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8th PRIORITY PROJECT LIST REPORT (APPENDICES)

PREPARED BY:

LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION
TASK FORCE

November 1999



Coastal Wetlands Planning, Protection and Restoration Act

8th Priority Project List Report

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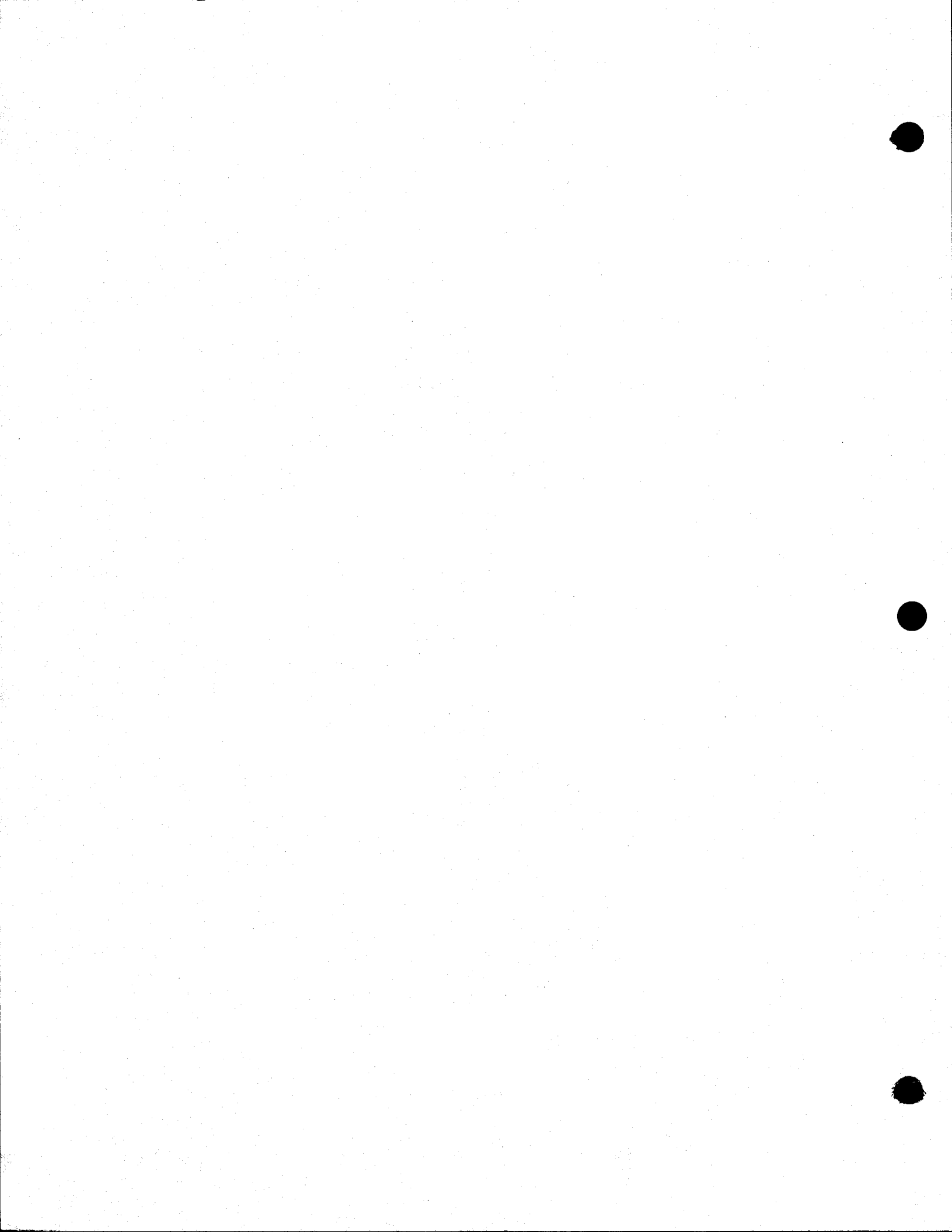
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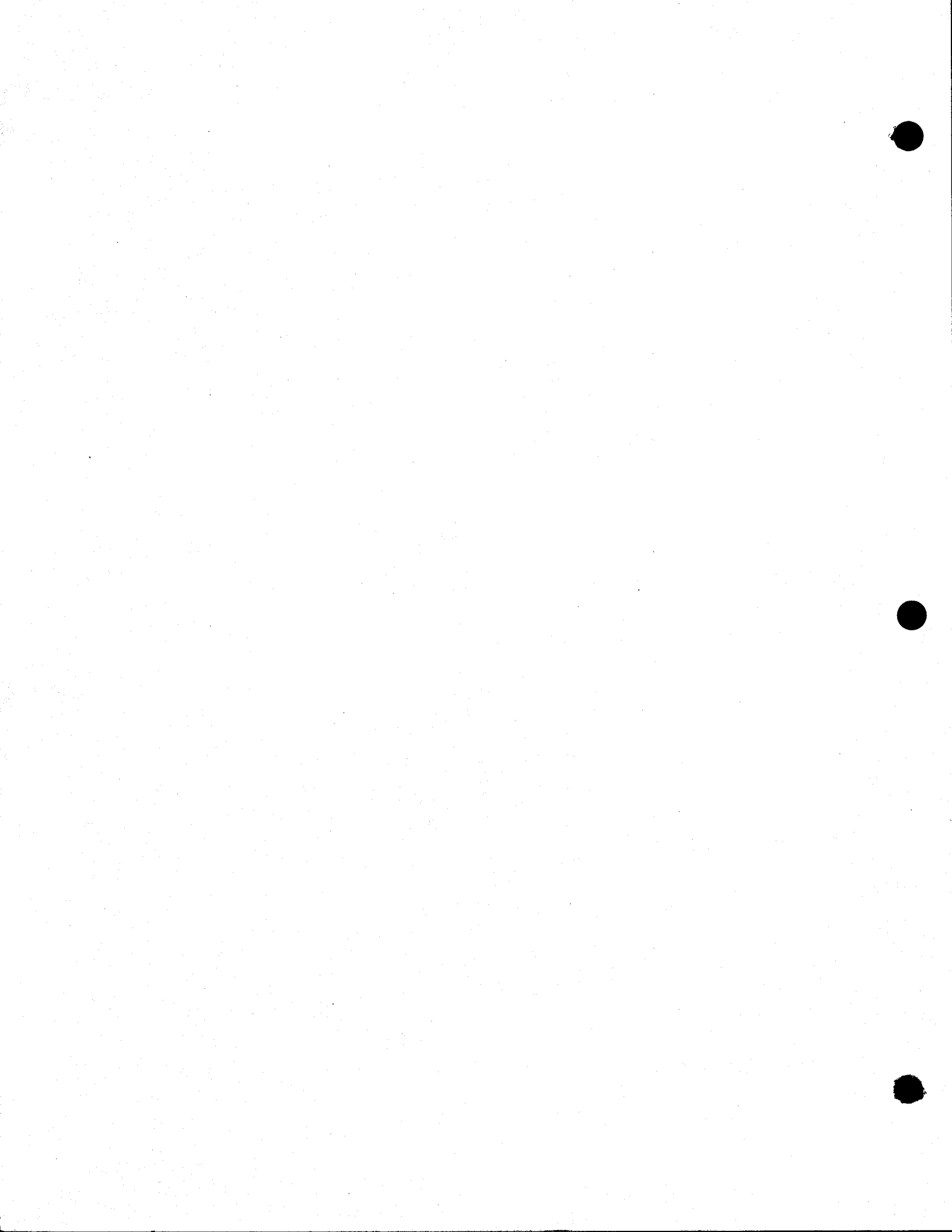


Coastal Wetlands Planning, Protection and
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Appendix A

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."

