	\$788
-6	1.297	2008	\$7,042	\$0	\$814
-7	1.339	2009	\$7,274	\$0	\$841
-8	1.384	2010	\$7,514	\$0	\$869
-9	1.429	2011	\$7,762	\$0	\$898
-10	1.476	2012	\$8,018	\$0	\$927
-11	1.525	2013	\$8,283	\$0	\$958
-12	1.575	2014	\$8,556	\$0	\$989
-13	1.627	2015	\$8,839	\$0	\$1,022
-14	1.681	2016	\$9,130	\$0	\$1,056
-15	1.737	2017	\$9,432	\$0	\$1,091
-16	1.794	2018	\$9,743	\$0	\$1,127
-17	1.853	2019	\$10,064	\$0	\$1,164
-18	1.914	2020	\$10,396	\$0	\$1,202
-19	1.977	2021	\$10,740	\$0	\$1,242
-20	2.043	2022	\$0	\$0	\$1,283
Total			\$179,030	\$0	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Grand Pierre Island Restoration - (XBA-1c)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$6,664,035	Total Fully Funded Costs	\$6,862,244

Annual Charges	<u>Present Worth</u>
Interest & Amortization	\$6,815,508
Monitoring	\$83,860
O & M Costs	\$0
Other Costs	\$6,851
Total	\$6,906,200

Average Annual	<u> </u>
	\$624,706
	\$7,687
	\$0
	\$628
	<u> </u>
	\$633,021

Average Annual Habitat Units

51

Cost Per Habitat Unit

\$12,412

Average Annual Acres of Emergent Marsh

NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Grand Pierre Island Restoration - (XBA-1c)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$172,988	\$179,941	\$48,499	\$24,250	\$628	\$0	\$0	\$0	\$426,305
2 Compound	2001	\$247,125	\$257,059	\$83,141	\$41,571	\$628	\$0	\$0	\$0	\$629,524
1 Compound	2002	\$0	\$0	\$62,356	\$31,178	\$628	\$90,000	\$1,010,397	\$4,041,586	\$5,236,144
TOTAL		\$420,113	\$437,000	\$193,996	\$96,998	\$1,884	\$90,000	\$1,010,397	\$4,041,586	\$5,231,974

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2001	\$17,876	\$0	\$0
1 Compound	2002	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$5,431	\$0	\$628
2 Discount	2004	\$5,431	\$0	\$628
3 Discount	2005	\$5,431	\$0	\$628
4 Discount	2006	\$5,431	\$0	\$628
5 Discount	2007	\$5,431	\$0	\$628
6 Discount	2008	\$5,431	\$0	\$628
7 Discount	2009	\$5,431	\$0	\$628
8 Discount	2010	\$5,431	\$0	\$628
9 Discount	2011	\$5,431	\$0	\$628
10 Discount	2012	\$5,431	\$0	\$628
11 Discount	2013	\$5,431	\$0	\$628
12 Discount	2014	\$5,431	\$0	\$628
13 Discount	2015	\$5,431	\$0	\$628
14 Discount	2016	\$5,431	\$0	\$628
15 Discount	2017	\$5,431	\$0	\$628
16 Discount	2018	\$5,431	\$0	\$628
17 Discount	2019	\$5,431	\$0	\$628
18 Discount	2020	\$5,431	\$0	\$628
19 Discount	2021	\$5,431	\$0	\$628
20 Discount	2022	\$0	\$0	\$628
Total		\$126,496	\$0	\$12,560

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Grand Pierre Island Restoration - (XBA-1c)

Present Valued Costs		Total Discounted Costs				Amortized Costs				Total First Cost	
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$209,697	\$218,126	\$58,791	\$29,395	\$761	\$0	\$0	\$0	\$516,771
2	1.137	2001	\$280,954	\$292,247	\$94,522	\$47,261	\$714	\$0	\$0	\$0	\$715,699
1	1.066	2002	\$0	\$0	\$66,487	\$33,243	\$670	\$95,963	\$1,077,335	\$4,309,341	\$5,583,039
Total			\$490,651	\$510,373	\$219,800	\$109,900	\$2,145	\$95,963	\$1,077,335	\$4,309,341	\$6,815,508

\$6,906,220

\$633,021

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$20,323	\$0	\$0
1	1.066	2002	\$5,791	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$5,094	\$0	\$589
-2	0.880	2004	\$4,777	\$0	\$552
-3	0.825	2005	\$4,480	\$0	\$518
-4	0.774	2006	\$4,202	\$0	\$486
-5	0.726	2007	\$3,941	\$0	\$456
-6	0.681	2008	\$3,696	\$0	\$427
-7	0.638	2009	\$3,466	\$0	\$401
-8	0.599	2010	\$3,251	\$0	\$376
-9	0.561	2011	\$3,049	\$0	\$353
-10	0.527	2012	\$2,859	\$0	\$331
-11	0.494	2013	\$2,682	\$0	\$310
-12	0.463	2014	\$2,515	\$0	\$291
-13	0.434	2015	\$2,359	\$0	\$273
-14	0.407	2016	\$2,212	\$0	\$256
-15	0.382	2017	\$2,075	\$0	\$240
-16	0.358	2018	\$1,946	\$0	\$225
-17	0.336	2019	\$1,825	\$0	\$211
-18	0.315	2020	\$1,712	\$0	\$198
-19	0.296	2021	\$1,605	\$0	\$186
-20	0.277	2022	\$0	\$0	\$174
Total			\$63,860	\$0	\$6,851

Coastal Wetlands Conservation and Restoration Plan Priority Project List IX

Grand Pierre Island Restoration - (XBA-1c)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs						
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project	Supervision & Inspection	Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.030	2000	\$172,988	\$179,811	\$48,499	\$24,250	\$628	\$0	\$0	\$426,305
2	1.033	2001	\$255,280	\$265,342	\$85,885	\$42,942	\$649	\$0	\$0	\$650,298
1	1.037	2002	\$0	\$0	\$66,539	\$33,276	\$670	\$96,038	\$4,312,732	\$5,587,432
TOTAL			\$428,268	\$445,183	\$200,923	\$100,462	\$1,947	\$96,038	\$4,312,732	\$6,664,035

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$18,466	\$0	\$0
1	1.067	2002	\$5,795	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$5,987	\$0	\$692
-2	1.139	2004	\$6,184	\$0	\$715
-3	1.176	2005	\$6,388	\$0	\$739
-4	1.215	2006	\$6,599	\$0	\$763
-5	1.255	2007	\$6,817	\$0	\$788
-6	1.297	2008	\$7,042	\$0	\$814
-7	1.339	2009	\$7,274	\$0	\$841
-8	1.384	2010	\$7,514	\$0	\$869
-9	1.429	2011	\$7,762	\$0	\$898
-10	1.476	2012	\$8,018	\$0	\$927
-11	1.525	2013	\$8,283	\$0	\$958
-12	1.575	2014	\$8,556	\$0	\$989
-13	1.627	2015	\$8,839	\$0	\$1,022
-14	1.681	2016	\$9,130	\$0	\$1,056
-15	1.737	2017	\$9,432	\$0	\$1,091
-16	1.794	2018	\$9,743	\$0	\$1,127
-17	1.853	2019	\$10,064	\$0	\$1,164
-18	1.914	2020	\$10,396	\$0	\$1,202
-19	1.977	2021	\$10,740	\$0	\$1,242
-20	2.043	2022	\$0	\$0	\$1,283
Total			\$179,030	\$0	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Freshwater Bayou on GIWW to Schooner Bayou (XME-28/33)

Project Construction Years:	4	Total Project Years	24
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$7,903,487	Total Fully Funded Costs	\$15,373,113

	Present Worth	Average Annual
Annual Charges		
Interest & Amortization	\$8,389,899	\$769,014
Monitoring	\$407,471	\$37,349
O & M Costs	\$2,797,122	\$256,383
Other Costs	<u>\$6,851</u>	<u>\$628</u>
Total	\$11,601,300	\$1,063,374
Average Annual Habitual Units		47
Cost Per Habitual Unit		\$22,625
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Freshwater Bayou on GIWW to Schooner Bayou (XME-28/33)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound	2000	\$201,000	\$12,333	\$61,091	\$23,333	\$628	\$0	\$0	\$0	\$298,386
3 Compound	2001	\$344,571	\$21,143	\$104,727	\$40,000	\$628	\$0	\$0	\$0	\$511,070
2 Compound	2002	\$57,429	\$3,524	\$104,727	\$40,000	\$628	\$175,000	\$953,361	\$3,813,444	\$5,148,113
1 Compound	2003	\$0	\$0	\$17,455	\$6,667	\$628	\$50,000	\$272,389	\$1,089,556	\$1,436,694
TOTAL		\$603,000	\$37,000	\$288,000	\$110,000	\$2,512	\$225,000	\$1,225,750	\$4,903,000	\$7,394,262

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2001	\$45,890	\$0	\$0
2 Compound	2002	\$32,493	\$0	\$0
1 Compound	2003	\$32,493	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2004	\$32,493	\$0	\$628
2 Discount	2005	\$32,493	\$4,407	\$628
3 Discount	2006	\$32,493	\$1,485,870	\$628
4 Discount	2007	\$32,493	\$4,407	\$628
5 Discount	2008	\$32,493	\$0	\$628
6 Discount	2009	\$32,493	\$4,407	\$628
7 Discount	2010	\$32,493	\$1,485,870	\$628
8 Discount	2011	\$32,493	\$4,407	\$628
9 Discount	2012	\$32,493	\$0	\$628
10 Discount	2013	\$32,493	\$0	\$628
11 Discount	2014	\$32,493	\$0	\$628
12 Discount	2015	\$32,493	\$0	\$628
13 Discount	2016	\$32,493	\$4,407	\$628
14 Discount	2017	\$32,493	\$1,485,870	\$628
15 Discount	2018	\$32,493	\$4,407	\$628
16 Discount	2019	\$32,493	\$0	\$628
17 Discount	2020	\$32,493	\$0	\$628
18 Discount	2021	\$32,493	\$0	\$628
19 Discount	2022	\$0	\$0	\$628
20 Discount	2023	\$0	\$4,407	\$628
Total		\$649,860	\$4,488,459	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Freshwater Bayou on GIWW to Schooner Bayou (XME-28/33)

Present Valued Costs Total Discounted Costs \$11,601,344 Amortized Costs \$1,063,374

Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293	2000	\$259,796	\$15,941	\$78,961	\$30,159	\$812	\$0	\$0	\$0	\$385,668
3	1.212	2001	\$417,692	\$25,630	\$126,951	\$48,488	\$761	\$0	\$0	\$0	\$619,523
2	1.137	2002	\$65,290	\$4,006	\$119,063	\$45,476	\$714	\$198,956	\$1,083,866	\$4,335,463	\$5,852,834
1	1.066	2003	\$0	\$0	\$18,611	\$7,108	\$670	\$53,313	\$290,435	\$1,161,739	\$1,531,875
Total			\$742,778	\$45,577	\$343,586	\$131,231	\$2,957	\$252,268	\$1,374,300	\$5,497,202	\$8,389,899

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2001	\$55,628	\$0	\$0
2	1.137	2002	\$36,941	\$0	\$0
1	1.066	2003	\$34,646	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2004	\$30,474	\$0	\$589
-2	0.880	2005	\$28,581	\$3,876	\$552
-3	0.825	2006	\$26,805	\$1,225,755	\$518
-4	0.774	2007	\$25,139	\$3,410	\$486
-5	0.726	2008	\$23,577	\$0	\$456
-6	0.681	2009	\$22,112	\$2,999	\$427
-7	0.638	2010	\$20,738	\$948,348	\$401
-8	0.599	2011	\$19,450	\$2,638	\$376
-9	0.561	2012	\$18,241	\$0	\$353
-10	0.527	2013	\$17,108	\$0	\$331
-11	0.494	2014	\$16,045	\$0	\$310
-12	0.463	2015	\$15,048	\$0	\$291
-13	0.434	2016	\$14,113	\$1,914	\$273
-14	0.407	2017	\$13,236	\$605,277	\$256
-15	0.382	2018	\$12,414	\$1,684	\$240
-16	0.358	2019	\$11,642	\$0	\$225
-17	0.336	2020	\$10,919	\$0	\$211
-18	0.315	2021	\$10,241	\$0	\$198
-19	0.296	2022	\$0	\$0	\$186
-20	0.277	2023	\$0	\$1,222	\$174
Total			\$407,471	\$2,797,122	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Freshwater Bayou on GIWW to Schooner Bayou (XME-28/33)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Supervision & Administration	LDNR Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.000	2000	\$201,000	\$12,333	\$61,091	\$23,333	\$628	\$0	\$0	\$0	\$298,386
3	1.033	2001	\$355,942	\$21,841	\$108,183	\$41,320	\$649	\$0	\$0	\$0	\$527,935
2	1.067	2002	\$61,281	\$3,760	\$111,753	\$42,684	\$670	\$186,741	\$1,017,321	\$4,069,285	\$5,493,495
1	1.102	2003	\$0	\$0	\$19,240	\$7,349	\$692	\$55,115	\$300,255	\$1,201,020	\$1,583,672
TOTAL			\$618,224	\$37,934	\$300,268	\$114,686	\$2,639	\$241,856	\$1,317,576	\$5,270,305	\$7,903,487

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.033	2001	\$47,404	\$0	\$0
2	1.067	2002	\$34,673	\$0	\$0
1	1.102	2003	\$35,817	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.139	2004	\$36,999	\$0	\$715
-2	1.176	2005	\$38,220	\$5,184	\$739
-3	1.215	2006	\$39,481	\$1,805,439	\$763
-4	1.255	2007	\$40,784	\$5,532	\$788
-5	1.297	2008	\$42,130	\$0	\$814
-6	1.339	2009	\$43,520	\$5,903	\$841
-7	1.384	2010	\$44,957	\$2,055,815	\$869
-8	1.429	2011	\$46,440	\$6,299	\$898
-9	1.476	2012	\$47,973	\$0	\$927
-10	1.525	2013	\$49,556	\$0	\$958
-11	1.575	2014	\$51,191	\$0	\$989
-12	1.627	2015	\$52,880	\$0	\$1,022
-13	1.681	2016	\$54,625	\$7,409	\$1,056
-14	1.737	2017	\$56,428	\$2,580,396	\$1,091
-15	1.794	2018	\$58,290	\$7,906	\$1,127
-16	1.853	2019	\$60,214	\$0	\$1,164
-17	1.914	2020	\$62,201	\$0	\$1,202
-18	1.977	2021	\$64,253	\$0	\$1,242
-19	2.043	2022	\$0	\$0	\$1,283
-20	2.110	2023	\$0	\$9,299	\$1,325
Total			\$960,634	\$6,489,180	\$19,812

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

New Cut Dune/Marsh Restoration (TE-11a)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$7,159,999	Total Fully Funded Costs	\$7,393,626

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$7,299,621	\$669,080
Monitoring	\$84,797	\$7,772
O & M Costs	\$4,962	\$455
Other Costs	\$6,851	\$628
Total	\$7,396,200	\$677,935
Average Annual Habitat Units		43
Cost Per Habitat Unit		\$15,766
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

New Cut Dune/Marsh Restoration (TE-11a)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$307,446	\$114,333	\$73,535	\$35,000	\$628	\$0	\$0	\$0	\$530,943
2 Compound	2001	\$87,842	\$32,667	\$126,060	\$60,000	\$628	\$0	\$0	\$0	\$307,196
1 Compound	2002	\$0	\$0	\$31,515	\$15,000	\$628	\$90,000	\$1,155,551	\$4,622,204	\$5,914,898
TOTAL		\$395,288	\$147,000	\$231,110	\$110,000	\$1,884	\$90,000	\$1,155,551	\$4,622,204	\$5,753,037

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2000	\$12,445	\$0	\$0
2 Compound	2001	\$5,431	\$0	\$0
1 Compound	2002	\$5,431	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$5,431	\$0	\$628
2 Discount	2004	\$5,431	\$0	\$628
3 Discount	2005	\$5,431	\$0	\$628
4 Discount	2006	\$5,431	\$0	\$628
5 Discount	2007	\$5,431	\$0	\$628
6 Discount	2008	\$5,431	\$0	\$628
7 Discount	2009	\$5,431	\$0	\$628
8 Discount	2010	\$5,431	\$0	\$628
9 Discount	2011	\$5,431	\$0	\$628
10 Discount	2012	\$5,431	\$0	\$628
11 Discount	2013	\$5,431	\$0	\$628
12 Discount	2014	\$5,431	\$0	\$628
13 Discount	2015	\$5,431	\$0	\$628
14 Discount	2016	\$5,431	\$0	\$628
15 Discount	2017	\$5,431	\$0	\$628
16 Discount	2018	\$5,431	\$0	\$628
17 Discount	2019	\$5,431	\$0	\$628
18 Discount	2020	\$5,431	\$0	\$628
19 Discount	2021	\$5,431	\$3,645	\$628
20 Discount	2022	\$0	\$14,011	\$628
Total		\$126,496	\$17,656	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

New Cut Dune/Marsh Restoration (TE-11a)

Present Valued Costs		Total Discounted Costs	Amortized Costs										Total First Cost
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Administration	Corps Project Management	Supervision & Inspecto	Contingency	Construction	Construction	Cost	
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
3	1.212	2000	\$372,689	\$138,596	\$89,140	\$42,427	\$761	\$0	\$0	\$0	\$0	\$643,613	
2	1.137	2001	\$99,866	\$37,138	\$143,316	\$68,213	\$714	\$0	\$0	\$0	\$0	\$349,248	
1	1.066	2002	\$0	\$0	\$33,603	\$15,994	\$670	\$95,963	\$1,232,106	\$4,928,425	\$0	\$6,306,760	
Total			\$472,555	\$175,734	\$266,059	\$126,634	\$2,145	\$95,963	\$1,232,106	\$4,928,425	\$0	\$7,299,621	

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2000	\$15,086	\$0	\$0
2	1.137	2001	\$6,174	\$0	\$0
1	1.066	2002	\$5,791	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$5,094	\$0	\$589
-2	0.880	2004	\$4,777	\$0	\$552
-3	0.825	2005	\$4,480	\$0	\$518
-4	0.774	2006	\$4,202	\$0	\$486
-5	0.726	2007	\$3,941	\$0	\$456
-6	0.681	2008	\$3,696	\$0	\$427
-7	0.638,	2009	\$3,466	\$0	\$401
-8	0.599,	2010	\$3,251	\$0	\$376
-9	0.561	2011	\$3,049	\$0	\$353
-10	0.527	2012	\$2,859	\$0	\$331
-11	0.494	2013	\$2,682	\$0	\$310
-12	0.463	2014	\$2,515	\$0	\$291
-13	0.434	2015	\$2,359	\$0	\$273
-14	0.407	2016	\$2,212	\$0	\$256
-15	0.382	2017	\$2,075	\$0	\$240
-16	0.358	2018	\$1,946	\$0	\$225
-17	0.336	2019	\$1,825	\$0	\$211
-18	0.315	2020	\$1,712	\$0	\$198
-19	0.296	2021	\$1,605	\$1,077	\$186
-20	0.277	2022	\$0	\$3,884	\$174
Total			\$84,797	\$4,962	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

New Cut Dune/Marsh Restoration (TE-11a)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost				
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Supervision & Administration	LDNR Supervision & Administration	Corps Project Management & Inspecto	Contingency	Construction	Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$307,446	\$114,333	\$73,535	\$35,000	\$628	\$0	\$0	\$530,943
2	1.033	2001	\$90,741	\$33,745	\$130,220	\$61,980	\$649	\$0	\$0	\$317,334
1	1.067	2002	\$0	\$0	\$33,529	\$16,006	\$670	\$96,038	\$1,233,076	\$4,932,303
TOTAL			\$398,187	\$148,078	\$237,384	\$112,986	\$1,947	\$96,038	\$1,233,076	\$7,159,999

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.000	2000	\$12,445	\$0	\$0
2	1.033	2001	\$5,610	\$0	\$0
1	1.067	2002	\$5,795	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$5,987	\$0	\$692
-2	1.139	2004	\$6,184	\$0	\$715
-3	1.176	2005	\$6,388	\$0	\$739
-4	1.215	2006	\$6,599	\$0	\$763
-5	1.255	2007	\$6,817	\$0	\$788
-6	1.297	2008	\$7,042	\$0	\$814
-7	1.339	2009	\$7,274	\$0	\$841
-8	1.384	2010	\$7,514	\$0	\$869
-9	1.429	2011	\$7,762	\$0	\$898
-10	1.476	2012	\$8,018	\$0	\$927
-11	1.525	2013	\$8,283	\$0	\$958
-12	1.575	2014	\$8,556	\$0	\$989
-13	1.627	2015	\$8,839	\$0	\$1,022
-14	1.681	2016	\$9,130	\$0	\$1,056
-15	1.737	2017	\$9,432	\$0	\$1,091
-16	1.794	2018	\$9,743	\$0	\$1,127
-17	1.853	2019	\$10,064	\$0	\$1,164
-18	1.914	2020	\$10,396	\$0	\$1,202
-19	1.977	2021	\$10,740	\$7,208	\$1,242
-20	2.043	2022	\$0	\$28,621	\$1,283
Total			\$178,619	\$35,829	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

North Bully Camp (XTE-58)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$7,052,886	Total Fully Funded Costs	\$8,990,659

	<u>Present Worth</u>	<u>Average Annual</u>
Annual Charges		
Interest & Amortization	\$7,469,134	\$684,617
Monitoring	\$435,517	\$39,919
O & M Costs	\$332,474	\$30,474
Other Costs	\$6,851	\$628
Total	\$8,244,000	\$755,639
Average Annual Habitat Units		54
Cost Per Habitat Unit		\$13,993
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

North Bully Camp (XTE-58)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$140,737	\$884,211	\$32,742	\$16,484	\$628	\$0	\$0	\$0	\$1,074,801
2 Compound	2001	\$241,263	\$1,515,789	\$56,129	\$28,258	\$628	\$0	\$0	\$0	\$1,842,068
1 Compound	2002	\$0	\$0	\$56,129	\$28,258	\$628	\$104,000	\$726,000	\$2,904,000	\$3,819,015
TOTAL		\$382,000	\$2,400,000	\$145,000	\$73,000	\$1,884	\$104,000	\$726,000	\$2,904,000	\$6,735,884

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2001	\$48,714	\$0	\$0
1 Compound	2002	\$32,493	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$32,493	\$3,645	\$628
2 Discount	2004	\$32,493	\$3,645	\$628
3 Discount	2005	\$32,493	\$3,645	\$628
4 Discount	2006	\$32,493	\$137,076	\$628
5 Discount	2007	\$32,493	\$3,645	\$628
6 Discount	2008	\$32,493	\$3,645	\$628
7 Discount	2009	\$32,493	\$3,645	\$628
8 Discount	2010	\$32,493	\$137,076	\$628
9 Discount	2011	\$32,493	\$3,645	\$628
10 Discount	2012	\$32,493	\$3,645	\$628
11 Discount	2013	\$32,493	\$3,645	\$628
12 Discount	2014	\$32,493	\$137,076	\$628
13 Discount	2015	\$32,493	\$3,645	\$628
14 Discount	2016	\$32,493	\$3,645	\$628
15 Discount	2017	\$32,493	\$3,645	\$628
16 Discount	2018	\$32,493	\$137,076	\$628
17 Discount	2019	\$32,493	\$3,645	\$628
18 Discount	2020	\$32,493	\$3,645	\$628
19 Discount	2021	\$32,493	\$3,645	\$628
20 Discount	2022	\$0	\$3,645	\$628
Total		\$698,574	\$606,625	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

North Bully Camp (XTE-58)

Present Valued Costs		Total Discounted Costs				Amortized Costs				Total First Cost	
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$170,602	\$1,071,847	\$39,690	\$19,982	\$761	\$0	\$0	\$0	\$1,302,883
2	1.137	2001	\$274,289	\$1,723,284	\$63,812	\$32,126	\$714	\$0	\$0	\$0	\$2,094,227
1	1.066	2002	\$0	\$0	\$59,848	\$30,130	\$670	\$110,890	\$774,098	\$3,096,390	\$4,072,025
Total			\$444,892	\$2,795,132	\$163,350	\$82,238	\$2,145	\$110,890	\$774,098	\$3,096,390	\$7,469,134

\$755,639

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$55,382	\$0	\$0
1	1.066	2002	\$34,646	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$30,474	\$3,419	\$589
-2	0.880	2004	\$28,581	\$3,206	\$552
-3	0.825	2005	\$26,805	\$3,007	\$518
-4	0.774	2006	\$25,139	\$106,054	\$486
-5	0.726	2007	\$23,577	\$2,645	\$456
-6	0.681	2008	\$22,112	\$2,481	\$427
-7	0.638	2009	\$20,738	\$2,326	\$401
-8	0.599	2010	\$19,450	\$82,052	\$376
-9	0.561	2011	\$18,241	\$2,046	\$353
-10	0.527	2012	\$17,108	\$1,919	\$331
-11	0.494	2013	\$16,045	\$1,800	\$310
-12	0.463	2014	\$15,048	\$63,482	\$291
-13	0.434	2015	\$14,113	\$1,583	\$273
-14	0.407	2016	\$13,236	\$1,485	\$256
-15	0.382	2017	\$12,414	\$1,393	\$240
-16	0.358	2018	\$11,642	\$49,115	\$225
-17	0.336	2019	\$10,919	\$1,225	\$211
-18	0.315	2020	\$10,241	\$1,149	\$198
-19	0.296	2021	\$9,604	\$1,077	\$186
-20	0.277	2022	\$0	\$1,010	\$174
Total			\$435,517	\$332,474	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

North Bully Camp (XTE-58)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs					\$824,080			
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$140,737	\$884,211	\$32,742	\$16,484	\$628	\$0	\$0	\$0	\$1,074,801
2	1.033	2001	\$249,225	\$1,565,811	\$57,981	\$29,191	\$649	\$0	\$0	\$0	\$1,902,856
1	1.067	2002	\$0	\$0	\$59,895	\$30,154	\$670	\$110,977	\$774,707	\$3,098,826	\$4,075,229
TOTAL			\$389,962	\$2,450,021	\$150,618	\$75,828	\$1,947	\$110,977	\$774,707	\$3,098,826	\$7,052,886

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$50,322	\$0	\$0
1	1.067	2002	\$34,673	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$35,817	\$4,018	\$692
-2	1.139	2004	\$36,999	\$4,150	\$715
-3	1.176	2005	\$38,220	\$4,287	\$739
-4	1.215	2006	\$39,481	\$166,557	\$763
-5	1.255	2007	\$40,784	\$4,575	\$788
-6	1.297	2008	\$42,130	\$4,726	\$814
-7	1.339	2009	\$43,520	\$4,882	\$841
-8	1.384	2010	\$44,957	\$189,655	\$869
-9	1.429	2011	\$46,440	\$5,210	\$898
-10	1.476	2012	\$47,973	\$5,381	\$927
-11	1.525	2013	\$49,556	\$5,559	\$958
-12	1.575	2014	\$51,191	\$215,957	\$989
-13	1.627	2015	\$52,880	\$5,932	\$1,022
-14	1.681	2016	\$54,625	\$6,128	\$1,056
-15	1.737	2017	\$56,428	\$6,330	\$1,091
-16	1.794	2018	\$58,290	\$245,905	\$1,127
-17	1.853	2019	\$60,214	\$6,755	\$1,164
-18	1.914	2020	\$62,201	\$6,978	\$1,202
-19	1.977	2021	\$64,253	\$7,208	\$1,242
-20	2.043	2022	\$0	\$7,446	\$1,283
Total			\$1,010,955	\$907,639	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Weeks Bay II (TV-10/PTV-13)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$14,074,874	Total Fully Funded Costs	\$14,554,524

	Present Worth	Average Annual
Annual Charges		
Interest & Amortization	\$14,244,516	\$1,305,646
Monitoring	\$73,651	\$6,751
O & M Costs	\$124,291	\$11,392
Other Costs	\$6,851	\$628
Total	\$14,449,300	\$1,324,417
Average Annual Habitat Units		57
Cost Per Habitat Unit		\$23,235
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Weeks Bay II (TV-10/PTV-13)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$294,368	\$25,789	\$113,207	\$26,552	\$628	\$0	\$0	\$0	\$460,545
2 Compound	2001	\$504,632	\$44,211	\$194,069	\$45,517	\$628	\$0	\$0	\$0	\$789,056
1 Compound	2002	\$0	\$0	\$161,724	\$37,931	\$628	\$70,000	\$2,344,850	\$9,379,400	\$11,994,533
TOTAL		\$799,000	\$70,000	\$469,000	\$110,000	\$1,884	\$70,000	\$2,344,850	\$9,379,400	\$13,244,134

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2001	\$36,999	\$0	\$0
1 Compound	2002	\$2,700	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$2,700	\$3,645	\$628
2 Discount	2004	\$2,700	\$3,645	\$628
3 Discount	2005	\$2,700	\$3,645	\$628
4 Discount	2006	\$2,700	\$3,645	\$628
5 Discount	2007	\$2,700	\$55,368	\$628
6 Discount	2008	\$2,700	\$3,645	\$628
7 Discount	2009	\$2,700	\$3,645	\$628
8 Discount	2010	\$2,700	\$3,645	\$628
9 Discount	2011	\$2,700	\$3,645	\$628
10 Discount	2012	\$2,700	\$55,368	\$628
11 Discount	2013	\$2,700	\$3,645	\$628
12 Discount	2014	\$2,700	\$3,645	\$628
13 Discount	2015	\$2,700	\$3,645	\$628
14 Discount	2016	\$2,700	\$3,645	\$628
15 Discount	2017	\$2,700	\$55,368	\$628
16 Discount	2018	\$2,700	\$3,645	\$628
17 Discount	2019	\$2,700	\$3,645	\$628
18 Discount	2020	\$2,700	\$3,645	\$628
19 Discount	2021	\$2,700	\$3,645	\$628
20 Discount	2022	\$0	\$3,645	\$628
Total		\$90,999	\$228,069	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Weeks Bay II (TV-10/PTV-13)

Present Valued Costs		Total Discounted Costs	Amortized Costs								
		\$14,449,310	\$1,324,417								
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$356,836	\$31,262	\$137,230	\$32,186	\$761	\$0	\$0	\$0	\$558,276
2	1.137	2001	\$573,710	\$50,262	\$220,635	\$51,748	\$714	\$0	\$0	\$0	\$897,069
1	1.066	2002	\$0	\$0	\$172,438	\$40,444	\$670	\$74,638	\$2,500,196	\$10,000,785	\$12,789,171
Total			\$930,546	\$81,525	\$530,304	\$124,378	\$2,145	\$74,638	\$2,500,196	\$10,000,785	\$14,244,516

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$42,064	\$0	\$0
1	1.066	2002	\$2,879	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$2,532	\$3,419	\$589
-2	0.880	2004	\$2,375	\$3,206	\$552
-3	0.825	2005	\$2,227	\$3,007	\$518
-4	0.774	2006	\$2,089	\$2,820	\$486
-5	0.726	2007	\$1,959	\$40,176	\$456
-6	0.681	2008	\$1,837	\$2,481	\$427
-7	0.638	2009	\$1,723	\$2,326	\$401
-8	0.599	2010	\$1,616	\$2,182	\$376
-9	0.561	2011	\$1,516	\$2,046	\$353
-10	0.527	2012	\$1,422	\$29,152	\$331
-11	0.494	2013	\$1,333	\$1,800	\$310
-12	0.463	2014	\$1,250	\$1,688	\$291
-13	0.434	2015	\$1,173	\$1,583	\$273
-14	0.407	2016	\$1,100	\$1,485	\$256
-15	0.382	2017	\$1,032	\$21,153	\$240
-16	0.358	2018	\$967	\$1,306	\$225
-17	0.336	2019	\$907	\$1,225	\$211
-18	0.315	2020	\$851	\$1,149	\$198
-19	0.296	2021	\$798	\$1,077	\$186
-20	0.277	2022	\$0	\$1,010	\$174
Total			\$73,651	\$124,291	\$6,851

Coastal Wetlands Conservation and Restoration Plan Priority Project List IX

Weeks Bay II (TV-10/PTV-13)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs		Total First Cost						
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Construction Cost	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$294,368	\$25,789	\$113,207	\$26,552	\$628	\$0	\$0	\$0	\$460,545
2	1.033	2001	\$521,284	\$45,669	\$200,473	\$47,019	\$649	\$0	\$0	\$0	\$815,095
1	1.067	2002	\$0	\$0	\$172,574	\$40,476	\$670	\$74,696	\$2,502,164	\$10,008,655	\$12,799,234
TOTAL			\$815,653	\$71,459	\$486,254	\$114,047	\$1,947	\$74,696	\$2,502,164	\$10,008,655	\$14,074,874

Fully Funded Costs: \$14,554,524

Amortized Costs: \$1,334,061

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$38,220	\$0	\$0
1	1.067	2002	\$2,881	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$2,976	\$4,018	\$692
-2	1.139	2004	\$3,074	\$4,150	\$715
-3	1.176	2005	\$3,176	\$4,287	\$739
-4	1.215	2006	\$3,281	\$4,429	\$763
-5	1.255	2007	\$3,389	\$69,496	\$788
-6	1.297	2008	\$3,501	\$4,726	\$814
-7	1.339	2009	\$3,616	\$4,882	\$841
-8	1.384	2010	\$3,736	\$5,043	\$869
-9	1.429	2011	\$3,859	\$5,210	\$898
-10	1.476	2012	\$3,986	\$81,745	\$927
-11	1.525	2013	\$4,118	\$5,559	\$958
-12	1.575	2014	\$4,254	\$5,743	\$989
-13	1.627	2015	\$4,394	\$5,932	\$1,022
-14	1.681	2016	\$4,539	\$6,128	\$1,056
-15	1.737	2017	\$4,689	\$96,154	\$1,091
-16	1.794	2018	\$4,844	\$6,539	\$1,127
-17	1.853	2019	\$5,003	\$6,755	\$1,164
-18	1.914	2020	\$5,169	\$6,978	\$1,202
-19	1.977	2021	\$5,339	\$7,208	\$1,242
-20	2.043	2022	\$0	\$7,446	\$1,283
Total			\$118,044	\$342,427	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Shore Protection in Lake Borgne at Shell Beach and Bayou Dupre (PPO-2b/d/h)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$10,165,493	Total Fully Funded Costs	\$21,513,220

	Present Worth	Average Annual
Annual Charges		
Interest & Amortization	\$10,676,619	\$978,614
Monitoring	\$48,805	\$4,473
O & M Costs	\$5,526,822	\$506,586
Other Costs	\$6,851	\$628
Total	\$16,259,100	\$1,490,301
Average Annual Habitat Units		28
Cost Per Habitat Unit		\$53,225
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Shore Protection in Lake Borgne at Shell Beach and Bayou Dupre (PPO-2b/d/h)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	Compound	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	Compound	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Compound	\$405,222	\$1,559,444	\$79,655	\$26,552	\$628	\$0	\$0	\$0	\$2,071,502
2	Compound	\$115,778	\$445,556	\$136,552	\$45,517	\$628	\$0	\$0	\$0	\$744,030
1	Compound	\$0	\$0	\$113,793	\$37,931	\$628	\$115,000	\$1,319,500	\$5,278,000	\$6,864,852
TOTAL		\$521,000	\$2,005,000	\$330,000	\$110,000	\$1,884	\$115,000	\$1,319,500	\$5,278,000	\$9,880,384

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	Compound	\$15,145	\$0	\$0
1	Compound	\$2,700	\$0	\$0
0	Base Year	\$0	\$0	\$0
1	Discount	\$2,700	\$4,407	\$628
2	Discount	\$2,700	\$2,059,280	\$628
3	Discount	\$2,700	\$4,407	\$628
4	Discount	\$2,700	\$2,059,280	\$628
5	Discount	\$2,700	\$4,407	\$628
6	Discount	\$2,700	\$4,407	\$628
7	Discount	\$2,700	\$2,059,280	\$628
8	Discount	\$2,700	\$4,407	\$628
9	Discount	\$2,700	\$0	\$628
10	Discount	\$2,700	\$0	\$628
11	Discount	\$2,700	\$0	\$628
12	Discount	\$2,700	\$0	\$628
13	Discount	\$2,700	\$0	\$628
14	Discount	\$2,700	\$4,407	\$628
15	Discount	\$2,700	\$2,059,280	\$628
16	Discount	\$2,700	\$4,407	\$628
17	Discount	\$2,700	\$0	\$628
18	Discount	\$2,700	\$0	\$628
19	Discount	\$2,700	\$0	\$628
20	Discount	\$2,700	\$4,407	\$628
Total		\$69,145	\$8,272,377	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Shore Protection in Lake Borgne at Shell Beach and Bayou Dupre (PPO-2b/d/h)

Present Valued Costs		Total Discounted Costs	Amortized Costs		Total First Cost
Year	Compound Rates	Fiscal Year	Fiscal Year	Year	Cost
5	1.378				\$0
4	1.293				\$0
3	1.212	2000	2000		\$0
2	1.137	2001	2001		\$0
1	1.066	2002	2002		\$0
Total					\$1,490,304

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
2	1.137	2001	\$17,218	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1	1.066	2002	\$2,879	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	Base Year		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
-1	0.938	2003	\$2,532	\$4,133	\$589	\$96,559	\$32,186	\$761	\$0	\$0	\$0	\$2,511,091
-2	0.880	2004	\$2,375	\$1,811,329	\$552	\$155,244	\$51,748	\$714	\$0	\$0	\$0	\$845,880
-3	0.825	2005	\$2,227	\$3,636	\$518	\$121,332	\$40,444	\$670	\$122,619	\$1,406,917	\$5,627,668	\$7,319,649
-4	0.774	2006	\$2,089	\$1,593,233	\$486	\$373,135	\$124,378	\$2,145	\$122,619	\$1,406,917	\$5,627,668	\$10,676,619
-5	0.726	2007	\$1,959	\$3,198	\$456							
-6	0.681	2008	\$1,837	\$2,999	\$427							
-7	0.638	2009	\$1,723	\$1,314,323	\$401							
-8	0.599	2010	\$1,616	\$2,638	\$376							
-9	0.561	2011	\$1,516	\$0	\$353							
-10	0.527	2012	\$1,422	\$0	\$331							
-11	0.494	2013	\$1,333	\$0	\$310							
-12	0.463	2014	\$1,250	\$0	\$291							
-13	0.434	2015	\$1,173	\$0	\$273							
-14	0.407	2016	\$1,100	\$1,795	\$256							
-15	0.382	2017	\$1,032	\$786,737	\$240							
-16	0.358	2018	\$967	\$1,579	\$225							
-17	0.336	2019	\$907	\$0	\$211							
-18	0.315	2020	\$851	\$0	\$198							
-19	0.296	2021	\$798	\$0	\$186							
-20	0.277	2022	\$0	\$1,222	\$174							
Total			\$48,805	\$5,526,822	\$6,851							

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Shore Protection in Lake Borgne at Shell Beach and Bayou Dupre (PPO-2b/d/h)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost				
Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1,000	\$405,222	\$1,559,444	\$79,655	\$26,552	\$628	\$0	\$0	\$0	\$2,071,502
2	1,033	\$119,598	\$460,259	\$141,058	\$47,019	\$649	\$0	\$0	\$0	\$768,583
1	1,067	\$0	\$0	\$121,427	\$40,476	\$670	\$122,715	\$1,408,024	\$5,632,096	\$7,325,408
TOTAL		\$524,821	\$2,019,703	\$342,140	\$114,047	\$1,947	\$122,715	\$1,408,024	\$5,632,096	\$10,165,493

Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1,033	\$15,645	\$0	\$0
1	1,067	\$2,881	\$0	\$0
0	Base Year	\$0	\$0	\$0
-1	1,102	\$2,976	\$4,858	\$692
-2	1,139	\$3,074	\$2,344,859	\$715
-3	1,176	\$3,176	\$5,184	\$739
-4	1,215	\$3,281	\$2,502,173	\$763
-5	1,255	\$3,389	\$5,532	\$788
-6	1,297	\$3,501	\$5,714	\$814
-7	1,339	\$3,616	\$2,758,153	\$841
-8	1,384	\$3,736	\$6,097	\$869
-9	1,429	\$3,859	\$0	\$898
-10	1,476	\$3,986	\$0	\$927
-11	1,525	\$4,118	\$0	\$958
-12	1,575	\$4,254	\$0	\$989
-13	1,627	\$4,394	\$0	\$1,022
-14	1,681	\$4,539	\$7,409	\$1,056
-15	1,737	\$4,689	\$3,576,193	\$1,091
-16	1,794	\$4,844	\$7,906	\$1,127
-17	1,853	\$5,003	\$0	\$1,164
-18	1,914	\$5,169	\$0	\$1,202
-19	1,977	\$5,339	\$0	\$1,242
-20	2,043	\$0	\$9,002	\$1,283
Total		\$95,468	\$11,233,079	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Lighthouse Bayou (PCS-32)

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$934,121	Total Fully Funded Costs	\$2,074,238

Annual Charges	Present Worth
Interest & Amortization	\$971,909
Monitoring	\$299,800
O & M Costs	\$150,153
Other Costs	\$6,851
Total	\$1,428,700

Average Annual
\$89,085
\$27,480
\$13,763
\$628
\$130,955

Average Annual Habitat Units

(173)

Cost Per Habitat Unit

∞

Average Annual Acres of Emergent Marsh

NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Lighthouse Bayou (PCS-32)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$79,154	\$32,308	\$8,815	\$2,852	\$628	\$0	\$0	\$0	\$123,756
2 Compound	2001	\$67,846	\$27,692	\$15,111	\$4,889	\$628	\$0	\$0	\$0	\$116,166
1 Compound	2002	\$0	\$0	\$10,074	\$3,259	\$628	\$68,000	\$113,000	\$452,000	\$646,961
TOTAL		\$147,000	\$60,000	\$34,000	\$11,000	\$1,884	\$68,000	\$113,000	\$452,000	\$886,884

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2001	\$36,349	\$0	\$0
1 Compound	2002	\$22,094	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$22,094	\$3,645	\$628
2 Discount	2004	\$22,094	\$3,645	\$628
3 Discount	2005	\$22,094	\$3,645	\$628
4 Discount	2006	\$22,094	\$3,645	\$628
5 Discount	2007	\$22,094	\$3,645	\$628
6 Discount	2008	\$22,094	\$3,645	\$628
7 Discount	2009	\$22,094	\$109,217	\$628
8 Discount	2010	\$22,094	\$3,645	\$628
9 Discount	2011	\$22,094	\$3,645	\$628
10 Discount	2012	\$22,094	\$3,645	\$628
11 Discount	2013	\$22,094	\$3,645	\$628
12 Discount	2014	\$22,094	\$3,645	\$628
13 Discount	2015	\$22,094	\$3,645	\$628
14 Discount	2016	\$22,094	\$109,217	\$628
15 Discount	2017	\$22,094	\$3,645	\$628
16 Discount	2018	\$22,094	\$3,645	\$628
17 Discount	2019	\$22,094	\$3,645	\$628
18 Discount	2020	\$22,094	\$3,645	\$628
19 Discount	2021	\$22,094	\$3,645	\$628
20 Discount	2022	\$0	\$3,645	\$628
Total		\$478,225	\$284,044	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Lighthouse Bayou (PCS-32)

Present Valued Costs		Total Discounted Costs	\$1,428,713	Amortized Costs					\$130,955		
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$95,951	\$39,164	\$10,685	\$3,457	\$761	\$0	\$0	\$0	\$150,018
2	1.137	2001	\$77,134	\$31,483	\$17,180	\$5,558	\$714	\$0	\$0	\$0	\$132,068
1	1.066	2002	\$0	\$0	\$10,741	\$3,475	\$670	\$72,505	\$120,486	\$481,945	\$689,823
Total			\$173,084	\$70,647	\$38,607	\$12,490	\$2,145	\$72,505	\$120,486	\$481,945	\$971,909

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$41,325	\$0	\$0
1	1.066	2002	\$23,558	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$20,721	\$3,419	\$589
-2	0.880	2004	\$19,434	\$3,206	\$552
-3	0.825	2005	\$18,226	\$3,007	\$518
-4	0.774	2006	\$17,094	\$2,820	\$486
-5	0.726	2007	\$16,032	\$2,645	\$456
-6	0.681	2008	\$15,035	\$2,481	\$427
-7	0.638	2009	\$14,101	\$69,707	\$401
-8	0.599	2010	\$13,225	\$2,182	\$376
-9	0.561	2011	\$12,403	\$2,046	\$353
-10	0.527	2012	\$11,633	\$1,919	\$331
-11	0.494	2013	\$10,910	\$1,800	\$310
-12	0.463	2014	\$10,232	\$1,688	\$291
-13	0.434	2015	\$9,596	\$1,583	\$273
-14	0.407	2016	\$9,000	\$44,490	\$256
-15	0.382	2017	\$8,441	\$1,393	\$240
-16	0.358	2018	\$7,916	\$1,306	\$225
-17	0.336	2019	\$7,425	\$1,225	\$211
-18	0.315	2020	\$6,963	\$1,149	\$198
-19	0.296	2021	\$6,531	\$1,077	\$186
-20	0.277	2022	\$0	\$1,010	\$174
Total			\$299,800	\$150,153	\$6,851

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Lighthouse Bayou (PCS-32)

Fully Funded Costs		Total Fully Funded Costs	Amortized Costs					Total First Cost			
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$79,154	\$32,308	\$8,815	\$2,852	\$628	\$0	\$0	\$0	\$123,756
2	1.033	2001	\$70,085	\$28,606	\$15,610	\$5,050	\$649	\$0	\$0	\$0	\$120,000
1	1.067	2002	\$0	\$0	\$10,750	\$3,478	\$670	\$72,562	\$120,581	\$482,324	\$690,365
TOTAL			\$149,239	\$60,914	\$35,175	\$11,380	\$1,947	\$72,562	\$120,581	\$482,324	\$934,121

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$37,548	\$0	\$0
1	1.067	2002	\$23,576	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$24,354	\$4,018	\$692
-2	1.139	2004	\$25,158	\$4,150	\$715
-3	1.176	2005	\$25,988	\$4,287	\$739
-4	1.215	2006	\$26,846	\$4,429	\$763
-5	1.255	2007	\$27,731	\$4,575	\$788
-6	1.297	2008	\$28,647	\$4,726	\$814
-7	1.339	2009	\$29,592	\$146,283	\$841
-8	1.384	2010	\$30,569	\$5,043	\$869
-9	1.429	2011	\$31,577	\$5,210	\$898
-10	1.476	2012	\$32,619	\$5,381	\$927
-11	1.525	2013	\$33,696	\$5,559	\$958
-12	1.575	2014	\$34,808	\$5,743	\$989
-13	1.627	2015	\$35,956	\$5,932	\$1,022
-14	1.681	2016	\$37,143	\$183,609	\$1,056
-15	1.737	2017	\$38,369	\$6,330	\$1,091
-16	1.794	2018	\$39,635	\$6,539	\$1,127
-17	1.853	2019	\$40,943	\$6,755	\$1,164
-18	1.914	2020	\$42,294	\$6,978	\$1,202
-19	1.977	2021	\$43,690	\$7,208	\$1,242
-20	2.043	2022	\$0	\$7,446	\$1,283
Total			\$690,737	\$430,200	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Restore Conn. of Mermentau R./Restrict Nav. Channel

Project Construction Years:	3	Total Project Years	23
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$2,707,645	Total Fully Funded Costs	\$12,566,773

	Present Worth	Average Annual
Annual Charges		
Interest & Amortization	\$2,760,567	\$253,032
Monitoring	\$435,517	\$39,919
O & M Costs	\$3,286,996	\$301,285
Other Costs	<u>\$6,851</u>	<u>\$628</u>
Total	\$6,489,900	\$594,864
Average Annual Habitat Units		0
Cost Per Habitat Unit		∞
Average Annual Acres of Emergent Marsh		NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Restore Conn. of Mermentau R./Restrict Nav. Channel

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$99,313	\$17,500	\$25,926	\$10,370	\$628	\$0	\$0	\$0	\$153,737
2 Compound	2001	\$127,688	\$22,500	\$44,444	\$17,778	\$628	\$0	\$0	\$0	\$213,038
1 Compound	2002	\$0	\$0	\$29,630	\$11,852	\$628	\$150,000	\$399,000	\$1,546,000	\$2,187,109
TOTAL		\$227,000	\$40,000	\$100,000	\$40,000	\$1,884	\$150,000	\$399,000	\$1,596,000	\$2,253,884

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2001	\$48,714	\$0	\$0
1 Compound	2002	\$32,493	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$32,493	\$253,407	\$628
2 Discount	2004	\$32,493	\$343,407	\$628
3 Discount	2005	\$32,493	\$253,407	\$628
4 Discount	2006	\$32,493	\$343,407	\$628
5 Discount	2007	\$32,493	\$339,756	\$628
6 Discount	2008	\$32,493	\$343,407	\$628
7 Discount	2009	\$32,493	\$253,407	\$628
8 Discount	2010	\$32,493	\$343,407	\$628
9 Discount	2011	\$32,493	\$253,407	\$628
10 Discount	2012	\$32,493	\$429,756	\$628
11 Discount	2013	\$32,493	\$253,407	\$628
12 Discount	2014	\$32,493	\$343,407	\$628
13 Discount	2015	\$32,493	\$253,407	\$628
14 Discount	2016	\$32,493	\$343,407	\$628
15 Discount	2017	\$32,493	\$339,756	\$628
16 Discount	2018	\$32,493	\$343,407	\$628
17 Discount	2019	\$32,493	\$253,407	\$628
18 Discount	2020	\$32,493	\$343,407	\$628
19 Discount	2021	\$32,493	\$253,407	\$628
20 Discount	2022	\$0	\$4,407	\$628
Total		\$698,574	\$5,888,192	\$12,560

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Restore Conn. of Mermentau R./Restrict Nav. Channel

Present Valued Costs		Total Discounted Costs	Amortized Costs		Total First Cost						
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$120,387	\$21,214	\$31,428	\$12,571	\$761	\$0	\$0	\$0	\$186,361
2	1.137	2001	\$145,167	\$25,580	\$50,528	\$20,211	\$714	\$0	\$0	\$0	\$242,200
1	1.066	2002	\$0	\$0	\$31,593	\$12,637	\$670	\$159,938	\$425,434	\$1,701,735	\$2,332,005
Total			\$265,554	\$46,794	\$113,549	\$45,419	\$2,145	\$159,938	\$425,434	\$1,701,735	\$2,760,567

\$5,469,932

\$594,864

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$55,382	\$0	\$0
1	1.066	2002	\$34,646	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$30,474	\$237,662	\$589
-2	0.880	2004	\$28,581	\$302,058	\$552
-3	0.825	2005	\$26,805	\$209,046	\$518
-4	0.774	2006	\$25,139	\$265,689	\$486
-5	0.726	2007	\$23,577	\$246,532	\$456
-6	0.681	2008	\$22,112	\$233,698	\$427
-7	0.638	2009	\$20,738	\$161,735	\$401
-8	0.599	2010	\$19,450	\$205,559	\$376
-9	0.561	2011	\$18,241	\$142,261	\$353
-10	0.527	2012	\$17,108	\$226,273	\$331
-11	0.494	2013	\$16,045	\$125,132	\$310
-12	0.463	2014	\$15,048	\$159,038	\$291
-13	0.434	2015	\$14,113	\$110,065	\$273
-14	0.407	2016	\$13,236	\$139,889	\$256
-15	0.382	2017	\$12,414	\$129,803	\$240
-16	0.358	2018	\$11,642	\$123,045	\$225
-17	0.336	2019	\$10,919	\$85,156	\$211
-18	0.315	2020	\$10,241	\$108,230	\$198
-19	0.296	2021	\$9,604	\$74,903	\$186
-20	0.277	2022	\$0	\$1,222	\$174
Total			\$435,517	\$3,286,996	\$6,851

Coastal Wetlands Conservation and Restoration Plan Priority Project List IX

Restore Conn. of Mermentau R./Restrict Nav. Channel

Fully Funded Costs		Total Fully Funded Costs										Amortized Costs		
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost			
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
3	1.000	2000	\$99,313	\$17,500	\$25,926	\$10,370	\$628	\$0	\$0	\$0	\$0			
2	1.033	2001	\$131,901	\$23,243	\$45,911	\$18,364	\$649	\$0	\$0	\$0	\$153,737			
1	1.067	2002	\$0	\$0	\$31,617	\$12,647	\$670	\$160,063	\$425,769	\$1,703,074	\$220,068			
TOTAL			\$231,214	\$40,743	\$103,454	\$41,382	\$1,947	\$160,063	\$425,769	\$1,703,074	\$2,333,840		\$1,151,865	

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$50,322	\$0	\$0
1	1.067	2002	\$34,673	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$35,817	\$279,331	\$692
-2	1.139	2004	\$36,999	\$391,030	\$715
-3	1.176	2005	\$38,220	\$298,071	\$739
-4	1.215	2006	\$39,481	\$417,264	\$763
-5	1.255	2007	\$40,784	\$426,453	\$788
-6	1.297	2008	\$42,130	\$445,258	\$814
-7	1.339	2009	\$43,520	\$339,408	\$841
-8	1.384	2010	\$44,957	\$475,130	\$869
-9	1.429	2011	\$46,440	\$362,178	\$898
-10	1.476	2012	\$47,973	\$634,494	\$927
-11	1.525	2013	\$49,556	\$386,476	\$958
-12	1.575	2014	\$51,191	\$541,020	\$989
-13	1.627	2015	\$52,880	\$412,405	\$1,022
-14	1.681	2016	\$54,625	\$577,317	\$1,056
-15	1.737	2017	\$56,428	\$590,031	\$1,091
-16	1.794	2018	\$58,290	\$616,049	\$1,127
-17	1.853	2019	\$60,214	\$469,596	\$1,164
-18	1.914	2020	\$62,201	\$657,379	\$1,202
-19	1.977	2021	\$64,253	\$501,101	\$1,242
-20	2.043	2022	\$0	\$9,002	\$1,283
Total			\$1,010,955	\$8,828,994	\$19,179

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Lake Athanasio Oyster Reef Demo (BS-XX)

Project Construction Years:	3	Total Project Years	6
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$592,790	Total Fully Funded Costs	\$706,608

	Present Worth	Average Annual
Annual Charges		
Interest & Amortization	\$607,047	\$55,642
Monitoring	\$103,289	\$9,467
O & M Costs	\$3,007	\$276
Other Costs	<u>\$1,659</u>	<u>\$152</u>
Total	\$715,000	\$65,537

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

NA
NA
NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Lake Athanasio Oyster Reef Demo (BS-XX)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound	2000	\$38,500	\$17,500	\$2,240	\$2,240	\$628	\$0	\$0	\$0	\$61,108
2 Compound	2001	\$5,500	\$2,500	\$3,840	\$3,840	\$628	\$0	\$0	\$0	\$16,308
1 Compound	2002	\$0	\$0	\$1,920	\$1,920	\$628	\$8,000	\$94,000	\$376,000	\$482,468
TOTAL		\$44,000	\$20,000	\$8,000	\$8,000	\$1,884	\$8,000	\$94,000	\$376,000	\$558,894

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3 Compound	2000	\$13,397	\$0	\$0
2 Compound	2001	\$21,651	\$0	\$0
1 Compound	2002	\$21,651	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2003	\$21,651	\$0	\$628
2 Discount	2004	\$21,651	\$0	\$628
3 Discount	2005	\$0	\$3,645	\$628
4 Discount	2006	\$0	\$0	\$0
5 Discount	2007	\$0	\$0	\$0
6 Discount	2008	\$0	\$0	\$0
7 Discount	2009	\$0	\$0	\$0
8 Discount	2010	\$0	\$0	\$0
9 Discount	2011	\$0	\$0	\$0
10 Discount	2012	\$0	\$0	\$0
11 Discount	2013	\$0	\$0	\$0
12 Discount	2014	\$0	\$0	\$0
13 Discount	2015	\$0	\$0	\$0
14 Discount	2016	\$0	\$0	\$0
15 Discount	2017	\$0	\$0	\$0
16 Discount	2018	\$0	\$0	\$0
17 Discount	2019	\$0	\$0	\$0
18 Discount	2020	\$0	\$0	\$0
19 Discount	2021	\$0	\$0	\$0
20 Discount	2022	\$0	\$0	\$0
Total		\$100,000	\$3,645	\$1,884

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Lake Athanasio Oyster Reef Demo (BS-XX)

Present Valued Costs		Total Discounted Costs				Amortized Costs				Total First Cost	
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$46,670	\$21,214	\$2,715	\$2,715	\$761	\$0	\$0	\$0	\$74,076
2	1.137	2001	\$6,253	\$2,842	\$4,366	\$4,366	\$714	\$0	\$0	\$0	\$18,540
1	1.066	2002	\$0	\$0	\$2,047	\$2,047	\$670	\$8,530	\$100,228	\$407,910	\$514,432
		Total	\$52,923	\$24,056	\$9,128	\$9,128	\$2,145	\$8,530	\$100,228	\$400,910	\$607,047

\$715,003

\$65,537

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.212	2000	\$16,240	\$0	\$0
2	1.137	2001	\$24,615	\$0	\$0
1	1.066	2002	\$23,085	\$0	\$0
0		Base Year	\$0	\$0	\$0
-1	0.938	2002	\$20,306	\$0	\$589
-2	0.880	2003	\$19,044	\$0	\$552
-3	0.825	2004	\$0	\$3,007	\$518
-4	0.774	2005	\$0	\$0	\$0
-5	0.726	2006	\$0	\$0	\$0
-6	0.681	2007	\$0	\$0	\$0
-7	0.638	2008	\$0	\$0	\$0
-8	0.599	2009	\$0	\$0	\$0
-9	0.561	2010	\$0	\$0	\$0
-10	0.527	2011	\$0	\$0	\$0
-11	0.494	2012	\$0	\$0	\$0
-12	0.463	2013	\$0	\$0	\$0
-13	0.434	2014	\$0	\$0	\$0
-14	0.407	2015	\$0	\$0	\$0
-15	0.382	2016	\$0	\$0	\$0
-16	0.358	2017	\$0	\$0	\$0
-17	0.336	2018	\$0	\$0	\$0
-18	0.315	2019	\$0	\$0	\$0
-19	0.296	2020	\$0	\$0	\$0
-20	0.277	2021	\$0	\$0	\$0
		Total	\$103,289	\$3,007	\$1,659

D-127

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Lake Athanasio Oyster Reef Demo (BS-XX)

Fully Funded Costs		Total Fully Funded Costs	\$706,608	Amortized Costs					\$64,767		
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$38,500	\$17,500	\$2,240	\$2,240	\$0	\$0	\$0	\$0	\$0
2	1.033	2001	\$5,682	\$2,583	\$3,967	\$3,967	\$628	\$0	\$0	\$0	\$61,108
1	1.067	2002	\$0	\$0	\$2,049	\$2,049	\$649	\$0	\$0	\$0	\$16,846
TOTAL			\$44,182	\$20,083	\$8,256	\$8,256	\$1,947	\$8,537	\$100,306	\$401,225	\$514,836

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
3	1.000	2000	\$13,397	\$0	\$0
2	1.033	2001	\$22,365	\$0	\$0
1	1.067	2002	\$23,103	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$23,866	\$0	\$692
-2	1.139	2004	\$24,653	\$0	\$715
-3	1.176	2005	\$0	\$4,287	\$739
-4	1.215	2006	\$0	\$0	\$0
-5	1.255	2007	\$0	\$0	\$0
-6	1.297	2008	\$0	\$0	\$0
-7	1.339	2009	\$0	\$0	\$0
-8	1.384	2010	\$0	\$0	\$0
-9	1.429	2011	\$0	\$0	\$0
-10	1.476	2012	\$0	\$0	\$0
-11	1.525	2013	\$0	\$0	\$0
-12	1.575	2014	\$0	\$0	\$0
-13	1.627	2015	\$0	\$0	\$0
-14	1.681	2016	\$0	\$0	\$0
-15	1.737	2017	\$0	\$0	\$0
-16	1.794	2018	\$0	\$0	\$0
-17	1.853	2019	\$0	\$0	\$0
-18	1.914	2020	\$0	\$0	\$0
-19	1.977	2021	\$0	\$0	\$0
-20	2.043	2022	\$0	\$0	\$0
Total			\$107,384	\$4,287	\$2,146

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Mandalay Bank Protection Demonstration - (XTE-XX)

Project Construction Years:	2	Total Project Years	7
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$1,101,210	Total Fully Funded Costs	\$1,194,494

Annual Charges	Present Worth	Average Annual
Interest & Amortization	\$1,164,567	\$106,744
Monitoring	\$66,799	\$6,123
O & M Costs	\$9,070	\$831
Other Costs	\$2,601	\$238
Total	\$1,243,000	\$113,936

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

NA
NA
NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Mandalay Bank Protection Demonstration - (XTE-XX)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2 Compound	2000	\$170,374	\$75,000	\$14,705	\$5,882	\$628	\$0	\$0	\$0	\$266,589
1 Compound	2001	\$0	\$0	\$23,107	\$9,243	\$628	\$18,750	\$151,246	\$604,984	\$807,958
TOTAL		\$170,374	\$75,000	\$37,812	\$15,125	\$1,256	\$18,750	\$151,246	\$604,984	\$1,074,547

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2000	\$25,924	\$0	\$0
1 Compound	2001	\$0	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2002	\$15,000	\$3,645	\$628
2 Discount	2003	\$0	\$0	\$628
3 Discount	2004	\$15,000	\$3,645	\$628
4 Discount	2005	\$0	\$0	\$628
5 Discount	2006	\$15,000	\$3,645	\$628
6 Discount	2007	\$0	\$0	\$0
7 Discount	2008	\$0	\$0	\$0
8 Discount	2009	\$0	\$0	\$0
9 Discount	2010	\$0	\$0	\$0
10 Discount	2011	\$0	\$0	\$0
11 Discount	2012	\$0	\$0	\$0
12 Discount	2013	\$0	\$0	\$0
13 Discount	2014	\$0	\$0	\$0
14 Discount	2015	\$0	\$0	\$0
15 Discount	2016	\$0	\$0	\$0
16 Discount	2017	\$0	\$0	\$0
17 Discount	2018	\$0	\$0	\$0
18 Discount	2019	\$0	\$0	\$0
19 Discount	2020	\$0	\$0	\$0
20 Discount	2021	\$0	\$0	\$0
Total		\$70,924	\$10,935	\$3,140

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Mandalay Bank Protection Demonstration - (XTE-XX)

Present Valued Costs		Total Discounted Costs	Amortized Costs										Total First Cost
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	Construction	Construction	Construction	Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	1.137	2000	\$193,696	\$85,267	\$16,718	\$6,687	\$714	\$0	\$0	\$0	\$0	\$303,082	
1	1.066	2001	\$0	\$0	\$24,638	\$9,855	\$670	\$19,992	\$161,266	\$645,064	\$0	\$861,486	
Total			\$193,696	\$85,267	\$41,356	\$16,543	\$1,384	\$19,992	\$161,266	\$645,064	\$0	\$1,164,567	

\$1,243,038

\$113,336

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2000	\$29,473	\$0	\$0
1	1.066	2001	\$0	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2002	\$14,068	\$3,419	\$589
-2	0.880	2003	\$0	\$0	\$552
-3	0.825	2004	\$12,374	\$3,007	\$518
-4	0.774	2005	\$0	\$0	\$486
-5	0.726	2006	\$10,884	\$2,645	\$456
-6	0.681	2007	\$0	\$0	\$0
-7	0.638	2008	\$0	\$0	\$0
-8	0.599	2009	\$0	\$0	\$0
-9	0.561	2010	\$0	\$0	\$0
-10	0.527	2011	\$0	\$0	\$0
-11	0.494	2012	\$0	\$0	\$0
-12	0.463	2013	\$0	\$0	\$0
-13	0.434	2014	\$0	\$0	\$0
-14	0.407	2015	\$0	\$0	\$0
-15	0.382	2016	\$0	\$0	\$0
-16	0.358	2017	\$0	\$0	\$0
-17	0.336	2018	\$0	\$0	\$0
-18	0.315	2019	\$0	\$0	\$0
-19	0.296	2020	\$0	\$0	\$0
-20	0.277	2021	\$0	\$0	\$0
Total			\$66,799	\$9,070	\$2,601

Coastal Wetlands Conservation and Restoration Plan Priority Project List IX

Mandalay Bank Protection Demonstration - (XTE-XX)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs				
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0
3			\$0	\$0	\$0	\$0	\$0	\$0
2	1.000	2000	\$170,374	\$75,000	\$5,882	\$0	\$0	\$0
1	1.033	2001	\$0	\$0	\$23,870	\$649	\$19,369	\$266,589
TOTAL			\$170,374	\$75,000	\$38,575	\$15,430	\$19,369	\$834,621

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.000	2000	\$25,924	\$0	\$0
1	1.033	2001	\$0	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.067	2002	\$16,006	\$3,890	\$670
-2	1.102	2003	\$0	\$0	\$692
-3	1.139	2004	\$17,080	\$4,150	\$715
-4	1.176	2005	\$0	\$0	\$739
-5	1.215	2006	\$18,226	\$4,429	\$763
-6	1.255	2007	\$0	\$0	\$0
-7	1.297	2008	\$0	\$0	\$0
-8	1.339	2009	\$0	\$0	\$0
-9	1.384	2010	\$0	\$0	\$0
-10	1.429	2011	\$0	\$0	\$0
-11	1.476	2012	\$0	\$0	\$0
-12	1.525	2013	\$0	\$0	\$0
-13	1.575	2014	\$0	\$0	\$0
-14	1.627	2015	\$0	\$0	\$0
-15	1.681	2016	\$0	\$0	\$0
-16	1.737	2017	\$0	\$0	\$0
-17	1.794	2018	\$0	\$0	\$0
-18	1.853	2019	\$0	\$0	\$0
-19	1.914	2020	\$0	\$0	\$0
-20	1.977	2021	\$0	\$0	\$0
Total			\$77,237	\$12,469	\$3,579

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Periodic Introduction of Sediment and Nutrients at Selected Sites along the Mississippi River (MR-XX)

Project Construction Years:	3	Total Project Years	11
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$1,506,784	Total Fully Funded Costs	\$1,632,235

	<u>Present Worth</u>	<u>Average Annual</u>
Annual Charges		
Interest & Amortization	\$1,571,397	\$144,034
Monitoring	\$114,380	\$10,484
O & M Costs	\$0	\$0
Other Costs	\$1,659	\$152
Total	\$1,687,400	\$154,670

Average Annual Habitat Units	NA
Cost Per Habitat Unit	NA
Average Annual Acres of Emergent Marsh	NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Periodic Introduction of Sediment and Nutrients at Selected Sites along the Mississippi River -(MR-XX)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	Compound	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	Compound	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	Compound	\$37,270	\$10,640	\$6,249	\$3,117	\$628	\$0	\$0	\$0	\$57,904
2	Compound	\$0	\$0	\$10,713	\$5,344	\$628	\$28,932	\$93,004	\$372,017	\$510,638
1	Compound	\$0	\$0	\$10,713	\$5,344	\$628	\$49,598	\$159,436	\$637,743	\$963,462
	TOTAL	\$37,270	\$10,640	\$27,675	\$13,805	\$1,884	\$78,530	\$252,440	\$1,009,760	\$1,322,004

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	Compound	\$38,397	\$0	\$0
1	Compound	\$25,000	\$0	\$0
0	Base Year	\$0	\$0	\$0
1	Discount	\$25,000	\$0	\$628
2	Discount	\$0	\$0	\$628
3	Discount	\$25,000	\$0	\$628
4	Discount	\$0	\$0	\$0
5	Discount	\$0	\$0	\$0
6	Discount	\$0	\$0	\$0
7	Discount	\$0	\$0	\$0
8	Discount	\$0	\$0	\$0
9	Discount	\$0	\$0	\$0
10	Discount	\$0	\$0	\$0
11	Discount	\$0	\$0	\$0
12	Discount	\$0	\$0	\$0
13	Discount	\$0	\$0	\$0
14	Discount	\$0	\$0	\$0
15	Discount	\$0	\$0	\$0
16	Discount	\$0	\$0	\$0
17	Discount	\$0	\$0	\$0
18	Discount	\$0	\$0	\$0
19	Discount	\$0	\$0	\$0
20	Discount	\$0	\$0	\$0
	Total	\$113,397	\$0	\$1,884

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Periodic Introduction of Sediment and Nutrients at Selected Sites along the Mississippi River - (MR-XX)

Present Valued Costs		Total Discounted Costs	Amortized Costs								
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212	2000	\$45,179	\$12,898	\$7,575	\$3,779	\$761	\$0	\$0	\$0	\$70,192
2	1.137	2001	\$0	\$0	\$12,179	\$6,075	\$714	\$32,893	\$105,735	\$422,942	\$580,539
1	1.066	2002	\$0	\$0	\$11,423	\$5,698	\$670	\$52,884	\$169,998	\$679,994	\$920,666
Total			\$45,179	\$12,898	\$31,177	\$15,552	\$2,145	\$85,776	\$275,734	\$1,102,936	\$1,571,397

Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2001	\$43,653	\$0	\$0
1	1.066	2002	\$26,656	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2003	\$23,447	\$0	\$589
-2	0.880	2004	\$0	\$0	\$552
-3	0.825	2005	\$20,624	\$0	\$518
-4	0.774	2006	\$0	\$0	\$0
-5	0.726	2007	\$0	\$0	\$0
-6	0.681	2008	\$0	\$0	\$0
-7	0.638	2009	\$0	\$0	\$0
-8	0.599	2010	\$0	\$0	\$0
-9	0.561	2011	\$0	\$0	\$0
-10	0.527	2012	\$0	\$0	\$0
-11	0.494	2013	\$0	\$0	\$0
-12	0.463	2014	\$0	\$0	\$0
-13	0.434	2015	\$0	\$0	\$0
-14	0.407	2016	\$0	\$0	\$0
-15	0.382	2017	\$0	\$0	\$0
-16	0.358	2018	\$0	\$0	\$0
-17	0.336	2019	\$0	\$0	\$0
-18	0.315	2020	\$0	\$0	\$0
-19	0.296	2021	\$0	\$0	\$0
-20	0.277	2022	\$0	\$0	\$0
Total			\$114,380	\$0	\$1,659

Coastal Wetlands Conservation and Restoration Plan Priority Project List IX

Periodic Introduction of Sediment and Nutrients at Selected Sites along the Mississippi River - (MR-XX)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
Year	Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.000	2000	\$37,270	\$10,640	\$6,249	\$3,117	\$628	\$0	\$0	\$0	\$57,904
2	1.033	2001	\$0	\$0	\$11,066	\$5,520	\$649	\$29,887	\$96,073	\$384,293	\$527,489
1	1.067	2002	\$0	\$0	\$11,432	\$5,702	\$670	\$52,925	\$170,132	\$680,529	\$921,390
TOTAL			\$37,270	\$10,640	\$28,747	\$14,340	\$1,947	\$82,812	\$266,206	\$1,064,822	\$1,506,784

Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.033	2001	\$39,664	\$0	\$0
1	1.067	2002	\$26,677	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1.102	2003	\$27,558	\$0	\$692
-2	1.139	2004	\$0	\$0	\$715
-3	1.176	2005	\$29,406	\$0	\$739
-4	1.215	2006	\$0	\$0	\$0
-5	1.255	2007	\$0	\$0	\$0
-6	1.297	2008	\$0	\$0	\$0
-7	1.339	2009	\$0	\$0	\$0
-8	1.384	2010	\$0	\$0	\$0
-9	1.429	2011	\$0	\$0	\$0
-10	1.476	2012	\$0	\$0	\$0
-11	1.525	2013	\$0	\$0	\$0
-12	1.575	2014	\$0	\$0	\$0
-13	1.627	2015	\$0	\$0	\$0
-14	1.681	2016	\$0	\$0	\$0
-15	1.737	2017	\$0	\$0	\$0
-16	1.794	2018	\$0	\$0	\$0
-17	1.853	2019	\$0	\$0	\$0
-18	1.914	2020	\$0	\$0	\$0
-19	1.977	2021	\$0	\$0	\$0
-20	2.043	2022	\$0	\$0	\$0
Total			\$123,305	\$0	\$2,146

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Terrebonne Bay Shore Protection Demonstration - (XTE-XX)

Project Construction Years:	2	Total Project Years	10
Interest Rate	6.625%	Amortization Factor	0.0916595
Total First Costs	\$678,503	Total Fully Funded Costs	\$1,060,774

	Present Worth	Average Annual
Annual Charges		
Interest & Amortization	\$715,984	\$65,627
Monitoring	\$241,545	\$22,140
O & M Costs	\$22,085	\$2,024
Other Costs	\$3,805	\$349
Total	\$983,400	\$90,140

Average Annual Habitat Units NA

Cost Per Habitat Unit NA

Average Annual Acres of Emergent Marsh NA

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Terrebonne Bay Shore Protection Demonstration - (XTE-XX)

First Costs and Annual Charges

Year	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3 Compound		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2 Compound	2000	\$110,840	\$30,000	\$5,282	\$2,641	\$628	\$0	\$0	\$0	\$0
1 Compound	2001	\$0	\$0	\$9,054	\$4,527	\$628	\$50,000	\$89,600	\$358,400	\$149,391
TOTAL		\$110,840	\$30,000	\$14,336	\$7,168	\$1,256	\$50,000	\$89,600	\$358,400	\$651,600

Year	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2 Compound	2000	\$41,397	\$0	\$0
1 Compound	2001	\$0	\$0	\$0
0 Base Year		\$0	\$0	\$0
1 Discount	2002	\$63,000	\$3,645	\$628
2 Discount	2003	\$0	\$3,645	\$628
3 Discount	2004	\$63,000	\$3,645	\$628
4 Discount	2005	\$0	\$3,645	\$628
5 Discount	2006	\$63,000	\$3,645	\$628
6 Discount	2007	\$0	\$3,645	\$628
7 Discount	2008	\$0	\$3,645	\$628
8 Discount	2009	\$63,000	\$3,645	\$628
9 Discount	2010	\$0	\$0	\$0
10 Discount	2011	\$0	\$0	\$0
11 Discount	2012	\$0	\$0	\$0
12 Discount	2013	\$0	\$0	\$0
13 Discount	2014	\$0	\$0	\$0
14 Discount	2015	\$0	\$0	\$0
15 Discount	2016	\$0	\$0	\$0
16 Discount	2017	\$0	\$0	\$0
17 Discount	2018	\$0	\$0	\$0
18 Discount	2019	\$0	\$0	\$0
19 Discount	2020	\$0	\$0	\$0
20 Discount	2021	\$0	\$0	\$0
Total		\$293,397	\$29,160	\$5,024

All dates are in Federal Fiscal Years (October 1 to September 30)

**Coastal Wetlands Conservation and Restoration Plan
Priority Project List IX**

Terrebonne Bay Shore Protection Demonstration - (XTE-XX)

Present Valued Costs		Total Discounted Costs	\$983,419	Amortized Costs	\$90,140						
Year	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Federal Supervision & Administration	LDNR Supervision & Administration	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1.378		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.293		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.212		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	1.137	2000	\$126,013	\$34,107	\$6,005	\$3,002	\$714	\$0	\$0	\$0	\$169,840
1	1.066	2001	\$0	\$0	\$9,654	\$4,827	\$670	\$53,313	\$95,536	\$382,144	\$546,143
Total			\$126,013	\$34,107	\$15,659	\$7,829	\$1,384	\$53,313	\$95,536	\$382,144	\$715,984

Discount Year	Discount Rates	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1.137	2000	\$47,064	\$0	\$0
1	1.066	2001	\$0	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	0.938	2002	\$59,086	\$3,419	\$589
-2	0.880	2003	\$0	\$3,206	\$552
-3	0.825	2004	\$51,971	\$3,007	\$518
-4	0.774	2005	\$0	\$2,820	\$486
-5	0.726	2006	\$45,714	\$2,645	\$456
-6	0.681	2007	\$0	\$2,481	\$427
-7	0.638	2008	\$0	\$2,326	\$401
-8	0.599	2009	\$37,711	\$2,182	\$376
-9	0.561	2010	\$0	\$0	\$0
-10	0.527	2011	\$0	\$0	\$0
-11	0.494	2012	\$0	\$0	\$0
-12	0.463	2013	\$0	\$0	\$0
-13	0.434	2014	\$0	\$0	\$0
-14	0.407	2015	\$0	\$0	\$0
-15	0.382	2016	\$0	\$0	\$0
-16	0.358	2017	\$0	\$0	\$0
-17	0.336	2018	\$0	\$0	\$0
-18	0.315	2019	\$0	\$0	\$0
-19	0.296	2020	\$0	\$0	\$0
-20	0.277	2021	\$0	\$0	\$0
Total			\$241,545	\$22,085	\$3,805

Coastal Wetlands Conservation and Restoration Plan Priority Project List IX

Terrebonne Bay Shore Protection Demonstration - (XTE-XX)

Fully Funded Costs		Total Fully Funded Costs		Amortized Costs		Total First Cost					
Year	Inflation Factor	Fiscal Year	Engineering & Design & Land Rights	Easements & Administration	Supervision & Administration	LDNR	Corps Project Management	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	1000	2000	\$110,840	\$30,000	\$5,282	\$2,641	\$628	\$0	\$0	\$0	\$0
1	1033	2001	\$0	\$0	\$9,353	\$4,677	\$649	\$51,650	\$92,557	\$370,227	\$149,391
TOTAL			\$110,840	\$30,000	\$14,635	\$7,317	\$1,277	\$51,650	\$92,557	\$370,227	\$678,503

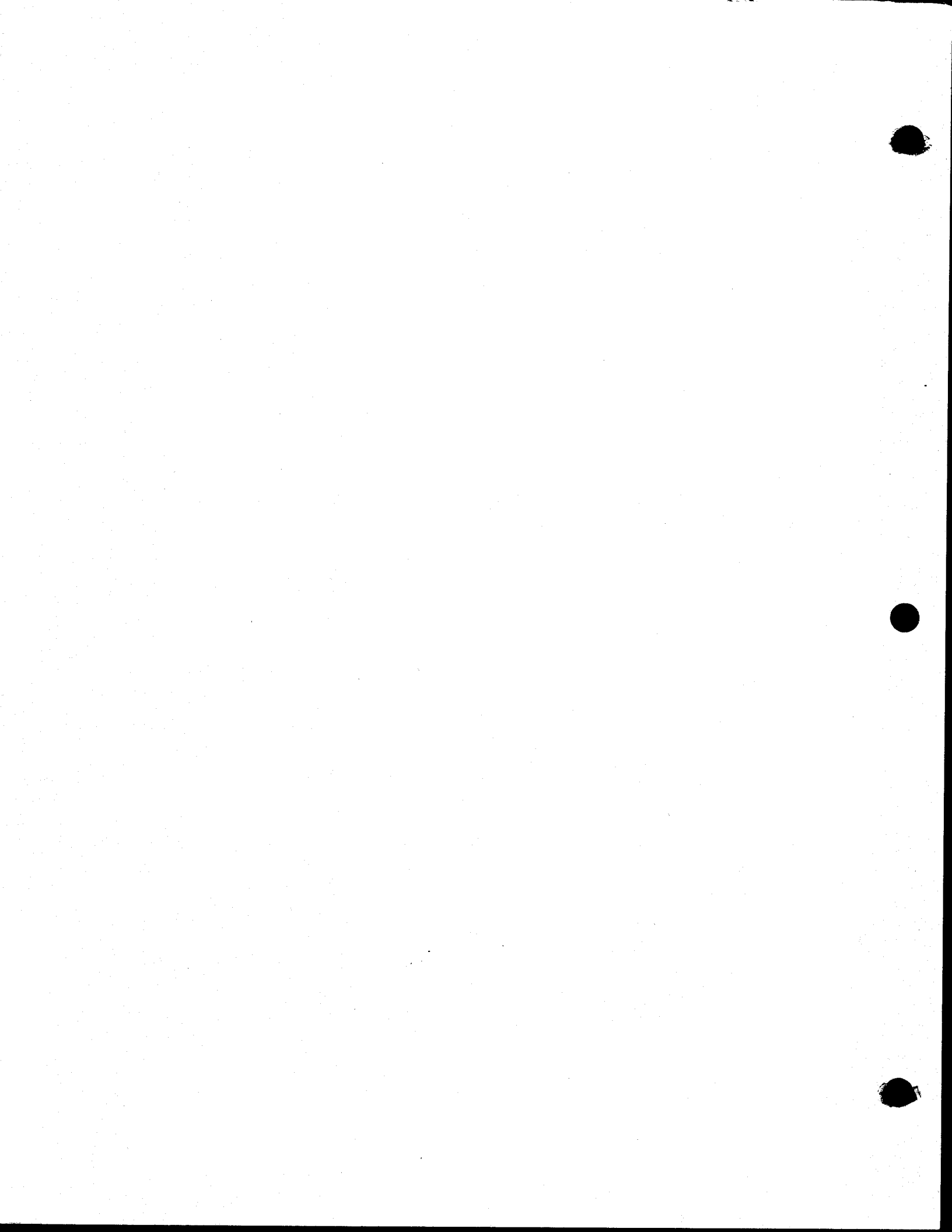
Year	Inflation Factor	Fiscal Year	Monitoring Costs	O&M Costs	Other Costs
2	1000	2000	\$41,397	\$0	\$0
1	1033	2001	\$0	\$0	\$0
0	Base Year		\$0	\$0	\$0
-1	1067	2002	\$67,227	\$3,890	\$670
-2	1102	2003	\$0	\$4,018	\$692
-3	1139	2004	\$71,737	\$4,150	\$715
-4	1176	2005	\$0	\$4,287	\$739
-5	1215	2006	\$76,550	\$4,429	\$763
-6	1255	2007	\$0	\$4,575	\$788
-7	1297	2008	\$0	\$4,726	\$814
-8	1339	2009	\$84,381	\$4,882	\$841
-9	1384	2010	\$0	\$0	\$0
-10	1429	2011	\$0	\$0	\$0
-11	1476	2012	\$0	\$0	\$0
-12	1525	2013	\$0	\$0	\$0
-13	1575	2014	\$0	\$0	\$0
-14	1627	2015	\$0	\$0	\$0
-15	1681	2016	\$0	\$0	\$0
-16	1737	2017	\$0	\$0	\$0
-17	1794	2018	\$0	\$0	\$0
-18	1853	2019	\$0	\$0	\$0
-19	1914	2020	\$0	\$0	\$0
-20	1977	2021	\$0	\$0	\$0
Total			\$341,291	\$34,957	\$6,023

Coastal Wetlands Planning, Protection, and
Restoration Act

9th Priority Project List Report

Appendix E

Wetlands Value Assessment
For Candidate Projects

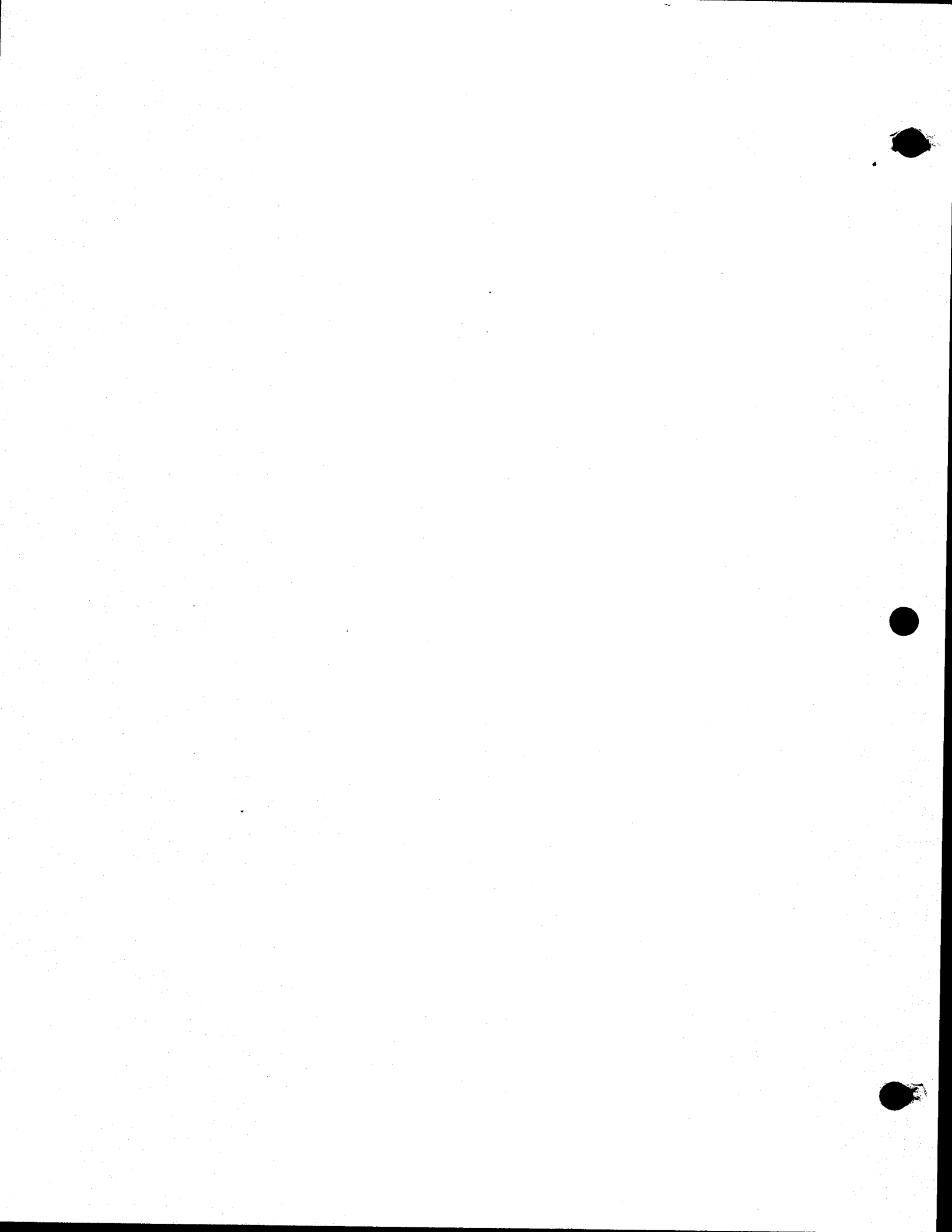


Appendix E

Wetlands Value Assessment For Candidate Projects

Table of Contents

<u>Project Name</u>	<u>Page Number</u>
Opportunistic Use of Bonnet Carré Spillway (XPO-55a).....	E-1
Northern Chandeleur Islands Marsh Restoration (XPO-95).....	E-8
Freshwater Introduction South of Hwy 82 to the Eastern Portion of Rockefeller Refuge Project (PME-7a).....	E-12
Southwest Lake Pontchartrain Sediment Trapping Project (XPO-54a).....	E-25
South Lake Decade Atchafalaya Freshwater/Sediment Introduction (PTE-28).....	E-33
Four Mile Canal/Little White Lake Hydrologic Restoration (XTV-30).....	E-40
Castille Pass Channel Sediment Delivery (XAT-11).....	E-50
LaBranche Wetlands Terracing, Planting, and Shoreline Protection (PPO-7a).....	E-54
Black Bayou Culverts Hydrologic Restoration (CS-16).....	E-70
Perry Ridge West Bank Stabilization (PCS-26 ii).....	E-86
Freshwater Bayou Bank Stabilization and Hydrologic Restoration (Belle Isle Canal to Lock) (East) (XTV-27).....	E-89
North Houma Navigational Channel Salinity Control Project (TE-8a).....	E-96
Little Pecan Bayou Hydrologic Restoration (XME-42a).....	E-100
Barataria Basin Landbridge Shoreline Protection, Ph. 3 (XBA-63 iii-2a).....	E-110
LA Highway 1 Marsh Creation (BA-32a).....	E-126
Tangipahoa/Pontchartrain Shoreline Protection (PO-13).....	E-129
Grand/White Lake Land Bridge Protection Project (PME-18).....	E-139
Raccoon Island Restoration (PTE-15-viii).....	E-147
Amoretta Freshwater Diversion (BA-17a).....	E-159
East/West Grand Terre Restoration Project (XBA-1).....	E-169
East Golden Meadow Terracing Project (XBA-77).....	E-181
Timbalier Island Dune and Marsh Creation (XTE-45a).....	E-184
Grand Pierre Island Restoration (XBA-1c).....	E-193
Freshwater Bayou Canal Shoreline Stabilization and Hydrologic Restoration (Schooner Bayou to the GIWW) (West) (XME-28/33).....	E-201
New Cut Dune and Marsh Creation (TE-11a).....	E-208
North Bully Camp Outfall Management (XTE-58).....	E-215
Weeks Bay Marsh Creation and Shore Protection/Commercial Canal Freshwater Re-Direction (PTV-13).....	E-235
Shoreline Protection at Lake Borgne (PPO-b/d/h).....	E-245
Constriction at Lighthouse Bayou (PCS-32).....	E-255
Restore Original Mermentau River Project (PME-17).....	E-271



WETLAND VALUE ASSESSMENT

MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: XPO-55a Opportunistic Use of the Bonnet Carre Spillway

The WVA analysis for this project includes 2 areas; Area 2 consists of brackish marsh and Area 3 consists of intermediate marsh. Total WVA benefits (AAHUs) for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
2	69
3	52

TOTAL BENEFITS = 121 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Opportunistic Use of the Bonnet Carre Spillway
Area 2

Project Area: 6,171

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	67	0.70	67	0.70	64	0.68
V2	% Aquatic	25	0.33	25	0.33	25	0.33
V3	Interspersion	%	0.52	%	0.52	%	0.52
	Class 1	10		10		10	
	Class 2	50		50		50	
	Class 3	20		20		20	
	Class 4	20		20		20	
V4	%OW <= 1.5ft	40	0.61	40	0.61	40	0.61
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.76	EM HSI =	0.76	EM HSI =	0.74
	Open Water HSI	=	0.65	OW HSI =	0.65	OW HSI =	0.66

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Opportunistic Use of the Bonnet Carre Spillway
Area 2

Project Area: 6,171

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	67	0.70	67	0.70	66	0.69
V2	% Aquatic	25	0.33	30	0.37	40	0.46
V3	Interspersion	%	0.52	%	0.52	%	0.52
	Class 1	10		10		10	
	Class 2	50		50		50	
	Class 3	20		20		20	
	Class 4	20		20		20	
V4	%OW <= 1.5ft	40	0.61	40	0.61	40	0.61
V5	Salinity (ppt)	4	1.00	3	1.00	3	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.76	EM HSI =	0.76	EM HSI =	0.78
	Open Water HSI	=	0.65	OW HSI =	0.69	OW HSI =	0.65

AAHU CALCULATION - EMERGENT MARSH

Project: Opportunistic Use of the Bonnet Carre Spillway
Area 2

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	4155	0.76	3166.07	
1	4145	0.76	3158.45	3162.26
20	3968	0.74	2953.73	58055.88

AAHUs = 3080.91

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	4155	0.76	3166.07	
1	4150	0.76	3162.26	3164.16
20	4060	0.76	3069.93	59204.14

AAHUs 3118.42

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	3118.42
B. Future Without Project Emergent Marsh AAHUs =	3080.91
Net Change (FWP - FWOP) =	57.51

AAHU CALCULATION - OPEN WATER

Project: Opportunistic Use of the Bonnet Carre Spillway
Area 2

Future Without Project			Total	Cumulative
TY	Water Acres	x HSI	HUs	HUs
0	2016	0.55	1117.61	
1	2026	0.55	1123.15	1120.38
20	2203	0.55	1221.27	22272.03

AAHUs = 1169.62

Future With Project			Total	Cumulative
TY	Water Acres	x HSI	HUs	HUs
0	2016	0.55	1117.61	
1	2021	0.59	1185.18	1151.37
20	2111	0.65	1364.14	24201.49

AAHUs 1267.64

NET CHANGE IN AAHUs DUE TO PROJECT

A. Future With Project Open Water AAHUs	=	1267.64
B. Future Without Project Open Water AAHUs	=	1169.62
Net Change (FWP - FWOP)	=	98.02

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

A. Emergent Marsh Habitat Net AAHUs	=	57.51
B. Open Water Habitat Net AAHUs	=	98.02
Net Benefits = (2.6xEMAAHUs + OWAHUs) / 3.6		68.76

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Opportunistic Use of the Bonnet Carre Spillway
Area 3
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 7,412

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	79	0.81	79	0.81	76	0.78
V2	% Aquatic	60	0.64	60	0.64	60	0.64
V3	Interspersion	%	0.62	%	0.62	%	0.62
	Class 1	30		30		30	
	Class 2	20		20		20	
	Class 3	50		50		50	
	Class 4						
V4	%OW <= 1.5ft	70	0.89	70	0.89	70	0.89
V5	Salinity (ppt)						
	fresh intermediate	2	1.00	2	1.00	2	1.00
V6	Access Value						
	fresh intermediat	0.72	0.78	0.72	0.78	0.72	0.78
Emergent Marsh HSI		=	0.81	EM HSI =	0.81	EM HSI =	0.78
Open Water HSI		=	0.71	OW HSI =	0.71	OW HSI =	0.71

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Opportunistic Use of the Bonnet Carre Spillway
Area 3
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 7,412

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	79	0.81	79	0.81	77	0.79
V2	% Aquatic	60	0.64	65	0.69	75	0.78
V3	Interspersion	%	0.62	%	0.62	%	0.62
	Class 1	30		30		30	
	Class 2	20		20		20	
	Class 3	50		50		50	
	Class 4						
V4	%OW <= 1.5ft	70	0.89	70	0.89	70	0.89
V5	Salinity (ppt)						
	fresh intermediate	2	1.00	1	1.00	1	1.00
V6	Access Value						
	fresh intermediat	0.72	0.78	0.72	0.78	0.72	0.78
Emergent Marsh HSI		=	0.81	EM HSI =	0.81	EM HSI =	0.79
Open Water HSI		=	0.71	OW HSI =	0.74	OW HSI =	0.79

AAHU CALCULATION - EMERGENT MARSHProject: Opportunistic Use of the Bonnet Carre Spillway
Area 3

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	5828	0.81	4698.28	
1	5819	0.81	4691.03	4694.65
20	5656	0.79	4461.09	86936.15

AAHUs = 4581.54

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	5828	0.81	4698.28	
1	5824	0.81	4695.06	4696.67
20	5741	0.79	4561.54	87934.59

AAHUs 4631.56

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Emergent Marsh AAHUs	=		4631.56
B. Future Without Project Emergent Marsh AAHUs	=		4581.54
Net Change (FWP - FWOP)	=		50.02

AAHU CALCULATION - OPEN WATER

Project: Opportunistic Use of the Bonnet Carre Spillway Area 3

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1584	0.71	1121.60	
1	1593	0.71	1127.98	1124.79
20	1756	0.71	1243.40	22528.04
			AAHUs =	1182.64

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1584	0.71	1121.60	
1	1588	0.74	1167.81	1144.69
20	1671	0.79	1317.94	23600.56
			AAHUs	1237.26

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Open Water AAHUs	=			1237.26
B. Future Without Project Open Water AAHUs	=			1182.64
Net Change (FWP - FWOP)	=			54.62

TOTAL BENEFITS IN AAHUs DUE TO PROJECT			
A. Emergent Marsh Habitat Net AAHUs	=		50.02
B. Open Water Habitat Net AAHUs	=		54.62
Net Benefits=(2.1xEMA AHUs+OWAAHUs)/3.1			51.51

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Chandeleur Island Vegetation Planting

Project Area: 504

Condition: Future Without Project

Variable		TY 0		TY 1		TY 10	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	6	0.15	6	0.15	4	0.14
V2	% Aquatic	0	0.30	5	0.34	10	0.37
V3	Interspersion	%		%		%	
	Class 1	5	0.24	5	0.24	3	0.22
	Class 2						
	Class 3						
	Class 4	95		95		97	
	Class 5						
V4	%OW <= 1.5ft	100	0.50	100	0.50	100	0.50
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.33		EM HSI =	0.33	EM HSI =	0.31
Open Water HSI =		0.68		OW HSI =	0.70	OW HSI =	0.71

Project: Chandeleur Island Vegetation Planting
FWOP

Variable		TY 11		TY 15		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	12	0.21	44	0.50	42	0.48
V2	% Aquatic	20	0.44	45	0.62	90	0.93
V3	Interspersion	%		%		%	
	Class 1	11	0.29	43	0.54	41	0.53
	Class 2						
	Class 3						
	Class 4	89		57		59	
	Class 5						
V4	%OW <= 1.5ft	100	0.50	100	0.50	100	0.50
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
EM HSI =		0.38		EM HSI =	0.63	EM HSI =	0.62
OW HSI =		0.75		OW HSI =	0.83	OW HSI =	0.91

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Chandeleur Island Vegetation Planting

Project Area: 504

Condition: Future With Project

Variable		TY 0		TY 1		TY 2	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	6	0.15	43	0.49	80	0.82
V2	% Aquatic	0	0.30	5	0.34	10	0.37
V3	Interspersion	%		%		%	
	Class 1	5	0.24	42	0.54	79	0.83
	Class 2						
	Class 3						
	Class 4	95		58		21	
	Class 5						
V4	%OW <= 1.5ft	100	0.50	100	0.50	100	0.50
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.33	EM HSI =	0.62	EM HSI =	0.87
Open Water HSI =			0.68	OW HSI =	0.72	OW HSI =	0.76

Project: Chandeleur Island Vegetation Planting
FWP

Variable		TY 11		TY 20		Value	SI
		Value	SI	Value	SI		
V1	% Emergent	88	0.89	86	0.87		
V2	% Aquatic	75	0.83	90	0.93		
V3	Interspersion	%		%		%	
	Class 1	87	0.90	85	0.88		
	Class 2						
	Class 3						
	Class 4	13		15			
	Class 5						
V4	%OW <= 1.5ft	100	0.50	100	0.50		
V5	Salinity (ppt)	20	1.00	20	1.00		
V6	Access Value	1.00	1.00	1.00	1.00		
EM HSI =			0.92	EM HSI =	0.91	EM HSI =	
OW HSI =			0.91	OW HSI =	0.94	OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Chanteleur Island Vegetation Planting

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	30	0.33	9.87	
1	29	0.33	9.54	9.70
10	20	0.31	6.20	70.59
11	60	0.38	22.96	14.10
15	220	0.63	138.87	297.15
20	213	0.62	131.40	675.60
			AAHUs =	53.36

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	30	0.33	9.87	
1	217	0.62	135.43	63.45
2	404	0.87	353.00	236.43
11	446	0.92	412.35	3440.90
20	433	0.91	394.87	3632.25
			AAHUs	368.65

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	368.65
B. Future Without Project Emergent Marsh AAHUs =	53.36
Net Change (FWP - FWOP) =	315.29

AAHU CALCULATION - OPEN WATER

Project: Chandeleur Island Vegetation Planting

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	474	0.68	322.45	
1	475	0.70	331.52	326.99
10	484	0.71	345.16	3044.88
11	444	0.75	331.93	338.78
15	284	0.83	235.24	1142.97
20	291	0.91	265.40	1251.13
			AAHUs =	305.24

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	474	0.68	322.45	
1	287	0.72	206.60	265.76
2	100	0.76	75.82	142.40
11	58	0.91	52.99	589.44
20	71	0.94	66.61	537.72
			AAHUs	76.77

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	76.77
B. Future Without Project Open Water AAHUs =	305.24
Net Change (FWP - FWOP) =	-228.47

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	315.29
B. Open Water Habitat Net AAHUs =	-228.47
Net Benefits = (3.5xEMAAHUs+OWAAHUs)/4.5	194.46

WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: PME-7a Highway 82 Freshwater Introduction

The WVA for this project includes 4 areas. Total benefits (AAHUs) for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A1	283
A2	37
B	143
C	90

TOTAL BENEFITS =	553 AAHUS
-------------------------	------------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Highway 82 Freshwater Introduction
Area A1

Project Area: 6,016

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	78	0.80	78	0.80	75	0.78
V2	% Aquatic	5	0.15	5	0.15	3	0.13
V3	Interspersion	%		%		%	
	Class 1	20	0.68	20	0.68	20	0.68
	Class 2	80		80		80	
	Class 3						
	Class 4						
V4	%OW <= 1.5ft	55	0.81	55	0.81	55	0.81
V5	Salinity (ppt)	15	0.25	15	0.25	15	0.25
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.76	EM HSI =	0.76	EM HSI =	0.74
Open Water HSI		=	0.37	OW HSI =	0.37	OW HSI =	0.36

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Highway 82 Freshwater Introduction
Area A1

Project Area: 6,016

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	78	0.80	78	0.80	76	0.78
V2	% Aquatic	5	0.15	10	0.19	15	0.24
V3	Interspersion	%		%		%	
	Class 1	20	0.68	20	0.68	20	0.68
	Class 2	80		80		80	
	Class 3						
	Class 4						
V4	%OW <= 1.5ft	55	0.81	55	0.81	55	0.81
V5	Salinity (ppt)	15	0.25	11	0.85	11	0.85
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.76	EM HSI =	0.83	EM HSI =	0.82
Open Water HSI		=	0.37	OW HSI =	0.46	OW HSI =	0.50

AAHU CALCULATION - EMERGENT MARSH

Project: Highway 82 Freshwater Introduction
Area A1

Future Without Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	4674	0.76	3550.82	
1	4667	0.76	3545.50	3548.16
20	4527	0.74	3361.89	65612.62
			AAHUs =	3458.04

Future With Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	4674	0.76	3550.82	
1	4670	0.83	3859.11	3705.01
20	4585	0.82	3736.78	72157.89
			AAHUs	3793.14

NET CHANGE IN AAHUs DUE TO PROJECT				
A.	Future With Project Emergent Marsh AAHUs	=		3793.14
B.	Future Without Project Emergent Marsh AAHUs	=		3458.04
	Net Change (FWP - FWOP)	=		335.11

AAHU CALCULATION - OPEN WATER

Project: Highway 82 Freshwater Introduction
Area A1

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1342	0.37	500.36	
1	1349	0.37	502.97	501.67
20	1489	0.35	527.38	9796.65
			AAHUs =	514.92

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1342	0.37	500.36	
1	1346	0.46	619.54	559.89
20	1431	0.50	714.56	12663.43
			AAHUs	661.17

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	661.17
B. Future Without Project Open Water AAHUs =	514.92
Net Change (FWP - FWOP) =	146.25

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	335.11
B. Open Water Habitat Net AAHUs =	146.25
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	282.65

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Highway 82 Freshwater Introduction
Area A2

Project Area: 8,352

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	84	0.86	84	0.86	81	0.83
V2	% Aquatic	5	0.34	5	0.34	4	0.33
V3	Interspersion	%		%		%	
	Class 1	60	0.84	60	0.84	60	0.84
	Class 2	40		40		40	
	Class 3						
	Class 4						
V4	%OW <= 1.5ft	55	0.81	55	0.81	55	0.81
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.90	EM HSI =	0.90	EM HSI =	0.88
	Open Water HSI	=	0.77	OW HSI =	0.77	OW HSI =	0.76

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Highway 82 Freshwater Introduction
Area A2

Project Area: 8,352

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	84	0.86	84	0.86	82	0.84
V2	% Aquatic	5	0.34	7	0.35	10	0.37
V3	Interspersion	%		%		%	
	Class 1	60	0.84	60	0.84	60	0.84
	Class 2	40		40		40	
	Class 3						
	Class 4						
V4	%OW <= 1.5ft	55	0.81	55	0.81	55	0.81
V5	Salinity (ppt)	20	1.00	17	1.00	17	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.90	EM HSI =	0.90	EM HSI =	0.89
	Open Water HSI	=	0.77	OW HSI =	0.77	OW HSI =	0.78

AAHU CALCULATION - EMERGENT MARSH

Project: Highway 82 Freshwater Introduction
Area A2

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	7010	0.90	6285.25	
1	6999	0.90	6275.38	6280.31
20	6789	0.88	5975.49	116372.32
			AAHUs =	6132.63

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	7010	0.90	6285.25	
1	7002	0.90	6278.07	6281.66
20	6862	0.89	6077.44	117372.54
			AAHUs	6182.71

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Emergent Marsh AAHUs	=			6182.71
B. Future Without Project Emergent Marsh AAHUs	=			6132.63
Net Change (FWP - FWOP)	=			60.08

AAHU CALCULATION - OPEN WATER

Project: Highway 82 Freshwater Introduction
Area A2

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1342	0.77	1026.83	
1	1353	0.77	1035.25	1031.04
20	1563	0.76	1190.58	21147.66
			AAHUs =	1108.94

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1342	0.77	1026.83	
1	1350	0.77	1041.99	1034.40
20	1490	0.78	1164.49	20957.32
			AAHUs	1099.59

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	1099.59
B. Future Without Project Open Water AAHUs	=	1108.94
Net Change (FWP - FWOP)	=	-9.35

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	50.08
B. Open Water Habitat Net AAHUs	=	-9.35
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5		36.87

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Highway 82 Freshwater Introduction
Area B
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 2,970

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	76	0.78	75	0.78	72	0.75
V2	% Aquatic	45	0.51	45	0.51	45	0.51
V3	Interspersion	%		%		%	
	Class 1	15	0.54	15	0.54	15	0.54
	Class 2	25		25		25	
	Class 3	60		60		60	
	Class 4						
V4	%OW <= 1.5ft	70	0.89	70	0.89	70	0.89
V5	Salinity (ppt)						
	fresh intermediate	5	0.80	5	0.80	5	0.80
V6	Access Value						
	fresh intermediate	0.13	0.30	0.13	0.30	0.13	0.30
Emergent Marsh HSI =			0.67	EM HSI =	0.66	EM HSI =	0.66
Open Water HSI =			0.51	OW HSI =	0.51	OW HSI =	0.51