Coastal Wetlands Planning, Protection and
Restoration Act

8th Priority Project List Report

Appendix B

Wetland Value Assessment Methodology and Community
Models



Appendix B

Wetland Value Assessment Methodology and Community Models

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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 coastal Louisiana 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 V₁- 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 V₁ setting optimum habitat conditions at 100 percent marsh cover.

Variable V₂- 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 V₃- Marsh edge and interspersion. 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 interspersion. Interspersion is 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, interspersion can be indicative of marsh degradation, a factor taken into consideration in assigning suitability indices to the various Interspersion Types.

A relatively high degree of interspersion in the form of stream courses and tidal channels (Interspersion Type 1, Attachment 4) is assumed to be optimal (SI=1.0); streams and channels offer interspersion, yet are not indicative of active marsh deterioration. Areas exhibiting a high degree of marsh cover are also ranked as optimum, even though interspersion 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 interspersion. Numerous small marsh ponds (Interspersion Type 2) offer a high degree of interspersion, 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 (Interspersion Types 3 and 4) offer lower interspersion 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 interspersion, 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 V₆ 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 V₁- Percent of wetland covered by persistent emergent vegetation (≥ 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 brackish marsh model is identical to that in the fresh/intermediate model.

Variable V₂- 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 V₂ 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 V₃- 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 (≥ 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 V_3 , V_4 , and V_5 were grouped to isolate their influence relative to V_1 , V_2 , and V_6 .

For all marsh models, V_1 receives the strongest weighting. The relative weights of V_1 , V_2 , and V_6 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, V_2 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 V_6 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 V_2 and V_4 , 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 V_2 and V_4 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 V_2 and V_4 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 V_2 and V_4 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., V_1 , V_3 , V_5 , and V_6). Likewise, the open water HSI formula contains only those variables important in characterizing the open water habitat (i.e., V_2 , V_3 , V_4 , V_5 , and V_6). 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 HSIs 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:

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

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

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

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.

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WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate 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 Mean high salinity during the growing season (March through November).

Aquatic Organism Access:

Variable V_6 Aquatic organism access.

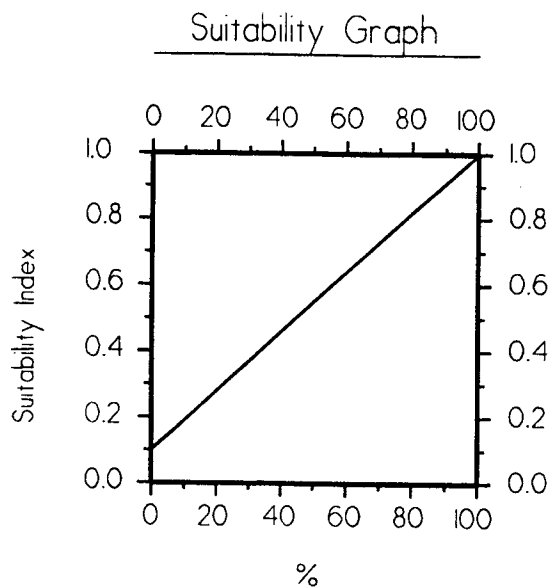
HSI Calculations:

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

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

FRESH/INTERMEDIATE MARSH

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

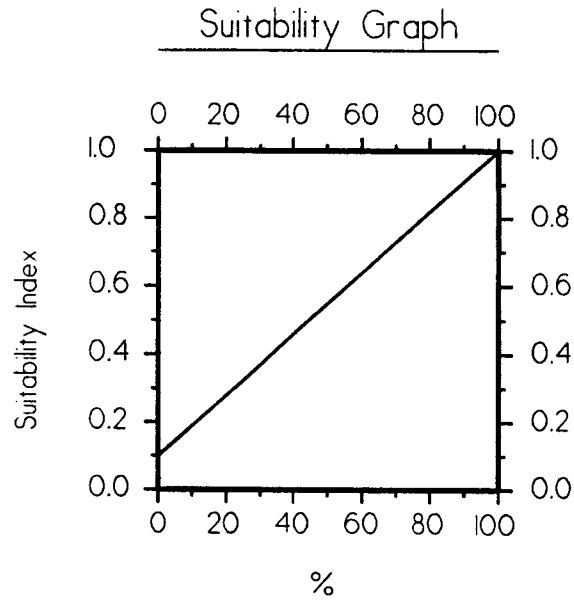


Line Formula

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

FRESH/INTERMEDIATE MARSH

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



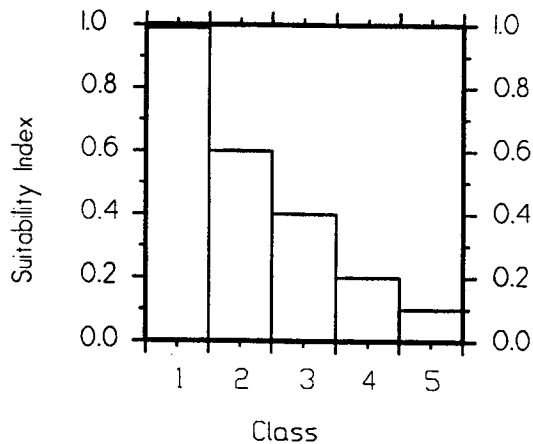
Line Formula

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

FRESH/INTERMEDIATE MARSH

Variable V₃ Marsh edge and interspersions.

Suitability Graph

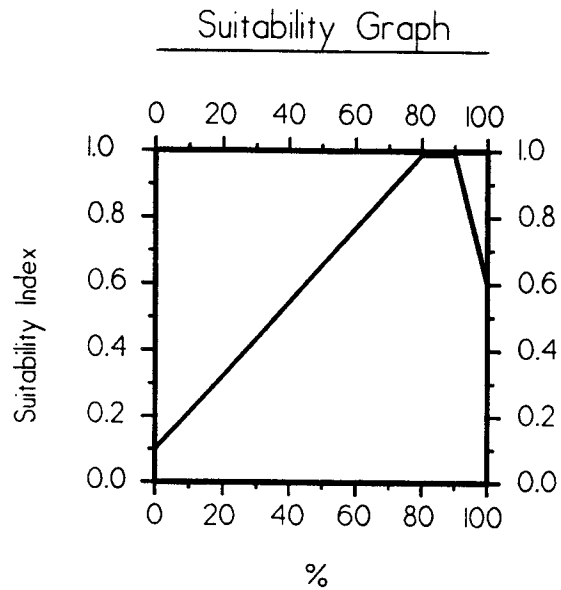


Instructions for Calculating SI for Variable V₃:

1. Refer to Attachment 4 for examples of the different interspersions 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 interspersions class #1 (SI=1.0). Conversely, if the entire project area is open water, assign an interspersions class #5 (SI=0.1).

FRESH/INTERMEDIATE MARSH

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



Line Formulas

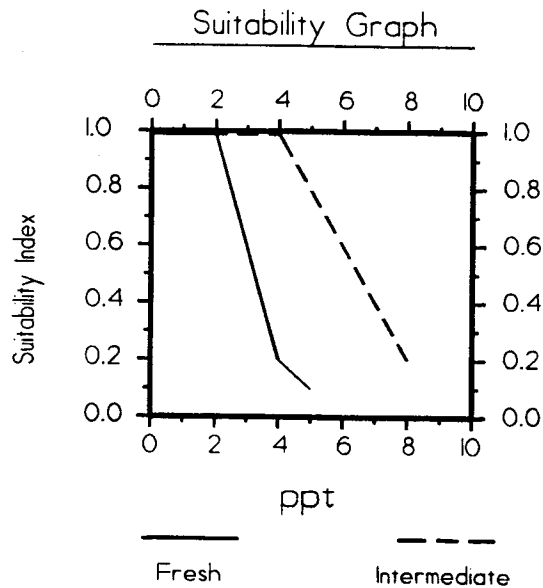
If $0 \leq \% < 80$, then $SI = (0.01125 * \%) + 0.1$