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Highway 82 Freshwater Introduction
Area B
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 2,970

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	76	0.78	76	0.78	76	0.78
V2	% Aquatic	45	0.51	60	0.64	70	0.73
V3	Interspersion	%		%		%	
	Class 1	15	0.54	15	0.54	15	0.54
	Class 2	25		25		25	
	Class 3	60		60		60	
	Class 4						
V4	%OW <= 1.5ft	70	0.89	70	0.89	70	0.89
V5	Salinity (ppt)						
	fresh intermediate	5	0.80	4	1.00	4	1.00
V6	Access Value						
	fresh intermediate	0.13	0.30	0.25	0.40	0.25	0.40
Emergent Marsh HSI =			0.67	EM HSI =	0.72	EM HSI =	0.72
Open Water HSI =			0.51	OW HSI =	0.62	OW HSI =	0.67

Project: Highway 82 Freshwater Introduction
FWP

Variable	TY 13		TY 20		Value	SI
	Value	SI	Value	SI		
V1	% Emergent	76	0.78	76	0.78	
V2	% Aquatic	70	0.73	70	0.73	
V3	Interspersion	%		%		%
	Class 1	15	0.55	15	0.55	
	Class 2	30		30		
	Class 3	55		55		
	Class 4					
V4	%OW <= 1.5ft	70	0.89	70	0.89	
V5	Salinity (ppt)					
	fresh		1.00		1.00	
V6	Access Value					
	fresh		0.40		0.40	
	intermediat	0.25		0.25		
		EM HSI =	0.72	EM HSI =	0.72	EM HSI =
		OW HSI =	0.67	OW HSI =	0.67	OW HSI =

AAHU CALCULATION - EMERGENT MARSH

Project: Highway 82 Freshwater Introduction
Area B

Future Without Project				Total HUs	Cummulative HUs
TY	Marsh Acres	x	HSI		
0	2244		0.67	1500.01	
1	2239		0.66	1485.53	1492.76
20	2139		0.65	1387.13	27285.49
				AAHUs =	1438.91

Future With Project				Total HUs	Cummulative HUs
TY	Marsh Acres	x	HSI		
0	2244		0.67	1500.01	
1	2251		0.72	1612.15	1556.02
3	2255		0.72	1615.02	3227.17
13	2262		0.72	1622.54	16187.79
20	2244		0.72	1609.63	11312.61
				AAHUs	1614.18

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs	= 1614.18
B. Future Without Project Emergent Marsh AAHUs	= 1438.91
Net Change (FWP - FWOP)	= 175.27

AAHU CALCULATION - OPEN WATER

Project: Highway 82 Freshwater Introduction
Area B

Future Without Project			Total HUs	Cumulative HUs
TY	Water Acres	x HSI		
0	726	0.51	370.14	
1	731	0.51	372.69	371.41
20	831	0.51	423.67	7585.36
			AAHUs =	396.84

Future With Project			Total HUs	Cumulative HUs
TY	Water Acres	x HSI		
0	726	0.51	370.14	
1	710	0.82	441.91	406.32
3	715	0.87	477.84	919.68
13	708	0.87	473.89	4757.68
20	726	0.67	485.73	3357.98
			AAHUs	472.08

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	472.08
B. Future Without Project Open Water AAHUs =	396.84
Net Change (FWP - FWOP) =	75.24

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	175.27
B. Open Water Habitat Net AAHUs =	75.24
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	143.00

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Highway 82 Freshwater Introduction
 Area C
 Condition: Future Without Project

Project Area:
 Fresh.....
 Intermediate. 2,650

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	72	0.75	72	0.75	64	0.68
V2	% Aquatic	35	0.42	35	0.42	35	0.42
V3	Interspersion	%		%		%	
	Class 1	50	0.70	50	0.70	50	0.70
	Class 2						
	Class 3	50		50		50	
	Class 4						
V4	%OW <= 1.5ft	30	0.44	30	0.44	30	0.44
V5	Salinity (ppt)						
	fresh		0.80		0.80		0.80
	intermediate	5		5		5	
V6	Access Value						
	fresh		0.30		0.30		0.30
	intermediat	0.13		0.13		0.13	
Emergent Marsh HSI		=	0.67	EM HSI =	0.67	EM HSI =	0.63
Open Water HSI		=	0.44	OW HSI =	0.44	OW HSI =	0.44

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Highway 82 Freshwater Introduction
 Area C
 Condition: Future With Project

Project Area:
 Fresh.....
 Intermediate. 2,650

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	72	0.75	72	0.75	67	0.70
V2	% Aquatic	35	0.42	40	0.46	40	0.46
V3	Interspersion	%		%		%	
	Class 1	50	0.70	50	0.70	50	0.70
	Class 2						
	Class 3	50		50		50	
	Class 4						
V4	%OW <= 1.5ft	30	0.44	30	0.44	30	0.44
V5	Salinity (ppt)						
	fresh		0.80		1.00		1.00
	intermediate	5		4		4	
V6	Access Value						
	fresh		0.30		0.40		0.40
	intermediat	0.13		0.25		0.25	
Emergent Marsh HSI		=	0.67	EM HSI =	0.71	EM HSI =	0.69
Open Water HSI		=	0.44	OW HSI =	0.60	OW HSI =	0.60

AAHU CALCULATION - EMERGENT MARSH

Project: Highway 82 Freshwater Introduction
Area C

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1907	0.67	1270.58	
1	1896	0.67	1263.25	1266.92
20	1704	0.63	1066.47	22107.79
			AAHUs =	1166.74

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1907	0.67	1270.58	
1	1900	0.71	1354.76	1312.73
20	1764	0.69	1211.20	24365.24
			AAHUs	1283.90

NET CHANGE IN AAHUs DUE TO PROJECT				
A.	Future With Project Emergent Marsh AAHUs	=		1283.90
B.	Future Without Project Emergent Marsh AAHUs	=		1166.74
	Net Change (FWP - FWOP)	=		116.16

AAHU CALCULATION - OPEN WATER

Project: Highway 82 Freshwater Introduction
Area C

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	743	0.44	327.77	
1	754	0.44	332.82	330.20
20	946	0.44	417.32	7124.50
			AAHUs =	372.73

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	743	0.44	327.77	
1	750	0.50	377.87	352.75
20	886	0.50	446.39	7830.48
			AAHUs	409.16

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	409.16
B. Future Without Project Open Water AAHUs =	372.73
Net Change (FWP - FWOP) =	36.43

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	115.16
B. Open Water Habitat Net AAHUs =	36.43
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	89.76

WETLAND VALUE ASSESSMENT

MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: XPO-54a Southwest Lake Pontchartrain Sediment Trapping Project

The WVA for this project includes 3 areas. Open water benefits in Area B were subtracted from the total project benefits because those would occur only under future without-project conditions. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	620
B	101
B-water	-27

TOTAL BENEFITS =	694 AAHUS
-------------------------	------------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Southwest Lake Pontchartrain Sediment Trapping Project Project Area: 2,032 Area A

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	3	0.13	3	0.13	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%	0.20	%	0.20	%	0.10
	Class 1						
	Class 2						
	Class 3						
	Class 4	100		100			
	Class 5					100	
V4	%OW <= 1.5ft	22	0.38	22	0.38	22	0.38
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.29	EM HSI =	0.29	EM HSI =	0.25
	Open Water HSI	=	0.31	OW HSI =	0.31	OW HSI =	0.31

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Southwest Lake Pontchartrain Sediment Trapping Project Project Area: 2,032 Area A

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	3	0.13	8	0.17	29	0.36
V2	% Aquatic	0	0.10	10	0.19	30	0.37
V3	Interspersion	%	0.20	%	0.21	%	0.25
	Class 1						
	Class 2						
	Class 3			5		25	
	Class 4	100		95		75	
	Class 5						
V4	%OW <= 1.5ft	22	0.38	22	0.38	40	0.61
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.29	EM HSI =	0.34	EM HSI =	0.49
	Open Water HSI	=	0.31	OW HSI =	0.41	OW HSI =	0.57

Project: Southwest Lake Pontchartrain Sediment Trapping Project
FWP

Variable		TY 8		TY 13		TY 18	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	50	0.55	70	0.73	91	0.92
V2	% Aquatic	40	0.46	50	0.55	50	0.55
V3	Interspersion	%		%		%	
	Class 1	33	0.66	40	0.76	100	1.00
	Class 2	33		60			
	Class 3	34					
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	55	0.81	65	0.94	75	1.00
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		EM HSI =	0.68	EM HSI =	0.81	EM HSI =	0.96
		OW HSI =	0.67	OW HSI =	0.74	OW HSI =	0.77

Project: Southwest Lake Pontchartrain Sediment Trapping Project
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	91	0.92				
V2	% Aquatic	50	0.55				
V3	Interspersion	%		%		%	
	Class 1	100	1.00				
	Class 2						
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	75	1.00				
V5	Salinity (ppt)	4	1.00				
V6	Access Value	1.00	1.00				
		EM HSI =	0.96	EM HSI =		EM HSI =	
		OW HSI =	0.77	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Southwest Lake Pontchartrain Sediment Trapping Project
Area A

Future Without Project				Total HUs	Cumulative HUs
TY	Marsh Acres	x	HSI		
0	71		0.29	20.76	
1	67		0.29	19.59	20.17
20	0		0.25	0.00	178.06
AAHUs =				9.91	

Future With Project				Total HUs	Cumulative HUs
TY	Marsh Acres	x	HSI		
0	71		0.29	20.76	
1	171		0.34	57.33	38.33
3	590		0.49	291.51	326.66
8	1009		0.68	682.03	2370.37
13	1428		0.81	1151.11	4537.42
18	1847		0.95	1756.63	7218.73
20	1847		0.95	1756.63	3513.25
AAHUs				900.24	

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Emergent Marsh AAHUs	=		900.24
B. Future Without Project Emergent Marsh AAHUs	=		9.91
Net Change (FWP - FWOP)	=		890.33

AAHU CALCULATION - OPEN WATER

Project: Southwest Lake Pontchartrain Sediment Trapping Project
Area A

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1961	0.31	613.05	
1	1965	0.31	614.30	613.68
20	2032	0.31	620.20	11729.32

AAHUs = 617.15

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1961	0.31	613.05	
1	1861	0.41	753.97	685.05
3	1442	0.57	816.79	1593.29
8	1023	0.67	686.60	3795.05
13	604	0.74	448.80	2863.58
18	185	0.77	141.63	1483.93
20	185	0.77	141.63	283.26

AAHUs 636.21

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	535.21
B. Future Without Project Open Water AAHUs =	617.15
Net Change (FWP - FWOP) =	-81.94

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	890.33
B. Open Water Habitat Net AAHUs =	-81.94
Net Benefits = $(2.6 \times \text{EMA AHUs} + \text{OWA AHUs}) / 3.6$	620.25

COMMUNITY HABITAT SUITABILITY MODEL Fresh Swamp

Project..... Southwest Lake Pontchartrain Sediment Acres: 187
 Trapping Project - Area B
 Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Class/Value	SI	Class/Value	SI	Class/Value	SI
V1	Stand Structure	% Cover		% Cover		% Cover	No swamp remaining
	Overstory	63	0.60	63	0.60		
	Scrub shrub	21		21			
V2	Maturity (least age or species composition and dbh)	Herbaceous	79		79		
		Age			Age		Age
		Cypress %	74		74		74
		Cypress dbh	18.4		18.4		18.4
		Tupelo et al. %	28		28		28
		Tupelo et al dbh	7.5	0.88	7.5	0.88	7.5
V3	Hyrology	Class 4	1.00	Class 4	1.00	Class	
V4	Forest Size	Class 5	1.00	Class 5	1.00	Class	
V5	Surrounding Land Use	Values %		Values %		Values %	
	Forest / marsh Abandoned Ag Pasture / Hay Active Ag Development	100	1.00	100	1.00		
V6	Disturbance	Class		Class		Class	
	Type	Class 4	1.00	Class 4	1.00	Class	
	Distance	Class 3		Class 3		Class	
		HSI =	0.82	HSI =	0.82	HSI =	

COMMUNITY HABITAT SUITABILITY MODEL Fresh Swamp

Project..... Southwest Lake Pontchartrain Sediment Acres: 187
 Trapping Project - Area B
 Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Class/Value	SI	Class/Value	SI	Class/Value	SI
V1	Stand Structure	% Cover		% Cover		% Cover	
	Overstory	63	0.60	63	0.60	65	0.60
	Scrub shrub	21		21		25	
V2	Maturity (least age or species composition and dbh)	Herbaceous	79		80		80
		Age			Age		Age
		Cypress %	74		74		75
		Cypress dbh	18.4		18.4		21
		Tupelo et al. %	28		28		25
		Tupelo et al dbh	7.5	0.88	7.5	0.88	9.5
V3	Hyrology	Class 4	1.00	Class 4	1.00	Class 4	1.00
V4	Forest Size	Class 5	1.00	Class 5	1.00	Class 5	1.00
V5	Surrounding Land Use	Values %		Values %		Values %	
	Forest / marsh Abandoned Ag Pasture / Hay Active Ag Development	100	1.00	100	1.00	100	1.00
V6	Disturbance	Class		Class		Class	
	Type	Class 4	1.00	Class 4	1.00	Class 4	1.00
	Distance	Class 3		Class 3		Class 3	
		HSI =	0.82	HSI =	0.82	HSI =	0.84

AAHU CALCULATION, Fresh Swamp

Project: Southwest Lake Pontchartrain Sediment
 Trapping Project - Area B

Future With Project				Total	Cummulative
TY	Acres	x	HSI	HUs	HUs
0	187		0.82	153.45	
1	187		0.82	153.45	153.45
20	187		0.84	156.66	296.03
				Total	
				CHUs =	3099.48
				AAHUs =	154.97

Future Without Project				Total	Cummulative
TY	Acres	x	HSI	HUs	HUs
0	187		0.82	153.45	
1	178		0.82	146.06	149.76
20	0		0.00	0.00	925.07
				Total	
				CHUs =	1074.83
				AAHUs =	53.74

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project AAHUs =	154.97
B. Future Without Project AAHUs =	53.74
Net Change (FWP - FWOP) =	101.23

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Southwest Lake Pontchartrain Sediment Trapping Project
 Open Water - FWOP Benefits - Area B
 Condition: Future Without Project

Project Area:
 Fresh.....
 Intermediate. 187

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	100	1.00	95	0.96	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	0.10
V4	%OW <= 1.5ft	0	0.10	100	0.60	100	0.60
V5	Salinity (ppt) fresh intermediate	4	1.00	4	1.00	4	1.00
V6	Access Value fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	1.00	EM HSI =	0.97	EM HSI =	0.24
Open Water HSI		=	0.29	OW HSI =	0.33	OW HSI =	0.26

AAHU CALCULATION - OPEN WATER

Project: Southwest Lake Pontchartrain Sediment Trapping Project
 Open Water - FWOP Benefits - Area B

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	0	0.29	0.00	
1	9	0.33	2.98	1.43
20	187	0.26	49.41	535.29
			AAHUs =	26.84

**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: PTE-28 South Lake DeCade Freshwater Introduction

The WVA for this project includes 2 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	12
B	95

TOTAL BENEFITS = 107 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: South Lake DeCade Freshwater Introduction
Area B

Project Area: 2,760

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	62	0.66	62	0.66	60	0.64
V2	% Aquatic	20	0.28	20	0.28	20	0.28
V3	Interspersion	%		%		%	
	Class 1	35	0.67	35	0.67	35	0.67
	Class 2	30		30		30	
	Class 3	35		35		35	
	Class 4						
V4	%OW <= 1.5ft	30	0.49	30	0.49	30	0.49
V5	Salinity (ppt)	6	1.00	6	1.00	5	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.75	EM HSI =	0.75	EM HSI =	0.74
	Open Water HSI	=	0.52	OW HSI =	0.52	OW HSI =	0.52

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: South Lake DeCade Freshwater Introduction
Area B

Project Area: 2,760

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	62	0.66	62	0.66	60	0.64
V2	% Aquatic	20	0.28	20	0.28	30	0.37
V3	Interspersion	%		%		%	
	Class 1	35	0.67	35	0.67	35	0.67
	Class 2	30		30		30	
	Class 3	35		35		35	
	Class 4						
V4	%OW <= 1.5ft	30	0.49	30	0.49	30	0.49
V5	Salinity (ppt)	6	1.00	5	1.00	5	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.75	EM HSI =	0.75	EM HSI =	0.74
	Open Water HSI	=	0.52	OW HSI =	0.52	OW HSI =	0.59

AAHU CALCULATION - EMERGENT MARSH

Project: South Lake DeCade Freshwater Introduction
Area B

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1714	0.75	1284.18	
1	1711	0.75	1281.93	1283.06
20	1653	0.74	1218.81	23754.89
			AAHUs =	1251.90

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1714	0.75	1284.18	
1	1712	0.75	1282.68	1283.43
20	1668	0.74	1229.87	23867.60
			AAHUs	1257.55

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	1257.55
B. Future Without Project Emergent Marsh AAHUs	=	1251.90
Net Change (FWP - FWOP)	=	5.65

AAHU CALCULATION - OPEN WATER

**Project: South Lake DeCade Freshwater Introduction
Area B**

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1046	0.52	546.07	
1	1049	0.52	547.64	546.86
20	1107	0.52	577.92	10692.78
			AAHUs =	561.98

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1046	0.52	546.07	
1	1048	0.52	547.12	546.59
20	1092	0.59	642.11	11288.50
			AAHUs	591.75

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	591.75
B. Future Without Project Open Water AAHUs	=	561.98
Net Change (FWP - FWOP)	=	29.77

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	5.65
B. Open Water Habitat Net AAHUs	=	29.77
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6		12.35

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: South Lake DeCade Freshwater Introduction
Area A
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 4,025

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	67	0.70	67	0.70	61	0.65
V2	% Aquatic	70	0.73	70	0.73	65	0.69
V3	Interspersion	%		%		%	
	Class 1	40	0.70	40	0.70	35	0.67
	Class 2	30		30		30	
	Class 3	30		30		35	
	Class 5						
V4	%OW <= 1.5ft	55	0.72	55	0.72	55	0.72
V5	Salinity (ppt)						
	fresh intermediate	4.5	0.90	4.5	0.90	3.5	1.00
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.76	EM HSI =	0.76	EM HSI =	0.73
Open Water HSI		=	0.79	OW HSI =	0.79	OW HSI =	0.76

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: South Lake DeCade Freshwater Introduction
Area A
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 4,025

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	67	0.70	67	0.70	65	0.69
V2	% Aquatic	70	0.73	75	0.78	90	0.91
V3	Interspersion	%		%		%	
	Class 1	40	0.70	40	0.70	40	0.70
	Class 2	30		30		30	
	Class 3	30		30		30	
	Class 5						
V4	%OW <= 1.5ft	55	0.72	55	0.72	60	0.78
V5	Salinity (ppt)						
	fresh intermediate	4.5	0.90	3.5	1.00	3	1.00
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.76	EM HSI =	0.77	EM HSI =	0.76
Open Water HSI		=	0.79	OW HSI =	0.82	OW HSI =	0.91

AAHU CALCULATION - EMERGENT MARSH

Project: South Lake DeCade Freshwater Introduction
Area A

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	2716	0.76	2057.73	
1	2709	0.76	2052.42	2055.07
20	2447	0.73	1781.53	36398.02
			AAHUs =	1922.65

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	2716	0.76	2057.73	
1	2712	0.77	2084.83	2071.29
20	2633	0.76	1991.45	38721.57
			AAHUs	2039.64

NET CHANGE IN AAHUs DUE TO PROJECT

A. Future With Project Emergent Marsh AAHUs	=	2039.64
B. Future Without Project Emergent Marsh AAHUs	=	1922.65
Net Change (FWP - FWOP)	=	116.99

AAHU CALCULATION - OPEN WATER

Project: South Lake DeCade Freshwater Introduction
Area A

Future Without Project				Total HU _s	Cummulative HU _s
TY	Water Acres	x HSI			
0	1309	0.79		1028.89	
1	1316	0.79		1034.39	1031.64
20	1578	0.76		1203.34	21277.93
AAHU_s =				1115.48	

Future With Project				Total HU _s	Cummulative HU _s
TY	Water Acres	x HSI			
0	1309	0.79		1028.89	
1	1313	0.82		1078.77	1053.81
20	1392	0.91		1263.93	22234.04
AAHU_s				1164.39	

NET CHANGE IN AAHU _s DUE TO PROJECT		
A. Future With Project Open Water AAHU _s	=	1164.39
B. Future Without Project Open Water AAHU _s	=	1115.48
Net Change (FWP - FWOP)	=	48.91

TOTAL BENEFITS IN AAHU _s DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHU _s	=	116.99
B. Open Water Habitat Net AAHU _s	=	48.91
Net Benefits=(2.1xEMAHU_s+OWAAHU_s)/3.1	=	95.03

WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: XTV-30 Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration

The WVA for this project includes 3 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
1	18
2	81
3	17

TOTAL BENEFITS =	116 AAHUS
-------------------------	------------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration
Area 1
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 105

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	100	1.00	95	0.96	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	0.10
V4	%OW <= 1.5ft	0	0.10	100	0.60	10	0.21
V5	Salinity (ppt) fresh intermediate	3	1.00	3	1.00	2	1.00
V6	Access Value fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		1.00		EM HSI =	0.97	EM HSI =	0.24
Open Water HSI =		0.29		OW HSI =	0.33	OW HSI =	0.24

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration
Area 1
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 105

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	100	1.00	98	0.98	53	0.58
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 50 50	0.60
V4	%OW <= 1.5ft	0	0.10	100	0.60	40	0.55
V5	Salinity (ppt) fresh intermediate	3	1.00	3	1.00	2	1.00
V6	Access Value fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		1.00		EM HSI =	0.99	EM HSI =	0.67
Open Water HSI =		0.29		OW HSI =	0.33	OW HSI =	0.30

AAHU CALCULATION - EMERGENT MARSH

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration
Area 1

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	105	1.00	105.00	
1	100	0.97	97.07	101.01
20	0	0.24	0.00	689.65
			AAHUs =	39.53

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	105	1.00	105.00	
1	103	0.99	101.80	103.39
20	56	0.67	37.20	1275.88
			AAHUs =	68.96

NET CHANGE IN AAHUs DUE TO PROJECT				
A.	Future With Project Emergent Marsh AAHUs	=		68.96
B.	Future Without Project Emergent Marsh AAHUs	=		39.53
	Net Change (FWP - FWOP)	=		29.43

AAHU CALCULATION - OPEN WATER

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration Area 1

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	0	0.29	0.00	
1	5	0.33	1.65	0.80
20	105	0.24	24.73	280.86
			AAHUs =	14.08

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	0	0.29	0.00	
1	2	0.33	0.66	0.32
20	49	0.30	14.58	149.77
			AAHUs	7.50

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Open Water AAHUs	=		7.50
B. Future Without Project Open Water AAHUs	=		14.08
Net Change (FWP - FWOP) =			-6.58

TOTAL BENEFITS IN AAHUs DUE TO PROJECT			
A. Emergent Marsh Habitat Net AAHUs	=		29.43
B. Open Water Habitat Net AAHUs	=		-6.58
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1			17.81

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration Project Area: 2,194 Area 2

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	3	0.13	3	0.13	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%	0.20	%	0.20	%	0.10
	Class 1						
	Class 2						
	Class 3						
	Class 4	100		100		100	
	Class 5						
V4	%OW <= 1.5ft	5	0.16	5	0.16	8	0.20
V5	Salinity (ppt)	4	1.00	4	1.00	3	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.29		EM HSI = 0.29		EM HSI = 0.25	
Open Water HSI =		0.30		OW HSI = 0.30		OW HSI = 0.29	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration Project Area: 2,194 Area 2

Condition: Future With Project

Variable		TY 0		TY 1		TY 2	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	3	0.13	5	0.15	5	0.15
V2	% Aquatic	0	0.10	0	0.10	5	0.15
V3	Interspersion	%	0.20	%	0.22	%	0.22
	Class 1						
	Class 2						
	Class 3			10		10	
	Class 4	100		90		90	
	Class 5						
V4	%OW <= 1.5ft	5	0.16	5	0.16	8	0.20
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.29		EM HSI = 0.31		EM HSI = 0.31	
Open Water HSI =		0.30		OW HSI = 0.30		OW HSI = 0.36	

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration
FWP

Variable		TY 9		TY 10		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	4	0.14	5	0.15	8	0.17
V2	% Aquatic	10	0.19	10	0.19	25	0.33
V3	Interspersion	%		%		%	
	Class 1		0.22		0.22		0.23
	Class 2						
	Class 3	10		10		15	
	Class 4	90		90		85	
V4	%OW <= 1.5ft	15	0.29	16	0.31	32	0.51
V5	Salinity (ppt)	4	1.00	4	1.00	3	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		EM HSI = 0.30		EM HSI = 0.31		EM HSI = 0.34	
		OW HSI = 0.40		OW HSI = 0.40		OW HSI = 0.63	

AAHU CALCULATION - EMERGENT MARSH

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration
Area 2

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	70	0.29	20.47	
1	67	0.29	19.59	20.03
20	0	0.25	0.00	178.06
			AAHUs =	9.90

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	70	0.29	20.47	
1	110	0.31	34.28	27.24
2	108	0.31	33.04	33.66
9	82	0.30	24.86	202.40
10	99	0.31	30.85	27.83
20	167	0.34	56.36	433.14
			AAHUs	36.21

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	36.21
B. Future Without Project Emergent Marsh AAHUs =	9.90
Net Change (FWP - FWOP) =	26.31

AAHU CALCULATION - OPEN WATER

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration
Area 2

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	2124	0.30	629.61	
1	2127	0.30	630.50	630.06
20	2194	0.29	640.38	12074.37
			AAHUs =	636.22

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	2124	0.30	629.61	
1	2084	0.30	620.84	625.24
2	2088	0.35	729.88	675.33
9	2112	0.40	843.14	5504.19
10	2095	0.40	838.35	840.75
20	2027	0.53	1064.71	9529.52
			AAHUs	858.75

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	858.75
B. Future Without Project Open Water AAHUs =	635.22
Net Change (FWP - FWOP) =	223.53

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	26.31
B. Open Water Habitat Net AAHUs =	223.53
Net Benefits = (2.6xEMAAHUs+OWAAHUs)/3.6	81.09

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration Project Area: 349
Area 3

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	13	0.22	12	0.21	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.10
	Class 2						
	Class 3						
	Class 4	100		100		100	
V4	%OW <= 1.5ft	95	0.70	95	0.70	95	0.70
V5	Salinity (ppt)	4	1.00	4	1.00	3	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.37	EM HSI =	0.37	EM HSI =	0.26
	Open Water HSI	=	0.34	OW HSI =	0.34	OW HSI =	0.33

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration Project Area: 349
Area 3

Condition: Future With Project

Variable		TY 0		TY 1		TY 2	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	13	0.22	15	0.24	14	0.23
V2	% Aquatic	0	0.10	0	0.10	5	0.15
V3	Interspersion	%		%		%	
	Class 1		0.20		0.24		0.24
	Class 2						
	Class 3			20		20	
	Class 4	100		80		80	
V4	%OW <= 1.5ft	95	0.70	95	0.70	95	0.70
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.37	EM HSI =	0.39	EM HSI =	0.39
	Open Water HSI	=	0.34	OW HSI =	0.34	OW HSI =	0.39

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration
FWP

Variable	TY 9		TY 10		TY 20		
	Value	SI	Value	SI	Value	SI	
V1 % Emergent	11	0.20	12	0.21	30	0.37	
V2 % Aquatic	10	0.19	10	0.19	15	0.24	
V3 Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	%	0.24	%	0.24	%	0.28	
	20		20		40		
	80		80		60		
V4 %OW <= 1.5ft	95	0.70	95	0.70	95	0.70	
V5 Salinity (ppt)	4	1.00	4	1.00	3	1.00	
V6 Access Value	1.00	1.00	1.00	1.00	1.00	1.00	
		EM HSI =	0.36	EM HSI =	0.37	EM HSI =	0.50
		OW HSI =	0.43	OW HSI =	0.43	OW HSI =	0.47

AAHU CALCULATION - EMERGENT MARSH

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration
Area 3

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	44	0.37	16.43	
1	42	0.37	15.36	15.89
20	0	0.25	0.00	131.15
			AAHUs =	7.35

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	44	0.37	16.43	
1	51	0.39	20.05	18.22
2	50	0.39	19.28	19.66
9	39	0.36	14.13	116.64
10	43	0.37	15.92	15.02
20	104	0.50	52.44	328.16
			AAHUs	24.89

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	24.89
B. Future Without Project Emergent Marsh AAHUs	=	7.35
Net Change (FWP - FWOP)	=	17.53

AAHU CALCULATION - OPEN WATER

Project: Four-Mile Cut/Little Vermilion Bay Hydrologic Restoration
Area 3

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	305	0.34	102.51	
1	307	0.34	103.19	102.85
20	349	0.33	114.72	2071.06
AAHUs =			108.70	

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	305	0.34	102.51	
1	298	0.34	101.04	101.78
2	299	0.39	115.97	108.50
9	310	0.43	133.56	872.82
10	306	0.43	131.84	132.70
20	245	0.47	115.85	1242.75
AAHUs			122.93	

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	122.93
B. Future Without Project Open Water AAHUs	=	108.70
Net Change (FWP - FWOP)	=	14.23

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	17.53
B. Open Water Habitat Net AAHUs	=	14.23
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	=	16.62

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Castille Pass Sediment Delivery

Project Area:
Fresh..... 5,051

Condition: Future Without Project

Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	0.2	0.10	3	0.13
V2	% Aquatic	1	0.11	1	0.11	3	0.13
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.10	% 100	0.20	% 100	0.20
V4	%OW <= 1.5ft	2	0.12	2	0.12	6	0.17
V5	Salinity (ppt) fresh intermediate	3	0.80	3	0.80	3	0.80
V6	Access Value fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.19	EM HSI =	0.20	EM HSI =	0.23
Open Water HSI		=	0.21	OW HSI =	0.22	OW HSI =	0.24

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Castille Pass Sediment Delivery

Project Area:
Fresh..... 5,051

Condition: Future With Project

Intermediate.

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	1	0.11	4	0.14
V2	% Aquatic	1	0.11	3	0.13	4	0.14
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.10	% 100	0.20	% 100	0.20
V4	%OW <= 1.5ft	2	0.12	6	0.17	8	0.19
V5	Salinity (ppt) fresh intermediate	3	0.80	2.5	0.80	2.5	0.80
V6	Access Value fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.19	EM HSI =	0.23	EM HSI =	0.26
Open Water HSI		=	0.21	OW HSI =	0.28	OW HSI =	0.26

Project: Castille Pass Sediment Delivery
FWP

Variable		TY 6		TY 9		TY 11	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	6	0.15	8	0.17	9	0.18
V2	% Aquatic	7	0.16	8	0.17	11	0.20
V3	Interspersion	%		%		%	
	Class 1	6	0.25	8	0.26	9	0.27
	Class 2						
	Class 3						
	Class 4	94		92		91	
V4	%OW <= 1.5ft	14	0.26	16	0.28	22	0.35
V5	Salinity (ppt)						
	fresh intermediate	2.5	0.80	2.5	0.80	2.5	0.80
V6	Access Value						
	fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
		EM HSI = 0.28		EM HSI = 0.30		EM HSI = 0.31	
		OW HSI = 0.30		OW HSI = 0.31		OW HSI = 0.34	

Project: Castille Pass Sediment Delivery
FWP

Variable		TY 14		TY 16		TY 19	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	11	0.20	12	0.21	14	0.23
V2	% Aquatic	13	0.22	15	0.24	17	0.25
V3	Interspersion	%		%		%	
	Class 1	11	0.29	12	0.30	15	0.32
	Class 2						
	Class 3						
	Class 4	89		88		85	
V4	%OW <= 1.5ft	26	0.39	30	0.44	34	0.48
V5	Salinity (ppt)						
	fresh intermediate	2.5	0.80	2.5	0.80	2.5	0.80
V6	Access Value						
	fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
		EM HSI = 0.32		EM HSI = 0.33		EM HSI = 0.38	
		OW HSI = 0.36		OW HSI = 0.38		OW HSI = 0.40	

Project: Castille Pass Sediment Delivery
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	15	0.24				
V2	% Aquatic	17	0.25				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 15 0.32 85		%		%	
V4	%OW <= 1.5ft	34	0.48				
V5	Salinity (ppt) fresh intermediate	2.5	0.80				
V6	Access Value fresh intermediate	1.00	1.00				
		EM HSI =	0.36	EM HSI =		EM HSI =	
		OW HSI =	0.40	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Castille Pass Sediment Delivery

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.19	0.00	
1	8	0.20	1.64	0.80
20	160	0.23	36.51	351.16
			AAHUs =	17.60

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.19	0.00	
1	57	0.23	13.33	6.27
3	207	0.26	53.53	65.62
6	282	0.28	78.97	197.96
9	394	0.30	117.28	293.38
11	450	0.31	137.83	254.93
14	562	0.32	181.78	478.48
18	618	0.33	205.14	386.77
19	730	0.35	255.28	689.61
20	749	0.36	267.48	943.05
			AAHUs	165.80

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	165.80
B. Future Without Project Emergent Marsh AAHUs =	17.60
Net Change (FWP - FWOP) =	148.20

AAHU CALCULATION - OPEN WATER

Project: Castille Pass Sediment Delivery

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	5051	0.21	1052.99	
1	5043	0.22	1088.68	1070.84
20	4891	0.24	1159.82	21370.89
			AAHUs =	1122.09

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	5051	0.21	1052.99	
1	4882	0.25	1230.01	1142.72
3	4844	0.28	1270.74	2500.88
6	4714	0.30	1398.42	4002.94
9	4657	0.31	1431.03	4241.50
11	4546	0.34	1531.48	2983.61
14	4489	0.36	1602.38	4701.34
16	4378	0.38	1648.61	3249.68
19	4321	0.40	1711.81	5038.20
20	4302	0.40	1704.28	6702.79
			AAHUs	1727.18

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	1727.18
B. Future Without Project Open Water AAHUs	=	1122.09
Net Change (FWP - FWOP)	=	605.10

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	148.20
B. Open Water Habitat Net AAHUs	=	605.10
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	=	298.69

**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: PPO-7a LaBranche Wetlands Terracing/Plantings

The WVA for this project includes 3 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	21
C	61
D	77
E	12
Z	27

TOTAL BENEFITS =	198 AAHUS
-------------------------	------------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: LaBranche Wetlands Terracing/Plantings
Area A

Project Area: 477

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	48	0.53	48	0.53	46	0.51
V2	% Aquatic	45	0.51	45	0.51	45	0.51
V3	Interspersion	%	0.32	%	0.32	%	0.31
	Class 1						
	Class 2						
	Class 3	60		60		55	
	Class 4	40		40		45	
V4	%OW <= 1.5ft	15	0.29	15	0.29	15	0.29
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.63	EM HSI =	0.63	EM HSI =	0.61
Open Water HSI		=	0.64	OW HSI =	0.64	OW HSI =	0.63

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: LaBranche Wetlands Terracing/Plantings
Area A

Project Area: 477

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	48	0.53	51	0.56	53	0.58
V2	% Aquatic	45	0.51	50	0.55	65	0.69
V3	Interspersion	%	0.32	%	0.40	%	0.40
	Class 1						
	Class 2						
	Class 3	60		100		100	
	Class 4	40					
V4	%OW <= 1.5ft	15	0.29	15	0.29	15	0.29
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.63	EM HSI =	0.65	EM HSI =	0.67
Open Water HSI		=	0.64	OW HSI =	0.67	OW HSI =	0.76

Project: LaBranche Wetlands Terracing/Plantings
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	52	0.57				
V2	% Aquatic	65	0.69				
V3	Interspersion	%		%		%	
	Class 1		0.40				
	Class 2						
	Class 3	100					
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	15	0.29				
V5	Salinity (ppt)	4	1.00				
V6	Access Value	1.00	1.00				
		EM HSI =	0.66	EM HSI =		EM HSI =	
		OW HSI =	0.76	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: LaBranche Wetlands Terracing/Plantings
Area A

Future Without Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	231	0.63	144.45	
1	230	0.63	143.82	144.14
20	221	0.61	135.19	2650.19
			AAHUs =	139.72

Future With Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	231	0.63	144.45	
1	244	0.65	159.28	151.80
3	255	0.67	169.59	328.82
20	250	0.66	164.73	2841.65
			AAHUs =	166.11

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs	= 166.11
B. Future Without Project Emergent Marsh AAHUs	= 139.72
Net Change (FWP - FWOP)	= 26.40

AAHU CALCULATION - OPEN WATER

Project: LaBranche Wetlands Terracing/Plantings
Area A

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	246	0.64	156.38	
1	247	0.64	157.02	156.70
20	256	0.63	162.55	3035.86
			AAHUs =	169.63

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	246	0.64	156.38	
1	221	0.67	147.79	152.22
3	222	0.75	165.44	313.21
20	227	0.75	169.17	2844.16
			AAHUs	166.48

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	165.48
B. Future Without Project Open Water AAHUs	=	159.63
Net Change (FWP - FWOP)	=	6.85

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	26.40
B. Open Water Habitat Net AAHUs	=	5.85
Net Benefits = (2.6xEMAAHUs+OWAAHUs)/3.6		20.69

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: LaBranche Wetlands Terracing/Plantings
Area C
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 2,502

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	49	0.54	49	0.54	47	0.52
V2	% Aquatic	65	0.69	65	0.69	65	0.69
V3	Interspersion	%		%		%	
	Class 1		0.30		0.30		0.30
	Class 2						
	Class 3	50		50		50	
	Class 4	50		50		50	
V4	%OW <= 1.5ft	90	1.00	90	1.00	90	1.00
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	2		2		2	
V6	Access Value						
	fresh		0.78		0.78		0.78
	intermediat	0.72		0.72		0.72	
Emergent Marsh HSI =			0.69	EM HSI =	0.69	EM HSI =	0.68
Open Water HSI =			0.72	OW HSI =	0.72	OW HSI =	0.72

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: LaBranche Wetlands Terracing/Plantings
Area C
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 2,502

Variable		TY 0		TY 1		TY 2	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	49	0.54	51	0.56	53	0.58
V2	% Aquatic	65	0.69	65	0.69	65	0.69
V3	Interspersion	%		%		%	
	Class 1		0.30		0.30		0.31
	Class 2						
	Class 3	50		50		55	
	Class 4	50		50		45	
V4	%OW <= 1.5ft	90	1.00	90	1.00	89	1.00
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	2		2		2	
V6	Access Value						
	fresh		0.78		0.78		0.78
	intermediat	0.72		0.72		0.72	
Emergent Marsh HSI =			0.69	EM HSI =	0.60	EM HSI =	0.62
Open Water HSI =			0.72	OW HSI =	0.72	OW HSI =	0.72

Project: LaBranche Wetlands Terracing/Plantings
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	56	0.60				
V2	% Aquatic	65	0.89				
V3	Interspersion	%		%		%	
	Class 1		0.32				
	Class 2						
	Class 3	60					
	Class 4	40					
	Class 5						
V4	%OW <= 1.5ft	87	1.00				
V5	Salinity (ppt)						
	fresh		1.00				
	intermediate	2					
V6	Access Value						
	fresh		0.78				
	intermediate	0.72					
		EM HSI =		0.64		EM HSI =	
		OW HSI =		0.72		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: LaBranche Wetlands Terracing/Plantings
Area C

Future Without Project			x HSI	Total HUs	Cumulative HUs
TY	Marsh Acres				
0	1218		0.59	719.02	
1	1214		0.59	717.83	718.42
20	1180		0.58	683.07	13307.24
				AAHUs =	701.28

Future With Project			x HSI	Total HUs	Cumulative HUs
TY	Marsh Acres				
0	1216		0.59	719.02	
1	1285		0.60	763.62	741.22
2	1314		0.62	810.81	787.10
20	1396		0.64	888.53	15289.21
				AAHUs =	840.88

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	840.88
B. Future Without Project Emergent Marsh AAHUs =	701.28
Net Change (FWP - FWOP) =	139.60

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: LaBranche Wetlands Terracing/Plantings
Area D

Project Area: 1,246

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	35	0.42	35	0.42	33	0.40
V2	% Aquatic	30	0.37	30	0.37	20	0.28
V3	Interspersion	%		%		%	
	Class 1	20	0.36	20	0.36	20	0.36
	Class 2						
	Class 3						
	Class 4	80		80		80	
	Class 5						
V4	%OW <= 1.5ft	60	0.87	60	0.87	60	0.87
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.65	EM HSI =	0.65	EM HSI =	0.63
Open Water HSI =			0.69	OW HSI =	0.69	OW HSI =	0.63

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: LaBranche Wetlands Terracing/Plantings
Area D

Project Area: 1,246

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	35	0.42	39	0.45	42	0.48
V2	% Aquatic	30	0.37	35	0.42	50	0.55
V3	Interspersion	%		%		%	
	Class 1	20	0.36	20	0.52	20	0.52
	Class 2						
	Class 3			80		80	
	Class 4	80					
	Class 5						
V4	%OW <= 1.5ft	60	0.87	60	0.87	60	0.87
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.65	EM HSI =	0.69	EM HSI =	0.61
Open Water HSI =			0.69	OW HSI =	0.64	OW HSI =	0.72

Project: LaBranche Wetlands Terracing/Plantings
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	42	0.48				
V2	% Aquatic	50	0.55				
V3	Interspersion	%		%		%	
	Class 1	20	0.52				
	Class 2						
	Class 3	80					
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	60	0.87				
V5	Salinity (ppt)	4	1.00				
V6	Access Value	1.00	1.00				
		EM HSI =	0.61	EM HSI =		EM HSI =	
		OW HSI =	0.72	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: LaBranche Wetlands Terracing/Plantings
Area D

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	431	0.55	235.55	
1	430	0.55	235.00	235.28
20	412	0.53	219.70	4318.96
			AAHUs =	227.71

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	431	0.55	235.55	
1	480	0.59	283.41	259.12
3	529	0.61	322.54	605.63
20	518	0.61	315.83	5426.11
			AAHUs	314.64

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	314.64
B. Future Without Project Emergent Marsh AAHUs	=	227.71
Net Change (FWP - FWOP) =		86.83

AAHU CALCULATION - OPEN WATER

Project: LaBranche Wetlands Terracing/Plantings
Area D

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	815	0.59	483.81	
1	816	0.59	484.40	484.11
20	834	0.53	440.08	8786.34
			AAHUs =	483.52

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	815	0.59	483.81	
1	716	0.64	455.39	470.30
3	717	0.72	516.60	971.96
20	728	0.72	524.52	8849.51
			AAHUs	614.59

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	514.59
B. Future Without Project Open Water AAHUs =	463.52
Net Change (FWP - FWOP) =	51.07

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	86.83
B. Open Water Habitat Net AAHUs =	51.07
Net Benefits = (2.6xEMAAHUs+OWAAHUs)/3.6	76.90

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: LaBranche Wetlands Terracing/Plantings
Area E
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 30

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	7	0.16	7	0.16	7	0.16
V2	% Aquatic	50	0.55	50	0.55	50	0.55
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.20
	Class 2						
	Class 3						
	Class 4	100		100		100	
V4	%OW <= 1.5ft	50	0.66	50	0.66	50	0.66
V5	Salinity (ppt)						
	fresh intermediate	4	1.00	4	1.00	4	1.00
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.30	EM HSI =	0.30	EM HSI =	0.30
Open Water HSI		=	0.63	OW HSI =	0.63	OW HSI =	0.63

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: LaBranche Wetlands Terracing/Plantings
Area E
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 30

Variable		TY 0		TY 1		TY 2	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	7	0.16	53	0.58	95	0.96
V2	% Aquatic	50	0.55	60	0.64	90	0.91
V3	Interspersion	%		%		%	
	Class 1		0.20		0.80		1.00
	Class 2			100			
	Class 3						
	Class 4	100					
V4	%OW <= 1.5ft	50	0.66	50	0.66	50	0.66
V5	Salinity (ppt)						
	fresh intermediate	4	1.00	4	1.00	4	1.00
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.30	EM HSI =	0.67	EM HSI =	0.97
Open Water HSI		=	0.63	OW HSI =	0.72	OW HSI =	0.92

Project: LaBranche Wetlands Terracing/Plantings
FWP

Variable		TY 20		Value	SI	Value	SI	Value	SI
		Value	SI						
V1	% Emergent	95	0.96						
V2	% Aquatic	90	0.91						
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	%		%		%	
V4	%OW <= 1.5ft	50	0.66						
V5	Salinity (ppt) fresh intermediate	4	1.00						
V6	Access Value fresh intermediat	1.00	1.00						
		EM HSI = 0.97		EM HSI =		EM HSI =			
		OW HSI = 0.92		OW HSI =		OW HSI =			

AAHU CALCULATION - EMERGENT MARSH

Project: LaBranche Wetlands Terracing/Plantings
Area E

Future Without Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	2	0.30	0.61	
1	2	0.30	0.61	0.61
20	2	0.30	0.61	11.58
			AAHUs =	0.61

Future With Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	2	0.30	0.61	
1	16	0.67	10.71	4.81
2	29	0.97	28.15	18.78
20	29	0.97	28.15	508.72
			AAHUs	28.62

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs	= 28.62
B. Future Without Project Emergent Marsh AAHUs	= 0.61
Net Change (FWP - FWOP) =	28.01

AAHU CALCULATION - OPEN WATER

Project: LaBranche Wetlands Terracing/Plantings
Area E

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	28	0.63	17.77	
1	28	0.63	17.77	17.77
20	28	0.63	17.77	337.66
			AAHUs =	17.77

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	28	0.63	17.77	
1	14	0.72	10.14	14.16
2	1	0.92	0.92	5.98
20	1	0.92	0.92	16.59
			AAHUs	1.84

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	1.84
B. Future Without Project Open Water AAHUs	=	17.77
Net Change (FWP - FWOP)	=	-15.94

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	25.91
B. Open Water Habitat Net AAHUs	=	-15.94
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1		12.41

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: LaBranche Wetlands Terracing/Plantings
Area Z

Project Area: 250

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	12	0.21	12	0.21	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.10
	Class 2						
	Class 3						
	Class 4	100		100		100	
	Class 5						
V4	%OW <= 1.5ft	22	0.38	22	0.38	20	0.36
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.37	EM HSI =	0.37	EM HSI =	0.25

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: LaBranche Wetlands Terracing/Plantings
Area Z

Project Area: 250

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	12	0.21	14	0.23	45	0.51
V2	% Aquatic	0	0.10	5	0.15	38	0.42
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20	40	0.52
	Class 2						
	Class 3						
	Class 4	100		100		60	
	Class 5						
V4	%OW <= 1.5ft	22	0.38	22	0.38	50	0.74
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.37	EM HSI =	0.38	EM HSI =	0.63
Open Water HSI		=	0.31	OW HSI =	0.36	OW HSI =	0.63

AAHU CALCULATION - EMERGENT MARSH

Project: LaBranche Wetlands Terracing/Plantings
Area Z

Future Without Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	30	0.37	10.97	
1	29	0.37	10.61	10.79
20	0	0.25	0.00	90.55
			AAHUs =	5.07

Future With Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	30	0.37	10.97	
1	34	0.38	12.96	11.95
20	111	0.63	69.79	725.71
			AAHUs	36.88

NET CHANGE IN AAHUs DUE TO PROJECT

A. Future With Project Emergent Marsh AAHUs	=	36.88
B. Future Without Project Emergent Marsh AAHUs	=	5.07
Net Change (FWP - FWOP) =		31.82

AAHU CALCULATION - OPEN WATER

Project: LaBranche Wetlands Terracing/Plantings
Area Z

Future Without Project			Total HUs	Cumulative HUs
TY	Water Acres	x HSI		
0	220	0.31	68.78	
1	221	0.31	69.09	68.93
20	250	0.30	75.83	1377.57
			AAHUs =	72.32

Future With Project			Total HUs	Cumulative HUs
TY	Water Acres	x HSI		
0	220	0.31	68.78	
1	216	0.36	78.07	73.45
20	139	0.63	87.91	1642.84
			AAHUs	85.81

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	85.81
B. Future Without Project Open Water AAHUs	=	72.32
Net Change (FWP - FWOP) =		13.49

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	31.82
B. Open Water Habitat Net AAHUs	=	13.49
Net Benefits= (2.6xEMAHUs+OWAAHUs)/3.6		26.73

**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: CS-16 Black Bayou Bypass Culverts

The WVA for this project includes 5 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
1	25
2a	33
2b	61
3	41
4	2

TOTAL BENEFITS =	162 AAHUS
-------------------------	------------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Black Bayou Bypass Culverts
Area 1
Condition: Future Without Project

Project Area:
Fresh..... 5,127
Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	76	0.78	76	0.78	69	0.72
V2	% Aquatic	10	0.19	10	0.19	10	0.19
V3	Interspersion	%		%		%	
	Class 1	75	0.85	75	0.85	70	0.83
	Class 2					5	
	Class 3	25		25		25	
	Class 4						
V4	%OW <= 1.5ft	48	0.64	48	0.64	48	0.64
V5	Salinity (ppt)						
	fresh intermediate	0	1.00	0	1.00	0	1.00
V6	Access Value						
	fresh intermediate	0.10	0.37	0.10	0.37	0.10	0.37
Emergent Marsh HSI =		0.74		EM HSI =	0.74	EM HSI =	0.71
Open Water HSI =		0.36		OW HSI =	0.36	OW HSI =	0.36

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Black Bayou Bypass Culverts
Area 1
Condition: Future With Project

Project Area:
Fresh..... 5,127
Intermediate.

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	76	0.78	76	0.78	70	0.73
V2	% Aquatic	10	0.19	10	0.19	10	0.19
V3	Interspersion	%		%		%	
	Class 1	75	0.85	75	0.85	70	0.83
	Class 2					5	
	Class 3	25		25		25	
	Class 4						
V4	%OW <= 1.5ft	48	0.64	50	0.66	50	0.66
V5	Salinity (ppt)						
	fresh intermediate	0	1.00	0	1.00	0	1.00
V6	Access Value						
	fresh intermediate	0.10	0.37	0.11	0.38	0.11	0.38
Emergent Marsh HSI =		0.74		EM HSI =	0.75	EM HSI =	0.71
Open Water HSI =		0.36		OW HSI =	0.36	OW HSI =	0.36

AAHU CALCULATION - EMERGENT MARSH

Project: Black Bayou Bypass Culverts
Area 1

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	3906	0.74	2904.51	
1	3886	0.74	2889.63	2897.07
20	3521	0.71	2482.66	50992.27
			AAHUs =	2694.47

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	3906	0.74	2904.51	
1	3890	0.75	2899.16	2901.84
20	3595	0.71	2559.28	51823.98
			AAHUs	2736.29

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Emergent Marsh AAHUs	=			2736.29
B. Future Without Project Emergent Marsh AAHUs	=			2694.47
Net Change (FWP - FWOP)	=			41.82

AAHU CALCULATION - OPEN WATER

Project: Black Bayou Bypass Culverts
Area 1

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1221	0.36	438.36	
1	1241	0.36	445.54	441.95
20	1606	0.36	574.20	9689.21
AAHUs =			506.56	

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1221	0.36	438.36	
1	1237	0.36	447.18	442.76
20	1532	0.36	551.55	9489.30
AAHUs			496.60	

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	496.60
B. Future Without Project Open Water AAHUs	=	506.56
Net Change (FWP - FWOP)	=	-9.96

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	41.82
B. Open Water Habitat Net AAHUs	=	-9.95
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1		25.12

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Black Bayou Bypass Culverts
Area 2A
Condition: Future Without Project

Project Area:
Fresh..... 12,902
Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	49	0.54	49	0.54	44	0.50
V2	% Aquatic	45	0.51	45	0.51	45	0.51
V3	Interspersion	%		%		%	
	Class 1	20	0.42	20	0.42	15	0.38
	Class 2						
	Class 3	30		30		30	
	Class 4	50		50		55	
V4	%OW <= 1.5ft	45	0.61	45	0.61	45	0.61
V5	Salinity (ppt)						
	fresh intermediate	0	1.00	0	1.00	0	1.00
V6	Access Value						
	fresh intermediate	0.10	0.37	0.10	0.37	0.10	0.37
Emergent Marsh HSI		=	0.55	EM HSI =	0.55	EM HSI =	0.52
Open Water HSI		=	0.51	OW HSI =	0.51	OW HSI =	0.51

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Black Bayou Bypass Culverts
Area 2A
Condition: Future With Project

Project Area:
Fresh..... 12,902
Intermediate.

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	49	0.54	49	0.54	45	0.51
V2	% Aquatic	45	0.51	45	0.51	45	0.51
V3	Interspersion	%		%		%	
	Class 1	20	0.42	20	0.42	15	0.38
	Class 2						
	Class 3	30		30		30	
	Class 4	50		50		55	
V4	%OW <= 1.5ft	45	0.61	48	0.64	48	0.64
V5	Salinity (ppt)						
	fresh intermediate	0	1.00	0	1.00	0	1.00
V6	Access Value						
	fresh intermediate	0.10	0.37	0.11	0.38	0.11	0.38
Emergent Marsh HSI		=	0.55	EM HSI =	0.55	EM HSI =	0.53
Open Water HSI		=	0.51	OW HSI =	0.52	OW HSI =	0.51

AAHU CALCULATION - EMERGENT MARSH

Project: Black Bayou Bypass Culverts
Area 2A

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	6344	0.55	3506.57	
1	6311	0.55	3488.33	3497.45
20	5710	0.52	2973.31	61324.68
			AAHUs =	3241.11

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	6344	0.55	3506.57	
1	6316	0.55	3488.90	3502.74
20	5801	0.53	3059.65	62262.88
			AAHUs	3288.28

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Emergent Marsh AAHUs	=			3288.28
B. Future Without Project Emergent Marsh AAHUs	=			3241.11
Net Change (FWP - FWOP)	=			47.17

AAHU CALCULATION - OPEN WATER

Project: Black Bayou Bypass Culverts
Area 2A

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	6568	0.51	3372.56	
1	6591	0.51	3384.37	3378.47
20	7192	0.51	3671.67	67038.00
			AAHUs =	3520.82

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	6568	0.51	3372.56	
1	6586	0.52	3409.51	3391.02
20	7101	0.51	3655.08	67118.44
			AAHUs	3525.47

NET CHANGE IN AAHUs DUE TO PROJECT

A. Future With Project Open Water AAHUs =	3525.47
B. Future Without Project Open Water AAHUs =	3520.82
Net Change (FWP - FWOP) =	4.65

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

A. Emergent Marsh Habitat Net AAHUs =	47.17
B. Open Water Habitat Net AAHUs =	4.65
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	33.46

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Black Bayou Bypass Culverts
Area 2B
Condition: Future Without Project

Project Area:
Fresh..... 21,768
Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	70	0.73	70	0.73	70	0.73
V2	% Aquatic	90	0.91	90	0.91	90	0.91
V3	Interspersion	%		%		%	
	Class 1	50	0.72	50	0.72	50	0.72
	Class 2	10		10		10	
	Class 3	40		40		40	
	Class 4						
V4	%OW <= 1.5ft	90	1.00	90	1.00	90	1.00
V5	Salinity (ppt)						
	fresh intermediate	0	1.00	0	1.00	0	1.00
V6	Access Value						
	fresh intermediate	0.10	0.37	0.10	0.37	0.10	0.37
Emergent Marsh HSI		=	0.70	EM HSI =	0.70	EM HSI =	0.70
Open Water HSI		=	0.77	OW HSI =	0.77	OW HSI =	0.77

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Black Bayou Bypass Culverts
Area 2B
Condition: Future With Project

Project Area:
Fresh..... 21,768
Intermediate.

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	70	0.73	70	0.73	71	0.74
V2	% Aquatic	90	0.91	90	0.91	90	0.91
V3	Interspersion	%		%		%	
	Class 1	50	0.72	50	0.72	50	0.72
	Class 2	10		10		10	
	Class 3	40		40		40	
	Class 4						
V4	%OW <= 1.5ft	90	1.00	90	1.00	90	1.00
V5	Salinity (ppt)						
	fresh intermediate	0	1.00	0	1.00	0	1.00
V6	Access Value						
	fresh intermediate	0.10	0.37	0.105	0.37	0.105	0.37
Emergent Marsh HSI		=	0.70	EM HSI =	0.70	EM HSI =	0.70
Open Water HSI		=	0.77	OW HSI =	0.77	OW HSI =	0.77

AAHU CALCULATION - OPEN WATER

Project: Black Bayou Bypass Culverts
Area 2B

Future Without Project			Total	Cumulative
TY	Water Acres	x HSI	HUs	HUs
0	6532	0.77	5007.83	
1	6532	0.77	5007.83	5007.83
20	6532	0.77	5007.83	95148.86
			AAHUs =	5007.83

Future With Project			Total	Cumulative
TY	Water Acres	x HSI	HUs	HUs
0	6532	0.77	5007.83	
1	6521	0.77	5008.09	5007.96
20	6313	0.77	4848.34	93636.09
			AAHUs	4932.20

NET CHANGE IN AAHUs DUE TO PROJECT

A. Future With Project Open Water AAHUs	=	4932.20
B. Future Without Project Open Water AAHUs	=	5007.83
Net Change (FWP - FWOP) =		-75.63

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

A. Emergent Marsh Habitat Net AAHUs	=	128.46
B. Open Water Habitat Net AAHUs	=	-75.63
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1		61.27

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Black Bayou Bypass Culverts
 Area 3
 Condition: Future Without Project

Project Area:
 Fresh..... 31,117
 Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	80	0.82	80	0.82	80	0.82
V2	% Aquatic	90	0.91	90	0.91	90	0.91
V3	Interspersion	%		%		%	
	Class 1	70	0.84	70	0.84	70	0.84
	Class 2	10		10		10	
	Class 3	20		20		20	
	Class 4						
V4	%OW <= 1.5ft	90	1.00	90	1.00	90	1.00
V5	Salinity (ppt)						
	fresh intermediate	0	1.00	0	1.00	0	1.00
V6	Access Value						
	fresh intermediate	0.10	0.37	0.10	0.37	0.10	0.37
Emergent Marsh HSI =		0.76		EM HSI =	0.76	EM HSI =	0.76
Open Water HSI =		0.78		OW HSI =	0.78	OW HSI =	0.78

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Black Bayou Bypass Culverts
 Area 3
 Condition: Future With Project

Project Area:
 Fresh..... 31,117
 Intermediate.

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	80	0.82	80	0.82	80.5	0.82
V2	% Aquatic	90	0.91	90	0.91	90	0.91
V3	Interspersion	%		%		%	
	Class 1	70	0.84	70	0.84	70	0.84
	Class 2	10		10		10	
	Class 3	20		20		20	
	Class 4						
V4	%OW <= 1.5ft	90	1.00	90	1.00	90	1.00
V5	Salinity (ppt)						
	fresh intermediate	0	1.00	0	1.00	0	1.00
V6	Access Value						
	fresh intermediate	0.10	0.37	0.10	0.37	0.10	0.37
Emergent Marsh HSI =		0.76		EM HSI =	0.76	EM HSI =	0.77
Open Water HSI =		0.78		OW HSI =	0.78	OW HSI =	0.78

AAHU CALCULATION - EMERGENT MARSHProject: **Black Bayou Bypass Culverts**
Area 3

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	24894	0.76	18994.15	
1	24894	0.76	18994.15	18994.15
20	24894	0.76	18994.15	360888.92
			AAHUs =	18994.15

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	24894	0.76	18994.15	
1	24902	0.76	19000.26	18997.21
20	25050	0.77	19177.14	362684.08
			AAHUs	19084.06

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Emergent Marsh AAHUs	=		19084.06
B. Future Without Project Emergent Marsh AAHUs	=		18994.15
Net Change (FWP - FWOP)	=		89.91

AAHU CALCULATION - OPEN WATER

Project: Black Bayou Bypass Culverts
Area 3

Future Without Project			Total	Cumulative
TY	Water Acres	x HSI	HUs	HUs
0	6223	0.78	4826.25	
1	6223	0.78	4826.25	4826.25
20	6223	0.78	4826.25	91698.78
			AAHUs =	4826.25

Future With Project			Total	Cumulative
TY	Water Acres	x HSI	HUs	HUs
0	6223	0.78	4826.25	
1	6215	0.78	4820.05	4823.15
20	6067	0.78	4705.27	90490.48
			AAHUs	4765.68

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	4765.68
B. Future Without Project Open Water AAHUs =	4826.25
Net Change (FWP - FWOP) =	-60.57

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	89.91
B. Open Water Habitat Net AAHUs =	-60.57
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	41.37

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Black Bayou Bypass Culverts
Area 4

Project Area: 1,464

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	56	0.60	55	0.60	53	0.58
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	40	0.52	40	0.52	40	0.52
	Class 2						
	Class 3						
	Class 4	60		60		60	
	Class 5						
V4	%OW <= 1.5ft	25	0.42	25	0.42	25	0.42
V5	Salinity (ppt)	10	1.00	10	1.00	10	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.70	EM HSI =	0.69	EM HSI =	0.68
Open Water HSI		=	0.34	OW HSI =	0.34	OW HSI =	0.34

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Black Bayou Bypass Culverts
Area 4

Project Area: 1,464

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	56	0.60	55	0.60	53	0.58
V2	% Aquatic	0	0.10	1	0.11	1	0.11
V3	Interspersion	%		%		%	
	Class 1	40	0.52	40	0.52	40	0.52
	Class 2						
	Class 3						
	Class 4	60		60		60	
	Class 5						
V4	%OW <= 1.5ft	25	0.42	25	0.42	25	0.42
V5	Salinity (ppt)	10	1.00	10	1.00	10	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.70	EM HSI =	0.69	EM HSI =	0.68
Open Water HSI		=	0.34	OW HSI =	0.35	OW HSI =	0.35

AAHU CALCULATION - EMERGENT MARSH

Project: Black Bayou Bypass Culverts
Area 4

Future Without Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	813	0.70	566.36	
1	811	0.69	560.05	563.21
20	782	0.68	530.50	10359.15
			AAHUs =	546.12

Future With Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	813	0.70	566.36	
1	811	0.69	560.05	563.21
20	782	0.68	530.50	10359.15
			AAHUs	546.12

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Emergent Marsh AAHUs	=		546.12
B. Future Without Project Emergent Marsh AAHUs	=		546.12
Net Change (FWP - FWOP)	=		0.00

AAHU CALCULATION - OPEN WATER

Project: Black Bayou Bypass Culverts
Area 4

Future Without Project			Total HU _s	Cummulative HU _s
TY	Water Acres	x HSI		
0	651	0.34	220.81	
1	653	0.34	221.49	221.15
20	682	0.34	231.32	4301.70

AAHU_s = 226.14

Future With Project			Total HU _s	Cummulative HU _s
TY	Water Acres	x HSI		
0	651	0.34	220.81	
1	653	0.35	228.26	224.53
20	682	0.35	238.39	4433.19

AAHU_s 232.89

NET CHANGE IN AAHU _s DUE TO PROJECT	
A. Future With Project Open Water AAHU _s =	232.89
B. Future Without Project Open Water AAHU _s =	226.14
Net Change (FWP - FWOP) =	6.74

TOTAL BENEFITS IN AAHU _s DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHU _s =	0.00
B. Open Water Habitat Net AAHU _s =	6.74
Net Benefits = $(2.6 \times \text{EMA} \text{AAHU} + \text{OWAAHU}) / 3.6$	1.87

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: GIWW Bank Stabilization - Perry Ridge to Texas

Project Area:

Fresh.....

Condition: Future Without Project

Intermediate. 1,132

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	43	0.49	43	0.49	34	0.41
V2	% Aquatic	55	0.60	55	0.60	50	0.55
V3	Interspersion	%	0.32	%	0.32	%	0.28
	Class 1						
	Class 2	20		20		10	
	Class 3	20		20		20	
	Class 4	60		60		70	
V4	%OW <= 1.5ft	70	0.89	70	0.89	65	0.83
V5	Salinity (ppt)						
	fresh intermediate	4	1.00	4	1.00	6	0.60
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.67	EM HSI =	0.67	EM HSI =	0.46
Open Water HSI		=	0.69	OW HSI =	0.69	OW HSI =	0.62

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: GIWW Bank Stabilization - Perry Ridge to Texas

Project Area:

Fresh.....

Condition: Future With Project

Intermediate. 1,132

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	43	0.49	43	0.49	43	0.49
V2	% Aquatic	55	0.60	55	0.60	65	0.69
V3	Interspersion	%	0.32	%	0.34	%	0.34
	Class 1						
	Class 2	20		25		25	
	Class 3	20		20		20	
	Class 4	60		55		55	
V4	%OW <= 1.5ft	70	0.89	70	0.89	70	0.89
V5	Salinity (ppt)						
	fresh intermediate	4	1.00	4	1.00	4	1.00
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.67	EM HSI =	0.68	EM HSI =	0.68
Open Water HSI		=	0.69	OW HSI =	0.69	OW HSI =	0.75

Project: GIWW Bank Stabilization - Perry Ridge to Texas
FWP

Variable		TY 10		TY 20		Value	
		Value	SI	Value	SI		SI
V1	% Emergent	43	0.49	41	0.47		
V2	% Aquatic	65	0.69	65	0.69		
V3	Interspersion	%		%			%
	Class 1		0.34		0.34		
	Class 2	25		25			
	Class 3	20		20			
	Class 4	55		55			
V4	%OW <= 1.5ft	70	0.89	70	0.89		
V5	Salinity (ppt)		1.00		1.00		
	fresh intermediate	4		4			
V6	Access Value		1.00		1.00		
	fresh intermediat	1.00		1.00			
		EM HSI = 0.58		EM HSI = 0.58		EM HSI =	
		OW HSI = 0.75		OW HSI = 0.75		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: GIWW Bank Stabilization - Perry Ridge to Texas

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	489	0.57	280.54	
1	483	0.57	277.10	278.82
20	383	0.46	178.00	4288.90
			AAHUs =	228.39

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	489	0.57	280.54	
1	487	0.58	280.47	280.51
3	489	0.58	281.63	562.10
10	483	0.58	278.17	1959.29
20	466	0.58	262.23	2701.64
			AAHUs	278.18

NET CHANGE IN AAHUs DUE TO PROJECT		
A.	Future With Project Emergent Marsh AAHUs	= 275.18
B.	Future Without Project Emergent Marsh AAHUs	= 228.39
Net Change (FWP - FWOP) =		46.79

AAHU CALCULATION - OPEN WATER

Project: GIWW Bank Stabilization - Perry Ridge to Texas

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	643	0.69	443.95	
1	649	0.69	448.09	448.02
20	749	0.62	467.00	8714.58
			AAHUs =	468.03

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	643	0.69	443.95	
1	641	0.69	443.52	443.74
3	643	0.75	482.68	926.14
10	649	0.75	487.16	3394.35
20	668	0.75	499.92	4935.39
			AAHUs	484.98

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Open Water AAHUs	=		484.98
B. Future Without Project Open Water AAHUs	=		458.03
Net Change (FWP - FWOP)	=		26.95

TOTAL BENEFITS IN AAHUs DUE TO PROJECT			
A. Emergent Marsh Habitat Net AAHUs	=		46.79
B. Open Water Habitat Net AAHUs	=		26.95
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1			40.39

**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: XTV-27 Freshwater Bayou Canal HR/SP - Belle Isle to Lock

The WVA for this project includes 2 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
1	75
2	177

TOTAL BENEFITS = 252 AAHUS
--

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Freshwater Bayou Canal HR/SP - Belle Isle to Lock
 Area A
 Condition: Future Without Project

Project Area:
 Fresh.....
 Intermediate. 285

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	69	0.72	66	0.69	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	65	0.72	65	0.72		0.10
	Class 2						
	Class 3						
	Class 4	35		35			
	Class 5					100	
V4	%OW <= 1.5ft	37	0.52	33	0.47	10	0.21
V5	Salinity (ppt)						
	fresh intermediate	6	0.60	6	0.60	6	0.60
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.74	EM HSI =	0.72	EM HSI =	0.19
Open Water HSI		=	0.27	OW HSI =	0.27	OW HSI =	0.21

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Freshwater Bayou Canal HR/SP - Belle Isle to Lock
 Area A
 Condition: Future With Project

Project Area:
 Fresh.....
 Intermediate. 285

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	69	0.72	69	0.72	85	0.87
V2	% Aquatic	0	0.10	5	0.15	30	0.37
V3	Interspersion	%		%		%	
	Class 1	65	0.72	65	0.72	80	0.88
	Class 2						
	Class 3					20	
	Class 4	35		35			
	Class 5						
V4	%OW <= 1.5ft	37	0.52	37	0.52	41	0.56
V5	Salinity (ppt)						
	fresh intermediate	6	0.60	6	0.60	6	0.60
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.74	EM HSI =	0.74	EM HSI =	0.85
Open Water HSI		=	0.27	OW HSI =	0.32	OW HSI =	0.52

AAHU CALCULATION - EMERGENT MARSH

Project: Freshwater Bayou Canal HR/SP - Belle Isle to Lock
Area A

Future Without Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	197	0.74	145.56	
1	187	0.72	134.70	140.10
20	0	0.19	0.00	966.77
AAHUs =			55.34	

Future With Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	197	0.74	145.56	
1	197	0.74	145.56	145.56
20	241	0.85	205.74	3321.30
AAHUs			173.34	

NET CHANGE IN AAHUs DUE TO PROJECT				
A.	Future With Project Emergent Marsh AAHUs	=		173.34
B.	Future Without Project Emergent Marsh AAHUs	=		55.34
	Net Change (FWP - FWOP)	=		118.00

AAHU CALCULATION - OPEN WATER

Project: Freshwater Bayou Canal HR/SP - Belle Isle to Lock Area A

Future Without Project				Total HUs	Cummulative HUs
TY	Water Acres	x HSI			
0	88	0.27		24.14	
1	98	0.27		26.56	25.35
20	285	0.21		58.68	848.33
AAHUs =				43.68	

Future With Project				Total HUs	Cummulative HUs
TY	Water Acres	x HSI			
0	88	0.27		24.14	
1	88	0.32		28.05	26.10
20	44	0.52		22.89	512.00
AAHUs				26.90	

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	26.90
B. Future Without Project Open Water AAHUs =	43.68
Net Change (FWP - FWOP) =	-16.78

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	118.00
B. Open Water Habitat Net AAHUs =	-16.78
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	74.52

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Freshwater Bayou Canal HR/SP - Belle Isle to Lock
Area B
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 4,630

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	84	0.86	83	0.85	67	0.70
V2	% Aquatic	35	0.42	35	0.42	20	0.28
V3	Interspersion	%		%		%	
	Class 1	40	0.64	40	0.64	40	0.60
	Class 2						
	Class 3	60		60		40	
	Class 4					20	
V4	%OW <= 1.5ft	85	1.00	85	1.00	75	0.94
V5	Salinity (ppt)						
	fresh intermediate	4	1.00	4	1.00	5.5	0.70
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.87	EM HSI =	0.86	EM HSI =	0.72
Open Water HSI =			0.60	OW HSI =	0.60	OW HSI =	0.47

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Freshwater Bayou Canal HR/SP - Belle Isle to Lock
Area B
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 4,630

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	84	0.86	83	0.85	73	0.76
V2	% Aquatic	35	0.42	40	0.46	50	0.55
V3	Interspersion	%		%		%	
	Class 1	40	0.64	40	0.64	40	0.62
	Class 2						
	Class 3	60		60		50	
	Class 4					10	
V4	%OW <= 1.5ft	85	1.00	85	1.00	85	1.00
V5	Salinity (ppt)						
	fresh intermediate	4	1.00	3	1.00	3	1.00
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.87	EM HSI =	0.86	EM HSI =	0.80
Open Water HSI =			0.60	OW HSI =	0.63	OW HSI =	0.69

AAHU CALCULATION - EMERGENT MARSH

Project: Freshwater Bayou Canal HR/SP - Belle Isle to Lock Area B

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	3869	0.87	3348.54	
1	3826	0.86	3288.40	3318.42
20	3101	0.72	2246.05	52266.85
			AAHUs =	2779.26

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	3869	0.87	3348.54	
1	3843	0.86	3303.01	3325.75
20	3389	0.80	2700.15	56939.81
			AAHUs	3013.28

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Emergent Marsh AAHUs	=			3013.28
B. Future Without Project Emergent Marsh AAHUs	=			2779.26
Net Change (FWP - FWOP)	=			234.01

AAHU CALCULATION - OPEN WATER

Project: Freshwater Bayou Canal HR/SP - Belle Isle to Lock Area B

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	761	0.60	454.86	
1	804	0.60	480.56	467.71
20	1529	0.47	711.88	11631.48
			AAHUs =	604.96

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	761	0.60	454.86	
1	787	0.63	495.80	475.19
20	1241	0.69	857.30	12767.01
			AAHUs =	662.11

NET CHANGE IN AAHUs DUE TO PROJECT

A. Future With Project Open Water AAHUs =	662.11
B. Future Without Project Open Water AAHUs =	604.96
Net Change (FWP - FWOP) =	57.15

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

A. Emergent Marsh Habitat Net AAHUs =	234.01
B. Open Water Habitat Net AAHUs =	57.15
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	176.96

WETLAND VALUE ASSESSMENT

MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: TE-8a North HNC Salinity Control

The WVA for this project includes 2 areas. Open water benefits in Area B were subtracted from the total project benefits because those would occur only under future without-project conditions. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	420
B-water	(89)

TOTAL BENEFITS =	331 AAHUS
-------------------------	------------------

COMMUNITY HABITAT SUITABILITY MODEL Fresh Swamp

Project..... North HNC Salinity Control

Acres: 3,791

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20		
		Class/Value	SI	Class/Value	SI	Class/Value	SI	
V1	Stand Structure	% Cover		% Cover		% Cover		
	Overstory	50	0.825	50	0.825	50	0.765	
	Scrub shrub	50		50		50		
	Herbaceous	50		50		50		
V2	Maturity (input age or	Age		Age		Age		
		Cypress %	94		Cypress %	94		
	species competition and dbh)	Cypress dbh	11		Cypress dbh	11		
		Tupelo et al. %	6		Tupelo et al. %	6		
		Tupelo et al dbh	6		Tupelo et al dbh	6		
			6	0.58	6	0.58	9	0.79
	V3	Hydrology	Class		Class		Class	
			2	0.40	2	0.40		0.30
V4	Forest Size	Class		Class		Class		
		5	1.00	5	1.00	5	1.00	
V5	Surrounding Land Use	Values %		Values %		Values %		
			0.81		0.81		0.81	
V6	Disturbance	Type		Type		Type		
		Class	0.97	Class	0.97	Class	0.97	
		Distance						
		HSI = 0.68		HSI = 0.68		HSI = 0.70		

COMMUNITY HABITAT SUITABILITY MODEL Fresh Swamp

Project..... North HNC Salinity Control

Acres: 3,791

Condition: Future With Project

Variable		TY 0		TY 1		TY 20		
		Class/Value	SI	Class/Value	SI	Class/Value	SI	
V1	Stand Structure	% Cover		% Cover		% Cover		
	Overstory	50	0.825	50	0.825	50	0.850	
	Scrub shrub	50		50		50		
	Herbaceous	50		50		50		
V2	Maturity (input age or	Age		Age		Age		
		Cypress %	94		Cypress %	94		
	species competition and dbh)	Cypress dbh	11		Cypress dbh	11		
		Tupelo et al. %	6		Tupelo et al. %	6		
		Tupelo et al dbh	6		Tupelo et al dbh	6		
			6	0.58	6	0.58	10	0.88
	V3	Hydrology	Class		Class		Class	
			2	0.40		0.60		0.60
V4	Forest Size	Class		Class		Class		
		5	1.00	5	1.00	5	1.00	
V5	Surrounding Land Use	Values %		Values %		Values %		
			0.81		0.81		0.81	
V6	Disturbance	Type		Type		Type		
		Class	0.97	Class	0.97	Class	0.97	
		Distance						
		HSI = 0.68		HSI = 0.72		HSI = 0.82		

AAHU CALCULATION, Fresh Swamp

Project: North HNC Salinity Control

Future With Project			Total	Cummulative
TY	Acres	x HSI	HUs	HUs
0	3781	0.68	2578.92	
1	3791	0.72	2744.91	2681.91
20	3791	0.82	3127.21	5578.12
			Total	
			CHUs =	68447.03
			AAHUs =	2822.35

Future Without Project			Total	Cummulative
TY	Acres	x HSI	HUs	HUs
0	3781	0.68	2578.92	
1	3774	0.68	2567.35	2573.13
20	3471	0.70	2428.47	47478.94
			Total	
			CHUs =	50062.07
			AAHUs =	2662.60

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project AAHUs =	2822.35
B. Future Without Project AAHUs =	2662.60
Net Change (FWP - FWOP) =	418.78

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: North HNC Salinity Control
 Open Water - FWOP Benefits
 Condition: Future Without Project

Project Area:
 Fresh.....
 Intermediate. 320

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	100	1.00	99	0.99	0	0.10
V2	% Aquatic	0	0.10	50	0.55	30	0.37
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	0.10
V4	%OW <= 1.5ft	0	0.10	100	0.60	70	0.89
V5	Salinity (ppt) fresh intermediate		0.80		0.80		0.60
		5		5		6	
V6	Access Value fresh intermediate		1.00		1.00		1.00
		1.00		1.00		1.00	
Emergent Marsh HSI		= 0.98		EM HSI = 0.97		EM HSI = 0.19	
Open Water HSI		= 0.28		OW HSI = 0.67		OW HSI = 0.49	

AAHU CALCULATION - OPEN WATER

Project: North HNC Salinity Control
 Open Water - FWOP Benefits

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	0	0.28	0.00	
1	17	0.67	11.47	4.61
20	320	0.49	155.70	1768.45
			AAHUs =	88.65

WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: XME-42 Little Pecan Bayou Control Structure

The WVA for this project includes 3 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
1	204
2	24
3	(4)

TOTAL BENEFITS =	224 AAHUS
-------------------------	------------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Little Pecan Bayou Control Structure
Area 1

Project Area: 5,044

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	26	0.33	26	0.33	25	0.33
V2	% Aquatic	15	0.24	15	0.24	15	0.24
V3	Interspersion	%		%		%	
	Class 1		0.24		0.24		0.24
	Class 2						
	Class 3	20		20		20	
	Class 4	80		80		80	
	Class 5						
V4	%OW <= 1.5ft	60	0.87	60	0.87	60	0.87
V5	Salinity (ppt)	12	0.70	12	0.70	12	0.70
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.44	EM HSI =	0.44	EM HSI =	0.43
	Open Water HSI	=	0.46	OW HSI =	0.46	OW HSI =	0.46

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Little Pecan Bayou Control Structure
Area 1

Project Area: 5,044

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	26	0.33	26	0.33	27	0.34
V2	% Aquatic	15	0.24	20	0.28	35	0.42
V3	Interspersion	%		%		%	
	Class 1		0.24		0.27		0.27
	Class 2						
	Class 3	20		35		35	
	Class 4	80		65		65	
	Class 5						
V4	%OW <= 1.5ft	60	0.87	60	0.87	60	0.87
V5	Salinity (ppt)	12	0.70	10	1.00	10	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.44	EM HSI =	0.48	EM HSI =	0.48
	Open Water HSI	=	0.46	OW HSI =	0.62	OW HSI =	0.62

Project: Little Pecan Bayou Control Structure
FWP

Variable		TY 5		TY 20		Value	SI
		Value	SI	Value	SI		
V1	% Emergent	27	0.34	27	0.34		
V2	% Aquatic	35	0.42	35	0.42		
V3	Interspersion	%		%		%	
	Class 1		0.27		0.27		
	Class 2						
	Class 3	35		35			
	Class 4	65		65			
	Class 5						
V4	%OW <= 1.5ft	60	0.87	60	0.87		
V5	Salinity (ppt)	10	1.00	10	1.00		
V6	Access Value	1.00	1.00	1.00	1.00		
		EM HSI =	0.48	EM HSI =	0.48	EM HSI =	
		OW HSI =	0.62	OW HSI =	0.62	OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Little Pecan Bayou Control Structure
Area 1

Future Without Project				Total	Cummulative
TY	Marsh Acres	x	HSI	HUs	HUs
0	1324		0.44	581.28	
1	1321		0.44	579.96	580.62
20	1272		0.43	549.60	10729.69
				AAHUs =	666.62

Future With Project				Total	Cummulative
TY	Marsh Acres	x	HSI	HUs	HUs
0	1324		0.44	581.28	
1	1331		0.48	633.15	607.17
3	1353		0.48	652.97	1286.07
5	1365		0.48	658.76	1311.73
20	1345		0.48	649.11	9809.05
				AAHUs	660.70

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	650.70
B. Future Without Project Emergent Marsh AAHUs	=	565.52
Net Change (FWP - FWOP)	=	85.19

AAHU CALCULATION - OPEN WATER

Project: Little Pecan Bayou Control Structure
Area 1

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	3720	0.46	1712.69	
1	3723	0.46	1714.08	1713.39
20	3772	0.46	1736.64	32781.76
			AAHUs =	1724.76

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	3720	0.46	1712.69	
1	3688	0.52	1921.47	1817.40
3	3691	0.62	2279.20	4200.57
5	3679	0.62	2271.79	4550.99
20	3699	0.62	2284.14	34169.44
			AAHUs	2236.92

NET CHANGE IN AAHUs DUE TO PROJECT				
A.	Future With Project Open Water AAHUs	=		2236.92
B.	Future Without Project Open Water AAHUs	=		1724.76
	Net Change (FWP - FWOP)	=		512.16

TOTAL BENEFITS IN AAHUs DUE TO PROJECT				
A.	Emergent Marsh Habitat Net AAHUs	=		85.19
B.	Open Water Habitat Net AAHUs	=		512.16
	Net Benefits = (2.6xEMAAHUs + OWAHUs)/3.6			203.79

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Little Pecan Bayou Control Structure
Area 2
Condition: Future Without Project

Project Area:
Fresh..... 8,500
Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	93	0.94	93	0.94	90	0.91
V2	% Aquatic	60	0.64	60	0.64	60	0.64
V3	Interspersion	%		%		%	
	Class 1	70	0.88	70	0.88	70	0.88
	Class 2	30		30		30	
	Class 3						
	Class 4						
V4	%OW <= 1.5ft	85	1.00	85	1.00	85	1.00
V5	Salinity (ppt)						
	fresh intermediate	1	1.00	1	1.00	1	1.00
V6	Access Value						
	fresh intermediate	0.35	0.55	0.35	0.55	0.35	0.55
Emergent Marsh HSI		=	0.87	EM HSI =	0.87	EM HSI =	0.86
Open Water HSI		=	0.69	OW HSI =	0.69	OW HSI =	0.69

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Little Pecan Bayou Control Structure
Area 2
Condition: Future With Project

Project Area:
Fresh..... 8,500
Intermediate.

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	93	0.94	93	0.94	91	0.92
V2	% Aquatic	60	0.64	65	0.69	65	0.69
V3	Interspersion	%		%		%	
	Class 1	70	0.88	70	0.88	70	0.88
	Class 2	30		30		30	
	Class 3						
	Class 4						
V4	%OW <= 1.5ft	85	1.00	85	1.00	85	1.00
V5	Salinity (ppt)						
	fresh intermediate	1	1.00	1	1.00	1	1.00
V6	Access Value						
	fresh intermediate	0.35	0.55	0.35	0.55	0.35	0.55
Emergent Marsh HSI		=	0.87	EM HSI =	0.87	EM HSI =	0.86
Open Water HSI		=	0.69	OW HSI =	0.72	OW HSI =	0.72

AAHU CALCULATION - EMERGENT MARSH

Project: Little Pecan Bayou Control Structure
Area 2

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	7891	0.87	6902.50	
1	7880	0.87	6892.88	6897.69
20	7688	0.86	6601.71	128188.89
			AAHUs =	6764.33

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	7891	0.87	6902.50	
1	7882	0.87	6894.63	6898.57
20	7718	0.86	6668.77	128846.79
			AAHUs	6787.27

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs	= 6787.27
B. Future Without Project Emergent Marsh AAHUs	= 6754.33
Net Change (FWP - FWOP)	= 32.94

AAHU CALCULATION - OPEN WATER

Project: Little Pecan Bayou Control Structure
Area 2

Future Without Project				Total	Cumulative
TY	Water Acres	x	HSI	HUs	HUs
0	609		0.69	421.13	
1	620		0.69	428.74	424.93
20	812		0.69	561.51	9407.32
AAHUs =				491.61	

Future With Project				Total	Cumulative
TY	Water Acres	x	HSI	HUs	HUs
0	609		0.69	421.13	
1	618		0.72	442.80	431.93
20	782		0.72	560.31	9529.62
AAHUs =				498.08	

NET CHANGE IN AAHUs DUE TO PROJECT

A. Future With Project Open Water AAHUs	=	498.08
B. Future Without Project Open Water AAHUs	=	491.61
Net Change (FWP - FWOP)	=	6.46

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

A. Emergent Marsh Habitat Net AAHUs	=	32.94
B. Open Water Habitat Net AAHUs	=	6.46
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	=	24.40

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Little Pecan Bayou Control Structure
Area 3
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 10,900

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	80	0.82	80	0.82	77	0.79
V2	% Aquatic	30	0.37	30	0.37	30	0.37
V3	Interspersion	%		%		%	
	Class 1	20	0.62	20	0.62	20	0.62
	Class 2	50		50		50	
	Class 3	30		30		30	
	Class 4						
V4	%OW <= 1.5ft	70	0.89	70	0.89	70	0.89
V5	Salinity (ppt)						
	fresh intermediate	5	0.80	5	0.80	5	0.80
V6	Access Value						
	fresh intermediat	0.48	0.58	0.48	0.58	0.48	0.58
Emergent Marsh HSI		=	0.76	EM HSI =	0.76	EM HSI =	0.74
Open Water HSI		=	0.49	OW HSI =	0.49	OW HSI =	0.49

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Little Pecan Bayou Control Structure
Area 3
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 10,900

Variable		TY 0		TY 1		TY 2	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	80	0.82	80	0.82	79	0.81
V2	% Aquatic	30	0.37	35	0.42	40	0.48
V3	Interspersion	%		%		%	
	Class 1	20	0.62	20	0.62	20	0.62
	Class 2	50		50		50	
	Class 3	30		30		30	
	Class 4						
V4	%OW <= 1.5ft	70	0.89	70	0.89	70	0.89
V5	Salinity (ppt)						
	fresh intermediate	5	0.80	4	1.00	4	1.00
V6	Access Value						
	fresh intermediat	0.48	0.58	0.28	0.43	0.28	0.43
Emergent Marsh HSI		=	0.76	EM HSI =	0.75	EM HSI =	0.75
Open Water HSI		=	0.49	OW HSI =	0.61	OW HSI =	0.64

Project: Little Pecan Bayou Control Structure
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	78	0.80				
V2	% Aquatic	40	0.48				
V3	Interspersion	%		%		%	
	Class 1	20	0.62				
	Class 2	50					
	Class 3	30					
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	70	0.89				
V5	Salinity (ppt)						
	fresh		1.00				
	intermediate	4					
V6	Access Value						
	fresh		0.43				
	intermediate	0.28					
		EM HSI =	0.74	EM HSI =		EM HSI =	
		OW HSI =	0.64	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Little Pecan Bayou Control Structure
Area 3

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	8685	0.76	6598.77	
1	8671	0.76	6588.14	6593.45
20	8411	0.74	6251.27	121960.69
			AAHUs =	6427.71

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	8685	0.76	6598.77	
1	8673	0.75	6519.86	6559.30
2	8681	0.75	6465.51	6492.68
20	8452	0.74	6285.17	114572.84
			AAHUs	6381.24

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs	= 6381.24
B. Future Without Project Emergent Marsh AAHUs	= 6427.71
Net Change (FWP - FWOP)	= -46.47

AAHU CALCULATION - OPEN WATER

Project: Little Pecan Bayou Control Structure
Area 3

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	2215	0.49	1091.84	
1	2229	0.49	1098.75	1095.29
20	2489	0.49	1226.91	22093.70

AAHUs = 1159.45

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	2215	0.49	1091.84	
1	2227	0.51	1137.02	1114.40
2	2239	0.54	1201.52	1169.22
20	2448	0.54	1313.68	22636.81

AAHUs = 1246.02

NET CHANGE IN AAHUs DUE TO PROJECT

A. Future With Project Open Water AAHUs	=	1246.02
B. Future Without Project Open Water AAHUs	=	1159.45
Net Change (FWP - FWOP)	=	86.57

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

A. Emergent Marsh Habitat Net AAHUs	=	-46.47
B. Open Water Habitat Net AAHUs	=	86.57
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	=	-3.55

WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET

**Project: XBA-63iii Barataria Basin Landbridge Shoreline Protection
Phase 3**

The WVA for this project includes 5 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
1	25
2a	11
2b	34
3	29
4	2

TOTAL BENEFITS =	101 AAHUS
-------------------------	------------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 1
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 974

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	74	0.77	73	0.76	66	0.69
V2	% Aquatic	50	0.55	49	0.54	39	0.45
V3	Interspersion	%		%		%	
	Class 1	30	0.64	30	0.64	25	0.56
	Class 2	30		30		25	
	Class 3	40		40		30	
	Class 5					20	
V4	%OW <= 1.5ft	40	0.55	39	0.54	30	0.44
V5	Salinity (ppt)						
	fresh intermediate	3	1.00	3	1.00	3	1.00
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.81	EM HSI =	0.80	EM HSI =	0.75
Open Water HSI		=	0.66	OW HSI =	0.65	OW HSI =	0.58

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 1
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 974

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	74	0.77	73	0.76	71	0.74
V2	% Aquatic	50	0.55	60	0.64	60	0.64
V3	Interspersion	%		%		%	
	Class 1	30	0.64	30	0.64	30	0.64
	Class 2	30		30		30	
	Class 3	40		40		40	
	Class 5						
V4	%OW <= 1.5ft	40	0.55	40	0.55	40	0.55
V5	Salinity (ppt)						
	fresh intermediate	3	1.00	3	1.00	3	1.00
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.81	EM HSI =	0.80	EM HSI =	0.79
Open Water HSI		=	0.66	OW HSI =	0.72	OW HSI =	0.72

AAHU CALCULATION - EMERGENT MARSH

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 1

Future Without Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	716	0.81	576.43	
1	712	0.80	568.86	572.64
20	647	0.75	483.31	9984.88
			AAHUs =	527.88

Future With Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	716	0.81	576.43	
1	715	0.80	571.26	573.84
20	691	0.79	543.62	10590.42
			AAHUs	558.21

NET CHANGE IN AAHUs DUE TO PROJECT				
A.	Future With Project Emergent Marsh AAHUs	=		558.21
B.	Future Without Project Emergent Marsh AAHUs	=		527.88
Net Change (FWP - FWOP) =				30.34

AAHU CALCULATION - OPEN WATER

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 1

Future Without Project			Total HU	Cummulative HU
TY	Water Acres	x HSI		
0	258	0.66	170.01	
1	259	0.65	168.87	169.44
20	327	0.58	188.35	3410.02
			AAHUs =	178.97

Future With Project			Total HU	Cummulative HU
TY	Water Acres	x HSI		
0	258	0.66	170.01	
1	259	0.72	186.16	178.07
20	283	0.72	203.41	3700.87
			AAHUs	193.95

NET CHANGE IN AAHUs DUE TO PROJECT				
A.	Future With Project Open Water AAHUs	=		193.95
B.	Future Without Project Open Water AAHUs	=		178.97
Net Change (FWP - FWOP) =				14.97

TOTAL BENEFITS IN AAHUs DUE TO PROJECT				
A.	Emergent Marsh Habitat Net AAHUs	=		30.34
B.	Open Water Habitat Net AAHUs	=		14.97
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1				25.38

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 2a
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 20

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	89	0.90	88	0.89	63	0.67
V2	% Aquatic	80	0.82	72	0.75	30	0.37
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 90 10	0.92
V4	%OW <= 1.5ft	50	0.66	45	0.61	19	0.31
V5	Salinity (ppt) fresh intermediate	3	1.00	3	1.00	3	1.00
V6	Access Value fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.94	EM HSI =	0.93	EM HSI =	0.77
Open Water HSI		=	0.87	OW HSI =	0.82	OW HSI =	0.53

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 2a
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 20

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	89	0.90	89	0.90	86	0.87
V2	% Aquatic	80	0.82	80	0.82	80	0.82
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	50	0.66	50	0.66	50	0.66
V5	Salinity (ppt) fresh intermediate	3	1.00	3	1.00	3	1.00
V6	Access Value fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.94	EM HSI =	0.94	EM HSI =	0.92
Open Water HSI		=	0.87	OW HSI =	0.87	OW HSI =	0.87

AAHU CALCULATION - EMERGENT MARSH

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 2a

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	107	0.94	100.08	
1	105	0.93	97.58	98.83
20	75	0.77	57.63	1459.16
			AAHUs =	77.90

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	107	0.94	100.08	
1	107	0.94	100.08	100.08
20	103	0.92	94.50	1848.19
			AAHUs =	97.41

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	97.41
B. Future Without Project Emergent Marsh AAHUs	=	77.90
Net Change (FWP - FWOP)	=	19.51

AAHU CALCULATION - OPEN WATER

Project: Baratania Basin Landbridge Shore Protection - Phase 3
Area 2a

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	13	0.87	11.28	
1	15	0.82	12.28	11.79
20	45	0.53	24.05	372.13
			AAHUs =	19.20

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	13	0.87	11.28	
1	13	0.87	11.28	11.28
20	17	0.87	14.75	247.22
			AAHUs	12.92

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	12.92
B. Future Without Project Open Water AAHUs =	19.20
Net Change (FWP - FWOP) =	-6.27

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	19.51
B. Open Water Habitat Net AAHUs =	-6.27
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	11.20

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 2b

Project Area: 203

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	68	0.71	65	0.69	12	0.21
V2	% Aquatic	30	0.37	27	0.34	12	0.21
V3	Interspersion	%		%		%	
	Class 1	30	0.58	30	0.58		0.20
	Class 2						
	Class 3	70		70			
	Class 4					100	
V4	%OW <= 1.5ft	30	0.49	27	0.45	12	0.25
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.77	EM HSI =	0.76	EM HSI =	0.37
	Open Water HSI	=	0.68	OW HSI =	0.66	OW HSI =	0.41

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 2b

Project Area: 203

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	68	0.71	68	0.71	66	0.69
V2	% Aquatic	30	0.37	30	0.37	30	0.37
V3	Interspersion	%		%		%	
	Class 1	30	0.58	30	0.58	30	0.58
	Class 2						
	Class 3	70		70		70	
	Class 4						
V4	%OW <= 1.5ft	30	0.49	30	0.49	30	0.49
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.77	EM HSI =	0.77	EM HSI =	0.76
	Open Water HSI	=	0.68	OW HSI =	0.68	OW HSI =	0.68

AAHU CALCULATION - EMERGENT MARSH

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 2b

Future Without Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	138	0.77	106.88	
1	132	0.76	99.92	103.38
20	25	0.37	9.14	903.53
			AAHUs =	50.35

Future With Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	138	0.77	106.88	
1	138	0.77	106.88	106.88
20	133	0.76	101.45	1978.98
			AAHUs	104.29

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Emergent Marsh AAHUs	=		104.29
B. Future Without Project Emergent Marsh AAHUs	=		50.35
Net Change (FWP - FWOP)	=		63.96

AAHU CALCULATION - OPEN WATER

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 2b

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	65	0.58	37.79	
1	71	0.56	39.72	38.78
20	178	0.41	73.14	1122.52
			AAHUs =	58.08

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	65	0.58	37.79	
1	65	0.58	37.79	37.79
20	70	0.58	40.69	745.58
			AAHUs	39.17

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	39.17
B. Future Without Project Open Water AAHUs =	58.08
Net Change (FWP - FWOP) =	-18.90

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	53.95
B. Open Water Habitat Net AAHUs =	-18.90
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	33.71

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 3

Project Area: 920

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	59	0.63	58	0.62	44	0.50
V2	% Aquatic	25	0.33	25	0.33	15	0.24
V3	Interspersion	%	0.46	%	0.46	%	0.38
	Class 1						
	Class 2	30		30			
	Class 3	70		70		90	
	Class 4					10	
V4	%OW <= 1.5ft	70	1.00	69	0.99	50	0.74
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.71		EM HSI = 0.70		EM HSI = 0.61	
Open Water HSI =		0.58		OW HSI = 0.58		OW HSI = 0.48	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 3

Project Area: 920

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	59	0.63	58	0.62	53	0.58
V2	% Aquatic	25	0.33	25	0.33	25	0.33
V3	Interspersion	%	0.46	%	0.46	%	0.45
	Class 1						
	Class 2	30		30		25	
	Class 3	70		70		75	
	Class 4						
V4	%OW <= 1.5ft	70	1.00	70	1.00	70	1.00
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.71		EM HSI = 0.70		EM HSI = 0.67	
Open Water HSI =		0.58		OW HSI = 0.58		OW HSI = 0.58	

AAHU CALCULATION - EMERGENT MARSH

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 3

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	539	0.71	381.62	
1	532	0.70	373.48	377.54
20	408	0.61	247.60	5862.88
AAHUs =			312.02	

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	539	0.71	381.62	
1	536	0.70	376.28	378.95
20	486	0.67	325.92	6665.94
AAHUs			362.24	

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	352.24
B. Future Without Project Emergent Marsh AAHUs =	312.02
Net Change (FWP - FWOP) =	40.22

AAHU CALCULATION - OPEN WATER

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 3

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	381	0.58	220.40	
1	388	0.58	224.09	222.25
20	512	0.48	247.54	4517.38

AAHUs = 236.98

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	381	0.58	220.40	
1	384	0.58	222.14	221.27
20	434	0.58	250.74	4492.49

AAHUs 235.69

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	235.69
B. Future Without Project Open Water AAHUs	=	236.98
Net Change (FWP - FWOP)	=	-1.29

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	40.22
B. Open Water Habitat Net AAHUs	=	-1.29
Net Benefits = (2.6xEMAAHUs+OWAAHUs)/3.6	=	28.69

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 4

Project Area: 163

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	53	0.58	52	0.57	43	0.49
V2	% Aquatic	15	0.24	15	0.24	12	0.21
V3	Interspersion	%		%		%	
	Class 1		0.44		0.44		0.43
	Class 2	20		20		15	
	Class 3	80		80		85	
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	20	0.36	20	0.36	17	0.32
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.67	EM HSI =	0.66	EM HSI =	0.61
Open Water HSI =			0.46	OW HSI =	0.46	OW HSI =	0.43

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 4

Project Area: 163

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	53	0.58	52	0.57	46	0.51
V2	% Aquatic	15	0.24	15	0.24	15	0.24
V3	Interspersion	%		%		%	
	Class 1		0.44		0.44		0.44
	Class 2	20		20		20	
	Class 3	80		80		80	
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	20	0.36	20	0.36	20	0.36
V5	Salinity (ppt)	4	1.00	4	1.00	4	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.67	EM HSI =	0.66	EM HSI =	0.63
Open Water HSI =			0.46	OW HSI =	0.46	OW HSI =	0.46

AAHU CALCULATION - EMERGENT MARSH

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 4

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	86	0.67	57.58	
1	85	0.66	56.39	56.98
20	70	0.61	42.43	936.00
			AAHUs =	49.65

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	86	0.67	57.58	
1	85	0.66	56.39	56.98
20	76	0.63	47.59	986.69
			AAHUs	52.18

NET CHANGE IN AAHUs DUE TO PROJECT

A. Future With Project Emergent Marsh AAHUs	=	52.18
B. Future Without Project Emergent Marsh AAHUs	=	49.65
Net Change (FWP - FWOP)	=	2.53

AAHU CALCULATION - OPEN WATER

Project: Barataria Basin Landbridge Shore Protection - Phase 3
Area 4

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	77	0.46	35.37	
1	78	0.46	35.83	35.60
20	93	0.43	40.24	723.93
AAHUs =				37.98

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	77	0.46	35.37	
1	78	0.46	35.83	35.60
20	87	0.46	39.96	720.01
AAHUs				37.78

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	37.78
B. Future Without Project Open Water AAHUs =	37.98
Net Change (FWP - FWOP) =	-0.20

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	2.53
B. Open Water Habitat Net AAHUs =	-0.20
Net Benefits = (2.6xEMAAHUs+OWAAHUs)/3.6	1.78

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Marsh Creation South of Leeville

Project Area: 163

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	6	0.15	6	0.15	6	0.15
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.20	% 100	0.20	% 100	0.20
V4	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10
V5	Salinity (ppt)	16	1.00	16	1.00	16	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.32		EM HSI =		0.32	
Open Water HSI =		0.65		OW HSI =		0.65	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Marsh Creation South of Leeville

Project Area: 163

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	6	0.15	29	0.36	99	0.99
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.20	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	0	0.10	100	0.50	100	0.50
V5	Salinity (ppt)	16	1.00	16	1.00	16	1.00
V6	Access Value	1.00	1.00	0.0001	0.10	1.00	1.00
Emergent Marsh HSI =		0.32		EM HSI =		0.43	
Open Water HSI =		0.65		OW HSI =		0.29	
						EM HSI = 0.99	
						OW HSI = 0.74	

Project: Marsh Creation South of Leeville
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	95	0.96				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1	100	1.00				
	Class 2						
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	95	0.63				
V5	Salinity (ppt)	16	1.00				
V6	Access Value	1.00	1.00				
		EM HSI =		0.97	EM HSI =		EM HSI =
		OW HSI =		0.75	OW HSI =		OW HSI =

AAHU CALCULATION - EMERGENT MARSH

Project: Marsh Creation South of Leeville

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	10	0.32	3.25	
1	10	0.32	3.25	3.25
20	9	0.32	2.92	58.58
			AAHUs =	3.09

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	10	0.32	3.25	
1	48	0.43	20.45	11.20
3	162	0.99	161.15	159.98
20	155	0.97	150.91	2652.06
			AAHUs	141.16

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Emergent Marsh AAHUs	=		141.16	
B. Future Without Project Emergent Marsh AAHUs	=		3.09	
Net Change (FWP - FWOP)	=		138.07	

AAHU CALCULATION - OPEN WATER

Project: Marsh Creation South of Leeville

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	153	0.65	99.10	
1	153	0.65	99.10	99.10
20	154	0.65	99.74	1888.99
			AAHUs =	99.40

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	153	0.65	99.10	
1	0	0.29	0.00	40.47
3	1	0.74	0.74	0.59
20	8	0.75	5.97	56.79
			AAHUs	4.89

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	4.89
B. Future Without Project Open Water AAHUs	=	99.40
Net Change (FWP - FWOP)	=	-94.51

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	138.07
B. Open Water Habitat Net AAHUs	=	-94.51
Net Benefits = (3.5xEMAAHUs+OWAAHUs)/4.5	=	86.39

WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: PO-13 Tangipahoa/Pontchartrain Shoreline Protection

The WVA for this project includes 4 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	10
B	11
B1	16
B-water	(3)

TOTAL BENEFITS =	34	AAHUS
-------------------------	-----------	--------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Tangipahoa/Pontchartrain Shoreline Protection
 Area A
 Condition: Future Without Project

Project Area:
 Fresh.....
 Intermediate. 40

Variable		TY 0		TY 1		TY 13	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	38	0.44	35	0.42	15	0.24
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%	0.48	%	0.44	%	0.28
	Class 1	35		30		10	
	Class 2						
	Class 3						
	Class 4	65		70		90	
V4	%OW <= 1.5R	38	0.53	36	0.51	28	0.42
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	3		3		3	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.00		1.00		1.00	
Emergent Marsh HSI		=	0.56	EM HSI =	0.53	EM HSI =	0.37
Open Water HSI		=	0.28	OW HSI =	0.28	OW HSI =	0.28

Project: Tangipahoa/Pontchartrain Shoreline Protection
 FWOP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	0	0.10				
V2	% Aquatic	0	0.10				
V3	Interspersion	%	0.10	%		%	
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5	100					
V4	%OW <= 1.5ft	24	0.37				
V5	Salinity (ppt)						
	fresh		1.00				
	intermediate	3					
V6	Access Value						
	fresh		1.00				
	intermediate	1.00					
EM HSI =		0.24		EM HSI =		EM HSI =	
OW HSI =		0.28		OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Tangipahoa/Pontchartrain Shoreline Protection Area A
 Condition: Future With Project

Project Area:
 Fresh.....
 Intermediate. 40

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	38	0.44	40	0.46	85	0.87
V2	% Aquatic	0	0.10	5	0.15	50	0.55
V3	Interspersion	%		%		%	
	Class 1	35	0.48	35	0.48	100	1.00
	Class 2						
	Class 3						
	Class 4	65		65			
	Class 5						
V4	%OW <= 1.5ft	38	0.53	40	0.55	95	0.80
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	3		3		3	
V8	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.00		1.00		1.00	
Emergent Marsh HSI		=	0.56	EM HSI =	0.57	EM HSI =	0.91
Open Water HSI		=	0.29	OW HSI =	0.33	OW HSI =	0.70

AAHU CALCULATION - EMERGENT MARSH

Project: Tangipahoa/Pontchartrain Shoreline Protection Area A

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	15	0.56	8.38	
1	14	0.53	7.47	7.92
13	8	0.37	2.25	55.79
20	0	0.24	0.00	6.90
			AAHUs =	3.63

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	15	0.56	8.38	
1	18	0.57	9.15	8.78
20	34	0.91	30.99	381.92
			AAHUs	18.53

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs	= 18.53
B. Future Without Project Emergent Marsh AAHUs	= 3.53
Net Change (FWP - FWOP) =	15.00

COMMUNITY HABITAT SUITABILITY MODEL Fresh Swamp

Project.....Tangipahoa/Pontchartrain Shoreline Protection Acres: 20
 Area B
 Condition: Future Without Project

Variable		TY 0		TY 1		TY 20		
		Class/Value	SI	Class/Value	SI	Class/Value	SI	
V1	Stand Structure	% Cover		% Cover		% Cover	No swamp remaining	
	Overstory	63	0.60	63	0.60			
	Scrub shrub	21		21				
	Herbaceous	79		79				
V2	Maturity (input age or	Age		Age		Age		
		Cypress %	74	Cypress %	74	Cypress %		
	species composition and dbh)	Cypress dbh	18.4		Cypress dbh	18.4	Cypress dbh	
		Tupelo et al. %	26		Tupelo et al. %	26	Tupelo et al. %	
		Tupelo et al dbh	7.5	0.88	Tupelo et al dbh	7.5	0.88	
		Class	4	1.00	Class	4	1.00	Class
	V3	Hydrology	Class	4	1.00	Class	4	1.00
	V4	Forest Size	Class	5	1.00	Class	5	1.00
V5	Surrounding Land Use	Values %		Values %		Values %		
	Forest / marsh Abandoned Ag Pasture / Hay Active Ag Development Disturbance	100	1.00	100	1.00			
V6	Type	Class	4	1.00	Class	4	1.00	
	Distance	Class	3		Class	3		
		HSI =	0.82	HSI =	0.82	HSI =		

COMMUNITY HABITAT SUITABILITY MODEL Fresh Swamp

Project.....Tangipahoa/Pontchartrain Shoreline Protection Acres: 20
 Area B
 Condition: Future With Project

Variable		TY 0		TY 1		TY 20		
		Class/Value	SI	Class/Value	SI	Class/Value	SI	
V1	Stand Structure	% Cover		% Cover		% Cover		
	Overstory	63	0.60	63	0.60	65	0.60	
	Scrub shrub	21		21		24		
	Herbaceous	79		79		80		
V2	Maturity (input age or	Age		Age		Age		
		Cypress %	74	Cypress %	74	Cypress %	75	
	species composition and dbh)	Cypress dbh	18.4		Cypress dbh	18.4	Cypress dbh	
		Tupelo et al. %	26		Tupelo et al. %	26	Tupelo et al. %	
		Tupelo et al dbh	7.5	0.88	Tupelo et al dbh	7.5	0.88	
		Class	4	1.00	Class	4	1.00	Class
	V3	Hydrology	Class	4	1.00	Class	4	1.00
	V4	Forest Size	Class	5	1.00	Class	5	1.00
V5	Surrounding Land Use	Values %		Values %		Values %		
	Forest / marsh Abandoned Ag Pasture / Hay Active Ag Development Disturbance	100	1.00	100	1.00	100	1.00	
V6	Type	Class	4	1.00	Class	4	1.00	
	Distance	Class	3		Class	3		
		HSI =	0.82	HSI =	0.82	HSI =	0.84	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Tangipahoa/Pontchartrain Shoreline Protection
Area B1
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 100

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	0	0.10	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.10	% 100	0.10	% 100	0.10
V4	%OW <= 1.5ft	67	0.85	67	0.85	67	0.85
V5	Salinity (ppt) fresh intermediate	 3	1.00	 3	1.00	 3	1.00
V6	Access Value fresh intermediate	 1.00	1.00	 1.00	1.00	 1.00	1.00
Emergent Marsh HSI		=	0.24	EM HSI =	0.24	EM HSI =	0.24
Open Water HSI		=	0.28	OW HSI =	0.28	OW HSI =	0.28

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Tangipahoa/Pontchartrain Shoreline Protection
Area B1
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 100

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	4	0.14	75	0.78
V2	% Aquatic	0	0.10	5	0.15	50	0.55
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.10	% 100	0.20	% 30	0.76
V4	%OW <= 1.5ft	67	0.85	67	0.85	95	0.80
V5	Salinity (ppt) fresh intermediate	 3	1.00	 3	1.00	 3	1.00
V6	Access Value fresh intermediate	 1.00	1.00	 1.00	1.00	 1.00	1.00
Emergent Marsh HSI		=	0.24	EM HSI =	0.28	EM HSI =	0.82
Open Water HSI		=	0.28	OW HSI =	0.33	OW HSI =	0.69

AAHU CALCULATION - EMERGENT MARSH

Project: Tangipahoa/Pontchartrain Shoreline Protection
Area B1

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	
1	0	0.24	0.00	0.00
20	0	0.24	0.00	0.00
			AAHUs =	0.00

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.24	0.00	
1	4	0.28	1.12	0.53
20	75	0.82	61.84	475.89
			AAHUs	23.82

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs	= 23.82
B. Future Without Project Emergent Marsh AAHUs	= 0.00
Net Change (FWP - FWOP)	= 23.82

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Tangipahoa/Pontchartrain Shoreline Protection
 Open Water - FWOP Benefits - Area B
 Condition: Future Without Project

Project Area:
 Fresh.....
 Intermediate. 20

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	100	1.00	99	0.99	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	0.10
V4	%OW <= 1.5ft	0	0.10	100	0.60	67	0.85
V5	Salinity (ppt) fresh intermediate		1.00		1.00		1.00
		3		3		3	
V6	Access Value fresh intermediate		1.00		1.00		1.00
		1.00		1.00		1.00	
Emergent Marsh HSI =		1.00		EM HSI =	0.99	EM HSI =	0.24
Open Water HSI =		0.29		OW HSI =	0.33	OW HSI =	0.28

AAHU CALCULATION - OPEN WATER

Project: Tangipahoa/Pontchartrain Shoreline Protection
 Open Water - FWOP Benefits - Area B

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	0	0.29	0.00	
1	1	0.33	0.33	0.16
20	20	0.28	5.66	59.80
			AAHUs =	3.00

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Grand/White Lakes Landbridge Protection
 Option A - Rock Breakwaters
 Condition: Future Without Project

Project Area:
 Fresh..... 1,530
 Intermediate..

Variable		TY 0		TY 1		TY 15	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	29	0.36	29	0.36	17	0.25
V2	% Aquatic	3	0.13	3	0.13	3	0.13
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	 0.20 	% 100	 0.20 	% 100	 0.20
V4	%OW <= 1.5ft	4	0.15	4	0.15	4	0.15
V5	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.00
V6	Access Value fresh intermediate	0.10	0.37	0.10	0.37	0.10	0.37
Emergent Marsh HSI		= 0.42		EM HSI = 0.42		EM HSI = 0.34	
Open Water HSI		= 0.23		OW HSI = 0.23		OW HSI = 0.23	

Project: Grand/White Lakes Landbridge Protection
 FWOP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	14	0.23				
V2	% Aquatic	1	0.11				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	 0.20 	%		%	
V4	%OW <= 1.5ft	2	0.12				
V5	Salinity (ppt) fresh intermediate	1	1.00				
V6	Access Value fresh intermediate	0.10	0.37				
EM HSI = 0.32		EM HSI =		EM HSI =		EM HSI =	
OW HSI = 0.21		OW HSI =		OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Grand/White Lakes Landbridge Protection
 Option A - Rock Breakwaters
 Condition: Future With Project

Project Area:
 Fresh..... 1,530
 Intermediate.

Variable		TY 0		TY 1		TY 10	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	29	0.36	30	0.37	30	0.37
V2	% Aquatic	3	0.13	3	0.13	5	0.15
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.20	% 100	0.20	% 100	0.20
V4	%OW <= 1.5ft	4	0.15	5	0.16	3	0.13
V5	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.00
V6	Access Value fresh intermediate	0.10	0.37	0.10	0.37	0.10	0.37
Emergent Marsh HSI =		0.42		EM HSI =		0.42	
Open Water HSI =		0.23		OW HSI =		0.23	

Project: Grand/White Lakes Landbridge Protection
 FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	28	0.35				
V2	% Aquatic	3	0.13				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.20	%		%	
V4	%OW <= 1.5ft	3	0.13				
V5	Salinity (ppt) fresh intermediate	1	1.00				
V6	Access Value fresh intermediate	0.10	0.37				
EM HSI =		0.41		EM HSI =			
OW HSI =		0.23		OW HSI =			

AAHU CALCULATION - EMERGENT MARSH

Project: Grand/White Lakes Landbridge Protection
Option A - Rock Breakwaters

Future Without Project			x HSI	Total HUs	Cumulative HUs
TY	Marsh Acres				
0	451		0.42	187.28	
1	441		0.42	183.13	185.21
15	267		0.34	91.58	1893.61
20	216		0.32	70.02	403.19
AAHUs =				124.10	

Future With Project			x HSI	Total HUs	Cumulative HUs
TY	Marsh Acres				
0	451		0.42	187.28	
1	460		0.42	193.71	190.49
10	458		0.42	192.87	1739.61
20	429		0.41	175.63	1841.93
AAHUs				188.60	

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	188.60
B. Future Without Project Emergent Marsh AAHUs	=	124.10
Net Change (FWP - FWOP)	=	64.50

AAHU CALCULATION - OPEN WATER

Project: Grand/White Lakes Landbridge Protection
Option A - Rock Breakwaters

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1079	0.23	246.75	
1	1089	0.23	249.03	247.89
15	1263	0.23	288.82	3764.99
20	1314	0.21	279.93	1422.55
			AAHUs =	271.77

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1079	0.23	246.75	
1	1070	0.23	245.58	246.16
10	1072	0.24	258.71	2269.27
20	1101	0.23	250.86	2548.50
			AAHUs	253.20

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Open Water AAHUs	=		253.20
B. Future Without Project Open Water AAHUs	=		271.77
Net Change (FWP - FWOP)	=		-18.57

TOTAL BENEFITS IN AAHUs DUE TO PROJECT			
A. Emergent Marsh Habitat Net AAHUs	=		64.50
B. Open Water Habitat Net AAHUs	=		-18.57
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1			37.70

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Grand/White Lakes Landbridge Protection
 Option B - A-Jacks
 Condition: Future Without Project

Project Area:
 Fresh..... 1,530
 Intermediate..

Variable		TY 0		TY 1		TY 15	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	29	0.36	29	0.36	17	0.25
V2	% Aquatic	3	0.13	3	0.13	3	0.13
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.20	% 100	0.20	% 100	0.20
V4	%OW <= 1.5ft	4	0.15	4	0.15	4	0.15
V5	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.00
V6	Access Value fresh intermediate	0.10	0.37	0.10	0.37	0.10	0.37
Emergent Marsh HSI =		0.42		EM HSI =	0.42	EM HSI =	0.34
Open Water HSI =		0.23		OW HSI =	0.23	OW HSI =	0.23

Project: Grand/White Lakes Landbridge Protection
 FWOP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	14	0.23				
V2	% Aquatic	1	0.11				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.20	%		%	
V4	%OW <= 1.5ft	2	0.12				
V5	Salinity (ppt) fresh intermediate	1	1.00				
V6	Access Value fresh intermediate	0.10	0.37				
EM HSI =		0.32		EM HSI =		EM HSI =	
OW HSI =		0.21		OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Grand/White Lakes Landbridge Protection
 Option B - A-Jacks
 Condition: Future With Project

Project Area:
 Fresh..... 1,530
 Intermediate.

Variable		TY 0		TY 1		TY 10	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	29	0.36	30	0.37	28	0.35
V2	% Aquatic	3	0.13	3	0.13	5	0.15
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.20	% 100	0.20	% 100	0.20
V4	%OW <= 1.5ft	4	0.15	5	0.16	5	0.18
V5	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.00
V6	Access Value fresh intermediate	0.10	0.37	0.10	0.37	0.10	0.37
Emergent Marsh HSI		= 0.42		EM HSI = 0.42		EM HSI = 0.41	
Open Water HSI		= 0.23		OW HSI = 0.23		OW HSI = 0.24	

Project: Grand/White Lakes Landbridge Protection
 FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	26	0.33				
V2	% Aquatic	4	0.14				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.20	%		%	
V4	%OW <= 1.5ft	6	0.17				
V5	Salinity (ppt) fresh intermediate	1	1.00				
V6	Access Value fresh intermediate	0.10	0.37				
EM HSI = 0.40		EM HSI =		EM HSI =		EM HSI =	
OW HSI = 0.24		OW HSI =		OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

**Project: Grand/White Lakes Landbridge Protection
Option B - A-Jacks**

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	451	0.42	187.28	
1	441	0.42	183.13	185.21
15	267	0.34	91.58	1893.61
20	216	0.32	70.02	403.19
			AAHUs =	124.10

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	451	0.42	187.28	
1	459	0.42	193.29	190.28
10	435	0.41	178.09	1670.78
20	396	0.40	157.44	1676.88
			AAHUs	176.90

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Emergent Marsh AAHUs	=			176.90
B. Future Without Project Emergent Marsh AAHUs	=			124.10
Net Change (FWP - FWOP)	=			52.80

AAHU CALCULATION - OPEN WATER

Project: Grand/White Lakes Landbridge Protection
Option B - A-Jacks

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1079	0.23	246.75	
1	1089	0.23	249.03	247.89
15	1263	0.23	288.82	3764.99
20	1314	0.21	279.93	1422.55
			AAHUs =	271.77

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1079	0.23	246.75	
1	1071	0.23	245.81	246.28
10	1095	0.24	266.09	2303.04
20	1134	0.24	268.92	2675.43
			AAHUs	261.24

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	261.24
B. Future Without Project Open Water AAHUs	=	271.77
Net Change (FWP - FWOP)	=	-10.53

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	52.80
B. Open Water Habitat Net AAHUs	=	-10.53
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1		32.37

**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: PTE-15viii Raccoon Island Restoration

The WVA for this project includes 3 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
1	41
2	42
3	0.48

TOTAL BENEFITS = 83 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Raccoon Island Restoration
Area 1
Condition: Future Without Project

Project Area: 86

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	0	0.10	0	0.10
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	 0.10 	% 100	 0.10 	% 100	 0.10
V4	%OW <= 1.5ft	60	0.87	60	0.87	50	0.74
V5	Salinity (ppt)	22	0.93	22	0.93	22	0.93
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.25	EM HSI =	0.25	EM HSI =	0.25
Open Water HSI		=	0.69	OW HSI =	0.69	OW HSI =	0.68

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Raccoon Island Restoration
Area 1
Condition: Future With Project

Project Area: 86

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	25	0.33	97	0.97
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	 0.10 	% 100 	 1.00 	% 100 	 1.00
V4	%OW <= 1.5ft	60	0.87	100	0.50	100	0.50
V5	Salinity (ppt)	22	0.93	22	0.93	22	0.93
V6	Access Value	1.00	1.00	0.0001	0.10	1.00	1.00
Emergent Marsh HSI		=	0.25	EM HSI =	0.40	EM HSI =	0.98
Open Water HSI		=	0.69	OW HSI =	0.29	OW HSI =	0.73

Project: Raccoon Island Restoration
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	87	0.88				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1	85	0.88				
	Class 2						
	Class 3						
	Class 4	15					
	Class 5						
V4	%OW <= 1.5ft	100	0.50				
V5	Salinity (ppt)	22	0.93				
V6	Access Value	1.00	1.00				
		EM HSI =	0.91	EM HSI =		EM HSI =	
		OW HSI =	0.72	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Raccoon Island Restoration
Area 1

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.25	0.00	
1	0	0.25	0.00	0.00
20	0	0.25	0.00	0.00
			AAHUs =	0.00

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.25	0.00	
1	21	0.40	8.45	3.70
3	83	0.98	81.01	77.60
20	75	0.91	68.19	1266.61
			AAHUs	67.40

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	67.40
B. Future Without Project Emergent Marsh AAHUs =	0.00
Net Change (FWP - FWOP) =	67.40

AAHU CALCULATION - OPEN WATER

Project: Raccoon Island Restoration
Area 1

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	86	0.69	59.51	
1	86	0.69	59.51	59.51
20	86	0.68	58.69	1122.87
			AAHUs =	59.12

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	86	0.69	59.51	
1	0	0.29	0.00	23.94
3	3	0.73	2.19	1.75
20	11	0.72	7.94	86.37
			AAHUs	5.60

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	5.60
B. Future Without Project Open Water AAHUs	=	59.12
Net Change (FWP - FWOP)	=	-53.52

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	67.40
B. Open Water Habitat Net AAHUs	=	-53.52
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5		40.53

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Raccoon Island Restoration
 Area 2
 Condition: Future Without Project

Project Area: 93

Variable		TY 0		TY 1		TY 13	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	62	0.66	57	0.61	0	0.10
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	60	0.68	60	0.68		0.10
	Class 2						
	Class 3						
	Class 4	40		40			
	Class 5					100	
V4	%OW <= 1.5ft	50	0.74	50	0.74	60	0.87
V5	Salinity (ppt)	22	0.93	22	0.93	22	0.93
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.75	EM HSI =	0.72	EM HSI =	0.25
Open Water HSI =			0.73	OW HSI =	0.73	OW HSI =	0.69

Project: Raccoon Island Restoration
 FWOP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	0	0.10				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1		0.10				
	Class 2						
	Class 3						
	Class 4						
	Class 5	100					
V4	%OW <= 1.5ft	40	0.61				
V5	Salinity (ppt)	22	0.93				
V6	Access Value	1.00	1.00				
EM HSI =			0.25	EM HSI =		EM HSI =	
OW HSI =			0.67	OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Raccoon Island Restoration
 Area 2
 Condition: Future With Project

Project Area: 93

Variable		TY 0		TY 1		TY 10	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	62	0.66	66	0.69	98	0.98
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	60	0.68	60	0.68	100	1.00
	Class 2						
	Class 3						
	Class 4	40		40			
	Class 5						
V4	%OW <= 1.5ft	50	0.74	50	0.74	100	0.50
V5	Salinity (ppt)	22	0.93	22	0.93	22	0.93
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.75	EM HSI =	0.77	EM HSI =	0.98
Open Water HSI =			0.73	OW HSI =	0.73	OW HSI =	0.73

Project: Raccoon Island Restoration
 FWP

Variable		TY 20					
		Value	SI	Value	SI	Value	SI
V1	% Emergent	98	0.98				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1	100	1.00				
	Class 2						
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	100	0.50				
V5	Salinity (ppt)	22	0.93				
V6	Access Value	1.00	1.00				
EM HSI =			0.98	EM HSI =		EM HSI =	
OW HSI =			0.73	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Raccoon Island Restoration
Area 2

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	58	0.75	43.31	
1	53	0.72	38.02	40.64
13	0	0.25	0.00	178.81
20	0	0.25	0.00	0.00
			AAHUs =	10.97

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	58	0.75	43.31	
1	61	0.77	46.96	45.12
10	91	0.98	89.29	603.63
20	91	0.98	89.29	892.94
			AAHUs	77.08

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	77.08
B. Future Without Project Emergent Marsh AAHUs =	10.97
Net Change (FWP - FWOP) =	66.11

AAHU CALCULATION - OPEN WATER

Project: Raccoon Island Restoration
Area 2

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	35	0.73	25.39	
1	40	0.73	29.02	27.20
13	93	0.69	64.35	563.75
20	93	0.67	62.58	444.26
			AAHUs =	51.76

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	35	0.73	25.39	
1	32	0.73	23.21	24.30
10	2	0.73	1.46	111.29
20	2	0.73	1.46	14.62
			AAHUs	7.51

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	7.51
B. Future Without Project Open Water AAHUs	=	51.76
Net Change (FWP - FWOP) =		-44.25

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	68.11
B. Open Water Habitat Net AAHUs	=	-44.25
Net Benefits = (3.5xEMAAHUs+OWAAHUs)/4.5		41.59

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Raccoon Island Restoration
Area 3

Project Area: 33

Condition: Future Without Project

Variable		TY 0		TY 1		TY 6	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	100	1.00	82	0.84	0	0.10
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	100	1.00	80	0.84		0.10
	Class 2						
	Class 3						
	Class 4			20			
	Class 5					100	
V4	%OW <= 1.5ft	100	0.50	100	0.50	80	1.00
V5	Salinity (ppt)	22	0.93	22	0.93	22	0.93
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.99	EM HSI =	0.88	EM HSI =	0.25
Open Water HSI =			0.73	OW HSI =	0.72	OW HSI =	0.70

Project: Raccoon Island Restoration
FWOP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	0	0.10				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1		0.10				
	Class 2						
	Class 3						
	Class 4						
	Class 5	100					
V4	%OW <= 1.5ft	20	0.36				
V5	Salinity (ppt)	22	0.93				
V6	Access Value	1.00	1.00				
EM HSI =			0.25	EM HSI =		EM HSI =	
OW HSI =			0.65	OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Raccoon Island Restoration
Area 3

Project Area: 33

Condition: Future With Project

Variable		TY 0		TY 1		TY 7	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	100	1.00	87	0.88	0	0.10
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	100	1.00	85	0.88		0.10
	Class 2						
	Class 3						
	Class 4			15			
	Class 5					100	
V4	%OW <= 1.5ft	100	0.50	100	0.50	80	1.00
V5	Salinity (ppt)	22	0.93	22	0.93	22	0.93
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.99	EM HSI =	0.91	EM HSI =	0.25
Open Water HSI		=	0.73	OW HSI =	0.72	OW HSI =	0.70

Project: Raccoon Island Restoration
FWP

Variable		TY 20					
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1		0.10				
	Class 2						
	Class 3						
	Class 4						
	Class 5	100					
V4	%OW <= 1.5ft	20	0.36				
V5	Salinity (ppt)	22	0.93				
V6	Access Value	1.00	1.00				
EM HSI =		0.25		EM HSI =		EM HSI =	
OW HSI =		0.65		OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Raccoon Island Restoration
Area 3

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	33	0.99	32.73	
1	27	0.88	23.69	28.10
6	0	0.25	0.00	45.16
20	0	0.25	0.00	0.00
			AAHUs =	3.66

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	33	0.99	32.73	
1	29	0.91	26.37	29.49
7	0	0.25	0.00	60.05
20	0	0.25	0.00	0.00
			AAHUs	4.48

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	4.48
B. Future Without Project Emergent Marsh AAHUs =	3.66
Net Change (FWP - FWOP) =	0.81

AAHU CALCULATION - OPEN WATER

Project: Raccoon Island Restoration
Area 3

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	0	0.73	0.00	
1	6	0.72	4.32	2.17
6	33	0.70	23.15	69.06
20	33	0.65	21.58	313.08
			AAHUs =	19.22

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	0	0.73	0.00	
1	4	0.72	2.89	1.45
7	33	0.70	23.15	78.71
20	33	0.65	21.58	290.72
			AAHUs	18.54

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	18.54
B. Future Without Project Open Water AAHUs =	19.22
Net Change (FWP - FWOP) =	-0.67

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	0.81
B. Open Water Habitat Net AAHUs =	-0.67
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	0.48

WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: BA-17a Amoretta Diversion

The WVA for this project includes 3 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	15
B	54
C	64

TOTAL BENEFITS =	133 AAHUS
-------------------------	------------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Amoretta Diversion
Area A

Project Area: 1,447

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	76	0.78	76	0.78	72	0.75
V2	% Aquatic	20	0.28	20	0.28	20	0.28
V3	Interspersion	%		%		%	
	Class 1	30	0.65	30	0.65	20	0.60
	Class 2	35		35		40	
	Class 3	35		35		40	
	Class 4						
V4	%OW <= 1.5ft	60	0.87	60	0.87	60	0.87
V5	Salinity (ppt)	8	1.00	8	1.00	8	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.83	EM HSI =	0.83	EM HSI =	0.80
	Open Water HSI	=	0.66	OW HSI =	0.66	OW HSI =	0.66

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Amoretta Diversion
Area A

Project Area: 1,447

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	76	0.78	76	0.78	73	0.76
V2	% Aquatic	20	0.28	25	0.33	50	0.55
V3	Interspersion	%		%		%	
	Class 1	30	0.65	30	0.65	20	0.60
	Class 2	35		35		40	
	Class 3	35		35		40	
	Class 4						
V4	%OW <= 1.5ft	60	0.87	60	0.87	70	1.00
V5	Salinity (ppt)	8	1.00	5	1.00	5	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.83	EM HSI =	0.83	EM HSI =	0.81
	Open Water HSI	=	0.66	OW HSI =	0.68	OW HSI =	0.74

AAHU CALCULATION - EMERGENT MARSH

Project: Amoretta Diversion
Area A

Future Without Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	1104	0.83	914.48	
1	1101	0.83	912.00	913.24
20	1043	0.80	834.27	16584.27
			AAHUs =	874.88

Future With Project			Total HUs	Cumulative HUs
TY	Marsh Acres	x HSI		
0	1104	0.83	914.48	
1	1101	0.83	912.00	913.24
20	1053	0.81	848.32	16719.55
			AAHUs	881.64

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	881.64
B. Future Without Project Emergent Marsh AAHUs =	874.88
Net Change (FWP - FWOP) =	6.76

AAHU CALCULATION - OPEN WATER

Project: Amoretta Diversion
Area A

Future Without Project			Total HUs	Cumulative HUs
TY	Water Acres	x HSI		
0	343	0.55	188.36	
1	346	0.55	190.01	189.18
20	404	0.55	220.36	3899.18
			AAHUs =	204.42

Future With Project			Total HUs	Cumulative HUs
TY	Water Acres	x HSI		
0	343	0.55	188.36	
1	346	0.58	201.74	195.03
20	394	0.74	289.96	4647.85
			AAHUs	242.14

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Open Water AAHUs	=			242.14
B. Future Without Project Open Water AAHUs	=			204.42
Net Change (FWP - FWOP)	=			37.73

TOTAL BENEFITS IN AAHUs DUE TO PROJECT				
A. Emergent Marsh Habitat Net AAHUs	=			6.76
B. Open Water Habitat Net AAHUs	=			37.73
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6				15.36

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Amoretta Diversion
Area B
Condition: Future Without Project

Project Area: 1,269

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	56	0.60	55	0.60	48	0.53
V2	% Aquatic	5	0.15	5	0.15	5	0.15
V3	Interspersion	%		%		%	
	Class 1	65	0.81	65	0.81	60	0.78
	Class 2	10		10		10	
	Class 3	25		25		30	
	Class 4						
V4	%OW <= 1.5ft	45	0.68	45	0.68	40	0.61
V5	Salinity (ppt)	8	1.00	8	1.00	8	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.73	EM HSI =	0.72	EM HSI =	0.68
	Open Water HSI	=	0.43	OW HSI =	0.43	OW HSI =	0.42

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Amoretta Diversion
Area B
Condition: Future With Project

Project Area: 1,269

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	56	0.60	56	0.60	54	0.59
V2	% Aquatic	5	0.15	20	0.28	40	0.48
V3	Interspersion	%		%		%	
	Class 1	65	0.81	65	0.81	65	0.81
	Class 2	10		10		10	
	Class 3	25		25		25	
	Class 4						
V4	%OW <= 1.5ft	45	0.68	45	0.68	45	0.68
V5	Salinity (ppt)	8	1.00	5	1.00	5	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.73	EM HSI =	0.73	EM HSI =	0.72
	Open Water HSI	=	0.43	OW HSI =	0.55	OW HSI =	0.67

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Amoretta Diversion
Area C

Project Area: 11,150

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	44	0.50	43	0.49	38	0.44
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	10	0.42	10	0.42	5	0.38
	Class 2	20		20		20	
	Class 3	30		30		30	
	Class 4	40		40		45	
Class 5							
V4	%OW <= 1.5ft	15	0.29	15	0.29	15	0.29
V5	Salinity (ppt)	13	1.00	13	1.00	13	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.82	EM HSI =	0.61	EM HSI =	0.67
Open Water HSI		=	0.68	OW HSI =	0.68	OW HSI =	0.68

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Amoretta Diversion
Area C

Project Area: 11,150

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	44	0.50	44	0.50	39	0.45
V2	% Aquatic	0	0.30	2	0.31	5	0.34
V3	Interspersion	%		%		%	
	Class 1	10	0.42	10	0.42	5	0.38
	Class 2	20		20		20	
	Class 3	30		30		30	
	Class 4	40		40		45	
Class 5							
V4	%OW <= 1.5ft	15	0.29	15	0.29	15	0.29
V5	Salinity (ppt)	13	1.00	11	1.00	11	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.82	EM HSI =	0.62	EM HSI =	0.58
Open Water HSI		=	0.68	OW HSI =	0.69	OW HSI =	0.69

AAHU CALCULATION - EMERGENT MARSH

Project: Amoretta Diversion
Area C

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	4878	0.62	3012.02	
1	4843	0.61	2960.04	2985.99
20	4217	0.57	2424.58	51082.05
			AAHUs =	2703.40

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	4878	0.62	3012.02	
1	4851	0.62	2995.35	3003.68
20	4373	0.58	2542.36	52553.58
			AAHUs	2777.86

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	2777.86
B. Future Without Project Emergent Marsh AAHUs =	2703.40
Net Change (FWP - FWOP) =	74.46

**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: XBA-1a East/West Grand Terre Islands Restoration

The WVA for this project includes 2 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
East	160
West	23

TOTAL BENEFITS =	183 AAHUS
-------------------------	------------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: East/West Grand Terre Islands Restoration
 East Grand Terre

Project Area: 1,575

Condition: Future Without Project

Variable		TY 0		TY 1		TY 13	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	37	0.43	36	0.42	17	0.25
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%	0.31	%	0.31	%	0.23
	Class 1						
	Class 2	15		15			
	Class 3	25		25		15	
	Class 4	60		60		85	
V4	%OW <= 1.5ft	45	0.68	45	0.68	45	0.68
V5	Salinity (ppt)	17	1.00	17	1.00	17	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.56		EM HSI =		0.55	
Open Water HSI =		0.70		OW HSI =		0.70	
				EM HSI =		0.41	
				OW HSI =		0.69	

Project: East/West Grand Terre Islands Restoration
 FWOP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	15	0.24				
V2	% Aquatic	0	0.30				
V3	Interspersion	%	0.23	%		%	
	Class 1						
	Class 2						
	Class 3	15					
	Class 4	85					
V4	%OW <= 1.5ft	45	0.68				
V5	Salinity (ppt)	17	1.00				
V6	Access Value	1.00	1.00				
		EM HSI =		0.40		EM HSI =	
		OW HSI =		0.69		OW HSI =	
				EM HSI =			
				OW HSI =			

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: East/West Grand Terre Islands Restoration
 East Grand Terre
 Condition: Future With Project

Project Area: 1,575

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	37	0.43	42	0.48	52	0.57
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1		0.31	35	0.53	35	0.53
	Class 2	15					
	Class 3	25		25		25	
	Class 4	60		40		40	
V4	%OW <= 1.5ft	45	0.68	41	0.63	41	0.63
V5	Salinity (ppt)	17	1.00	17	1.00	17	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.56	EM HSI =	0.62	EM HSI =	0.68
Open Water HSI =			0.70	OW HSI =	0.71	OW HSI =	0.71

Project: East/West Grand Terre Islands Restoration
 FWP

Variable		TY 14		TY 20		Value	SI
		Value	SI	Value	SI		
V1	% Emergent	42	0.48	41	0.47		
V2	% Aquatic	0	0.30	0	0.30		
V3	Interspersion	%		%			%
	Class 1	30	0.47	30	0.47		
	Class 2						
	Class 3	15		15			
	Class 4	55		55			
V4	%OW <= 1.5ft	45	0.68	50	0.74		
V5	Salinity (ppt)	17	1.00	17	1.00		
V6	Access Value	1.00	1.00	1.00	1.00		
EM HSI =			0.61	EM HSI =	0.60	EM HSI =	
OW HSI =			0.71	OW HSI =	0.72	OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: East/West Grand Terre Islands Restoration
East Grand Terre

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	589	0.56	330.26	
1	564	0.55	312.59	321.40
13	270	0.41	111.81	2464.02
20	231	0.40	92.21	713.41
			AAHUs =	174.94

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	589	0.56	330.26	
1	655	0.62	404.22	366.62
3	822	0.68	558.04	958.82
14	657	0.61	401.07	5254.41
20	639	0.60	386.04	2381.21
			AAHUs	447.05

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	447.05
B. Future Without Project Emergent Marsh AAHUs =	174.94
Net Change (FWP - FWOP) =	272.11

AAHU CALCULATION - OPEN WATER

Project: East/West Grand Terre Islands Restoration
East Grand Terre

Future Without Project			Total HUs	Cumulative HUs
TY	Water Acres	x HSI		
0	986	0.70	688.92	
1	1011	0.70	706.39	697.66
13	1305	0.69	904.08	9666.28
20	1344	0.69	931.09	6423.10
			AAHUs =	839.35

Future With Project			Total HUs	Cumulative HUs
TY	Water Acres	x HSI		
0	986	0.70	688.92	
1	711	0.71	505.66	597.86
3	753	0.71	535.53	1041.18
14	918	0.71	652.29	6533.19
20	936	0.72	669.54	3965.40
			AAHUs	606.88

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Open Water AAHUs	=		606.88
B. Future Without Project Open Water AAHUs	=		839.35
Net Change (FWP - FWOP)	=		-232.47

TOTAL BENEFITS IN AAHUs DUE TO PROJECT			
A. Emergent Marsh Habitat Net AAHUs	=		272.11
B. Open Water Habitat Net AAHUs	=		-232.47
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5			159.98

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: East/West Grand Terre Islands Restoration
West Grand Terre

Project Area: 249

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	49	0.54	46	0.51	0	0.10
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	45	0.56	45	0.56		0.10
	Class 2						
	Class 3						
	Class 4	55		55			
	Class 5					100	
V4	%OW <= 1.5ft	46	0.69	46	0.69	10	0.23
V5	Salinity (ppt)	17	1.00	17	1.00	17	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.66		EM HSI = 0.66		EM HSI = 0.28	
Open Water HSI =		0.72		OW HSI = 0.72		OW HSI = 0.66	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: East/West Grand Terre Islands Restoration
West Grand Terre

Project Area: 249

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	49	0.54	53	0.58	59	0.63
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	45	0.56	55	0.64	55	0.64
	Class 2						
	Class 3						
	Class 4	55		45		45	
	Class 5						
V4	%OW <= 1.5ft	46	0.69	67	0.96	67	0.96
V5	Salinity (ppt)	17	1.00	17	1.00	17	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.66		EM HSI = 0.70		EM HSI = 0.73	
Open Water HSI =		0.72		OW HSI = 0.74		OW HSI = 0.74	

Project: East/West Grand Terre Islands Restoration
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	26	0.33				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1	20	0.36				
	Class 2						
	Class 3						
	Class 4	80					
	Class 5						
V4	%OW <= 1.5ft	23	0.40				
V5	Salinity (ppt)	17	1.00				
V6	Access Value	1.00	1.00				
		EM HSI =	0.49	EM HSI =		EM HSI =	
		OW HSI =	0.68	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: East/West Grand Terre Islands Restoration
West Grand Terre

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	121	0.66	80.34	
1	115	0.65	74.23	77.27
20	0	0.26	0.00	565.00
			AAHUs =	32.11

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	121	0.66	80.34	
1	131	0.70	91.33	85.78
3	146	0.73	107.00	198.15
20	64	0.49	31.54	1121.82
			AAHUs	70.29

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	70.29
B. Future Without Project Emergent Marsh AAHUs =	32.11
Net Change (FWP - FWOP) =	38.17

AAHU CALCULATION - OPEN WATER

Project: East/West Grand Terre Islands Restoration
West Grand Terre

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	128	0.72	91.93	
1	134	0.72	96.24	94.08
20	249	0.65	161.80	2476.26
			AAHUs =	128.52

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	128	0.72	91.93	
1	88	0.74	65.48	78.88
3	103	0.74	76.64	142.12
20	185	0.68	126.07	1737.60
			AAHUs	97.93

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	97.93
B. Future Without Project Open Water AAHUs	=	128.52
Net Change (FWP - FWOP)	=	-30.59

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	38.17
B. Open Water Habitat Net AAHUs	=	-30.59
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	=	22.89

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: East Grand Terre Island Restoration

Project Area: 1,575

Condition: Future Without Project

Variable		TY 0		TY 1		TY 13	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	37	0.43	36	0.42	17	0.25
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1		0.31		0.31		0.23
	Class 2	15		15			
	Class 3	25		25		15	
	Class 4	60		60		85	
	Class 5						
V4	%OW <= 1.5ft	45	0.68	45	0.68	45	0.68
V5	Salinity (ppt)	17	1.00	17	1.00	17	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.56	EM HSI =	0.55	EM HSI =	0.41
Open Water HSI =			0.70	OW HSI =	0.70	OW HSI =	0.69

Project: East Grand Terre Island Restoration
FWOP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	15	0.24				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1		0.23				
	Class 2						
	Class 3	15					
	Class 4	85					
	Class 5						
V4	%OW <= 1.5ft	45	0.68				
V5	Salinity (ppt)	17	1.00				
V6	Access Value	1.00	1.00				
EM HSI =			0.40	EM HSI =		EM HSI =	
OW HSI =			0.69	OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: East Grand Terre Island Restoration

Project Area: 1,575

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	37	0.43	42	0.48	52	0.57
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1		0.31	35	0.53	35	0.53
	Class 2	15					
	Class 3	25		25		25	
	Class 4	60		40		40	
	Class 5						
V4	%OW <= 1.5ft	45	0.68	41	0.63	41	0.63
V5	Salinity (ppt)	17	1.00	17	1.00	17	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.56	EM HSI =	0.62	EM HSI =	0.68
Open Water HSI =			0.70	OW HSI =	0.71	OW HSI =	0.71

Project: East Grand Terre Island Restoration
FWP

Variable		TY 14		TY 20			
		Value	SI	Value	SI	Value	SI
V1	% Emergent	42	0.48	41	0.47		
V2	% Aquatic	0	0.30	0	0.30		
V3	Interspersion	%		%		%	
	Class 1	30	0.47	30	0.47		
	Class 2						
	Class 3	15		15			
	Class 4	55		55			
	Class 5						
V4	%OW <= 1.5ft	45	0.68	50	0.74		
V5	Salinity (ppt)	17	1.00	17	1.00		
V6	Access Value	1.00	1.00	1.00	1.00		
EM HSI =			0.81	EM HSI =	0.80	EM HSI =	
OW HSI =			0.71	OW HSI =	0.72	OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: East Grand Terre Island Restoration

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	589	0.56	330.26	
1	564	0.55	312.59	321.40
13	270	0.41	111.81	2464.02
20	231	0.40	92.21	713.41
			AAHUs =	174.94

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	589	0.56	330.26	
1	655	0.62	404.22	366.62
3	822	0.68	558.04	958.82
14	657	0.61	401.07	5254.41
20	639	0.60	386.04	2361.21
			AAHUs	447.05

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	447.05
B. Future Without Project Emergent Marsh AAHUs =	174.94
Net Change (FWP - FWOP) =	272.11

AAHU CALCULATION - OPEN WATER

Project: East Grand Terre Island Restoration

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	986	0.70	688.92	
1	1011	0.70	706.39	697.66
13	1305	0.69	904.08	9666.28
20	1344	0.69	931.09	6423.10
			AAHUs =	839.35

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	986	0.70	688.92	
1	711	0.71	505.66	597.86
3	753	0.71	535.53	1041.18
14	918	0.71	652.29	6533.19
20	936	0.72	669.54	3965.40
			AAHUs	606.88

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	606.88
B. Future Without Project Open Water AAHUs =	839.35
Net Change (FWP - FWOP) =	-232.47

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	272.11
B. Open Water Habitat Net AAHUs =	-232.47
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	159.98

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: East Golden Meadow Terracing

Project Area: 1,878

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	24	0.32	24	0.32	21	0.29
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.20
	Class 2						
	Class 3						
	Class 4	100		100		100	
	Class 5						
V4	%OW <= 1.5ft	5	0.16	5	0.16	3	0.14
V5	Salinity (ppt)	6	1.00	6	1.00	6	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		0.46	EM HSI =	0.46	EM HSI =	0.43
	Open Water HSI =		0.30	OW HSI =	0.30	OW HSI =	0.29

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: East Golden Meadow Terracing

Project Area: 1,878

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	24	0.32	28	0.33	27	0.34
V2	% Aquatic	0	0.10	5	0.15	23	0.31
V3	Interspersion	%		%		%	
	Class 1		0.20		0.40		0.40
	Class 2						
	Class 3						
	Class 4	100		100		100	
	Class 5						
V4	%OW <= 1.5ft	5	0.16	7	0.19	7	0.19
V5	Salinity (ppt)	6	1.00	6	1.00	6	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		0.46	EM HSI =	0.49	EM HSI =	0.50
	Open Water HSI =		0.30	OW HSI =	0.36	OW HSI =	0.50

Project: East Golden Meadow Terracing
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	25	0.33				
V2	% Aquatic	25	0.33				
V3	Interspersion	%		%		%	
	Class 1		0.40				
	Class 2						
	Class 3	100					
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	6	0.18				
V5	Salinity (ppt)	6	1.00				
V6	Access Value	1.00	1.00				
		EM HSI = 0.48		EM HSI =		EM HSI =	
		OW HSI = 0.51		OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: East Golden Meadow Terracing

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	452	0.45	205.19	
1	449	0.45	203.83	204.51
20	390	0.43	168.74	3535.43
			AAHUs =	187.00

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	452	0.45	205.19	
1	487	0.49	238.70	221.73
3	516	0.50	256.48	495.11
20	469	0.48	226.61	4104.45
			AAHUs	241.06

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	241.06
B. Future Without Project Emergent Marsh AAHUs	=	187.00
Net Change (FWP - FWOP)	=	54.07

AAHU CALCULATION - OPEN WATER

Project: East Golden Meadow Terracing

Future Without Project			Total HUs	Cumulative HUs
TY	Water Acres	x HSI		
0	1426	0.30	422.71	
1	1429	0.30	423.60	423.15
20	1488	0.29	438.25	8187.89
			AAHUs =	430.55

Future With Project			Total HUs	Cumulative HUs
TY	Water Acres	x HSI		
0	1426	0.30	422.71	
1	1391	0.36	503.46	463.46
3	1362	0.50	681.99	1186.79
20	1409	0.51	722.95	11940.30
			AAHUs	679.53

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	679.53
B. Future Without Project Open Water AAHUs	=	430.55
Net Change (FWP - FWOP)	=	248.98

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	54.07
B. Open Water Habitat Net AAHUs	=	248.98
Net Benefits = (2.6xEMAAHUs+OWAAHUs)/3.6		108.21

**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project : XTE-45a Timbalier Island Dune/Marsh Restoration

The WVA for this project includes 2 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	70
B	54

TOTAL BENEFITS =	124 AAHUS
-------------------------	------------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Timbalier Island Dune and Marsh Restoration
Area A

Project Area: 397

Condition: Future Without Project

Variable		TY 0		TY 1		TY 6	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	50	0.55	41	0.47	0	0.10
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	50	0.60	40	0.52		0.10
	Class 2						
	Class 3						
	Class 4	50		60			
	Class 5					100	
V4	%OW <= 1.5ft	100	0.50	90	0.75	53	0.78
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.67	EM HSI =	0.61	EM HSI =	0.26
Open Water HSI =			0.71	OW HSI =	0.72	OW HSI =	0.69

Project: Timbalier Island Dune and Marsh Restoration
FWOP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	0	0.10				
V2	% Aquatic	0	0.30				
V3	Interspersion	%					%
	Class 1		0.10				
	Class 2						
	Class 3						
	Class 4						
	Class 5	100					
V4	%OW <= 1.5ft	0	0.10				
V5	Salinity (ppt)	20	1.00				
V6	Access Value	1.00	1.00				
EM HSI =			0.26	EM HSI =		EM HSI =	
OW HSI =			0.64	OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Timbalier Island Dune and Marsh Restoration
Area A

Project Area: 397

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	50	0.55	62	0.66	83	0.85
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	50	0.60	100	1.00	80	0.84
	Class 2						
	Class 3						
	Class 4	50				20	
V4	%OW <= 1.5ft	100	0.50	100	0.50	85	0.88
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	0.83	0.85	0.98	0.98
Emergent Marsh HSI =			0.67	EM HSI =	0.77	EM HSI =	0.89
Open Water HSI =			0.71	OW HSI =	0.67	OW HSI =	0.75

Project: Timbalier Island Dune and Marsh Restoration
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	7	0.16				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1		0.20				
	Class 2						
	Class 3						
	Class 4	100					
V4	%OW <= 1.5ft	56	0.82				
V5	Salinity (ppt)	20	1.00				
V6	Access Value	1.00	1.00				
EM HSI =			0.33	EM HSI =		EM HSI =	
OW HSI =			0.70	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Timbalier Island Dune and Marsh Restoration
Area A

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	200	0.67	134.90	
1	164	0.61	99.99	117.06
6	0	0.26	0.00	202.25
20	0	0.26	0.00	0.00
			AAHUs =	15.97

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	200	0.67	134.90	
1	246	0.77	188.77	161.12
3	330	0.89	293.05	478.44
20	27	0.33	8.99	2090.71
			AAHUs	136.51

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	136.51
B. Future Without Project Emergent Marsh AAHUs =	15.97
Net Change (FWP - FWOP) =	120.55

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Timbalier Island Dune and Marsh Restoration
Area B

Project Area: 266

Condition: Future Without Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	42	0.48	45	0.51	52	0.57
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	40	0.52	45	0.56	50	0.60
	Class 2						
	Class 3						
	Class 4	60		55		50	
	Class 5						
V4	%OW <= 1.5ft	11	0.24	12	0.25	15	0.29
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.62	EM HSI =	0.64	EM HSI =	0.69
Open Water HSI =			0.68	OW HSI =	0.69	OW HSI =	0.69

Project: Timbalier Island Dune and Marsh Restoration
FWOP

Variable		TY 6		TY 9		TY 14	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	57	0.61	57	0.61	42	0.48
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	55	0.64	55	0.64	40	0.52
	Class 2						
	Class 3						
	Class 4	45		45		60	
	Class 5						
V4	%OW <= 1.5ft	17	0.32	18	0.33	12	0.25
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
EM HSI =			0.72	EM HSI =	0.72	EM HSI =	0.62
OW HSI =			0.70	OW HSI =	0.70	OW HSI =	0.68

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Timbalier Island Dune and Marsh Restoration
Area B

Project Area: 266

Condition: Future With Project

Variable		TY 0		TY 1		TY 10	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	42	0.48	45	0.51	76	0.78
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	40	0.52	45	0.56	75	0.80
	Class 2						
	Class 3						
	Class 4	60		55		25	
V4	%OW <= 1.5ft	11	0.24	12	0.25	31	0.50
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.62		EM HSI = 0.64		EM HSI = 0.85	
Open Water HSI =		0.68		OW HSI = 0.69		OW HSI = 0.72	

Project: Timbalier Island Dune and Marsh Restoration
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	92	0.93				
V2	% Aquatic	0	0.30				
V3	Interspersion	%					
	Class 1	90	0.92				
	Class 2						
	Class 3						
	Class 4	10					
V4	%OW <= 1.5ft	50	0.74				
V5	Salinity (ppt)	20	1.00				
V6	Access Value	1.00	1.00				
EM HSI =		0.95		EM HSI =		EM HSI =	
OW HSI =		0.75		OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Timbalier Island Dune and Marsh Restoration
Area B

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	112	0.62	68.99	
1	121	0.64	77.35	73.14
3	139	0.69	95.45	172.51
6	152	0.72	109.60	307.34
9	152	0.72	109.60	328.80
14	112	0.62	68.99	442.98
20	0	0.26	0.00	167.17
			AAHUs =	74.60

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	112	0.62	68.99	
1	121	0.64	77.35	73.14
10	201	0.85	170.45	1090.07
20	246	0.95	233.39	2011.64
			AAHUs	158.74

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	158.74
B. Future Without Project Emergent Marsh AAHUs =	74.60
Net Change (FWP - FWOP) =	84.15

AAHU CALCULATION - OPEN WATER

Project: Timbalier Island Dune and Marsh Restoration
Area B

Future	Without Project		Total HUs	Cummulative HUs
	Water Acres	x HSI		
0	154	0.68	105.01	
1	145	0.69	99.44	102.23
3	127	0.69	87.83	187.31
5	114	0.70	79.40	250.88
	114	0.70	79.51	238.36
1	154	0.68	105.15	462.14
20	266	0.65	171.84	835.10
			AAHUs =	103.80

Future With Project	TY			Total HUs	Cummulative HUs
		Water Acres	x HSI		
	0	154	0.68	105.01	
	1	145	0.69	99.44	102.23
	10	65	0.72	46.91	662.87
	20	20	0.75	14.97	311.43
			AAHUs	53.83	

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	53.83
B. Future Without Project Open Water AAHUs =	103.80
Net Change (FWP - FWOP) =	-49.97

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	84.15
B. Open Water Habitat Net AAHUs =	-49.97
Net Benefits = (3.5xEMAAHUs+OWAAHUs)/4.5	54.34

**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: XBA-1c Grand Pierre Island Restoration

The WVA for this project includes 2 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	50
B	1

TOTAL BENEFITS =	51 AAHUS
-------------------------	-----------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Grand Pierre Island Restoration
Area A

Project Area: 501

Condition: Future Without Project

Variable		TY 0		TY 1		TY 5	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	42	0.48	42	0.48	40	0.48
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	40	0.52	40	0.52	40	0.52
	Class 2						
	Class 3						
	Class 4	60		60		60	
V4	%OW <= 1.5ft	7	0.19	7	0.19	6	0.18
V5	Salinity (ppt)	15	1.00	15	1.00	15	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.62	EM HSI =	0.62	EM HSI =	0.60
Open Water HSI =			0.68	OW HSI =	0.68	OW HSI =	0.68

Project: Grand Pierre Island Restoration
FWOP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	20	0.28				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1		0.20				
	Class 2						
	Class 3						
	Class 4	100					
V4	%OW <= 1.5ft	5	0.16				
V5	Salinity (ppt)	15	1.00				
V6	Access Value	1.00	1.00				
EM HSI =			0.43	EM HSI =		EM HSI =	
OW HSI =			0.65	OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Grand Pierre Island Restoration
Area A

Project Area: 501

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	42	0.48	45	0.51	54	0.59
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	40	0.52	50	0.60	50	0.60
	Class 2						
	Class 3						
	Class 4	60		50		50	
V4	%OW <= 1.5ft	7	0.19	4	0.15	11	0.24
V5	Salinity (ppt)	15	1.00	15	1.00	15	1.00
V6	Access Value	1.00	1.00	0.97	0.97	0.97	0.97
Emergent Marsh HSI =			0.62	EM HSI =	0.64	EM HSI =	0.70
Open Water HSI =			0.68	OW HSI =	0.67	OW HSI =	0.68

Project: Grand Pierre Island Restoration
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	49	0.54				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1	45	0.56				
	Class 2						
	Class 3						
	Class 4	55					
V4	%OW <= 1.5ft	10	0.23				
V5	Salinity (ppt)	15	1.00				
V6	Access Value	1.00	1.00				
EM HSI =			0.66	EM HSI =		EM HSI =	
OW HSI =			0.68	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Grand Pierre Island Restoration
Area A

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	212	0.62	130.59	
1	209	0.62	128.75	129.67
5	198	0.60	119.46	496.32
20	102	0.43	44.14	1186.01
			AAHUs =	90.60

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	212	0.62	130.59	
1	227	0.64	145.40	137.94
3	269	0.70	187.00	331.63
20	247	0.66	164.00	2981.52
			AAHUs	172.55

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	172.55
B. Future Without Project Emergent Marsh AAHUs	=	90.60
Net Change (FWP - FWOP)	=	81.95

AAHU CALCULATION - OPEN WATER

Project: Grand Pierre Island Restoration
Area A

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	289	0.68	195.96	
1	292	0.68	197.99	196.98
5	303	0.68	205.16	806.32
20	399	0.65	260.33	3497.11
			AAHUs =	225.02

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	289	0.68	195.96	
1	229	0.67	153.53	174.67
3	232	0.68	157.09	310.62
20	254	0.68	173.71	2811.37
			AAHUs	164.83

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	164.83
B. Future Without Project Open Water AAHUs	=	225.02
Net Change (FWP - FWOP)	=	-60.19

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	81.95
B. Open Water Habitat Net AAHUs	=	-60.19
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5		50.37

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Grand Pierre Island Restoration
Area B

Project Area: 501

Condition: Future Without Project

Variable		TY 0		TY 1		TY 10	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	14	0.23	14	0.23	12	0.21
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.20
	Class 2						
	Class 3						
	Class 4	100		100		100	
V4	%OW <= 1.5ft	20	0.36	20	0.36	15	0.29
V5	Salinity (ppt)	15	1.00	15	1.00	15	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.39	EM HSI =	0.39	EM HSI =	0.37
Open Water HSI =			0.67	OW HSI =	0.67	OW HSI =	0.66

Project: Grand Pierre Island Restoration
FWOP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	10	0.19				
V2	% Aquatic	0	0.30				
V3	Interspersion	%		%		%	
	Class 1		0.20				
	Class 2						
	Class 3						
	Class 4	100					
V4	%OW <= 1.5ft	10	0.23				
V5	Salinity (ppt)	15	1.00				
V6	Access Value	1.00	1.00				
EM HSI =			0.36	EM HSI =		EM HSI =	
OW HSI =			0.66	OW HSI =		OW HSI =	

AAHU CALCULATION - OPEN WATER

Project: Grand Pierre Island Restoration
Area B

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	430	0.67	286.70	
1	431	0.67	287.37	287.03
10	441	0.66	291.93	2606.91
20	452	0.66	297.06	2945.06
			AAHUs =	291.95

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	430	0.67	286.70	
1	431	0.67	287.37	287.03
20	450	0.67	302.18	5600.37
			AAHUs	294.37

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Open Water AAHUs	=		294.37
B. Future Without Project Open Water AAHUs	=		291.95
Net Change (FWP - FWOP)	=		2.42

TOTAL BENEFITS IN AAHUs DUE TO PROJECT			
A. Emergent Marsh Habitat Net AAHUs	=		0.38
B. Open Water Habitat Net AAHUs	=		2.42
Net Benefits = (3.5xEMAAHUs+OWAAHUs)/4.5			0.83

WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: XME-28/33 Freshwater Bayou Canal SP/HR
Schooner Bayou to GIWW

The WVA for this project includes 2 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	37
B	10

TOTAL BENEFITS =	47 AAHUS
-------------------------	-----------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Freshwater Bayou Canal Bank SP/HR
Schooner Bayou to GIWW - Area A
Condition: Future Without Project

Project Area: 139

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	65	0.69	61	0.65	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	75	0.80	75	0.80		0.10
	Class 2						
	Class 3						
	Class 4	25		25			
	Class 5					100	
V4	%OW <= 1.5ft	34	0.54	30	0.49	10	0.23
V5	Salinity (ppt)	5	1.00	5	1.00	5	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.78	EM HSI =	0.78	EM HSI =	0.25
	Open Water HSI	=	0.37	OW HSI =	0.36	OW HSI =	0.29

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Freshwater Bayou Canal Bank SP/HR
Schooner Bayou to GIWW - Area A
Condition: Future With Project

Project Area: 139

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	65	0.69	65	0.69	81	0.83
V2	% Aquatic	0	0.10	5	0.15	27	0.34
V3	Interspersion	%		%		%	
	Class 1	75	0.80	75	0.80	75	0.80
	Class 2						
	Class 3						
	Class 4	25		25		25	
	Class 5						
V4	%OW <= 1.5ft	34	0.54	34	0.54	46	0.69
V5	Salinity (ppt)	5	1.00	5	1.00	5	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.78	EM HSI =	0.78	EM HSI =	0.87
	Open Water HSI	=	0.37	OW HSI =	0.42	OW HSI =	0.59

AAHU CALCULATION - EMERGENT MARSH

Project: Freshwater Bayou Canal Bank SP/HR
Schooner Bayou to GIWW - Area A

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	90	0.78	70.32	
1	85	0.76	64.41	67.35
20	0	0.25	0.00	476.43
			AAHUs =	27.19

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	90	0.78	70.32	
1	90	0.78	70.32	70.32
20	113	0.87	98.68	1598.87
			AAHUs	83.46

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	83.46
B. Future Without Project Emergent Marsh AAHUs	=	27.19
Net Change (FWP - FWOP) =		56.27

AAHU CALCULATION - OPEN WATER

Project: Freshwater Bayou Canal Bank SP/HR
Schooner Bayou to GIWW - Area A

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	49	0.37	18.06	
1	54	0.36	19.69	18.88
20	139	0.29	40.84	594.11
			AAHUs =	30.65

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	49	0.37	18.06	
1	49	0.42	20.45	19.25
20	26	0.59	15.44	353.79
			AAHUs	18.65

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	18.65
B. Future Without Project Open Water AAHUs	=	30.65
Net Change (FWP - FWOP)	=	-12.00

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	56.27
B. Open Water Habitat Net AAHUs	=	-12.00
Net Benefits = (2.6xEMAAHUs+OWAAHUs)/3.6		37.31

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Freshwater Bayou Canal Bank SP/HR
Schooner Bayou to GIWW - Area B
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 1,398

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	97	0.97	97	0.97	95	0.96
V2	% Aquatic	50	0.55	50	0.55	50	0.55
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	50	0.66	50	0.66	45	0.61
V5	Salinity (ppt) fresh intermediate		1.00		1.00	4.5	0.90
V6	Access Value fresh intermediat		1.00		1.00	1.00	1.00
Emergent Marsh HSI =			0.98	EM HSI =	0.98	EM HSI =	0.96
Open Water HSI =			0.69	OW HSI =	0.69	OW HSI =	0.68

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Freshwater Bayou Canal Bank SP/HR
Schooner Bayou to GIWW - Area B
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 1,398

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	97	0.97	97	0.97	96	0.96
V2	% Aquatic	50	0.55	50	0.55	55	0.60
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	50	0.66	50	0.66	50	0.66
V5	Salinity (ppt) fresh intermediate		1.00		1.00	4	1.00
V6	Access Value fresh intermediat		1.00		1.00	1.00	1.00
Emergent Marsh HSI =			0.98	EM HSI =	0.98	EM HSI =	0.96
Open Water HSI =			0.69	OW HSI =	0.69	OW HSI =	0.72

AAHU CALCULATION - EMERGENT MARSH

Project: Freshwater Bayou Canal Bank SP/HR
Schooner Bayou to GIWW - Area B

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	1351	0.98	1327.30	
1	1350	0.98	1326.32	1326.81
20	1330	0.98	1276.28	24723.29
AAHUs =			1302.51	

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	1351	0.98	1327.30	
1	1350	0.98	1326.32	1326.81
20	1340	0.98	1308.64	25031.93
AAHUs			1317.94	

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Emergent Marsh AAHUs	=		=	1317.94
B. Future Without Project Emergent Marsh AAHUs	=		=	1302.51
Net Change (FWP - FWOP)	=		=	15.43

WETLAND VALUE ASSESSMENT

MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: TE-11a New Cut Dune/Marsh Restoration

The WVA for this project includes 2 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	26
B	17

TOTAL BENEFITS = 43 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: New Cut Dune/Marsh Restoration
Area A

Project Area: 104

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	33	0.40	31	0.38	0	0.10
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.10
	Class 2						
	Class 3						
	Class 4	100		100			
	Class 5					100	
V4	%OW <= 1.5ft	23	0.40	23	0.40	14	0.28
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.52	EM HSI =	0.51	EM HSI =	0.28
	Open Water HSI	=	0.67	OW HSI =	0.67	OW HSI =	0.88

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: New Cut Dune/Marsh Restoration
Area A

Project Area: 104

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	33	0.40	50	0.55	90	0.91
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1		0.20	100	1.00	100	1.00
	Class 2						
	Class 3						
	Class 4	100					
	Class 5						
V4	%OW <= 1.5ft	23	0.40	100	0.50	100	0.50
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	0.875	0.89	0.90	0.91
	Emergent Marsh HSI	=	0.52	EM HSI =	0.70	EM HSI =	0.93
	Open Water HSI	=	0.67	OW HSI =	0.69	OW HSI =	0.70

AAHU CALCULATION - OPEN WATER

Project: New Cut Dune/Marsh Restoration
Area A

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	70	0.67	46.87	
1	72	0.67	48.21	47.54
20	104	0.65	67.98	1105.40
			AAHUs =	57.65

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	70	0.67	46.87	
1	0	0.69	0.00	23.69
3	10	0.70	7.01	6.98
20	64	0.67	42.79	428.20
			AAHUs	22.94

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	22.94
B. Future Without Project Open Water AAHUs	=	57.65
Net Change (FWP - FWOP)	=	-34.70

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	43.77
B. Open Water Habitat Net AAHUs	=	-34.70
Net Benefits = (3.5xEMAAHUs+OWAAHUs)/4.5		28.33

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: New Cut Dune/Marsh Restoration
Area B

Project Area: 282

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	100	1.00	95	0.96	0	0.10
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	0.10
V4	%OW <= 1.5ft	100	0.50	86	0.85	4	0.15
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		1.00		EM HSI = 0.97		EM HSI = 0.26	
Open Water HSI =		0.74		OW HSI = 0.76		OW HSI = 0.64	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: New Cut Dune/Marsh Restoration
Area B

Project Area: 282

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	100	1.00	96	0.96	22	0.30
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	0.20
V4	%OW <= 1.5ft	100	0.50	100	0.50	5	0.16
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		1.00		EM HSI = 0.98		EM HSI = 0.45	
Open Water HSI =		0.74		OW HSI = 0.74		OW HSI = 0.65	

AAHU CALCULATION - EMERGENT MARSH

Project: New Cut Dune/Marsh Restoration
Area B

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	282	1.00	282.00	
1	268	0.97	260.92	271.40
20	0	0.26	0.00	1873.63
			AAHUs =	107.25

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	282	1.00	282.00	
1	271	0.98	265.28	273.60
20	62	0.45	27.72	2431.48
			AAHUs	136.25

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	136.25
B. Future Without Project Emergent Marsh AAHUs =	107.25
Net Change (FWP - FWOP) =	28.00

AAHU CALCULATION - OPEN WATER

Project: New Cut Dune/Marsh Restoration
Area B

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	0	0.74	0.00	
1	14	0.76	10.68	5.28
20	282	0.64	181.63	1927.43
			AAHUs =	96.64

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	0	0.74	0.00	
1	11	0.74	8.10	4.05
20	220	0.65	143.54	1496.28
			AAHUs	75.02

NET CHANGE IN AAHUs DUE TO PROJECT

A. Future With Project Open Water AAHUs	=	75.02
B. Future Without Project Open Water AAHUs	=	96.64
Net Change (FWP - FWOP)	=	-21.62

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

A. Emergent Marsh Habitat Net AAHUs	=	28.00
B. Open Water Habitat Net AAHUs	=	-21.62
Net Benefits = (3.5xEMA AHUs + OWA AHUs)/4.5		16.98

**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: XTE-58 North Bully Camp Outfall Management

The WVA for this project includes 6 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
1	(67)
2	(6)
3	37
4	69
5	12
6	9

TOTAL BENEFITS =	54 AAHUS
-------------------------	-----------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: North Bully Camp Outfall Management
Area 1

Project Area: 5,058

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	27	0.34	26	0.33	22	0.30
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%	0.30	%	0.30	%	0.28
	Class 1						
	Class 2	10		10		5	
	Class 3	30		30		30	
	Class 4	60		60		65	
V4	%OW <= 1.5ft	10	0.23	10	0.23	10	0.23
V5	Salinity (ppt)	12	1.00	12	1.00	12	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.49	EM HSI =	0.49	EM HSI =	0.46
Open Water HSI		=	0.66	OW HSI =	0.66	OW HSI =	0.66

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: North Bully Camp Outfall Management
Area 1

Project Area: 5,058

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	27	0.34	26	0.33	23	0.31
V2	% Aquatic	0	0.30	1	0.31	2	0.31
V3	Interspersion	%	0.30	%	0.30	%	0.28
	Class 1						
	Class 2	10		10		5	
	Class 3	30		30		30	
	Class 4	60		60		65	
V4	%OW <= 1.5ft	10	0.23	10	0.23	10	0.23
V5	Salinity (ppt)	12	1.00	10	1.00	10	1.00
V6	Access Value	1.00	1.00	0.80	0.82	0.80	0.82
Emergent Marsh HSI		=	0.49	EM HSI =	0.47	EM HSI =	0.45
Open Water HSI		=	0.66	OW HSI =	0.59	OW HSI =	0.60

AAHU CALCULATION - EMERGENT MARSH

Project: North Bully Camp Outfall Management
Area 1

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1349	0.49	665.12	
1	1337	0.49	650.00	657.54
20	1131	0.46	515.65	11053.92
AAHUs =			586.57	

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1349	0.49	665.12	
1	1338	0.47	628.35	646.69
20	1140	0.45	510.12	10801.64
AAHUs			572.42	

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	572.42
B. Future Without Project Emergent Marsh AAHUs =	585.57
Net Change (FWP - FWOP) =	-13.16

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: North Bully Camp Outfall Management
Area 2

Project Area: 3,128

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	39	0.45	39	0.45	33	0.40
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1		0.40		0.40		0.40
	Class 2						
	Class 3	100		100		100	
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	30	0.49	30	0.49	25	0.42
V5	Salinity (ppt)	10	1.00	10	1.00	10	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.58	EM HSI =	0.58	EM HSI =	0.54
Open Water HSI =			0.34	OW HSI =	0.34	OW HSI =	0.33

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: North Bully Camp Outfall Management
Area 2

Project Area: 3,128

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	39	0.45	39	0.45	33	0.40
V2	% Aquatic	0	0.10	5	0.15	10	0.19
V3	Interspersion	%		%		%	
	Class 1		0.40		0.40		0.40
	Class 2						
	Class 3	100		100		100	
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	30	0.49	30	0.49	25	0.42
V5	Salinity (ppt)	10	1.00	8	1.00	8	1.00
V6	Access Value	1.00	1.00	0.65	0.69	0.65	0.69
Emergent Marsh HSI =			0.58	EM HSI =	0.54	EM HSI =	0.51
Open Water HSI =			0.34	OW HSI =	0.36	OW HSI =	0.38

AAHU CALCULATION - EMERGENT MARSH

Project: North Bully Camp Outfall Management
Area 2

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1220	0.58	704.06	
1	1209	0.58	697.71	700.88
20	1023	0.54	550.07	11830.70
			AAHUs =	626.58

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1220	0.58	704.06	
1	1210	0.54	655.64	679.79
20	1041	0.51	526.49	11210.93
			AAHUs	594.64

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Emergent Marsh AAHUs	=			594.54
B. Future Without Project Emergent Marsh AAHUs	=			626.58
Net Change (FWP - FWOP)	=			-32.04

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: North Bully Camp Outfall Management
Area 3

Project Area: 3,815

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	52	0.57	51	0.56	43	0.49
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%	0.48	%	0.48	%	0.46
	Class 1						
	Class 2	40		40		30	
	Class 3	60		60		70	
	Class 4						
V4	%OW <= 1.5ft	70	1.00	70	1.00	60	0.87
V5	Salinity (ppt)	11	0.85	11	0.85	11	0.85
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.66	EM HSI =	0.66	EM HSI =	0.69
	Open Water HSI	=	0.37	OW HSI =	0.37	OW HSI =	0.36

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: North Bully Camp Outfall Management
Area 3

Project Area: 3,815

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	52	0.57	51	0.56	44	0.50
V2	% Aquatic	0	0.10	5	0.15	10	0.19
V3	Interspersion	%	0.48	%	0.48	%	0.46
	Class 1						
	Class 2	40		40		30	
	Class 3	60		60		70	
	Class 4						
V4	%OW <= 1.5ft	70	1.00	70	1.00	60	0.87
V5	Salinity (ppt)	11	0.85	9	1.00	9	1.00
V6	Access Value	1.00	1.00	0.80	0.82	0.80	0.82
	Emergent Marsh HSI	=	0.66	EM HSI =	0.64	EM HSI =	0.60
	Open Water HSI	=	0.37	OW HSI =	0.41	OW HSI =	0.44

AAHU CALCULATION - EMERGENT MARSH

Project: North Bully Camp Outfall Management
Area 3

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	1970	0.65	1282.77	
1	1953	0.65	1259.70	1271.22
20	1651	0.59	978.62	21214.10
AAHUs =			1124.27	

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	1970	0.65	1282.77	
1	1955	0.64	1250.06	1266.39
20	1686	0.60	1003.94	21375.52
AAHUs			1132.10	

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Emergent Marsh AAHUs	=			1132.10
B. Future Without Project Emergent Marsh AAHUs	=			1124.27
Net Change (FWP - FWOP)	=			7.83

AAHU CALCULATION - OPEN WATER

Project: North Bully Camp Outfall Management
Area 3

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1845	0.37	678.89	
1	1862	0.37	685.14	682.02
20	2164	0.36	772.48	13857.95
			AAHUs =	727.00

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1845	0.37	678.89	
1	1860	0.41	761.17	719.93
20	2129	0.44	932.39	16064.39
			AAHUs	839.22

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	839.22
B. Future Without Project Open Water AAHUs	=	727.00
Net Change (FWP - FWOP)	=	112.22

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	7.83
B. Open Water Habitat Net AAHUs	=	112.22
Net Benefits = (2.6xEMAAHUs+OWAAHUs)/3.6		36.83

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: North Bully Camp Outfall Management
Area 4

Project Area: 3,495

Condition: Future Without Project

Variable		TY 0		TY 1		TY 10	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	45	0.51	45	0.51	40	0.48
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%	0.47	%	0.47	%	0.46
	Class 1						
	Class 2	35		35		30	
	Class 3	65		65		70	
	Class 4						
V4	%OW <= 1.5ft	65	0.94	65	0.94	60	0.87
V5	Salinity (ppt)	11	0.85	11	0.85	12	0.70
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.61	EM HSI =	0.61	EM HSI =	0.56
Open Water HSI =			0.36	OW HSI =	0.36	OW HSI =	0.35

Project: North Bully Camp Outfall Management
FWOP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	35	0.42				
V2	% Aquatic	0	0.10				
V3	Interspersion	%	0.45	%		%	
	Class 1						
	Class 2	25					
	Class 3	75					
	Class 4						
V4	%OW <= 1.5ft	55	0.81				
V5	Salinity (ppt)	12	0.70				
V6	Access Value	1.00	1.00				
EM HSI =			0.52	EM HSI =		EM HSI =	
OW HSI =			0.34	OW HSI =		OW HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: North Bully Camp Outfall Management
Area 4

Project Area: 3,495

Condition: Future With Project

Variable		TY 0		TY 1		TY 5	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	45	0.51	45	0.51	43	0.49
V2	% Aquatic	0	0.10	5	0.15	10	0.19
V3	Interspersion	%		%		%	
	Class 1		0.47		0.47		0.47
	Class 2	35		35		35	
	Class 3	65		65		65	
	Class 4						
V4	%OW <= 1.5ft	65	0.94	65	0.94	65	0.94
V5	Salinity (ppt)	11	0.85	9	1.00	10	1.00
V6	Access Value	1.00	1.00	0.80	0.82	0.88	0.89
Emergent Marsh HSI =			0.61	EM HSI =	0.60	EM HSI =	0.60
Open Water HSI =			0.36	OW HSI =	0.40	OW HSI =	0.45

Project: North Bully Camp Outfall Management
FWP

Variable		TY 20		Value	SI	Value	SI
		Value	SI				
V1	% Emergent	36	0.42				
V2	% Aquatic	5	0.15				
V3	Interspersion	%		%		%	
	Class 1		0.45				
	Class 2	25					
	Class 3	75					
	Class 4						
V4	%OW <= 1.5ft	55	0.81				
V5	Salinity (ppt)	10	1.00				
V6	Access Value	0.88	0.89				
EM HSI =			0.55	EM HSI =		EM HSI =	
OW HSI =			0.40	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: North Bully Camp Outfall Management
Area 4

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1577	0.61	956.48	
1	1559	0.61	945.56	951.02
10	1410	0.56	785.21	7777.37
20	1233	0.52	645.09	7141.53

AAHUs = 793.50

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1577	0.61	956.48	
1	1561	0.60	940.66	948.56
5	1500	0.60	898.33	3677.82
20	1271	0.55	702.40	11978.98

AAHUs 830.27

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Emergent Marsh AAHUs	=		830.27
B. Future Without Project Emergent Marsh AAHUs	=		793.50
Net Change (FWP - FWOP)	=		36.77

AAHU CALCULATION - OPEN WATER

Project: North Bully Camp Outfall Management
Area 4

Future Without Project				Total	Cummulative
TY	Water Acres	x	HSI	HUs	HUs
0	1918		0.36	695.22	
1	1936		0.36	701.75	698.48
10	2085		0.35	721.11	6406.59
20	2262		0.34	769.88	7456.60
				AAHUs =	728.08

Future With Project				Total	Cummulative
TY	Water Acres	x	HSI	HUs	HUs
0	1918		0.36	695.22	
1	1934		0.40	780.84	737.92
5	1995		0.45	902.80	3365.30
20	2224		0.40	890.62	13480.46
				AAHUs	879.18

NET CHANGE IN AAHUs DUE TO PROJECT			
A. Future With Project Open Water AAHUs	=		879.18
B. Future Without Project Open Water AAHUs	=		728.08
Net Change (FWP - FWOP)	=		151.10

TOTAL BENEFITS IN AAHUs DUE TO PROJECT			
A. Emergent Marsh Habitat Net AAHUs	=		36.77
B. Open Water Habitat Net AAHUs	=		151.10
Net Benefits = (2.6xEMAAHUs+OWAAHUs)/3.6			68.53

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: North Bully Camp Outfall Management
Area 5

Project Area: 2,999

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	39	0.45	39	0.45	33	0.40
V2	% Aquatic	5	0.15	5	0.15	5	0.15
V3	Interspersion	%	0.46	%	0.46	%	0.45
	Class 1						
	Class 2	30		30		25	
	Class 3	70		70		75	
	Class 4						
V4	%OW <= 1.5ft	70	1.00	70	1.00	60	0.87
V5	Salinity (ppt)	8	1.00	8	1.00	8	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.58	EM HSI =	0.58	EM HSI =	0.54
	Open Water HSI	=	0.43	OW HSI =	0.43	OW HSI =	0.42

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: North Bully Camp Outfall Management
Area 5

Project Area: 2,999

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	39	0.45	39	0.45	34	0.41
V2	% Aquatic	5	0.15	10	0.19	15	0.24
V3	Interspersion	%	0.46	%	0.46	%	0.45
	Class 1						
	Class 2	30		30		25	
	Class 3	70		70		75	
	Class 4						
V4	%OW <= 1.5ft	70	1.00	70	1.00	60	0.87
V5	Salinity (ppt)	8	1.00	6	1.00	6	1.00
V6	Access Value	1.00	1.00	0.80	0.82	0.80	0.82
	Emergent Marsh HSI	=	0.58	EM HSI =	0.56	EM HSI =	0.53
	Open Water HSI	=	0.43	OW HSI =	0.45	OW HSI =	0.47

AAHU CALCULATION - EMERGENT MARSH

Project: North Bully Camp Outfall Management
Area 5

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1182	0.58	690.01	
1	1171	0.58	683.58	686.79
20	990	0.54	537.83	11580.20
			AAHUs =	613.35

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1182	0.58	690.01	
1	1173	0.56	662.62	676.28
20	1017	0.53	541.56	11423.65
			AAHUs	605.00

NET CHANGE IN AAHUs DUE TO PROJECT			
A.	Future With Project Emergent Marsh AAHUs	=	605.00
B.	Future Without Project Emergent Marsh AAHUs	=	613.35
Net Change (FWP - FWOP)		=	-8.35

AAHU CALCULATION - OPEN WATER

Project: North Bully Camp Outfall Management
Area 5

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1817	0.43	774.74	
1	1828	0.43	779.43	777.08
20	2009	0.42	836.01	15352.52
AAHUs =			806.48	

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1817	0.43	774.74	
1	1826	0.45	817.06	795.87
20	1982	0.47	938.05	16660.81
AAHUs			872.83	

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	872.83
B. Future Without Project Open Water AAHUs	=	806.48
Net Change (FWP - FWOP)	=	66.35

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	-8.35
B. Open Water Habitat Net AAHUs	=	66.35
Net Benefits = (2.6xEMAAHUs+OWAAHUs)/3.6		12.40

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: North Bully Camp Outfall Management
Area 6

Project Area: 1,583

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	33	0.40	33	0.40	27	0.34
V2	% Aquatic	5	0.15	5	0.15	5	0.15
V3	Interspersion	%	0.41	%	0.41	%	0.39
	Class 1						
	Class 2	35		35		30	
	Class 3	35		35		35	
	Class 4	30		30		35	
V4	%OW <= 1.5ft	75	1.00	75	1.00	65	0.94
V5	Salinity (ppt)	8	1.00	8	1.00	8	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.54		EM HSI =		0.54	
Open Water HSI =		0.42		OW HSI =		0.42	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: North Bully Camp Outfall Management
Area 6

Project Area: 1,583

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	33	0.40	33	0.40	28	0.35
V2	% Aquatic	5	0.15	10	0.19	15	0.24
V3	Interspersion	%	0.41	%	0.41	%	0.39
	Class 1						
	Class 2	35		35		30	
	Class 3	35		35		35	
	Class 4	30		30		35	
V4	%OW <= 1.5ft	75	1.00	75	1.00	65	0.94
V5	Salinity (ppt)	8	1.00	6	1.00	6	1.00
V6	Access Value	1.00	1.00	0.80	0.82	0.80	0.82
Emergent Marsh HSI =		0.54		EM HSI =		0.52	
Open Water HSI =		0.42		OW HSI =		0.44	

**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: PTV-13 Weeks Bay/Commercial Canal/GIWW Shore Protection

The WVA for this project includes 3 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	17
B	20
C	20

TOTAL BENEFITS =	57 AAHUS
-------------------------	-----------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Weeks Bay/Commercial Canal/GIWW Shore Protection
 Area A
 Condition: Future Without Project

Project Area:
 Fresh.....
 Intermediate. 122

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	66	0.69	63	0.67	0	0.10
V2	% Aquatic	5	0.15	5	0.15	0	0.10
V3	Interspersion	%		%		%	
	Class 1		0.40		0.40		0.10
	Class 2						
	Class 3	100		100			
	Class 4					100	
V4	%OW <= 1.5ft	15	0.27	15	0.27	10	0.21
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	4		4		4	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediat	1.00		1.00		1.00	
Emergent Marsh HSI =			0.73	EM HSI =	0.71	EM HSI =	0.24
Open Water HSI =			0.31	OW HSI =	0.31	OW HSI =	0.24

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Weeks Bay/Commercial Canal/GIWW Shore Protection
 Area A
 Condition: Future With Project

Project Area:
 Fresh.....
 Intermediate. 122

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	66	0.69	66	0.69	55	0.60
V2	% Aquatic	5	0.15	6	0.15	10	0.19
V3	Interspersion	%		%		%	
	Class 1		0.40		0.40		0.40
	Class 2						
	Class 3	100		100		100	
	Class 4						
V4	%OW <= 1.5ft	15	0.27	15	0.27	15	0.27
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	4		4		4	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediat	1.00		1.00		1.00	
Emergent Marsh HSI =			0.73	EM HSI =	0.73	EM HSI =	0.66
Open Water HSI =			0.31	OW HSI =	0.31	OW HSI =	0.35

AAHU CALCULATION - EMERGENT MARSH

Project: Weeks Bay/Commercial Canal/GIWW Shore Protection
Area A

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	81	0.73	59.07	
1	77	0.71	54.71	58.88
20	0	0.24	0.00	404.15
			AAHUs =	23.06

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	81	0.73	59.07	
1	80	0.73	58.34	58.70
20	67	0.68	44.23	971.55
			AAHUs	51.51

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs	= 51.51
B. Future Without Project Emergent Marsh AAHUs	= 23.05
Net Change (FWP - FWOP)	= 28.46

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Weeks Bay/Commercial Canal/GIWW Shore Protection
Area B

Project Area:
Fresh.....

Condition: Future Without Project

Intermediate. 131

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	99	0.99	94	0.95	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		0.10
	Class 2						
	Class 3						
	Class 4						
	Class 5					100	
V4	%OW <= 1.5ft	25	0.38	25	0.38	20	0.33
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	4		4		4	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediat	1.00		1.00		1.00	
Emergent Marsh HSI		=	0.99	EM HSI =	0.96	EM HSI =	0.24
Open Water HSI		=	0.31	OW HSI =	0.31	OW HSI =	0.24

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Weeks Bay/Commercial Canal/GIWW Shore Protection
Area B

Project Area:
Fresh.....

Condition: Future With Project

Intermediate. 131

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	99	0.99	97	0.97	50	0.55
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00	45	0.58
	Class 2						
	Class 3						
	Class 4					55	
	Class 5						
V4	%OW <= 1.5ft	25	0.38	25	0.38	25	0.38
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	4		4		4	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediat	1.00		1.00		1.00	
Emergent Marsh HSI		=	0.99	EM HSI =	0.98	EM HSI =	0.66
Open Water HSI		=	0.31	OW HSI =	0.31	OW HSI =	0.28

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Weeks Bay/Commercial Canal/GIWW Shore Protection
Area C
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 11,131

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	89	0.90	89	0.90	88	0.89
V2	% Aquatic	15	0.24	15	0.24	15	0.24
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	15	0.27	15	0.27	15	0.27
V5	Salinity (ppt) fresh intermediate	2.8	1.00	2.8	1.00	2.8	1.00
V6	Access Value fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.94		EM HSI = 0.94		EM HSI = 0.93	
Open Water HSI =		0.43		OW HSI = 0.43		OW HSI = 0.43	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Weeks Bay/Commercial Canal/GIWW Shore Protection
Area C
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 11,131

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	89	0.90	89	0.90	89	0.90
V2	% Aquatic	15	0.24	15	0.24	15	0.24
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	15	0.27	15	0.27	15	0.27
V5	Salinity (ppt) fresh intermediate	2.8	1.00	2.3	1.00	2.3	1.00
V6	Access Value fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.94		EM HSI = 0.94		EM HSI = 0.94	
Open Water HSI =		0.43		OW HSI = 0.43		OW HSI = 0.43	

WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: PPO-b/d/h Lake Borgne at Shell Beach and Bayou Dupre Shore Protection

The WVA for this project includes 3 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	12
B-east	9
B-west	7

TOTAL BENEFITS =	28 AAHUS
-------------------------	-----------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Lake Borgne at Shell Beach and Bayou Dupre SP
Area A - Bayou Dupre
Condition: Future Without Project

Project Area: 56

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	64	0.68	61	0.65	0	0.10
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%	0.68	%	0.68	%	0.10
	Class 1	60		60			
	Class 2						
	Class 3						
	Class 4	40		40			
	Class 5			100			
V4	%OW <= 1.5ft	50	0.74	50	0.74	17	0.32
V5	Salinity (ppt)	10	1.00	10	1.00	10	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.77	EM HSI =	0.76	EM HSI =	0.26
Open Water HSI =			0.73	OW HSI =	0.73	OW HSI =	0.66

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Lake Borgne at Shell Beach and Bayou Dupre SP
Area A - Bayou Dupre
Condition: Future With Project

Project Area: 56

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	64	0.68	64	0.68	70	0.73
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%	0.68	%	0.68	%	0.72
	Class 1	60		60			
	Class 2						
	Class 3						
	Class 4	40		40			
	Class 5			35			
V4	%OW <= 1.5ft	50	0.74	50	0.74	60	0.87
V5	Salinity (ppt)	10	1.00	10	1.00	10	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =			0.77	EM HSI =	0.77	EM HSI =	0.81
Open Water HSI =			0.73	OW HSI =	0.73	OW HSI =	0.74

AAHU CALCULATION - EMERGENT MARSH

Project: Lake Borgne at Shell Beach and Bayou Dupre SP
Area A - Bayou Dupre

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	36	0.77	27.59	
1	34	0.75	25.47	26.53
20	0	0.26	0.00	189.35
AAHUs =			10.79	

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	36	0.77	27.59	
1	36	0.77	27.59	27.59
20	39	0.81	31.41	560.17
AAHUs			29.39	

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	29.39
B. Future Without Project Emergent Marsh AAHUs =	10.79
Net Change (FWP - FWOP) =	18.59

AAHU CALCULATION - OPEN WATER

Project: Lake Borgne at Shell Beach and Bayou Dupre SP
Area A - Bayou Dupre

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	20	0.73	14.62	
1	22	0.73	16.08	15.35
20	56	0.66	36.76	510.01
			AAHUs =	26.27

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	20	0.73	14.62	
1	20	0.73	14.62	14.62
20	17	0.74	12.64	259.04
			AAHUs	13.68

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	13.68
B. Future Without Project Open Water AAHUs	=	26.27
Net Change (FWP - FWOP)	=	-12.59

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	18.59
B. Open Water Habitat Net AAHUs	=	-12.59
Net Benefits = (3.5xEMAAHUs+OWAAHUs)/4.5		11.67

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Lake Borgne at Shell Beach and Bayou Dupre SP
Area B - East
Condition: Future Without Project

Project Area: 26

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	85	0.87	81	0.83	0	0.10
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	80	0.84	75	0.80		0.10
	Class 2						
	Class 3						
	Class 4	20		25			
	Class 5					100	
V4	%OW <= 1.5ft	75	1.00	60	0.87	12	0.25
V5	Salinity (ppt)	12	1.00	12	1.00	12	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.90	EM HSI =	0.88	EM HSI =	0.28
Open Water HSI		=	0.76	OW HSI =	0.75	OW HSI =	0.66

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Lake Borgne at Shell Beach and Bayou Dupre SP
Area B - East
Condition: Future With Project

Project Area: 26

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	85	0.87	85	0.87	92	0.93
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	80	0.84	80	0.84	90	0.92
	Class 2						
	Class 3						
	Class 4	20		20		10	
	Class 5						
V4	%OW <= 1.5ft	75	1.00	75	1.00	97	0.58
V5	Salinity (ppt)	12	1.00	12	1.00	12	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.90	EM HSI =	0.90	EM HSI =	0.96
Open Water HSI		=	0.76	OW HSI =	0.76	OW HSI =	0.74

AAHU CALCULATION - EMERGENT MARSH

Project: Lake Borgne at Shell Beach and Bayou Dupre SP
Area B - East

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	22	0.90	19.85	
1	21	0.88	18.39	19.11
20	0	0.26	0.00	133.80
AAHUs =			7.65	

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	22	0.90	19.85	
1	22	0.90	19.85	19.85
20	24	0.95	22.77	404.54
AAHUs			21.22	

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Emergent Marsh AAHUs	=			21.22
B. Future Without Project Emergent Marsh AAHUs	=			7.65
Net Change (FWP - FWOP)	=			13.57

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Lake Borgne at Shell Beach and Bayou Dupre SP
Area B - West

Project Area: 26

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	69	0.72	65	0.69	0	0.10
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	65	0.72	60	0.68		0.10
	Class 2						
	Class 3						
	Class 4	35		40			
	Class 5					100	
V4	%OW <= 1.5ft	88	0.80	84	0.90	12	0.25
V5	Salinity (ppt)	12	1.00	12	1.00	12	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.80	EM HSI =	0.77	EM HSI =	0.28
Open Water HSI		=	0.74	OW HSI =	0.74	OW HSI =	0.66

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Lake Borgne at Shell Beach and Bayou Dupre SP
Area B - West

Project Area: 26

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	69	0.72	69	0.72	85	0.87
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	65	0.72	65	0.72	80	0.84
	Class 2						
	Class 3						
	Class 4	35		35		20	
	Class 5						
V4	%OW <= 1.5ft	88	0.80	88	0.80	97	0.58
V5	Salinity (ppt)	12	1.00	12	1.00	12	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.80	EM HSI =	0.80	EM HSI =	0.90
Open Water HSI		=	0.74	OW HSI =	0.74	OW HSI =	0.73

AAHU CALCULATION - EMERGENT MARSH

Project: Lake Borgne at Shell Beach and Bayou Dupre SP
Area B - West

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	18	0.80	14.39	
1	17	0.77	13.13	13.76
20	0	0.26	0.00	97.18
			AAHUs =	5.65

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	18	0.80	14.39	
1	18	0.80	14.39	14.39
20	22	0.90	19.85	323.98
			AAHUs	16.92

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	16.92
B. Future Without Project Emergent Marsh AAHUs =	5.55
Net Change (FWP - FWOP) =	11.37

AAHU CALCULATION - OPEN WATER

Project: Lake Borgne at Shell Beach and Bayou Dupre SP Area B - West

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	8	0.74	5.90	
1	9	0.74	6.68	6.29
20	26	0.65	16.94	229.34
			AAHUs =	11.78

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	8	0.74	5.90	
1	8	0.74	5.90	5.90
20	4	0.73	2.92	83.74
			AAHUs	4.48

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	4.48
B. Future Without Project Open Water AAHUs	=	11.78
Net Change (FWP - FWOP)	=	-7.30

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	11.37
B. Open Water Habitat Net AAHUs	=	-7.30
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5		7.22

**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: PCS-32 Lighthouse Bayou Constriction

The WVA for this project includes 5 areas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A-brackish	8
A-intermediate	(18)
A-saline	(121)
B	(23)
C	(19)

TOTAL BENEFITS =	(173) AAHUS
-------------------------	--------------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Lighthouse Bayou Constriction
Area A - Brackish
Condition: Future Without Project

Project Area: 2,864

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	90	0.91	90	0.91	86	0.87
V2	% Aquatic	10	0.19	10	0.19	5	0.15
V3	Interspersion	%		%		%	
	Class 1	60	0.84	60	0.84	60	0.84
	Class 2	40		40		40	
	Class 3						
	Class 4						
V4	%OW <= 1.5ft	80	1.00	80	1.00	70	1.00
V5	Salinity (ppt)	12	0.70	12	0.70	15	0.25
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	=	0.89	EM HSI =	0.89	EM HSI =	0.82
	Open Water HSI	=	0.48	OW HSI =	0.48	OW HSI =	0.40

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Lighthouse Bayou Constriction
Area A - Brackish
Condition: Future With Project

Project Area: 2,864

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	90	0.91	90	0.91	88	0.89
V2	% Aquatic	10	0.19	15	0.24	30	0.37
V3	Interspersion	%		%		%	
	Class 1	60	0.84	60	0.84	60	0.84
	Class 2	40		40		40	
	Class 3						
	Class 4						
V4	%OW <= 1.5ft	80	1.00	80	1.00	80	1.00
V5	Salinity (ppt)	12	0.70	10	1.00	10	1.00
V6	Access Value	1.00	1.00	0.60	0.64	0.60	0.64
	Emergent Marsh HSI	=	0.89	EM HSI =	0.86	EM HSI =	0.85
	Open Water HSI	=	0.48	OW HSI =	0.48	OW HSI =	0.57

AAHU CALCULATION - EMERGENT MARSH

Project: Lighthouse Bayou Constriction
Area A - Brackish

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	2590	0.89	2316.66	
1	2584	0.89	2311.29	2313.97
20	2473	0.82	2033.66	41251.72
			AAHUs =	2178.28

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	2590	0.89	2316.66	
1	2587	0.86	2217.07	2266.85
20	2529	0.85	2142.20	41411.26
			AAHUs	2183.91

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	2183.91
B. Future Without Project Emergent Marsh AAHUs =	2178.28
Net Change (FWP - FWOP) =	5.62

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Lighthouse Bayou Constriction
Area A - Intermediate
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 1,795

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	96	0.96	96	0.96	94	0.95
V2	% Aquatic	30	0.37	30	0.37	15	0.24
V3	Interspersion	%		%		%	
	Class 1	85	0.94	85	0.94	85	0.94
	Class 2	15		15		15	
	Class 3						
	Class 4						
V4	%OW <= 1.5ft	90	1.00	90	1.00	80	1.00
V5	Salinity (ppt)						
	fresh intermediate	4	1.00	4	1.00	6	0.60
V6	Access Value						
	fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.97	EM HSI =	0.97	EM HSI =	0.91
Open Water HSI		=	0.59	OW HSI =	0.59	OW HSI =	0.45

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Lighthouse Bayou Constriction
Area A - Intermediate
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 1,795

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	96	0.96	96	0.96	95	0.96
V2	% Aquatic	30	0.37	35	0.42	50	0.55
V3	Interspersion	%		%		%	
	Class 1	85	0.94	85	0.94	85	0.94
	Class 2	15		15		15	
	Class 3						
	Class 4						
V4	%OW <= 1.5ft	90	1.00	90	1.00	90	1.00
V5	Salinity (ppt)						
	fresh intermediate	4	1.00	3	1.00	3	1.00
V6	Access Value						
	fresh intermediat	1.00	1.00	0.60	0.68	0.60	0.68
Emergent Marsh HSI		=	0.97	EM HSI =	0.92	EM HSI =	0.92
Open Water HSI		=	0.59	OW HSI =	0.58	OW HSI =	0.87

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Lighthouse Bayou Constriction
Area A - Saline

Project Area: 1,768

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	96	0.96	96	0.96	94	0.95
V2	% Aquatic	2	0.31	2	0.31	2	0.31
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	60	0.87	60	0.87	50	0.74
V5	Salinity (ppt)	15	1.00	15	1.00	18	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.98	EM HSI =	0.98	EM HSI =	0.97
Open Water HSI		=	0.77	OW HSI =	0.77	OW HSI =	0.78

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Lighthouse Bayou Constriction
Area A - Saline

Project Area: 1,768

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	96	0.96	96	0.96	94	0.95
V2	% Aquatic	2	0.31	2	0.31	15	0.41
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	60	0.87	60	0.87	60	0.87
V5	Salinity (ppt)	15	1.00	12	1.00	12	1.00
V6	Access Value	1.00	1.00	0.54	0.59	0.54	0.59
Emergent Marsh HSI		=	0.98	EM HSI =	0.88	EM HSI =	0.87
Open Water HSI		=	0.77	OW HSI =	0.59	OW HSI =	0.62

AAHU CALCULATION - OPEN WATER

Project: Lighthouse Bayou Constriction
Area A - Saline

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	74	0.77	57.08	
1	76	0.77	58.62	57.85
20	114	0.76	86.85	1383.09
			AAHUs =	72.05

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	74	0.77	57.08	
1	76	0.59	45.15	51.17
20	108	0.62	67.27	1065.03
			AAHUs	55.81

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	55.81
B. Future Without Project Open Water AAHUs	=	72.05
Net Change (FWP - FWOP) =		-16.24

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	-150.86
B. Open Water Habitat Net AAHUs	=	-16.24
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5		-120.94

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Lighthouse Bayou Constriction
Area B
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 846

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	98	0.98	98	0.98	98	0.98
V2	% Aquatic	50	0.55	50	0.55	30	0.37
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	90	1.00	90	1.00	85	1.00
V5	Salinity (ppt) fresh intermediate	2	1.00	2	1.00	4	1.00
V6	Access Value fresh intermediat	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.99	EM HSI =	0.99	EM HSI =	0.98
Open Water HSI		=	0.72	OW HSI =	0.72	OW HSI =	0.69

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Lighthouse Bayou Constriction
Area B
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 846

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	98	0.98	98	0.98	97	0.97
V2	% Aquatic	50	0.55	50	0.55	50	0.55
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	90	1.00	90	1.00	90	1.00
V5	Salinity (ppt) fresh intermediate	2	1.00	2	1.00	2	1.00
V6	Access Value fresh intermediat	1.00	1.00	0.80	0.88	0.60	0.68
Emergent Marsh HSI		=	0.99	EM HSI =	0.94	EM HSI =	0.94
Open Water HSI		=	0.72	OW HSI =	0.67	OW HSI =	0.67

AAHU CALCULATION - EMERGENT MARSH

Project: Lighthouse Bayou Constriction
Area B

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	828	0.99	818.33	
1	827	0.99	817.34	817.83
20	815	0.98	795.93	15325.55
			AAHUs =	807.17

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	828	0.99	818.33	
1	828	0.94	778.84	798.58
20	821	0.94	767.74	14682.38
			AAHUs	774.68

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	774.55
B. Future Without Project Emergent Marsh AAHUs =	807.17
Net Change (FWP - FWOP) =	-32.62

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Lighthouse Bayou Constriction
Area C

Project Area: 1,194

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	94	0.95	94	0.95	94	0.95
V2	% Aquatic	30	0.37	30	0.37	25	0.33
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	80	1.00	80	1.00	80	1.00
V5	Salinity (ppt)	8	1.00	8	1.00	10	1.00
V6	Access Value	0.10	0.19	0.10	0.19	0.10	0.19
Emergent Marsh HSI		=	0.73	EM HSI =	0.73	EM HSI =	0.73
Open Water HSI		=	0.44	OW HSI =	0.44	OW HSI =	0.43

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Lighthouse Bayou Constriction
Area C

Project Area: 1,194

Condition: Future With Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	94	0.95	94	0.95	94	0.95
V2	% Aquatic	30	0.37	35	0.42	40	0.46
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	80	1.00	80	1.00	80	1.00
V5	Salinity (ppt)	8	1.00	8	1.00	7	1.00
V6	Access Value	0.10	0.19	0.06	0.15	0.06	0.15
Emergent Marsh HSI		=	0.73	EM HSI =	0.71	EM HSI =	0.71
Open Water HSI		=	0.44	OW HSI =	0.44	OW HSI =	0.45

AAHU CALCULATION - EMERGENT MARSH

Project: Lighthouse Bayou Constriction
Area C

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1126	0.73	822.24	
1	1126	0.73	822.24	822.24
20	1126	0.73	822.24	15622.50
			AAHUs =	822.24

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1126	0.73	822.24	
1	1126	0.71	795.17	808.70
20	1126	0.71	795.17	15108.20
			AAHUs	795.84

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	795.84
B. Future Without Project Emergent Marsh AAHUs =	822.24
Net Change (FWP - FWOP) =	-26.39

WETLAND VALUE ASSESSMENT

MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: PME-17 Restore Connection of Mermentau River/Restrict Navigation Channel

The Environmental Work Group did not conduct a WVA for this project. Based on information provided by the Corps of Engineers, it was determined that the Mermentau Navigation Channel could not be restricted to the degree necessary to provide hydrologic benefits in the upper basin. Furthermore, restoring the connection of the Mermentau River to the Gulf of Mexico would result in negative impacts as a significant acreage of intertidal, saline marsh would have to be destroyed by opening the ancient river channel. It was also decided that the negative benefits of that action would overshadow any positive impacts.



**Coastal Wetlands Planning, Protection, and
Restoration Act**

9th Priority Project List Report

Appendix F

Public Support For Candidate Projects

Public Support for Candidate Projects¹
for the
9th Priority Project List

XTE-58

North Bully Camp Outfall Management

Grady C. Galiano (Administrator, Lafourche Parish Coastal Zone Management)

PTV-13

Weeks Bay/Commercial Canal/GIWW SP

Will Langlinais (Iberia Parish President) 23 March 1999

Charles Stemmans (District Conservationist, Natural Resources Conservation Service) 19 November 1999

Hugh R Goodrich (Goodrich Operating Company) 19 March 1999

Carol Cocke Hoff (Landowner) 19 March 1999

Gene L. Jefferies (Director, Agricultural Operations, McIlhenny Company) 18 March 1999

Darrell P. Judice (Chairman, Iberia Soil & Water Conservation District) 18 March 1999

PO-13

Tangipahoa/Ponchartrain Shoreline Protection

Tangipahoa Parish Council , 11 February 1999

PTE-15viii

Raccoon Island Restoration

Reggie P. Dupre, Jr. (State Representative, District 53) 2 November 1999

Matthew B. Sevier (Coastal Zone Manager, Terrebonne Parish Coastal Zone Management) 3 December 1999

XAT-11

Castille Pass Sediment Delivery

Jack D. Smith (State Representative, District 50) 9 November 1999

PTE-28

South Lake DeCade/Atch. Freshwater Introduction

Thomas A. Lopus (General Manager Products Division, Fina Oil and Chemical Company) 24 March 1999

Matthew B. Sevier (Coastal Zone Manager, Terrebonne Parish Coastal Zone Management) 3 December 1999

¹ Date listed is date of support

Public Support for Candidate Projects¹
for the
9th Priority Project List
(continued)

BA-32a

LA Highway 1 Marsh Creation

Grady C. Galiano (Administrator, Lafourche Parish Coastal Zone Management)

XBA-63 iii-2a

Barataria Basin Landbridge Shore Protection

Grady C. Galiano (Administrator, Lafourche Parish Coastal Zone Management)

Randy Gros (Chairman, Jefferson Parish Marine Fisheries Advisory Board) 22 December 1999

XBA-1

East/West Grande Terre Islands Restoration

Grady C. Galiano (Administrator, Lafourche Parish Coastal Zone Management)

Randy Gros (Chairman, Jefferson Parish Marine Fisheries Advisory Board) 22 December 1999

XBA-77

East Golden Meadow Terracing

Grady C. Galiano (Administrator, Lafourche Parish Coastal Zone Management)

XTE-45a

Timbalier Island Dune/Marsh Restoration

Grady C. Galiano (Administrator, Lafourche Parish Coastal Zone Management)

Matthew B. Sevier (Coastal Zone Manager, Terrebonne Parish Coastal Zone Management) 3 December 1999

TE-8a

North HNC Salinity Control

Matthew B. Sevier (Coastal Zone Manager, Terrebonne Parish Coastal Zone Management) 3 December 1999

¹ Date listed is date of support

Public Support for Candidate Projects¹
for the
9th Priority Project List
(continued)

TE-11a

New Cut Dune/Marsh Restoration

Matthew B. Sevier (Coastal Zone Manager, Terrebonne Parish Coastal Zone Management) 3 December 1999

Reggie P. Dupre, Jr. (State Representative, District 53) 31 March 1998

CS-16

Black Bayou Culverts

Earnestine T. Horn (Administrator, Cameron Police Jury) 22 November 1999

PME-18

Grand/White Lake Land Bridge Protection

Earnestine T. Horn (Administrator, Cameron Police Jury) 22 November 1999

PME-7a

Freshwater Intro. South of Hwy 82 to the Eastern Portion of Rockefeller Refuge

Earnestine T. Horn (Administrator, Cameron Police Jury) 22 November 1999

XME-42a

Little Pecan Bayou Hydrologic Restoration

Earnestine T. Horn (Administrator, Cameron Police Jury) 22 November 1999

PCS-26ii

GIWW-Perry Ridge West Bank Stabilization

Earnestine T. Horn (Administrator, Cameron Police Jury) 22 November 1999

PPO-7a

Labranche Wetlands Terracing, Planting and Shoreline Protection

St. Charles Parish Council , 20 December 1999

¹ Date listed is date of support

Public Support for Candidate Projects¹
for the
9th Priority Project List
(continued)

XPO-54a

Southwest Lake Ponchartrain Sediment Trapping Project

St. Charles Parish Council , 20 December 1999

XPO-55a

Opportunistic Use of Bonnet Carre' Spillway

St. Charles Parish Council , 20 December 1999

BS-DEMO

Lake Athanasio Oyster Reef Demo

Kenneth L. Odinet, Sr. (State Representative, District 103) 30 November 1999

Myra M. Kattengell (Clerk of Council, St. Bernard Parish) 23 October 1999

Mary L. Landrieu (United States Senator) 4 November 1999

St. Bernard Parish Council , 19 October 1999

XTE-DEMO

Terrebonne Bay Shore Protection Demonstration

Jerome P. Zeringue (Operations Manager, South Terrebonne Tidewater Management & Conservation District) 20 October 1999

Matthew B. Sevier (Coastal Zone Manager, Terrebonne Parish Coastal Zone Management) 3 December 1999

Barry P. Bonvillain (Parish President, Terrebonne Parish Consolidated Government) 8 December 1999

XTE-DEMO

Mandalay Bank Protection Demonstration

Matthew B. Sevier (Coastal Zone Manager, Terrebonne Parish Coastal Zone Management) 3 December 1999

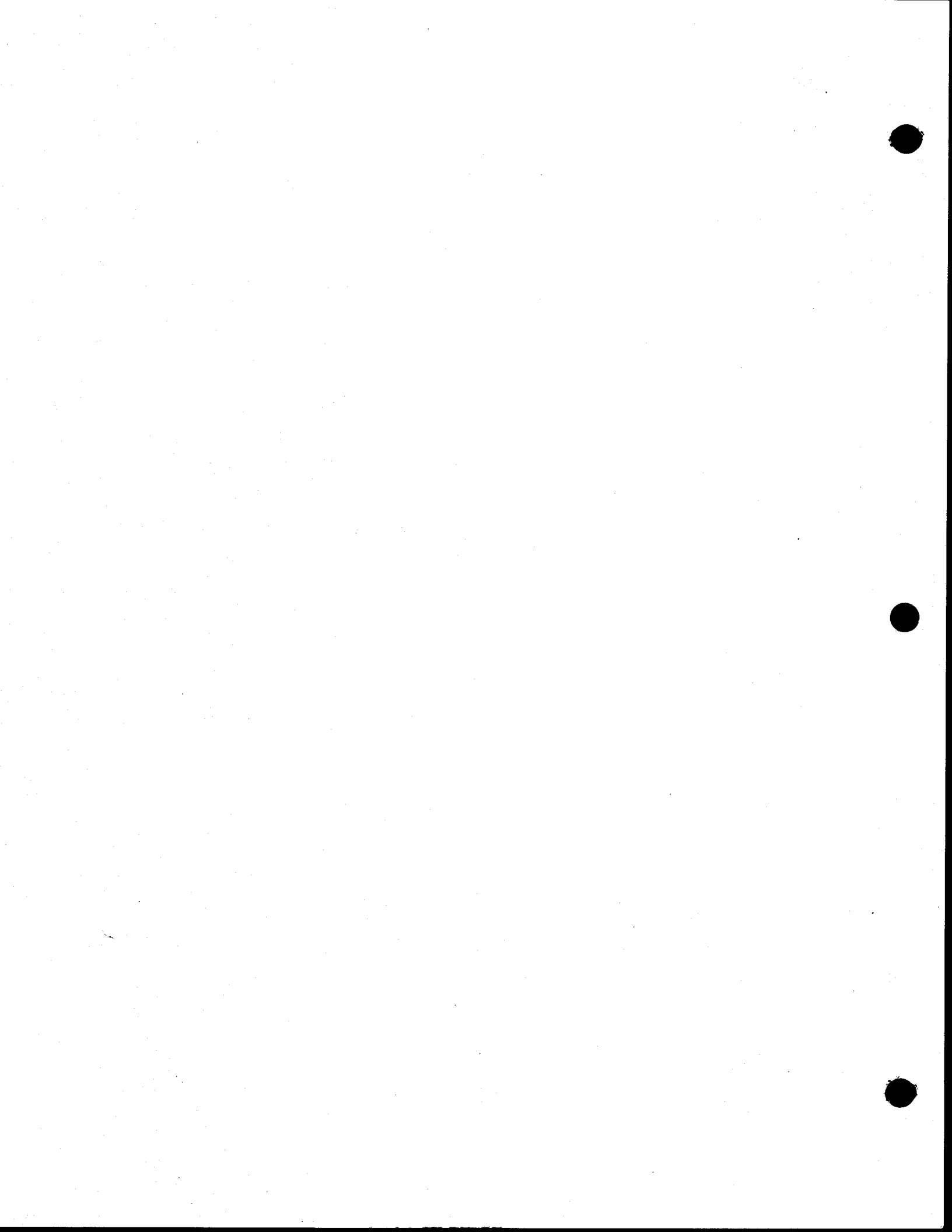
¹ Date listed is date of support

**Coastal Wetlands Planning, Protection, and
Restoration Act**

9th Priority Project List Report

Appendix G

Status Projects from Previous Project Lists

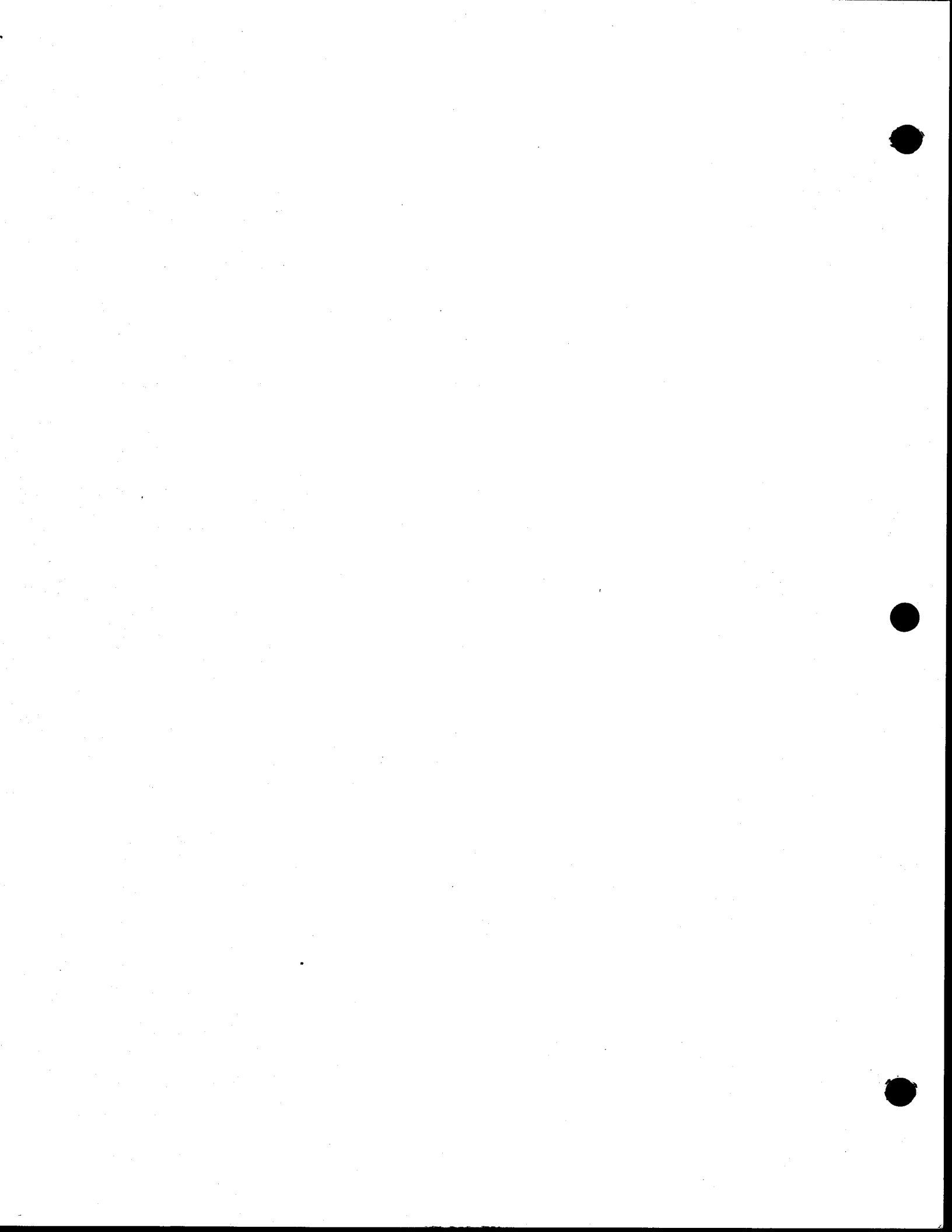


Appendix G

Status Projects From Previous Priority Project Lists

Table of Contents

	<u>Page Number</u>
DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS	
1 st Priority Project List	G-1
Barataria Bay Marsh Creation	G-1
Bayou Labranche Wetlands Restoration	G-1
Lake Salvador Shoreline Protection at Jean Lafitte NHP&P	G-2
Vermillion River Cutoff Bank Protection	G-2
West Bay Sediment Diversion.....	G-3
2 nd Priority Project List	G-3
Clear Marais Bank Protection	G-4
West Belle Pass Headland Restoration.....	G-4
3 rd Priority Project List	G-5
Channel Armor Gap Crevasse	G-5
MRGO Back Dike Marsh Protection	G-5
Pass-a-Loutre Crevasse	G-6
4 th Priority Project List	G-6
Grand Bay Crevasse	G-6
Hopper Dredge Demonstration.....	G-7
5 th Priority Project List	G-7
Bayou Chevee Shoreline Protection.....	G-7
6 th Priority Project List	G-8
Avoca Island (Incr 1).....	G-8
Dustpan/Cutterhead Dredge Demonstration.....	G-8
Marsh Island Hydrologic Restoration.....	G-9
7 th Priority Project List	G-
Cut Off Bayou Marsh Restoration.....	G-
Lake Borgne Shore Protection East & West of Shell Beach	G-
Sabine Refuge Marsh Creation.....	G-
Wine Island Eastward Expansion.....	G-
8 th Priority Project List.....	G-9
Sabine Refuge Marsh Creation.....	G-10



ENVIRONMENTAL PROTECTION AGENCY, REGION 6

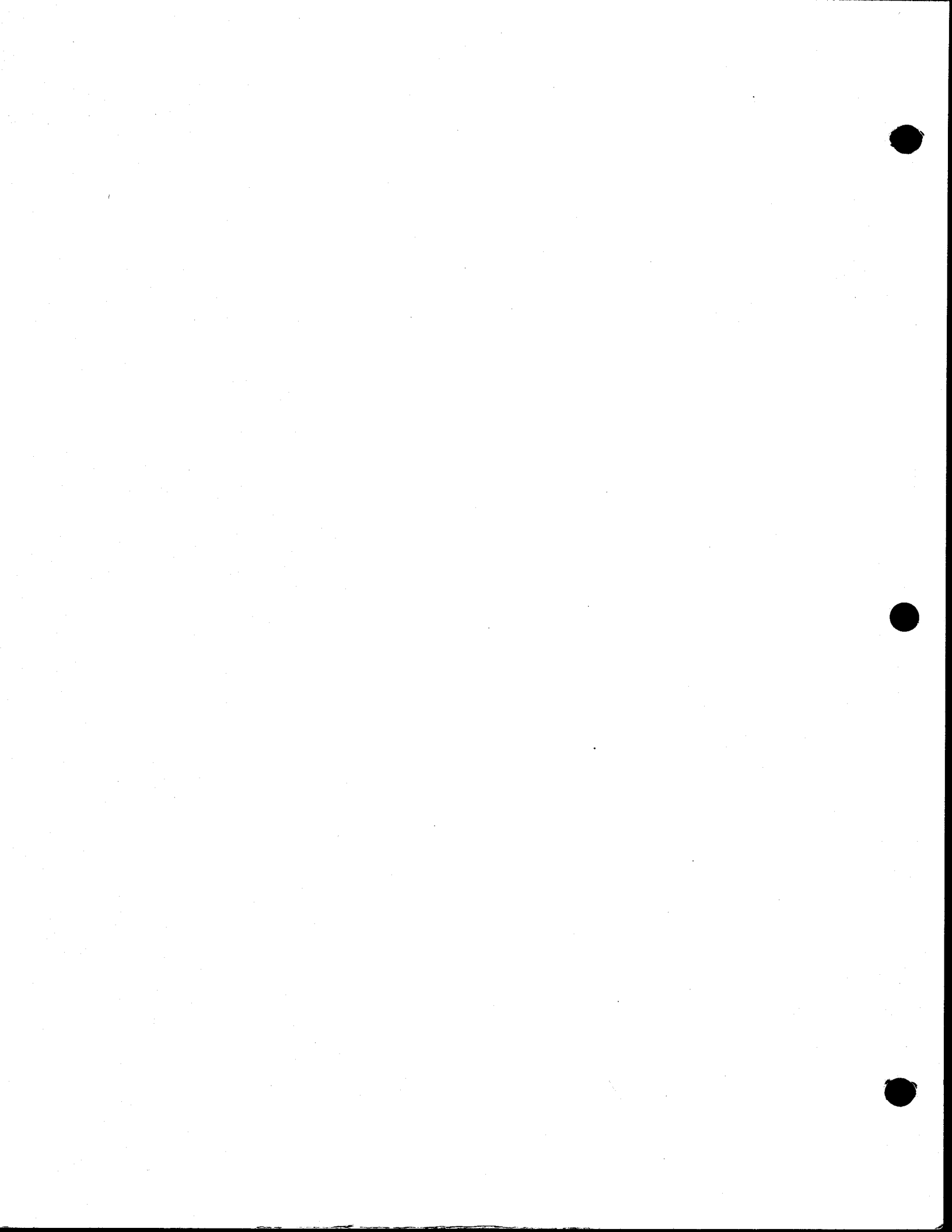
Priority List Conservation Plan	G-13
State of Louisiana Wetlands Conservation Plan.....	G-13
1 st Priority Project List	G-13
Isles Dernieres (Phase 0) (East Island).....	G-13
2 nd Priority Project List	G-13
Isles Dernieres (Phase 1) (Trinity Island).....	G-13
3 rd Priority Project List	G-13
Red Mud Demonstration	G-14
Whiskey Island Restoration (Phase 2).....	G-14
4 th Priority Project List	G-14
Compost Demonstration.....	G-15
5 th Priority Project List	G-16
Bayou Lafourche Siphon.....	G-17
6 th Priority Project List	G-17
Bayou Bouef/Verret Basin, Incr 1	G-18
7 th Priority Project List	G-
Lake Pelto Dedicated Dredging at New Cut Closure	G-
8 th Priority Project List	G-

DEPARTMENT OF THE INTERIOR, FISH & WILDLIFE SERVICE

1 st Priority Project List	G-21
Bayou Sauvage #1	G-21
Cameron Creole Watershed Hydrologic Restoration	G-21
Cameron Prairie Refuge Shoreline Protection.....	G-21
Sabine Wildlife Refuge Erosion Protection.....	G-22
2 nd Priority Project List	G-22
Bayou Sauvage #2.....	G-22
3 rd Priority Project List	G-23
Sabine Refuge Structures (Hog Island)	G-23
5 th Priority Project List	G-24
Grand Bayou/GIWW Freshwater Introduction	G-24
6 th Priority Project List	G-24
Lake Boudreaux Freshwater Introduction, Alt B	G-25
Nutria Harvest for Wetland Restoration Demo	G-26
8 th Priority Project List	G-

DEPARTMENT OF COMMERCE, NATIONAL MARINE FISHERIES SERVICE

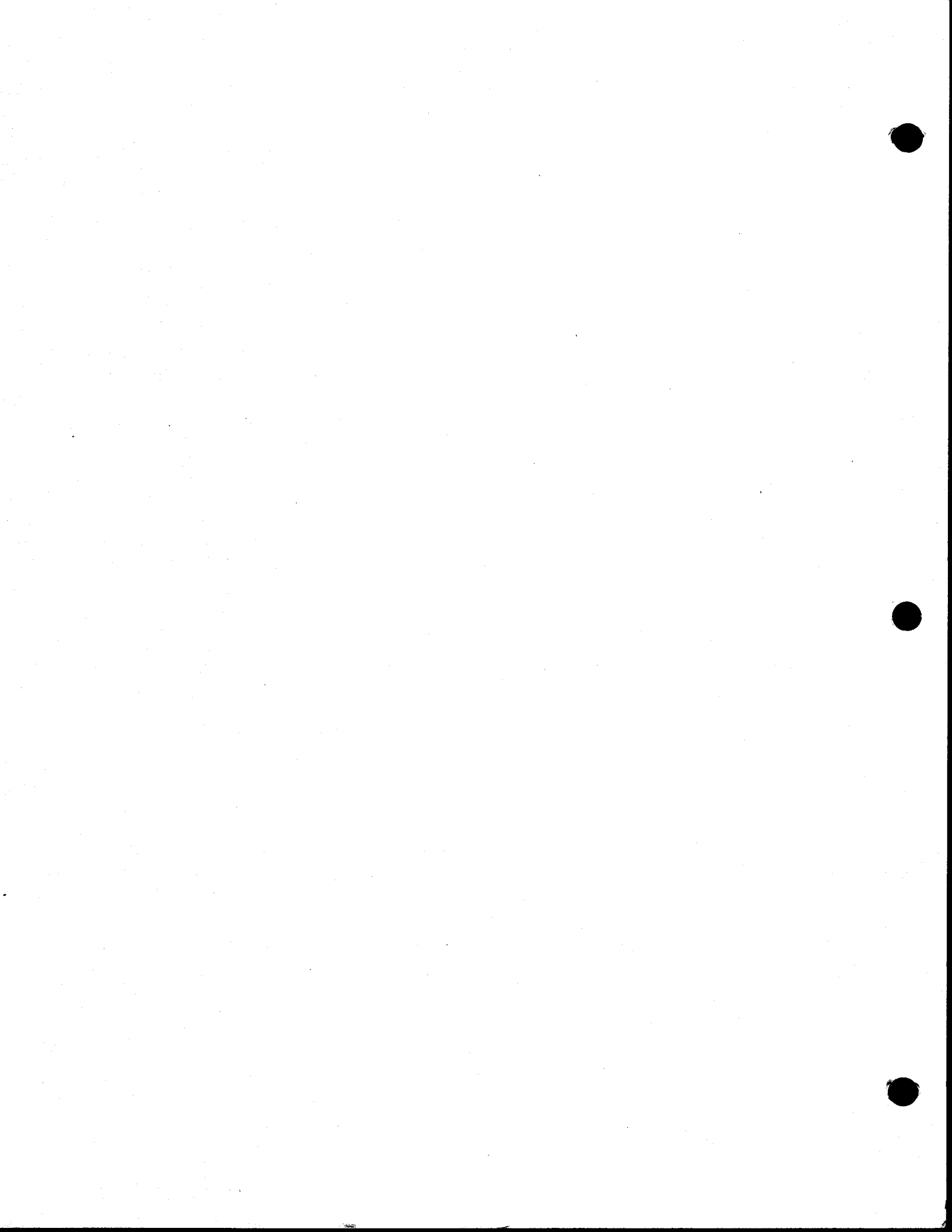
1 st Priority Project List	G-29
Fourchon Hydrologic Restoration	G-29
Lower Bayou LaCache Hydrologic Restoration.....	G-29



2 nd	Priority Project List	G-30
	Atchafalaya Sediment Delivery.....	G-30
	Big Island Mining (Incr. 1).....	G-30
	Point Au Fer.....	G-31
3 rd	Priority Project List	G-31
	Bayou Perot/Bayou Rigolettes Marsh Restoration	G-31
	East Timbalier Island Sediment Restoration #1	G-32
	Lake Chapeau Sediment & Hydrologic Restoration	G-32
	Lake Salvador Shore Protection Demonstration.....	G-32
4 th	Priority Project List	G-33
	East Timbalier Island Sediment Restoration #2	G-33
	Eden Isles East Marsh Restoration	G-33
5 th	Priority Project List	G-33
	Little Vermillion Bay Sediment Trapping.....	G-34
	Myrtle Grove Siphon.....	G-34
6 th	Priority Project List	G-34
	Black Bayou Hydrologic Restoration.....	G-35
	Delta-Wide Crevasses	G-35
	Jaws Sediment Trapping	G-35
7 th	Priority Project List	G-36
	Grand Terre Vegetative Plantings	G-36
	Pecan Island Terracing	G-36
8 th	Priority Project List	G-36
	Bayou Bienvenue Pumping Station/Terracing.....	G-37
	Hopedale Hydrological Restoration.....	G-37

DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE

1 st	Priority Project List	G-40
	BA-2 GIWW to Clovelly Wetland Restoration.....	G-40
	Vegetative Plantings Demo - Dewitt-Rollever	G-40
	Vegetative Plantings Demo - Falgout Canal	G-40
	Vegetative Plantings Demo - Timbalier Island	G-41
	Vegetative Plantings Demo - West Hackberry.....	G-41
2 nd	Priority Project List	G-41
	Brown Lake.....	G-42
	Caernarvon Outfall Management	G-42
	Freshwater Bayou.....	G-42
	Fritchie Marsh	G-43
	Hwy 384.....	G-43
	Jonathan Davis Wetland.....	G-43
	Mud Lake	G-44
	Vermillion Bay/Boston Canal	G-44



3 rd Priority list.....	G-44
Brady Canal.....	G-45
Cameron Creole Maintenance.....	G-45
Cote Clance.....	G-45
SW Shore White Lake - Demonstration.....	G-46
Violet Freshwater Distribution.....	G-46
West Point-a-la-Hache Outfall Management.....	G-46
White's Ditch Outfall Management.....	G-46
4 th Priority Project List.....	G-47
Bayou L'Ours Ridge Hydrologic Restoration.....	G-47
BBWW "Dupre Cut" - West.....	G-47
Flotant Marsh Fencing Demonstration.....	G-48
Perry Ridge Bank Protection.....	G-48
Plowed Terraces Demonstration.....	G-48
5 th Priority Project List.....	G-49
Freshwater Bayou Bank Stabilization.....	G-49
Naomi Outfall Management.....	G-49
Racoon Island Breakwaters Demonstration.....	G-50
Sweet Lake/Willow Lake.....	G-50
6 th Priority Project List.....	G-50
BBWW "Dupre Cut" - East.....	G-51
Cheniere au Tigre Sediment Trapping Device Demo.....	G-51
Oaks/Avery Canals Hydrologic Restoration (Incr 1) (B.S. only).....	G-51
Penant Basin Plan w/o Shoreline Stabilization.....	G-51
7 th Priority Project List.....	G-52
Barataria Basin Land Bridge, Ph 1.....	G-52
Barataria Basin Land Bridge, Ph 2.....	G-52
South Grand Cheniere Freshwater Introduction.....	G-
Thin Mat Floatant Marsh Enhancement Demonstration.....	G-52
Upper Oak River Freshwater Introduction Siphon.....	G-
8 th Priority Project List.....	G-



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

PROJECT STATUS SUMMARY REPORT

18 March 2000

Summary report on the status of CWPPRA projects prepared for the Louisiana Coastal Wetlands Conservation and Restoration Task Force.

Reports enclosed:

- Project Details by Lead Agency
- Project Summary by Basin
- Project Summary by Priority List

Information based on data furnished by the Federal Lead Agencies and collected by the Corps of Engineers

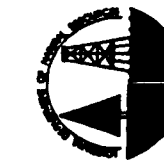
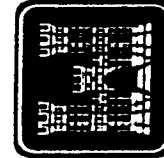
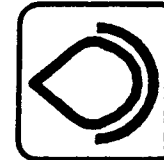
Prepared by:

Planning, Programs and Project Management Division
CWPPRA Branch

U.S. Army Corps of Engineers
New Orleans District

P.O. Box 60267

New Orleans, LA 70160-0267



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	

Lead Agency: DEPT. OF THE ARMY, CORPS OF ENGINEERS

Priority List 1

Barataria Bay Marsh Creation	BARA	JEFF	445	24-Apr-95 A	22-Jul-96 A	31-Dec-00	\$1,759,257	\$1,180,393	67.1	\$1,211,824 \$1,087,839
---------------------------------	------	------	-----	-------------	-------------	-----------	-------------	-------------	------	----------------------------

Remarks: The enlargement of Queen Bess Island was incorporated into the project and the construction of the 9-acre cell was completed in October 1996. If oyster-related conflicts are removed from the remaining marsh creation sites, they will be incorporated into the Corp's O&M deposit plan for the next maintenance cycle.

Status: Completed Queen Bess Island for \$945,678. Remaining funds may be used to clear marsh creation sites of oyster leases.

**Bayou Labranche
Wetlands Restoration**

PONI	SICHA	203	17-Apr-93 A	06-Jan-94 A	07-Apr-94 A	\$4,461,301	\$3,665,519	82.2	\$3,517,868 \$3,498,299
------	-------	-----	-------------	-------------	-------------	-------------	-------------	------	----------------------------

Remarks: Contract awarded to T. L. James Co (Dredge "Tom James") for dredging approximately 2,500,000 cy of Lake Pontchartrain sediments and placing in marsh creation area. Contract final inspection was performed on April 7, 1994. Site visit by Task Force took place on April 13, 1994

Status: Complete
 The project site is being monitored. No further work is planned at this time except to address the problem of impaired access for the lease holders in the project area.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
Lake Salvador Shoreline Protection at Jean Lafitte NHP&P	BARA	JEFF	0	29-Oct-96 A	01-Jun-95 A	21-Mar-96 A	\$60,000	\$60,000	100.0	\$60,000 \$58,753

Remarks: This project was added to Priority List I at the March 1995 Task Force meeting.

The Task Force approved the expenditures of up to \$45,000 in Federal funds and non-Federal funds of \$15,000 (25%) for the design of the project

A design review meeting was held with Jean Lafitte Park personnel in May 1996 to resolve design comments prior to advertisement for the construction contract. The contract was awarded December 4, 1996 for \$610,000 to Bertucci Contracting Corp. The contract was completed in March 1997

Status: Complete. This project was design only

Vermilion River Cutoff
Bank Protection

TECHE	VERMI	65	17-Apr-93 A	10-Jan-96 A	11-Feb-96 A	\$1,526,000	\$2,046,940	134.11	\$1,710,546 \$1,726,392
-------	-------	----	-------------	-------------	-------------	-------------	-------------	--------	----------------------------

Remarks: The project was modified by moving the dike from the west to the east bank of the cutoff to better protect the wetlands. The need for the sediment retention fence on the west bank is still undetermined.

The Task Force approved a revised project estimate of \$2,500,000, however, current estimate is less.

Condemnation of real estate easements was required because of unclear ownership titles and significantly lengthened the project schedule. Construction was completed in February 1996.

Status: Complete.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	

West Bay Sediment Diversion	DELTA	PLAQ	9,831	01-Jun-00	31-Oct-00	31-Oct-02	\$8,517,066	\$16,673,000	195.8	\$558,054 \$663,353
--------------------------------	-------	------	-------	-----------	-----------	-----------	-------------	--------------	-------	------------------------

Remarks: The major portion of the cost increase is for dredging the anchorage as a result of induced shoaling caused by the diversion of flow from the river. A model study of the river and diversion point was completed, providing a basis for estimating the amount of material to be dredged. However, the State of Louisiana was looking into the issue of State-owned waterbottom vs. private ownership, both before and after project construction, and they requested that we not proceed with easement acquisition through condemnation until that issue was resolved. If no resolution on the land rights issue with LA DNR is reached, project will be proposed for de-authorization.

In a letter dated March 1, 1995, the Local Sponsor, LA DNR, requested deauthorization of the project citing cost overruns and its location on the "bird's foot" delta, which the CWPPRA Restoration Plan calls for a phased-abandonment. A letter requesting deauthorization of the project was issued to the Chairman of the Technical Committee on August 25, 1995.

However, at the February 28, 1996 Task Force meeting, the State withdrew its request for deauthorization and work on the project proceeded. The CSA was sent to LA DNR for signature in March 1997. The current estimate exceeds the Priority List estimate by 125% and, therefore, necessitated Task Force approval, which was granted at the April 14, 1998 meeting.

Status: At the April 14, 1998 Task Force meeting, approval was granted to proceed with the project at the current price of \$16.7 million.

Total Priority List 1	10,544	\$16,323,624	\$23,625,852	144.7	\$7,058,288 \$7,034,636
-----------------------	--------	--------------	--------------	-------	----------------------------

- 5 Project(s)
- 4 Cost Sharing Agreements Executed
- 4 Construction Started
- 3 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 2

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
Clear Marais Bank Protection	CALC	CALCA	1,067	29-Apr-96 A	29-Aug-96 A	03-Mar-97 A	\$1,741,310	\$3,717,443	213.51	\$2,891,748 \$2,812,532

Remarks: The original construction estimate was low, based on the proposed plan in that the rock quantity estimate was less than half of the quantity needed (based on the original design), and the estimate did not include a floatation channel needed for construction. This accounts for most of the cost increase shown. The current estimate is based on the original rock dike design and costs about \$89/foot.

The Cost Sharing Agreement was executed and approved and the construction contract awarded on August 1, 1996 to Luhr Bros., Inc. for \$2,694,000. Construction was completed in March 1997.

There is an opportunity to create marsh behind the rock dike between Brannon Canal and Alkalie Ditch using material from GIWW maintenance dredging.

Status: Complete.

West Belle Pass Headland Restoration	TERRE	LAFOU	474	27-Dec-96 A	10-Feb-98 A	17-Jul-98 A	\$4,854,102	\$6,751,441	139.11	\$5,671,917 \$5,268,104
---	-------	-------	-----	-------------	-------------	-------------	-------------	-------------	--------	----------------------------

Remarks: We have received verbal authority from HQ Counsel to acquire oyster leases, for this project only, directly impacted by the construction of the project. Construction cost increase approved at the January 16, 1998 Task Force meeting.

Status: Construction complete.

Total Priority List 2			1,541				\$6,595,412	\$10,468,884	158.7	\$8,563,665 \$8,080,636
-----------------------	--	--	-------	--	--	--	-------------	--------------	-------	----------------------------

- 2 Project(s)
- 2 Cost Sharing Agreements Executed
- 2 Construction Started
- 2 Construction Completed
- 0 Project(s) Deferred/Deauthorized

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)**

Actual
Obligations/
Expenditures

***** SCHEDULES ***** ESTIMATES *****
CONST START CONST END BASELINE CURRENT %

Priority List 3

PROJECT	BASIN	PARISH	ACRES	CSA	CONST START	CONST END	BASELINE	CURRENT	%	Actual Obligations/Expenditures
Channel Armor Gap Crevasse	DELTA	PLAQ	936	13-Jan-97 A	22-Sep-97 A	02-Nov-97 A	\$808,397	\$902,720	111.7	\$533,523

Remarks: The Cost Sharing Agreement is being reviewed by L.A DNR.

Cost increase is due to additional project management costs, by both Federal and Local Sponsor.

Surveys identified a pipeline in the crevasse area which would be negatively impacted by the project. US Fish & Wildlife Service reviewed their permit for the pipeline and determined that Shell Pipeline is required to lower it at their own cost. US FWS requested a modification to the alignment and only US FWS-owned lands should be involved.

Status: Complete.

MRGO Back Dike Marsh Protection

PONT	STBER	755	17-Jan-97 A	25-Jan-99 A	29-Jan-99 A	\$512,198	\$342,611	66.9	\$305,055
------	-------	-----	-------------	-------------	-------------	-----------	-----------	------	-----------

Remarks:

Cost increase is due to additional project management costs, environmental investigations and local sponsor activities not included in the baseline estimate. Further title research indicates that private ownership titles are unclear, requiring condemnation. This accounts for the long period between CSA execution and project construction.

Status:

Scope of work greatly reduced. Work was to be performed via a simplified acquisition contract as estimated construction cost is under \$100,000. Bids received were higher than Government estimate by 25%. Subsequently received an in-house labor estimate from Vicksburg District. Vicksburg District completed construction on 29 January 1999.

\$298,780

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
Pass-a-Loutre Crevasse - DEAUTHORIZED	DELTA	PLAQ	0				\$2,857,790	\$119,857	4.2	\$119,857

Remarks: Two pipelines and two power poles are in the area of the crevasse, increasing relocation costs by approximately \$2.15 million. LA DNR asked that the Corps investigate alternative locations to avoid or minimize impacts to the pipelines, but there are no more suitable locations for the cut. The Corps has also reviewed the design to determine whether relocations cost-savings could be achieved. Reducing the bottom width of the crevasse from 430 feet as originally proposed to 200 feet reduced the relocation cost only marginally.

Status: A draft memorandum dated December 5, 1997 was sent to the CWPPRA Technical Committee Chairman requesting the Task Force to deauthorize the project. COE requested deauthorization at the January 16, 1998 Task Force meeting. Task Force formally deauthorized project July 23, 1998.

Total Priority List 3	1,691	\$4,178,385	\$1,365,188	32.7	\$958,434	\$961,665
-----------------------	-------	-------------	-------------	------	-----------	-----------

- 3 Project(s)
- 2 Cost Sharing Agreements Executed
- 2 Construction Started
- 2 Construction Completed
- 1 Project(s) Deferred/Deauthorized

Priority List 4

Grand Bay Crevasse - DEAUTHORIZED	BRET	PLAQ	0				\$2,468,908	\$64,442	2.6	\$64,442
-----------------------------------	------	------	---	--	--	--	-------------	----------	-----	----------

Remarks: The major landowner has indicated non-support of the project and has withheld ROE because of concern about sedimentation negatively impacting oil and gas interests within the deposition area.

Status: A draft memorandum dated December 5, 1997 was sent to the CWPPRA Technical Committee Chairman requesting the Task Force to deauthorize the project. COE requested deauthorization at the January 16, 1998 Task Force meeting. Project deauthorized July 23, 1998.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	
Hopper Dredge Demo	DELTA	PLAQ	0	30-Jun-97 A			\$300,000	\$52,909	\$38,013

Remarks: LA DNR requested that the hoppers dump the material in crevasses, but there are concerns that the hopper dredges cannot get close enough to the crevasses to avoid dropping the material in the navigation channel. Current plan involves the pumpout of material from the hopper into a disposal area located on the left descending bank or in Southwest Pass between miles 2.95 and 3.2 BHP

Status: Current scheme was found to be non-implementable due to inability of the hopper dredge to get close enough to the disposal area to spray over the bank of the Mississippi River. Proposed for deauthorization.

Total Priority List 4	4	0	\$2,768,908	\$117,351	4.2	\$102,655
						\$103,905

- 2 Project(s)
- 1 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 1 Project(s) Deferred/Deauthorized

Priority List 5

Bayou Chevee Shoreline Protection	PONT	ORL	75	01-Feb-00*	12-Aug-00	30-Nov-00	\$2,890,821	\$2,418,904	83.7	\$321,060
--------------------------------------	------	-----	----	------------	-----------	-----------	-------------	-------------	------	-----------

Remarks: Revised project consists of constructing a 2,870-foot rock dike across the mouth of the north cove and a 2,820-foot rock dike tying into and extending an existing USFWS rock dike, across the south cove. Approximately 75 acres of brackish marsh will be protected by the project.

Status: Model CSA for PPL 5 and PPL 6 projects pending review and approval by HQUSACE.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures	
					Const Start	Const End	Baseline	Current		%
Total Priority List 5										
			75				\$2,890,821	\$2,418,904	83.7	\$321,060 \$327,880
1 Project(s)										
0	Cost Sharing Agreements Executed									
0	Construction Started									
0	Construction Completed									
0	Project(s) Deferred/Deauthorized									

Priority List 6

Avoca Island -
DEAUTHORIZED

TERRE	STMRY	0	\$6,438,400	\$66,159	1.0	\$66,159
-------	-------	---	-------------	----------	-----	----------

Remarks: A draft memorandum dated December 5, 1997 was sent to the Technical Committee Chairman requesting the Task Force to deauthorize the project. COE requested deauthorization at the January 16, 1998 Task Force meeting.

Status: Project deauthorized July 23, 1998.

Dustpan/Cutterhead
Dredge Demo

DELTA	PLAQ	0	\$1,600,000	\$1,640,000	102.5	\$83,898
-------	------	---	-------------	-------------	-------	----------

Remarks: Project is an optional work item on a Southwest Pass leased cutterhead dredge contract. The contract will be awarded as needed.

Status: Model cost sharing agreement for PPI's 5 and 6 pending review and approval by HQUISACE.

CEMVN-PM-C COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

Actual
Obligations/
Expenditures

***** ESTIMATES *****
Current %

***** SCHEDULES *****
Const Start Const End

CSA

ACRES

PARISH

BASIN

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Marsh Island Hydrologic Restoration	TECHE	IBERI	408	01-Feb-00*	24-Aug-00	31-Dec-00	\$4,094,900	\$5,118,626	125.0!	\$318,950 \$388,465

Remarks: Revised design of closures from earthen to rock because soil borings indicate highly organic material in borrow area.

Status: Model CSA for PPL 5 and 6 projects pending review and approval by HQUSACE.

Total Priority List 6	408	\$12,133,300	\$6,824,785	56.2	\$469,007 \$548,900
-----------------------	-----	--------------	-------------	------	------------------------

- 3 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 1 Project(s) Deferred/Deauthorized

Priority List 8

Sabine Refuge Marsh Creation, Ph 1	CALC	CAMER	993	01-Feb-01	01-Jul-01	01-Oct-02	\$5,920,248	\$5,920,248	100.0	\$17,810 \$148,485
---------------------------------------	------	-------	-----	-----------	-----------	-----------	-------------	-------------	-------	-----------------------

Remarks: Total project cost estimate is \$10,154,300; Priority List 8 funded \$5,313,000 to complete construction of a permanent pipeline and one cycle of marsh creation. The COE will request funding for the remaining phases of the project upon completion of engineering and design, probably in January 2001.

Status: Total project cost estimate is \$10,154,300; Priority List 8 funded \$5,313,000, approved at \$5.9 million recently, to complete construction of a permanent pipeline and one cycle of marsh creation. The COE will request funding for the remaining phases of the project upon completion of engineering and design, probably in January 2001. Further engineering analyses on the project indicate higher cost efficiency on the project as scoped out with about 2 to 5 dredge cycles by using a temporary pipeline in lieu of a permanent pipeline. Cost feasibility for a permanent pipeline is achieved for 10 pumping events or greater, which is not the case on this project.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
 Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

Actual
 Obligations/
 Expenditures

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	***** ESTIMATES *****	***** SCHEDULES *****	Baseline	Current	%	Obligations/ Expenditures
Total Priority List 8												
			993						\$5,920,248	\$5,920,248	100.0	\$17,810 \$148,485

- 1 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 9

Freshwater Bayou Canal, Belle Isle to Lock	TECHE	VERMI	529						\$399,114	\$399,114	100.0	\$0 \$0
Remarks:												
Status:												
Opportunistic Use of Bonnet Carre Spillway	PONT	STCHA	177						\$107,778	\$107,778	100.0	\$0 \$0
Remarks:												
Status:												

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
 Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

Actual
 Obligations/
 Expenditures

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Periodic Intro of Sediment & Nutrients Along the Miss. River	VARY	VARY	VARY				\$52,549	\$52,549	100.0	\$0

Remarks:

Status:

Weeks Bay/Commercial Canal/GIWW	TECHE	IBERI	138				\$390,351	\$390,351	100.0	\$0
---------------------------------	-------	-------	-----	--	--	--	-----------	-----------	-------	-----

Remarks:

Status:

Total Priority List	9	844					\$949,792	\$949,792	100.0	\$0
---------------------	---	-----	--	--	--	--	-----------	-----------	-------	-----

- 4 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
Total DEPT. OF THE ARMY, CORPS OF ENGINEERS										
			16,096				\$51,760,490	\$51,691,004	99.9	\$17,490,919

- 21 Project(s)
- 9 Cost Sharing Agreements Executed
- 8 Construction Started
- 7 Construction Completed
- 3 Project(s) Deferred/Deauthorized

Notes:

1. Expenditures based on Corps of Engineers financial data.
2. Date codes: A = Actual date * = Behind schedule
3. Percent codes: ! = 125% of baseline estimate exceeded

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	

Lead Agency: ENVIRONMENTAL PROTECTION AGENCY, REGION 6

Priority List Conservation Plan

State of Louisiana Wetlands Conservation Plan	ALL	COAST	0	13-Jun-95 A	03-Jul-95 A	21-Nov-97 A	\$238,871	\$143,855	60.2	\$143,855
---	-----	-------	---	-------------	-------------	-------------	-----------	-----------	------	-----------

Remarks: The date the MIPR was issued to obligate the Federal funds for the development of the plan is used as the construction start date for reporting purposes.

Status: Complete.

Total Priority List	Cons Plan	0					\$238,871	\$143,855	60.2	\$143,855
---------------------	-----------	---	--	--	--	--	-----------	-----------	------	-----------

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 1 Construction Started
- 1 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 1

Isles Dernieres (Phase 0) (East Island)	TERRE	TERRE	9	17-Apr-93 A	16-Jan-98 A	24-Oct-98 A	\$6,345,468	\$8,745,210	137.8	\$6,553,934
--	-------	-------	---	-------------	-------------	-------------	-------------	-------------	-------	-------------

Remarks: This phase of the Isles Dernieres restoration project was combined with Isles Dernieres, Phase 1 (Trinity Island), a priority list 2 project. Additional funds to cover the increased construction cost on lowest bid received were approved at the January 16, 1998 Task Force meeting.

Status: Construction start was January 16, 1998. Hydraulic dredging was completed September 1998. Vegetation planting was completed May 1999.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures	
					Const Start	Const End	Baseline	Current	%		
Total Priority List 1											
			9					\$6,345,468	\$8,745,210	137.8	\$6,553,934 \$6,384,707

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 1 Construction Started
- 1 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 2

Isles Dernieres (Phase 1)(Trinity Island)	TERRE	TERRE	109	17-Apr-93 A	27-Jan-98 A	22-Oct-98 A		\$6,907,897	\$10,785,706	156.1	\$9,050,670 \$8,816,977
---	-------	-------	-----	-------------	-------------	-------------	--	-------------	--------------	-------	----------------------------

Remarks: Costs increased due to construction bids significantly greater than projected in plans and specifications. Additional funds to cover the increased project construction/dredging cost were approved at the January 16, 1998 Task Force meeting.

Status: The 30' hydraulic dredge, the Tom James, mobilized at East Island on about January 27, 1998. Dredging was completed in September 1998. Vegetation plantings was completed May 1999.

Total Priority List 2 109

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 1 Construction Started
- 1 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 3

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	
Red Mud Demo	PONT	STJON	0	03-Nov-94 A	08-Jul-96 A	\$350,000	\$470,500	134.4!	\$368,406

Remarks:

Status: Facility construction is essentially complete; project on hold pending resolution of cell contamination by saltwater before planting occurred, and possible change to freshwater marsh demonstration. Resolution of these concerns is expected by spring 2000.

Whiskey Island Restoration (Phase 2)

TERRE	TERRE	1,239	06-Apr-95 A	13-Feb-98 A	25-Aug-98 A	\$4,844,274	\$7,721,186	159.4!	\$5,959,741
-------	-------	-------	-------------	-------------	-------------	-------------	-------------	--------	-------------

Remarks: At the January 16, 1998 meeting, the Task Force approved additional funds to cover the increased construction cost on lowest bid received.

Status: Work was initiated on February 13, 1998. Dredging completed July 1998. Initial vegetation with spartina on bay shore, July 1998. Final vegetation seeding/planting to be carried out in spring 2000.

Total Priority List 3 1,239

\$5,194,274	\$8,191,686	157.7	\$6,328,147
			\$7,049,901

- 2 Project(s)
- 2 Cost Sharing Agreements Executed
- 2 Construction Started
- 1 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 4

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	
Compost Demo	CALC	CAMER	0	22-Jul-96 A	01-May-00	30-Sep-00	\$370,594	\$425,333	\$318,404
									\$104,403

Remarks: Plans and specifications are being finalized. All permits and construction approvals have been obtained.

Status: Advertisement for construction bids is delayed until required volume of vegetative compost is supplied as agreed by Entergy, Inc.

Total Priority List 4	0	\$370,594	\$425,333	114.8	\$318,404
					\$104,403

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 5

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	

Bayou Lafourche Siphon	TERRE	ASCEN	988	19-Feb-97A			\$24,487,337	\$8,391,454	34.3	\$1,500,000
------------------------	-------	-------	-----	------------	--	--	--------------	-------------	------	-------------

Remarks: Priority List 5 authorized funding in the amount of \$1,000,000 for the FY 96 Phase 1 of this project. Priority List 6 authorized \$8,000,000 for the FY 97 Phase 2 of this project. In FY 98, Priority List 7 authorized \$7,987,000, for a project estimate of \$16,987,000. At the January 20, 1999 Task Force meeting for approval of Priority List 8, \$7,500,000 completed funding for the project, for a total of \$24,487,337. EPA motioned to allow \$16,095,883 from project funds be delayed and put to immediate use on PPL 8. This decrease resulted in the current estimate of \$8,391,454. The public has been involved in development of the scope of the evaluation phase. EPA proposes an alternative approach for siphoning and pumping 1,000 cfs year-round (versus the 2,000 cfs siphon only at high river times). Addition of pumps increases the estimated cost. Additional engineering is projected to be completed in 2000.

Status: The Cost Sharing Agreement (CSA) was executed February 19, 1997. Preliminary draft report was distributed to Technical Committee members in October 1998. Additional hydrologic work by the U.S. Geological Survey and the COE is in progress. Additional geotechnical analysis is being planned.

Total Priority List 5	988	\$24,487,337	\$8,391,454	34.3	\$1,500,000
-----------------------	-----	--------------	-------------	------	-------------

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 6

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****	%	Actual Obligations/ Expenditures
					Const Start	Const End			
Bayou Boeuf/Verret Basin, Incr 1 - DEAUTHORIZED	TERRE	STMAR	0			\$150,000	\$3,452	2.3	\$3,452

Remarks: This was a 3-phased project. Priority List 6 authorized funding of \$150,000; Priority List 7 was scheduled to fund \$250,000; and Priority List 8 was scheduled to fund \$100,000. Total project cost was estimated to be \$500,000. By letter dated November 18, 1997, EPA notified the Technical Committee that they and LA DNR agree to deauthorize the project.

Status: Deauthorization was approved at the July 23, 1998 Task Force meeting.

Total Priority List 6	0	\$150,000	\$3,452	2.3	\$3,452
-----------------------	---	-----------	---------	-----	---------

- 1 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 1 Project(s) Deferred/Deauthorized

Priority List 9

Marsh Creation South of Leeville	BARA	LAFOU	146		\$799,535	\$799,535	100.0	\$0
----------------------------------	------	-------	-----	--	-----------	-----------	-------	-----

Remarks:

Status: Project design initiation is pending assignment of LADNR project officer and cooperation agreement negotiation meeting.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)**

Actual
Obligations/
Expenditures

***** SCHEDULES *****
***** ESTIMATES *****
Baseline Current %

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
---------	-------	--------	-------	-----	-------------	-----------	----------	---------	---	------------------------------

New Cut Dune/Marsh Restoration	TERRE	TERRE	102				\$488,806	\$488,806	100.0	\$0
-----------------------------------	-------	-------	-----	--	--	--	-----------	-----------	-------	-----

Remarks:

Status: Project design initiation is pending assignment of LADNR project officer and cooperative agreement negotiation meeting.

Timbalier Island Dune/Marsh Restoration	TERRE	TERRE	273				\$477,574	\$477,574	100.0	\$0
---	-------	-------	-----	--	--	--	-----------	-----------	-------	-----

Remarks:

Status: Project design initiation is pending assignment of DNR project officer and cooperative agreement negotiation meeting.

Total Priority List	9	521					\$1,765,915	\$1,765,915	100.0	\$0
---------------------	---	-----	--	--	--	--	-------------	-------------	-------	-----

- 3 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/Expenditures
***** SCHEDULES *****										
***** ESTIMATES *****										
Total ENVIRONMENTAL PROTECTION AGENCY, REGION 6			2,866				\$45,460,356	\$38,452,611	84.6	\$23,898,463
11 Project(s)										\$23,657,217
7 Cost Sharing Agreements Executed										
5 Construction Started										
4 Construction Completed										
1 Project(s) Deferred/Deauthorized										

Notes:

- Expenditures based on Corps of Engineers financial data.
- Date codes: A = Actual date * = Behind schedule
- Percent codes: ! = 125% of baseline estimate exceeded

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
 Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	

Lead Agency: DEPT. OF THE INTERIOR, FISH & WILDLIFE SERVICE

Priority List 1

Bayou Sauvage #1	PONT	ORL	1,550	17-Apr-93 A	01-Jun-95 A	30-May-96 A	\$1,657,708	\$1,615,390	97.4	\$1,058,779
------------------	------	-----	-------	-------------	-------------	-------------	-------------	-------------	------	-------------

Remarks: Project completed May 30, 1996. A dedication ceremony was held in mid-summer 1996.

Status: Complete.

G-21

Cameron Creole
 Watershed Hydrologic
 Restoration

CALC	CAMER	865	17-Apr-93 A	01-Oct-96 A	28-Jan-97 A	\$660,460	\$1,022,686	154.8!	\$434,848
------	-------	-----	-------------	-------------	-------------	-----------	-------------	--------	-----------

Remarks:

\$535,602

Status: Complete.

Cameron Prairie
 Refuge Shoreline
 Protection

MERM	CAMER	247	17-Apr-93 A	19-May-94 A	09-Aug-94 A	\$1,177,668	\$1,401,125	119.0	\$908,670
------	-------	-----	-------------	-------------	-------------	-------------	-------------	-------	-----------

Remarks:

\$980,027

Status: Complete.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
Sabine Wildlife Refuge Erosion Protection	CALC	CAMER	5,542	17-Apr-93 A	24-Oct-94 A	01-Mar-95 A	\$4,895,780	\$1,576,703	32.2	\$1,198,324 \$1,251,645

Remarks:

Status: Complete.

Total Priority List 1	8,204	\$8,391,616	\$5,615,904	66.9	\$3,600,616 \$3,832,052
-----------------------	-------	-------------	-------------	------	----------------------------

- 4 Project(s)
- 4 Cost Sharing Agreements Executed
- 4 Construction Started
- 4 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 2

Bayou Sauvage #2	PONT	ORL	1,280	30-Jun-94 A	15-Apr-96 A	28-May-97 A	\$1,452,035	\$1,634,700	112.6	\$1,055,250 \$1,070,422
------------------	------	-----	-------	-------------	-------------	-------------	-------------	-------------	-------	----------------------------

Remarks: Construction was completed on March 18, 1997. Initial problems with the pumps were corrected, and the project was accepted at a final inspection conducted May 28, 1997.

Status: Complete.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
 Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures	
					Const Start	Const End	Baseline	Current		%
Total Priority List 2										
			1,280				\$1,452,035	\$1,634,700	112.6	\$1,055,250 \$1,070,422

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 1 Construction Started
- 1 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 3

Sabine Refuge
 Structures (Hog Island)

CALC	CAMER	953	26-Oct-96 A	01-Nov-99 A	01-Nov-00	\$4,581,454	\$4,466,354	97.5	\$3,102,441 \$354,636
------	-------	-----	-------------	-------------	-----------	-------------	-------------	------	--------------------------

Remarks: Structure operational plan, permitting requirements and control structure design were revised at an interagency meeting held June 17, 1998. A final water control structure design and operation meeting was held on September 29, 1998, involving DNR, NRCS and the USFWS; those recommendations were incorporated into the permit. The Intra-Service Section 7 Endangered Species evaluation was completed on April 14, 1999. Project construction began the week of November 1, 1999.

Status: The LADNR Coastal Management Division determined that the project was consistent with the Coastal Resources Program on November 23, 1998. Construction approval, on condition that permitting and NEPA requirements were met, was received from the CWP/PRA Planning and Evaluation Subcommittee on December 7, 1998, and the Technical Committee on December 8, 1998. The CWP/PRA Task Force approved the request to begin construction on January 20, 1999. Final designs were completed by NRCS design engineers in March 1999. NEPA compliance was completed on May 30, 1999 with the submittal of the Finding of No Significant Impact (FONSI) and the final Environmental Assessment. The Corps of Engineers Section 404 permit was issued on March 8, 1999. Construction bid advertisement was completed June 7, 1999. The bid opening occurred on September 14, 1999 and the contract was awarded to F. Miller and Sons, Inc. of Lake Charles, LA. The pre-construction conference was held October 25, 1999. Construction began the week of November 1, 1999, and is projected to be completed by November 2000. The Headquarters Canal structure was completed the week of February 9, 2000. Work is presently commencing on the Hog Island Gully replacement structure, then the West Cove replacement structure.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures	
					Const Start	Const End	Baseline	Current		%
Total Priority List 3										
			953				\$4,581,454	\$4,466,354	97.5	\$3,102,441 \$354,636

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 1 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 5

Grand Bayou / GIWW
Freshwater Introduction

TERRE	L.AFOU	1,927	01-Mar-00*	01-Jan-01	01-Sep-01	\$5,135,468	\$10,303,446	200.6	\$227,634 \$222,577
-------	--------	-------	------------	-----------	-----------	-------------	--------------	-------	------------------------

Remarks: The Environmental Work Group and the Engineering Work Group have reviewed modifications made to the project following the Task Force approval of additional features. They have determined that the proposed modifications are not substantial enough for Task Force review and approval.

Status: Personnel from the Natural Resources Conservation Service (NRCS) have completed permit-style drawings to be used in the Environmental Assessment (EA) and permitting. A draft E/A has been completed and is being reviewed in-house. Geotechnical investigations and site surveying has been completed by the NRCS. The Corps of Engineers has been working on validating a TABS model developed for the project area. Some problems with the model have been identified and fixes are presently being made.

Total Priority List 5 1,927

						\$5,135,468	\$10,303,446	200.6	\$227,634 \$222,577
--	--	--	--	--	--	-------------	--------------	-------	------------------------

- 1 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 6

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)**

PROJECT	BASIN	PARISH	ACRES	CSA	SCHEDULES ***** Const Start	Const End	***** ESTIMATES ***** Baseline	Current	%	Actual Obligations/ Expenditures
Lake Boudreaux FW Introduction, Alt B	TERRE	TERRE	619	22-Oct-98 A	01-Aug-02	01-Aug-03	\$9,831,306	\$10,519,383	107.0	\$74,498
										\$48,930

Remarks: On January 20, 1999, the Task Force authorized the remaining \$1,915,650 to fully fund this project.

Status: DNR is continuing to conduct land rights work. The DNR has contracted with Gulf Engineers and Consultants, Inc. (GEC) to conduct a feasibility study. GEC has subcontracted UNLET modeling work to FTN. That work is partially complete and would seem to indicate that the project would introduce about as much freshwater as initially anticipated. USFWS is presently working on compiling water quality data and developing the draft Environmental Assessment (EA). Once the feasibility study is completed early next year, the draft EA can be completed and a public meeting held to present the feasibility study findings to the public. Following that meeting, the permit application(s) will be prepared. A contract for engineering and design work will also be issued following completion and review of the EA.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
Nutria Harvest for Wetland Restoration Demo	COAST	COAST	0	27-Oct-98 A	20-Dec-98 A	30-Sep-02	\$2,140,000	\$2,140,000	100.0	\$936,000

Remarks:

Only one nutria meat processor was enrolled in the program (Mr. Ulysess Guidry in Golden Meadow) during the FY 1998/1999 trapping season. FY 1998/1999 was the "worst" nutria harvesting effort on record in Louisiana at only 120,000 nutria harvested. Demand for wild furs is low worldwide due to the movement away from coats made from wild fur and the economic depression of traditional fur-demanding countries such as Russia. Therefore, the program is being instituted at a very low demand time for nutria pelts. Nutria meat is currently selling for about \$1.25/lb by the Louisiana Seafood Exchange while alligator meat is selling for \$6.00/lb. The LDWF 1999 nutria coastal damage survey and report indicated increased nutria-related marsh damages in Jefferson and Plaquemines Parishes. During the Winn Dixie-WWL nutria meat promotions at 16 Winn Dixie supermarkets in south Louisiana from November 1999 to February 2000, approximately 30-40 pounds of sausage were sold at each location during each three-hour promotion.

Status:

Work is continually being done in the promotion of nutria meat both overseas and within the state of Louisiana. Nutria meat promotion has consisted of nutria cook-offs, providing nutria meat dishes at various festivals, and the preparation of recipes in Louisiana beginning in October 1998 and proceeding throughout the project life. Baseline surveys of nutria damage to the coastal marshes were completed in May 1998 and 1999. The cost share agreement (CSA) was signed by LADNR and USFWS on October 21, 1998. The CWPRA Task Force approved the implementation of the total \$2,140,000 project on October 21, 1998. The state coastal zone consistency determination was received on October 29, 1998. A second interagency agreement has been completed between the LA Department of Wildlife and Fisheries (LDWF) and the LADNR to implement the project.

The Louisiana Department of Wildlife and Fisheries, or its subcontractors, in 1998 and 1999, completed the following: 1) Final reports entitled "A Survey of Nutria Herbivory Damage in Coastal Louisiana in 1998 and 1999"; 2) A large scale map showing 1998 and 1999 coastal area nutria damage; 3) Traveled to Japan and presented the "nutria meat for human consumption" program to potential buyers; 4) Worked with a Golden Meadow nutria meat processor in the processing of 20,000 pounds of nutria meat for human consumption; 5) Presented a program on furs and nutria meat for human consumption at the Louisiana Sportsman Show in the New Orleans Superdome in March 1999; 6) Participated and sponsored a nutria category in the Chefs competition at the Baton Rouge Culinary Classic (April 1999), the New Orleans Culinary Classic (July 1999), and the New Orleans Restaurant Show (July 1999); 7) Participated in a menu promotion, to introduce nutria meat for human consumption, at the Blue Bayou Restaurant in Cancun, Mexico; 8) Prepared nutria meat for tasting at the Bogue Supermarket in Baton Rouge, LA; 9) Prepared nutria meat for tasting, discussed recipes and gave a presentation on nutria herbivory and the nutria harvest demonstration project to the Baton Rouge Rotary Club; 10) Met with LSU to discuss the use of a meat deboning machine for whole processing of bone-in carcass nutria meat; and 11) The LDWF will participate in the Louisiana Restaurant Association Food Show in August 1999 and the Louisiana Gold Culinary Classic in New Orleans.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)**

PROJECT	BASIN	PARISH	ACRES	CSA	SCHEDULES Const Start	Const End	Baseline	ESTIMATES Current	%	Actual Obligations/ Expenditures
Total Priority List 6										
			619				\$11,971,306	\$12,659,383	105.7	\$1,010,498 \$212,145

- 2 Project(s)
- 2 Cost Sharing Agreements Executed
- 1 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 9

Freshwater Intro. South of Hwy 82	MERM	CAMER	296				\$89,402	\$89,402	100.0	\$0 \$0
	Remarks:									
	Status:									
Mandalay Bank Protection	TERRE	TERRE					\$281,905	\$281,905	100.0	\$0 \$0
	Remarks:									
	Status:									

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures			
					Const Start	Const End	Baseline	Current		%		
Total Priority List				9	296			\$371,307	\$371,307	100.0	\$0	\$0
2			Project(s)									
0			Cost Sharing Agreements Executed									
0			Construction Started									
0			Construction Completed									
0			Project(s) Deferred/Deauthorized									
Total DEPT. OF THE INTERIOR, FISH & WILDLIFE SERVICE					13,279			\$31,903,186	\$35,051,094	109.9	\$8,996,439	\$5,691,831
11			Project(s)									
8			Cost Sharing Agreements Executed									
7			Construction Started									
5			Construction Completed									
0			Project(s) Deferred/Deauthorized									

Notes:

1. Expenditures based on Corps of Engineers financial data.
2. Date codes: A = Actual date • = Behind schedule
3. Percent codes: ! = 125% of baseline estimate exceeded

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual
					Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures

Lead Agency: DEPT. OF COMMERCE, NATIONAL MARINE FISHERIES SERVICE

Priority List 1

Fourchon Hydrologic Restoration - DEAUTHORIZED	TERRE	LAFOU	0				\$252,036	\$6,999	2.8	\$6,999
Remarks:	In a meeting on October 7, 1993, Port Fourchon conveyed to NMFS personnel that any additional work in the project area could be conducted by the Port and they did not wish to see the project pursued because they question its benefits and are concerned that undesired Government / general public involvement would result after implementation.									

NMFS has recommended to the Task Force that the project be deauthorized and the Task Force concurred at the July 14, 1994 meeting.

Status: Deauthorized.

Lower Bayou LaCache Hydrologic Restoration - DEAUTHORIZED	TERRE	TERRE	0	17-Apr-93 A			\$1,694,739	\$99,625	5.9	\$99,625
Remarks:	In a public hearing on September 22, 1993, with landowners in the project area, users strenuously objected to the proposed closure of the two east-west connections between Bayou Petit Caillou and Bayou Terrebonne.									

NMFS received a letter from LA DNR, dated February 6, 1995, recommending deauthorization of the project. NMFS forwarded the letter to COE for Task Force approval.

Status: Deauthorized.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures	
					Const Start	Const End	Baseline	Current		%
Total Priority List 1										
			0				\$1,946,775	\$106,625	5.5	\$106,625

2 Project(s)

- 1 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 2 Project(s) Deferred/Deauthorized

Priority List 2

Atchafalaya Sediment Delivery	ATCHI	STMRY	2,232	01-Aug-94 A	25-Jan-98 A	21-Mar-98 A	\$907,810	\$2,559,023	281.9!	\$1,734,183
-------------------------------	-------	-------	-------	-------------	-------------	-------------	-----------	-------------	--------	-------------

Remarks: Project cost increase was approved by the Task Force at the January 16, 1998 meeting.

Status: Complete. Processing application for amendment to cooperative agreement for cost share change.

Big Island Mining (Increment 1)	ATCHI	STMRY	1,560	01-Aug-94 A	25-Jan-98 A	08-Oct-98 A	\$4,136,057	\$7,550,903	182.6!	\$5,998,653
---------------------------------	-------	-------	-------	-------------	-------------	-------------	-------------	-------------	--------	-------------

Remarks: Project cost increase was approved by the Task Force at the January 16, 1998 meeting.

Status: Construction complete. Processing application to amend cooperative agreement for cost share change.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)**

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	***** ESTIMATES ***** Baseline	Current	%	Actual Obligations/ Expenditures
Point Au Fer	TERRE	TERRE	375	01-Jan-94 A	01-Oct-95 A	08-May-97 A	\$1,069,589	\$2,909,663	272.01	\$2,297,042

Remarks: Construction for the project will be accomplished in two phases. Phase I construction on the wooden plugs in the oil and gas canals in Area 1 was completed December 22, 1995. Phase II construction in Area 2 has been delayed until suitable materials can be found to backfill the canal fronting the Gulf of Mexico. Phase II construction completed in May 1997. Task Force approved project design change and project cost increase at December 18, 1996 meeting.

Status: Complete. Closing out cooperative agreement grant between NOAA and LA DNR.

Total Priority List 2 4,167

\$6,113,456 \$13,019,589 213.0 \$10,029,877 \$8,393,170

- 3 Project(s)
- 3 Cost Sharing Agreements Executed
- 3 Construction Started
- 3 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 3

Bayou Perot / Bayou Rigolettes Marsh Restoration - DEAUTHORIZED	BARA	JEFF	0	01-Mar-95 A			\$1,835,047	\$20,963	1.1	\$20,963
---	------	------	---	-------------	--	--	-------------	----------	-----	----------

Remarks: A feasibility study conducted by LA DNR indicated that possible wetlands benefits from construction of this project are questionable. LA DNR has indicated a willingness to deauthorize the project. In April 1996, LA DNR had asked to reconsider the project with potential of combining this with two other projects in the watershed. Project deauthorized at January 16, 1998 Task Force meeting.

Status: Deauthorized.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)**

PROJECT	BASIN	PARISH	ACRES	CSA	SCHEDULES ***** Const Start	Const End	***** ESTIMATES ***** Baseline	Current	%	Actual Obligations/ Expenditures
East Timbalier Island Sediment Restoration #1	TERRE	LAFOU	1,913	01-Feb-95 A	01-May-99 A	01-May-00	\$2,046,971	\$4,040,843	197.4!	\$3,422,629 \$2,673,952

Remarks:

Status: Construction completed in December 1999. Sand fencing and aerial seeding scheduled for 2000. Vegetative plantings scheduled for 2001.

Lake Chapeau Sediment & Hydrologic Restoration	TERRE	TERRE	509	01-Mar-95 A	14-Sep-98 A	18-May-99 A	\$4,149,182	\$5,644,322	136.0!	\$4,429,030 \$3,397,312
--	-------	-------	-----	-------------	-------------	-------------	-------------	-------------	--------	----------------------------

Remarks:

Status: Construction complete. Vegetative plantings to be completed in spring 2000.

Lake Salvador Shore Protection Demo	BARA	STCHA	0	01-Mar-95 A	02-Jul-97 A	30-Jun-98 A	\$1,444,628	\$2,543,098	176.0!	\$2,106,256 \$4,098,255
--	------	-------	---	-------------	-------------	-------------	-------------	-------------	--------	----------------------------

Remarks:

Status: Phase 1 was completed September 1997. Phase 2 is shoreline protection between Bayou des Allemands and Lake Salvador. Construction began in April 1998 and completed in June 1998.

Total Priority List 3 2,422

\$9,475,828 \$12,249,226 129.3 \$9,978,879
\$10,190,482

- 4 Project(s)
- 4 Cost Sharing Agreements Executed
- 3 Construction Started
- 2 Construction Completed
- 1 Project(s) Deferred/Deauthorized

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)**

Actual
Obligations/
Expenditures

***** ESTIMATES *****
Current %

***** SCHEDULES *****
Const Start Const End

CSA

BASIN PARISH ACRES

Priority List 4

TERRE	LAFOU	215	08-Jun-95 A	01-May-99 A	01-May-00	\$5,752,404	\$13,849,106	240.81	\$11,760,822
Remarks:									

Status: Construction completed in January 2000. Due to changed site conditions, variable sand consistency in the borrow area, weather conditions and lack of an acceptable change order proposal from the contractor, restoration activities stopped at station +114 leaving a gap approximately 4,200 feet in the island. NMFS and LADNR are presently evaluating the feasibility of filling the remaining gap. Vegetative plantings and aerial seeding are scheduled for 2000 with vegetative plantings in 2001.

**Eden Isles East Marsh
Restoration -
DEAUTHORIZED**

PONT	STTAM	0				\$5,018,968	\$38,920	0.8	\$38,920
------	-------	---	--	--	--	-------------	----------	-----	----------

Remarks: NMFS letter of September 8, 1997 requests the CWPPRA Task Force to move forward with deauthorization of this project. Bids were placed twice to acquire the land; both times they were rejected due to higher bids by private developers. Project deauthorized at January 16, 1998 Task Force meeting.

Status: Deauthorized.

Total Priority List 4 215

\$10,771,372 \$13,888,026 128.9 \$11,799,742 \$3,259,721

- 2 Project(s)
- 1 Cost Sharing Agreements Executed
- 1 Construction Started
- 0 Construction Completed
- 1 Project(s) Deferred/Deauthorized

Priority List 5

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)**

PROJECT	BASIN	PARISH	ACRES	VERMI	441	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
							Const Start	Const End	Baseline	Current	%	
Little Vermilion Bay Sediment Trapping	TECHE	VERMI	441	VERMI	441	22-May-97 A	10-May-99 A	20-Aug-99 A	\$940,065	\$1,460,196	155.31	\$1,055,306
Remarks:												\$262,036

Status: Construction completed in August 1999.

Myrtle Grove Siphon	BARA	PLAQ	1,119	PLAQ	1,119	20-Mar-97 A	01-Oct-00	30-Oct-01	\$15,525,950	\$15,092,773	97.2	\$12,960,071
---------------------	------	------	-------	------	-------	-------------	-----------	-----------	--------------	--------------	------	--------------

Remarks: The 5th Priority List authorized funding in the amount of \$4,500,000 for the FY 96 Phase 1 of this project. Priority List 6 authorized funding in the amount of \$6,000,000 for FY 97. Priority List 8 is scheduled to fund the remaining \$5,000,000. Total project cost is estimated to be \$15,525,950.

Status: Engineering design contract to be issued pending resolution of landrights.

Total Priority List 5											1,560
2 Project(s)											\$16,466,015
2 Cost Sharing Agreements Executed											100.5
1 Construction Started											\$14,015,377
1 Construction Completed											\$548,464
0 Project(s) Deferred/Deauthorized											

Priority List 6

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
Black Bayou Hydrologic Restoration	CALC	CAMER	3,594	28-May-98 A	01-Apr-00	30-Oct-00	\$6,316,800	\$6,382,511	101.0	\$5,685,125 \$122,781

Remarks:

Status: Engineering design contract has been issued.

Delta-Wide Crevasses

DELTA	PLAQ	2,386	28-May-98 A	21-Jun-99 A	31-Dec-14	\$5,473,934	\$4,732,653	86.5	\$2,463,255
-------	------	-------	-------------	-------------	-----------	-------------	-------------	------	-------------

Remarks: In FY 97, Priority List 6 authorized funding of \$2,736,950 for Phase 1 of this 2-phased project. Priority List 8 is scheduled to fund \$2,736,950. Total project is scheduled to cost \$5,473,900.

Status: First dredging cycle of construction complete; three remaining dredging cycles.

Jaws Sediment Trapping

TECHIE	STMAR	1,999	28-May-98 A	01-Jun-00	30-Aug-00	\$3,167,400	\$3,392,135	107.1	\$2,850,660 \$106,644
--------	-------	-------	-------------	-----------	-----------	-------------	-------------	-------	--------------------------

Remarks:

Status: Engineering design in progress.

Total Priority List 6 7,979

\$14,958,134 \$14,507,299 97.0 \$10,999,040 \$431,554

- 3 Project(s)
- 3 Cost Sharing Agreements Executed
- 1 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

Actual
Obligations/
Expenditures

***** ESTIMATES *****
Current %
Baseline

***** SCHEDULES *****
Const Start Const End

BASIN PARISH ACRES

PROJECT

Priority List 7

Grand Terre Vegetative Plantings	BARA	JEFF	127	16-Dec-98 A	01-Mar-01	30-Apr-01	\$928,900	\$965,030	103.9	\$789,561	\$16,951
----------------------------------	------	------	-----	-------------	-----------	-----------	-----------	-----------	-------	-----------	----------

Remarks:

Status: Livestock removal complete. Planting design under development.

Pecan Island Terracing	MERM	VERMI	442	01-Apr-99 A	30-Jun-00	30-Nov-00	\$2,185,900	\$2,223,353	101.7	\$1,858,019	\$24,541
------------------------	------	-------	-----	-------------	-----------	-----------	-------------	-------------	-------	-------------	----------

Remarks:

Status: Awarded cooperative agreement to LA DNR April 1999.

Total Priority List 7	569	\$3,114,800	\$3,188,383	102.4	\$2,647,580	\$41,492
-----------------------	-----	-------------	-------------	-------	-------------	----------

- 2 Project(s)
- 2 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 8

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures	
					Const Start	Const End	Baseline	Current		%
Bayou Bienvenue Pumping Station/Terracing	PONT	STBER	442				\$3,295,574	\$3,894,916	118.2	\$3,308,569
Remarks:										
Status:										

Status:

Hopedale Hydrologic Restoration

PONT STBER 134

15-Jul-00 30-Sep-00

\$2,179,491 \$2,432,958 111.6 \$2,065,279 \$11,950

Remarks:

Status: Engineering design contract to be awarded.

Total Priority List 8 576

\$5,475,065 \$6,327,874 115.6 \$5,373,848 \$15,459

- 2 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 9

CEMVN-PM-C

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)**

18-Mar-00
Page 38

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
Castille Pass Sediment Delivery	ATCH	STMRY	589				\$1,041,900	\$1,041,900	100.0	\$0 \$0
Remarks:										
Status:										
Chandeleur Island Restoration	PONT	STBER	220				\$156,082	\$156,082	100.0	\$20,000 \$0
Remarks:										
Status:										
East/West Grand Terre Islands Restoration	BARA	JEFF	472				\$341,562	\$341,562	100.0	\$0 \$0
Remarks:										
Status:										
Four Mile Canal Terracing & Sediment Trapping	TECHE	VERMI	327				\$293,139	\$293,139	100.0	\$0 \$0
Remarks:										
Status:										

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
LaBranche Wetlands Terracing/Plantings	PONT	STCHIA	489				\$146,911	\$146,911	100.0	\$0

Remarks:

Status:

Total Priority List 9 2,097

- 5 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

\$1,979,594 \$1,979,594 100.0 \$20,000
\$0

Total DEPT. OF COMMERCE, NATIONAL MARINE FISHERIES SERVICE 19,585

\$70,301,039 \$81,819,585 116.4 \$64,970,967
\$22,986,967

- 25 Project(s)
- 16 Cost Sharing Agreements Executed
- 9 Construction Started
- 6 Construction Completed
- 4 Project(s) Deferred/Deauthorized

Notes:

1. Expenditures based on Corps of Engineers financial data.
2. Date codes: A = Actual date * = Behind schedule
3. Percent codes: ! = 125% of baseline estimate exceeded

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

Actual
Obligations/
Expenditures

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****	***** ESTIMATES *****	Current	%	Actual Obligations/Expenditures
					Const Start	Const End	Baseline		

Lead Agency: DEPT. OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE

Priority List 1

BA-2 GIWW to Clovelly Wetland Restoration	BARA	LAFOU	2,052	17-Apr-93 A	21-Apr-97 A	31-Dec-00	\$8,141,512	\$8,328,603	102.3	\$6,033,556
---	------	-------	-------	-------------	-------------	-----------	-------------	-------------	-------	-------------

Remarks: The project has been divided into two contracts in order to expedite implementation. The first contract was to install most of the weir structures and is complete. The second contract is to install bank protection, one weir and one plug.

Contract 1: Begin: 1 May 97 Complete: 30 Nov 97 \$ 646,691
Contract 2: Begin: 1 Jan 00 Complete: 31 Oct 00 \$3,400,000

Status: The first construction contract is complete. The second construction contract was advertised in March 1999. The bids came in over budget. The project was readvertised in September 1999. The contract will be awarded in Jan 2000.

Vegetative Plantings Demo - Dewitt-Rollover - DEAUTHORIZED	MERM	VERMI	0	17-Apr-93 A	11-Jul-94 A	26-Aug-94 A	\$191,003	\$91,764	48.0	\$91,764
--	------	-------	---	-------------	-------------	-------------	-----------	----------	------	----------

Remarks: Sub-project of the Vegetative Plantings project.

Status: Complete and deauthorized.

Vegetative Plantings Demo - Falgout Canal	TERRE	TERRE	0	17-Apr-93 A	30-Aug-96 A	30-Dec-96 A	\$144,561	\$204,979	141.8!	\$115,548
---	-------	-------	---	-------------	-------------	-------------	-----------	-----------	--------	-----------

Remarks: Sub-project of the Vegetative Plantings project. Wave-stilling devices are in place. Vegetative plantings are in place.

Status: Complete.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****				***** ESTIMATES *****		Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Vegetative Plantings Demo - Timbalier Island	TERRE	TERRE	0	17-Apr-93 A	15-Mar-95 A	30-Jul-96 A	\$372,589	\$432,858	116.2	\$193,461 \$263,260

Remarks: Sub-project of the Vegetative Plantings project.

The contract to install the sand fences has been completed and the vegetation was planted during the summer of 1996.

Status: Complete.

Vegetative Plantings Demo - West Hackberry	CALC	CAMER	0	17-Apr-93 A	15-Apr-93 A	30-Mar-94 A	\$213,947	\$246,241	115.1	\$167,882 \$221,832
---	------	-------	---	-------------	-------------	-------------	-----------	-----------	-------	------------------------

Remarks: Sub-project of the Vegetative Plantings project.

Status: Complete.

Total Priority List 1 2,052

\$9,063,612 \$9,304,445 102.7
\$6,602,211
\$2,373,673

- 5 Project(s)
- 5 Cost Sharing Agreements Executed
- 5 Construction Started
- 4 Construction Completed
- 1 Project(s) Deferred/Deauthorized

Priority List 2

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures	
					Const Start	Const End	Baseline	Current		%
Brown Lake	CALC	CAMER	282	28-Mar-94 A	01-May-00	30-Nov-00	\$3,222,800	\$3,201,890	99.4	\$427,954
Remarks: Pipeline issues are a problem holding up construction start.										

Status: Contract award has been delayed due primarily to the length of time needed to complete the permitting process, beneficial use of COE dredged material, and the relocation of a pipeline. Contract award is expected in April 2000.

Caemarvon Outfall Management	BRET	PLAQ	802	13-Oct-94 A	30-Aug-00	01-Jan-01	\$2,522,199	\$2,658,799	105.4	\$271,187
Remarks: NRCS correspondence dated September 30, 1996 requested DNR to evaluate project for possible deauthorization. DNR correspondence of December 6, 1996 concurred with NRCS to begin formal deauthorization of the project. As of July 1, 1997, LA DNR had stated that problems might be able to be resolved, and requested that NRCS not proceed with formal deauthorization at July 1997 Task Force meeting. Further discussion with primary landowner put deauthorization on hold. A meeting was scheduled for July 22, 1997 between NRCS, LA DNR and primary landowner to see if problems could be resolved.										
Status: This project was proposed for deauthorization but was referred for revisions at the request of the landowners and DNR. The project has been modified. The final plan/EA has been prepared. Advertisement for bids is scheduled for May 2000.										

Freshwater Bayou	M:ERM	VERMI	1,593	17-Aug-94 A	29-Aug-94 A	15-Aug-98 A	\$2,770,093	\$2,923,123	105.5	\$1,300,974
Remarks: The project has been expedited in order to allow the use of stone removed from the Wax Lake Outlet Weir at a substantial cost savings. Construction is included as an option in the Corps of Engineers contract for the Wax Lake Outlet Weir removal. Option was exercised on September 2, 1994.										
Status: Project complete.										

The rock bank protection was Phase I of this project and was completed on January 26, 1995. Phase II will consist of installing water control structures to benefit the interior marsh area.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
Fritchie Marsh	PONT	STTAM	1,040	21-Feb-95 A	15-Apr-00	01-Sep-00	\$3,048,389	\$2,933,808	96.2	\$1,930,490

Remarks:

Status: Delays in project construction start occurred because a landowner had changed his position, prompting design changes, and local officials expressed concerns about drainage that required additional investigations. The construction contract is expected to be awarded in time to start construction in April 2000.

Hwy 384

CALC	CAMER	150	13-Oct-94 A	01-Oct-99 A	07-Jan-00 A	\$700,717	\$1,068,509	152.5!	\$308,222
------	-------	-----	-------------	-------------	-------------	-----------	-------------	--------	-----------

Remarks: Difference of opinion between agencies concerning impacts and benefits resulted in delays, and multiple, complex land-owner title issues caused delays.

\$277,204

Jonathan Davis Wetland

BARA	JEFF	510	05-Jan-95 A	22-Jun-98 A	15-Aug-00	\$3,398,867	\$4,431,026	130.4!	\$2,368,352
------	------	-----	-------------	-------------	-----------	-------------	-------------	--------	-------------

Remarks: The project will be constructed in two contracts. The first contract will install the majority of the structures. The second contract will install the bank protection and the remaining structures.

Status: Construction start slipped from December 1997 to June 1998 because of planning and design delays. First contract to construct weir and plugs was advertised in February 1998 and is complete. Second contract is bank stabilization and will probably be advertised in spring 2000.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
Mud Lake	CALC	CAMER	1,520	24-Mar-94 A	01-Oct-95 A	15-Jun-96 A	\$2,903,635	\$3,348,967	115.3	\$1,508,818

Remarks: Bid opening was August 8, 1995 and contract awarded to Crain Bros. Construction started in early October 1995. Water control structures are installed and the vegetation installed in the summer of 1996.

Status: Complete.

Vermilion Bay/Boston Canal	TIECHE	VERMI	378	24-Mar-94 A	13-Sep-94 A	30-Nov-95 A	\$1,008,634	\$1,008,710	100.0	\$688,351
----------------------------	--------	-------	-----	-------------	-------------	-------------	-------------	-------------	-------	-----------

Remarks: The structural portion of the project - shoreline protection - is complete.

The vegetative portion of the project is complete.

Status: Complete.

Total Priority List 2	6,275	\$19,575,334	\$21,574,832	110.2	\$8,804,347
-----------------------	-------	--------------	--------------	-------	-------------

- 8 Project(s)
- 8 Cost Sharing Agreements Executed
- 5 Construction Started
- 4 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 3

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

PROJECT	BASIN	PARISH	ACRES	CSA	SCHEDULES	ESTIMATES	Actual Obligations/Expenditures																
					Const Start	Const End	Baseline								Current								%
							Current								%								
							%																

Brady Canal	TERRE	TERRE	297	15-May-98 A	01-May-99 A	28-May-00	\$4,717,928	\$5,662,176	120.0	\$3,294,428
-------------	-------	-------	-----	-------------	-------------	-----------	-------------	-------------	-------	-------------

Remarks: Project delayed because of landowner concerns about permit conditions regarding monitoring, and objection from a pipeline company in the area. In addition, CSA revisions were needed to accommodate the landowner's interest in providing non-Federal funding.

Status: Permitting and design conditions have resulted in the CSA being modified to also include Fina Oil Co. and LL&E. Both will help cost share the project. The revised CSA is complete. Project is under construction and should be complete by May 2000.

Cameron Creole Maintenance	CALC	CAMER	2,602	09-Jan-97 A	30-Sep-97 A	15-Jul-98 A	\$3,719,926	\$3,799,365	102.1	\$1,052,400
----------------------------	------	-------	-------	-------------	-------------	-------------	-------------	-------------	-------	-------------

Remarks: This project provides for maintenance on an as-needed basis, therefore, a definite design completion start date cannot be set. The first and second contracts for are complete.

Status: The first three contracts for maintenance work are complete. The project provides for maintenance on an as-needed basis.

Cote Blanche	TECHE	STMRY	2,223	01-Jul-96 A	25-Mar-98 A	15-Dec-98 A	\$5,173,062	\$6,109,005	118.1	\$4,609,449
--------------	-------	-------	-------	-------------	-------------	-------------	-------------	-------------	-------	-------------

Remarks: LA DNR's placement of the project on a September 1995 candidate deauthorization list caused delays, as did the CSA being put on hold during that time.

Status: Construction start date slipped from November 1997 to March 1998 because of concern about the source of shell to construct the project. Site inspection for bidder was held January 12, 1998. Concern for a source of shell may require budget modifications. Contract awarded February 1998; notice to proceed March 1998. Construction was completed December 1998.

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

18-Mar-00
Page 46

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
SW Shore White Lake Demo - DEAUTHORIZED	MERM	VERMI	0	11-Jan-95 A	30-Apr-96 A	31-Jul-96 A	\$126,062	\$108,803	86.3	\$111,103 \$111,103

Remarks:

Status: Complete. Project deauthorized.

Violet Freshwater
Distribution

PONT STBER 247 13-Oct-94 A

\$1,821,438 \$1,862,562 102.3 \$145,511 \$116,195

Remarks: Rights-of-way to gain access to the site is a problem due to multiple landowner coordination, and additional questions have arisen about rights to operate existing siphon.

Status: Project is being deauthorized.

West Pointe-a-la-
Hache Outfall
Management

BARA PLAQ 1,087 05-Jan-95 A 15-Nov-00 01-Jul-01

\$881,148 \$4,068,045 461.71 \$161,872 \$84,411

Remarks: Initial cost estimate is too low. Additional \$3.2 million requested and approved at the January 16, 1998 Task Force meeting.

Status: Oyster issues and siphon operation being reviewed by DNR.

White's Ditch Outfall
Management -
DEAUTHORIZED

BRET PLAQ 0 13-Oct-94 A

\$756,134 \$32,862 4.3 \$32,862 \$32,862

Remarks: LA DNR concurred with NRCS to deauthorize the project. Project deauthorized at the January 16, 1998 Task Force meeting.

Status: Deauthorized.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****	Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	
							Current	%

Total Priority List 3 6,456

\$17,195,698 \$21,642,819 125.9 \$9,407,626 \$6,683,658

- 7 Project(s)
- 7 Cost Sharing Agreements Executed
- 4 Construction Started
- 3 Construction Completed
- 2 Project(s) Deferred/Deauthorized

Priority List 4

Bayou L'Ours Ridge Hydrologic Restoration

BARA LAFOU 737 23-Jun-97A 15-Jul-00 01-Jan-01

\$2,418,676 \$2,793,221 115.5 \$290,518 \$39,034

Remarks: Landowners have voiced concerns of project's effects on oyster leases.

Status: Project delayed to address concerns.

BBWW "Dupre Cut" - West

BARA JEFF 232 23-Jun-97A 30-Apr-00 30-Nov-00

\$2,192,418 \$3,304,787 150.71 \$2,371,267 \$305,096

Remarks:

Status: The project is being coordinated with the COE dredging program. Contract advertised December 1999. The Task Force approved a project cost increase of \$1,112,368 on August 4, 1999.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures	
				CSA	Const Start	Const End	Baseline	Current		%
Flotant Marsh Fencing Demo	TERRE	TERRE	0	16-Jul-99 A			\$367,066	\$540,240	147.2!	\$90,794

Remarks: Difficulty in locating an appropriate site for demonstration and difficulty in addressing engineering constraints.

Status: Project on hold; potential deauthorization.

Perry Ridge Bank Protection	CA/SB	CA/CA	1,203	23-Jun-97 A	15-Dec-98 A	15-Feb-99 A	\$2,223,518	\$2,664,613	119.8	\$2,231,936
-----------------------------	-------	-------	-------	-------------	-------------	-------------	-------------	-------------	-------	-------------

Remarks:

Status: Project complete.

Plowed Terraces Demo	CALC	CAMER	0	22-Oct-98 A	30-Apr-99 A	31-Aug-00	\$299,690	\$321,939	107.4	\$342,587
----------------------	------	-------	---	-------------	-------------	-----------	-----------	-----------	-------	-----------

Remarks: Project was put on hold pending results of an earlier terraces demonstration project being paid for by the Gulf of Mexico program. The project is currently proceeding.

Status: Project initially put on hold pending results of an earlier terraces demonstration project being paid for by the Gulf of Mexico program. Project currently proceeding. The first attempt to plow the terraces in the summer of 1999 was not successful. A second contract will be advertised in January 2000 to try again.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		Const End	Baseline	***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End			Current	%	
Total Priority List 4											
			2,172					\$7,501,368	\$9,624,800	128.3	\$5,327,101
5 Project(s)											
5 Cost Sharing Agreements Executed											
2 Construction Started											
1 Construction Completed											
0 Project(s) Deferred/Deauthorized											

Priority List 5

Freshwater Bayou Bank Stabilization	MERM	VERMI	511	01-Jul-97 A	15-Feb-98 A	15-Jun-98 A	\$3,998,919	\$2,533,882	63.4	\$1,910,479
-------------------------------------	------	-------	-----	-------------	-------------	-------------	-------------	-------------	------	-------------

Remarks: The local cost share is being paid by Acadian Gas Company.

Status: Contract was awarded January 14, 1998. Construction is complete.

Naomi Outfall Management	BARA	JEFF	633	12-May-99 A	01-Oct-00	28-Feb-01	\$1,686,865	\$2,102,650	124.6	\$242,368
--------------------------	------	------	-----	-------------	-----------	-----------	-------------	-------------	-------	-----------

Remarks: This project was combined with the BBWW "Dupre Cut" East project for planning and design; construction will be separate.

Status: The operation of the siphon is being reviewed by DNR.

CEMVN-PM-C

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

18-Mar-00
Page 50

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****				***** ESTIMATES *****		Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Racoon Island Breakwaters Demo	TERRE	TERRE	0	03-Sep-96 A	21-Apr-97 A	31-Jul-97 A	\$1,497,538	\$2,049,633	136.9!	\$1,585,097
Remarks:										
Status: Complete.										

Remarks:

Status: Complete.

Sweet Lake/Willow
Lake

CALC	CAMER	247	23-Jun-97 A	01-Nov-99 A	27-Jan-00 A	\$4,800,000	\$5,010,762	104.4	\$4,152,673
------	-------	-----	-------------	-------------	-------------	-------------	-------------	-------	-------------

Remarks: The 5th Priority List authorized funding in the amount of \$2,300,000 for the FY 96 Phase 1 of this project. Priority List 6 authorized funding in the amount of \$2,500,000 for the FY 97 Phase 2 of the project. Total project cost is \$4,800,000.

Status: The rock bank protection feature of the project is complete. The terraces and vegetation will be installed in spring 2001.

Total Priority List 5 1,391

\$11,983,322 \$11,696,927 97.6 \$7,890,617 \$5,300,037

- 4 Project(s)
- 4 Cost Sharing Agreements Executed
- 3 Construction Started
- 3 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 6

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****			***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	%	
BBWW "Dupre Cut" - East	BARA	JEFF	217	12-May-99 A	01-Jul-00	01-Feb-01	\$5,019,900	\$6,042,090	120.4	\$332,598

Remarks: This project was combined with the Naomi Outfall Management project for planning and design; construction will be separate.

Status: The project will be advertised in April 2000.

Cheniere au Tigre
Sediment Trapping
Device Demo

TECHE	VERMI	0	20-Jul-99 A	01-May-00	30-Nov-00	\$500,000	\$500,000	100.0	\$319,840
-------	-------	---	-------------	-----------	-----------	-----------	-----------	-------	-----------

Remarks:

Status: A request for proposals was advertised in Feb 2000.

Oaks/Avery Canals
Hydrologic Restoration-
Incr 1 (B.S. only)

TECHIE	VERMI	160	22-Oct-98 A	15-Apr-99 A	31-Aug-00	\$2,367,700	\$2,373,597	100.2	\$366,258
--------	-------	-----	-------------	-------------	-----------	-------------	-------------	-------	-----------

Remarks:

This project has a vegetative component and a structural component. NRCS will implement the vegetative component and LADNR will implement the structural component.

Status: The vegetative plantings were scheduled to be installed in summer 1999. The contractor defaulted on the vegetation contract. The vegetation contract has been awarded again. It is scheduled to be complete by August 2000.

Penchant Basin Plan
w/o Shoreline
Stabilization

TERRE	TERRE	1,155	30-Apr-00	01-Jan-03	30-Jan-04	\$14,103,051	\$14,103,051	100.0	\$1,060,498
-------	-------	-------	-----------	-----------	-----------	--------------	--------------	-------	-------------

Remarks:

Priority List 6 authorized funding for \$7,051,550 in FY 97; Priority List 8 is scheduled to fund \$7,051,550, for a total project cost of \$14,103,100.

Status: Data gathering on-going. Hydraulic model being set up.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****	***** ESTIMATES *****	Actual Obligations/ Expenditures	
					Const Start	Baseline		
					Const End	Current	%	
Total Priority List 6			1,532			\$21,990,651	\$23,018,738	104.7
4	Project(s)							\$2,079,194
3	Cost Sharing Agreements Executed							\$667,026
1	Construction Started							
0	Construction Completed							
0	Project(s) Deferred/Deauthorized							

Priority List 7

Barataria Basin Landbridge, Ph 1 & Ph 2	BARA	JEFF	1,304	16-Jul-99 A	01-Aug-00	15-Dec-00	\$17,515,029	\$17,515,020	100.0	\$1,280,195
---	------	------	-------	-------------	-----------	-----------	--------------	--------------	-------	-------------

Remarks: At the April 14, 1999 meeting, the Task Force approved combining the Barataria Basin Landbridge, Ph 1 (PL 7) project and the Barataria Basin Landbridge, Ph 2 (PL 8) project. The project will be recorded on Priority List 7. The project will be separated into three or four construction units.

Status: The first construction unit will be advertised May 2000.

Thin Mat Floating Marsh Enhancement Demo	TERRE	TERRE	0	16-Oct-98 A	15-Jun-99 A	30-Jun-00	\$460,222	\$542,570	117.9	\$69,000
--	-------	-------	---	-------------	-------------	-----------	-----------	-----------	-------	----------

Remarks:

Status: Under construction.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

PROJECT	BASIN	PARISH	ACRES	CSA	SCHEDULES ***** Const Start	Const End	***** ESTIMATES ***** Baseline	Current	%	Actual Obligations/ Expenditures
---------	-------	--------	-------	-----	--------------------------------	-----------	-----------------------------------	---------	---	--

Total Priority List 7 1,304

\$17,975,251 \$18,057,590 100.5 \$1,349,195 \$51,699

- 2 Project(s)
- 2 Cost Sharing Agreements Executed
- 1 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 8

Humble Canal Hydrologic Restoration	MERM	CAMER	378.	15-Apr-00	30-Nov-00	31-Mar-01	\$1,526,136	\$1,526,136	100.0	\$100,348 \$3,017
--	------	-------	------	-----------	-----------	-----------	-------------	-------------	-------	----------------------

Remarks:

Status:

Lake Portage
Landbridge, Ph 1

TECHE	VERMI	24	15-Apr-00	15-Jan-01	30-Apr-01	\$1,013,820	\$1,013,820	100.0	\$152,973 \$1,741
-------	-------	----	-----------	-----------	-----------	-------------	-------------	-------	----------------------

Remarks: Total project cost estimate is \$4,559,400; Priority List 8 funded \$1,000,000 for engineering and design and construction of the canal backfilling increment of the project. If monitoring indicates the need to construct the offshore breakwater increment of the project, the additional funds will be requested at that time.

This project is federally co-sponsored by EPA.

Status: The project is scheduled for advertisement in October 2000.

CEMVN-PM-C

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

18-Mar-00
Page 54

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual Obligations/ Expenditures
					Const Start	Const End	Baseline	Current	
Upper Oaks River, Freshwater Introduction Siphon	BRET	PLAQ	339	15-Apr-00	15-Oct-01	30-Apr-02	\$2,500,239	\$2,500,239	\$18,273

Remarks: Total project cost estimate is \$12,994,800; Priority List 8 funded \$2,500,000 for completion of engineering and design and construction of the outflow channel. Funding of the siphon will be requested when engineering and design are completed.

Status:

Total Priority List 8	741	\$5,040,195	\$5,040,195	100.0	\$271,594	\$6,499
-----------------------	-----	-------------	-------------	-------	-----------	---------

- 3 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 9

Barataria Basin Landbridge - Ph 3	BARA	JEFF	264				\$332,945	\$332,945	100.0	\$0	\$0
-----------------------------------	------	------	-----	--	--	--	-----------	-----------	-------	-----	-----

Remarks: This is the final phase of the Barataria Basin Landbridge project.

Status:

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****		Actual
	CA/SB	CAMER	540		Const Start	Const End	Baseline	Current	Obligations/ Expenditures
Black Bayou Bypass Culverts							\$217,689	\$217,689	100.0 \$0

Remarks:

Status:

Little Pecan Bayou
Control Structure

MERM CAMER 144

\$220,087 \$220,087 100.0
\$0 \$0

Remarks:

Status:

Perry Ridge #2

CALC CAMER 83

\$99,011 \$99,011 100.0
\$0 \$0

Remarks: The Perry Ridge project approved on Priority List 4 was the first phase of this project. This is the second and final phase of the project.

Status:

South Lake
DeCade/Atch
Freshwater Intro

TERRE TERRE 201

\$116,592 \$116,592 100.0
\$0 \$0

Remarks:

Status:

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	CSA	***** SCHEDULES *****		***** ESTIMATES *****	Actual Obligations/ Expenditures	
					Const Start	Const End			Current
Total Priority List 9				1,232		\$986,324	\$986,324	100.0	\$0
5									\$0
0									
0									
0									
0									
Total DEPT. OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE									
43			23,155			\$111,311,755	\$120,946,670	108.7	\$41,731,884
34									\$25,046,571
21									
15									
3									

Notes:

1. Expenditures based on Corps of Engineers financial data.
2. Date codes: A = Actual date * = Behind schedule
3. Percent codes: † = 125% of baseline estimate exceeded

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Total All Priority Lists

PROJECT	ACRES	***** ESTIMATES *****		Actual Obligations/ Expenditures			
		Baseline	Current %				
SUMMARY	Total All Projects	74,981	\$310,736,826	\$327,960,965	105.5	\$157,088,672	\$94,588,698
111 Project(s)							
74 Cost Sharing Agreements Executed							
50 Construction Started							
37 Construction Completed							
11 Project(s) Deferred/Deauthorized							
			Total Available Funds				
			Federal Funds	\$320,972,363			
			Non/Federal Funds	\$47,658,338			
			Total Funds	\$368,630,701			

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report by Basin

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: All Basins in State									
Priority List: Cons Plan	1	0	1	1	1	0	\$238,871	\$143,855	\$143,855
Basin Total	1	0	1	1	1	0	\$238,871	\$143,855	\$143,855
Basin: Atchafalaya									
Priority List:	2	3,792	2	2	2	0	\$5,043,867	\$10,109,926	\$7,230,868
Priority List:	1	589	0	0	0	0	\$1,041,900	\$1,041,900	\$0
Basin Total	3	4,381	2	2	2	0	\$6,085,767	\$11,151,826	\$7,230,868
Basin: Barataria									
Priority List:	1	2,497	3	3	1	0	\$9,960,769	\$9,568,996	\$2,771,599
Priority List:	2	510	1	1	0	0	\$3,398,867	\$4,431,026	\$2,245,402
Priority List:	3	1,087	3	1	1	1	\$4,160,823	\$6,632,106	\$4,203,628
Priority List:	4	969	2	0	0	0	\$4,611,094	\$6,098,008	\$344,130
Priority List:	5	1,752	2	0	0	0	\$17,212,815	\$17,195,423	\$472,822
Priority List:	6	217	1	0	0	0	\$5,019,900	\$6,042,090	\$298,560
Priority List:	7	1,431	2	0	0	0	\$18,443,929	\$18,480,050	\$31,697
Priority List:	9	882	0	0	0	0	\$1,474,042	\$1,474,042	\$0
Basin Total	17	9,345	14	5	2	1	\$64,282,239	\$69,921,741	\$10,367,839

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Breton Sound										
Priority List:	2	1	802	1	0	0	0	\$2,522,199	\$2,658,799	\$218,034
Priority List:	3	1	0	1	0	0	1	\$756,134	\$32,862	\$32,862
Priority List:	4	1	0	0	0	0	1	\$2,468,908	\$64,442	\$64,442
Priority List:	8	1	339	0	0	0	0	\$2,500,239	\$2,500,239	\$1,741
Basin Total		4	1,141	2	0	0	2	\$8,247,480	\$5,256,342	\$317,062
Basin: Calcasieu/Sabine										
Priority List:	4	1	1,203	1	1	1	0	\$2,223,518	\$2,664,613	\$1,736,481
Priority List:	9	1	540	0	0	0	0	\$217,689	\$217,689	\$0
Basin Total		2	1,743	1	1	1	0	\$2,441,207	\$2,882,302	\$1,736,481
Basin: Calcasieu										
Priority List:	1	3	6,407	3	3	3	0	\$5,770,187	\$2,845,630	\$2,009,079
Priority List:	2	4	3,019	4	3	3	0	\$8,568,462	\$11,336,809	\$5,292,522
Priority List:	3	2	3,555	2	2	1	0	\$8,301,380	\$8,265,719	\$1,180,445
Priority List:	4	2	0	2	1	0	0	\$670,284	\$747,272	\$216,666
Priority List:	5	1	247	1	1	1	0	\$4,800,000	\$5,010,762	\$1,484,719
Priority List:	6	1	3,594	1	0	0	0	\$6,316,800	\$6,382,511	\$122,781
Priority List:	8	1	993	0	0	0	0	\$5,920,248	\$5,920,248	\$148,485
Priority List:	9	1	83	0	0	0	0	\$99,011	\$99,011	\$0
Basin Total		15	17,898	13	10	8	0	\$40,446,372	\$40,607,962	\$10,454,698

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

Basin: Coastal Basins		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Priority List:	6	1	0	1	1	0	0	\$2,140,000	\$2,140,000	\$163,211
Basin Total		1	0	1	1	0	0	\$2,140,000	\$2,140,000	\$163,211
Basin: Miss. River Delta										
Priority List:	1	1	9,831	0	0	0	0	\$8,517,066	\$16,673,000	\$663,353
Priority List:	3	2	936	1	1	1	1	\$3,666,187	\$1,022,577	\$662,885
Priority List:	4	1	0	1	0	0	0	\$300,000	\$52,909	\$39,415
Priority List:	6	2	2,386	1	1	0	0	\$7,073,934	\$6,372,653	\$296,377
Basin Total	6	6	13,153	3	2	1	1	\$19,557,187	\$24,121,139	\$1,662,095
Basin: Mermentau										
Priority List:	1	2	247	2	2	2	1	\$1,368,671	\$1,492,890	\$1,072,081
Priority List:	2	1	1,593	1	1	1	0	\$2,770,093	\$2,923,123	\$1,558,271
Priority List:	3	1	0	1	1	1	1	\$126,062	\$108,803	\$111,103
Priority List:	5	1	511	1	1	1	0	\$3,998,919	\$2,533,882	\$1,940,045
Priority List:	7	1	442	1	0	0	0	\$2,185,900	\$2,223,353	\$24,541
Priority List:	8	1	378	0	0	0	0	\$1,526,136	\$1,526,136	\$3,011
Priority List:	9	2	440	0	0	0	0	\$309,489	\$309,489	\$0
Basin Total	9	9	3,611	6	5	5	2	\$12,285,270	\$11,117,676	\$4,709,057

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Pontchartrain									
Priority List:	1	2	1,753	2	2	0	\$6,119,009	\$5,280,909	\$4,563,071
Priority List:	2	2	2,320	1	1	0	\$4,500,424	\$4,568,508	\$1,498,111
Priority List:	3	3	1,002	2	1	0	\$2,683,636	\$2,675,673	\$783,381
Priority List:	4	1	0	0	0	1	\$5,018,968	\$38,920	\$38,920
Priority List:	5	1	75	0	0	0	\$2,890,821	\$2,418,904	\$327,880
Priority List:	8	2	576	0	0	0	\$5,475,065	\$6,327,874	\$15,459
Priority List:	9	3	886	0	0	0	\$410,771	\$410,771	\$0
Basin Total	14	6,612	7	5	4	1	\$27,098,694	\$21,721,559	\$7,226,824

G-61

Basin: Teche / Vermilion

Priority List:	1	1	65	1	1	0	\$1,526,000	\$2,046,940	\$1,726,392
Priority List:	2	1	378	1	1	0	\$1,008,634	\$1,008,710	\$786,034
Priority List:	3	1	2,223	1	1	0	\$5,173,062	\$6,109,005	\$4,723,816
Priority List:	5	1	441	1	1	0	\$940,065	\$1,460,196	\$262,036
Priority List:	6	4	2,567	3	1	0	\$10,130,000	\$11,384,358	\$706,532
Priority List:	8	1	24	0	0	0	\$1,013,820	\$1,013,820	\$1,741
Priority List:	9	3	994	0	0	0	\$1,082,604	\$1,082,604	\$0
Basin Total	12	6,692	7	5	4	0	\$20,874,185	\$24,105,633	\$8,206,551

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report by Basin

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Terrebonne									
Priority List: 1	5	9	4	3	3	2	\$8,809,393	\$9,489,672	\$6,926,112
Priority List: 2	3	958	3	3	3	0	\$12,831,588	\$20,446,810	\$15,247,381
Priority List: 3	4	3,958	4	4	2	0	\$15,758,355	\$23,068,527	\$13,542,221
Priority List: 4	2	215	2	1	0	0	\$6,119,470	\$14,389,346	\$3,276,493
Priority List: 5	3	2,915	2	1	1	0	\$31,120,343	\$20,744,533	\$3,065,378
Priority List: 6	4	1,774	1	0	0	2	\$30,522,757	\$24,692,045	\$275,612
Priority List: 7	1	0	1	1	0	0	\$460,222	\$542,570	\$36,953
Priority List: 9	4	576	0	0	0	0	\$1,364,877	\$1,364,877	\$0
Basin Total	26	10,405	17	13	9	4	\$106,987,005	\$114,738,381	\$42,370,152

Basin: Various Basins

Priority List: 9	1		0	0	0	0	\$52,549	\$52,549	\$0
Basin Total	1		0	0	0	0	\$52,549	\$52,549	\$0
Total All Basins	111	74,981	74	50	37	11	\$310,736,826	\$327,960,965	\$94,588,698

CEMVN-PM-C COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Summary Report by Priority List

P/L	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Federal Const. Funds Available	Non/Fed Const. Funds Available	Baseline Estimate	Current Estimate	Obligations To Date	Expenditures To Date	
1	14	20,809	13	2	11	\$28,084,900	\$8,446,848	\$39,933,317	\$47,199,647	\$23,723,285	\$19,533,015	
2	15	13,372	15	1	11	\$28,173,110	\$10,080,750	\$40,644,134	\$57,483,711	\$37,503,809	\$34,076,620	
3	13	12,761	13	4	7	\$29,939,100	\$8,161,414	\$35,050,606	\$47,632,787	\$29,490,742	\$24,955,557	
4	8	2,387	8	2	1	\$29,957,533	\$3,643,507	\$13,924,366	\$23,952,148	\$17,444,540	\$5,613,251	
5	9	5,941	7	0	4	\$33,371,625	\$4,936,370	\$60,962,963	\$49,363,701	\$23,954,688	\$7,552,880	
6	11	10,538	8	3	0	\$39,134,000	\$5,701,366	\$54,614,991	\$56,944,046	\$14,491,579	\$1,793,438	
7	4	1,873	4	1	0	\$42,540,715	\$3,186,896	\$21,090,051	\$21,245,973	\$3,996,775	\$93,191	
8	6	2,310	0	0	0	\$41,864,079	\$2,593,248	\$16,435,508	\$17,288,317	\$5,663,252	\$170,444	
9	19	4,990	0	0	0	\$47,907,301	\$907,939	\$6,052,932	\$6,052,932	\$20,000	\$0	
Active Projects		99	74,981	68	13	34	\$320,972,363	\$47,658,338	\$288,708,868	\$327,163,263	\$156,288,669	\$93,788,395

Deauthorized Projects	11	0	5	0	2			\$21,789,087	\$653,848	\$656,148	\$656,447
-----------------------	----	---	---	---	---	--	--	--------------	-----------	-----------	-----------

Total Projects	110	74,981	73	13	36	\$320,972,363	\$47,658,338	\$310,497,955	\$327,817,110	\$156,944,817	\$94,444,843
----------------	-----	--------	----	----	----	---------------	--------------	---------------	---------------	---------------	--------------

Conservation Plan	1	0	1	0	1			\$238,871	\$143,855	\$143,855	\$143,855
-------------------	---	---	---	---	---	--	--	-----------	-----------	-----------	-----------

Total Construction Program	111	74,981	74	13	37	\$320,972,363	\$47,658,338	\$310,736,826	\$327,960,965	\$157,088,672	\$94,588,698
							\$368,630,701				

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Summary Report by Priority List

- NOTES:
1. Total of 111 projects includes 99 active construction projects, 11 deauthorized projects, and the State of Louisiana's Wetlands Conservation Plan.
 2. Federal funds for FY 2000 is anticipated to be \$47,907,301.
 3. Total construction program funds available is \$368,630,701
 4. The current estimate for closed-out deauthorized projects is equal to expenditures to date.
 5. Current Estimate for the 5th priority list includes authorized funds for FY 96, FY 97 FY 98 and FY 99 for phased projects with multi-year funding
 6. Current Estimate for the 6th priority list includes authorized funds for FY 97, FY 98 and FY 99 for phased projects with multi-year funding.
 7. The Task Force approved 8 unfunded projects, totalling \$77,492,000 on Priority List 7 (not included in totals).
 8. Obligations include expenditures and remaining obligations to date.
 9. Non-Federal Construction Funds Available are estimated using cost share percentages as authorized for before and after approval of Conservation Plan.
 10. Baseline and current estimates for PPL 9 (and future project priority lists) reflect funding utilizing cash flow management principles.