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 $SI = 1.0$
If $2 < \text{ppt} \leq 4$, then $SI = (-0.4 * \text{ppt}) + 1.8$
If $4 < \text{ppt} \leq 5$ then $SI = (-0.1 * \text{ppt}) + 0.6$

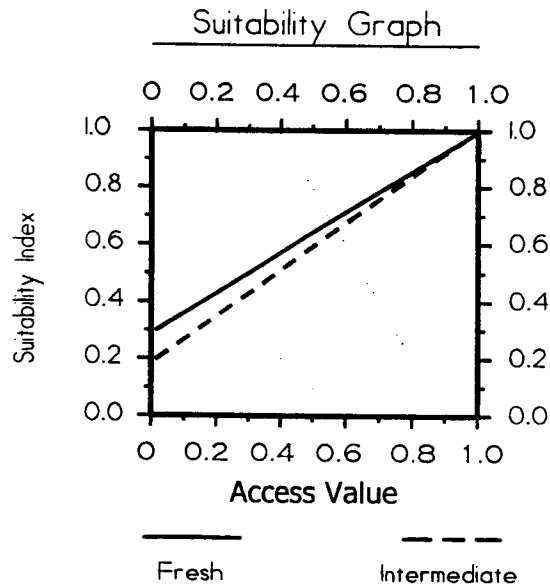
Intermediate Marsh:

If $0 \leq \text{ppt} \leq 4$, then $SI = 1.0$
If $4 < \text{ppt} \leq 8$, then $SI = (-0.2 * \text{ppt}) + 1.8$

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.

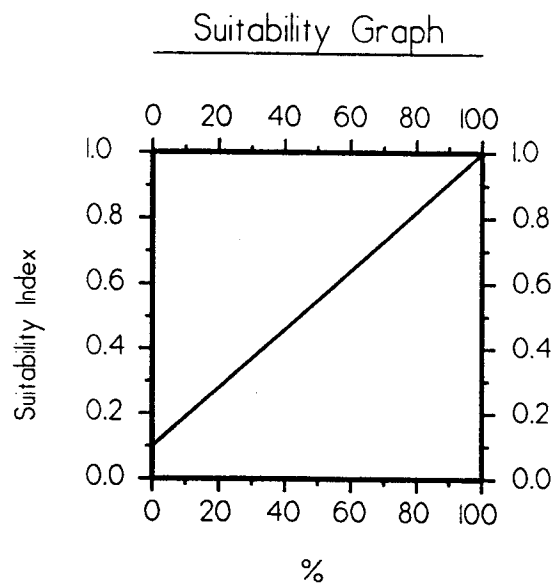
HSI Calculations:

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

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

BRACKISH MARSH

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

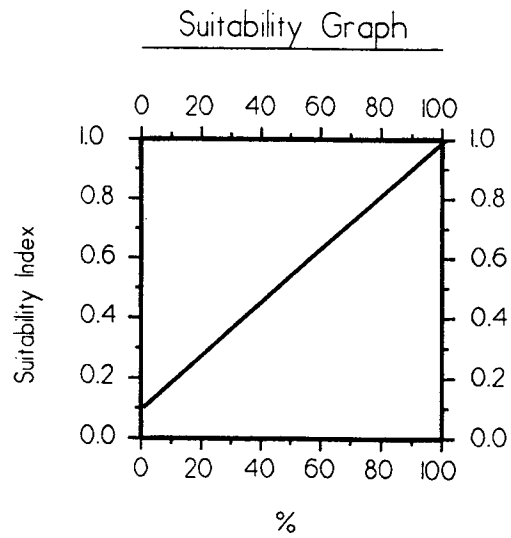


Line Formula

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

BRACKISH MARSH

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

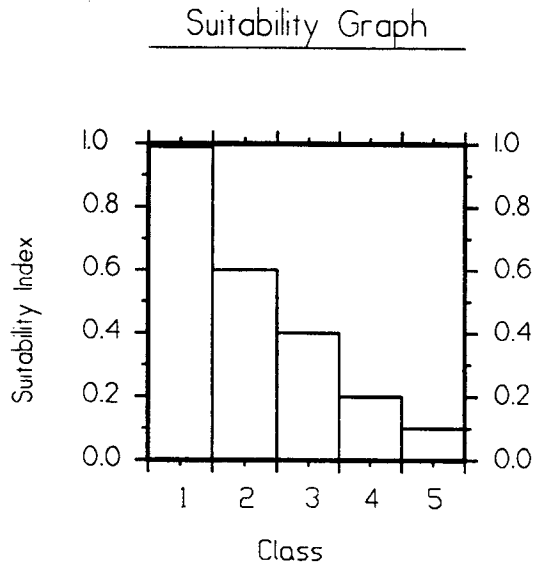


Line Formula

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

BRACKISH MARSH

Variable V_3 Marsh edge and interspersions.

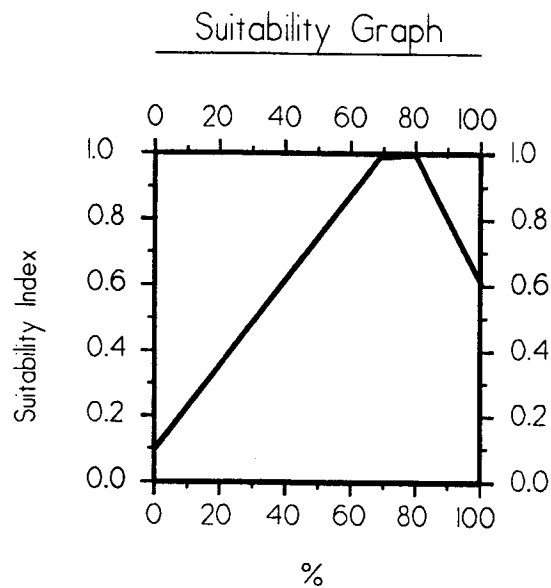


Instructions for Calculating SI for Variable V_3 :

1. Refer to Attachment 4 for examples of the different interspersions classes (=types).
2. Estimate percent of project area in each class and compute a weighted average to arrive at SIV_3 . If the entire project area is solid marsh, assign an interspersions class #1 (SI=1.0). Conversely, if the entire project area is open water, assign an interspersions 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

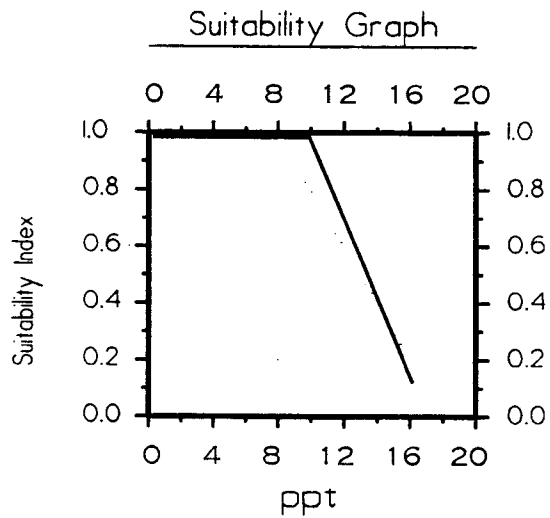
If $0 \leq \% < 70$, then $SI = (0.01286 * \%) + 0.1$

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

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

BRACKISH MARSH

Variable V₅ Average annual salinity.



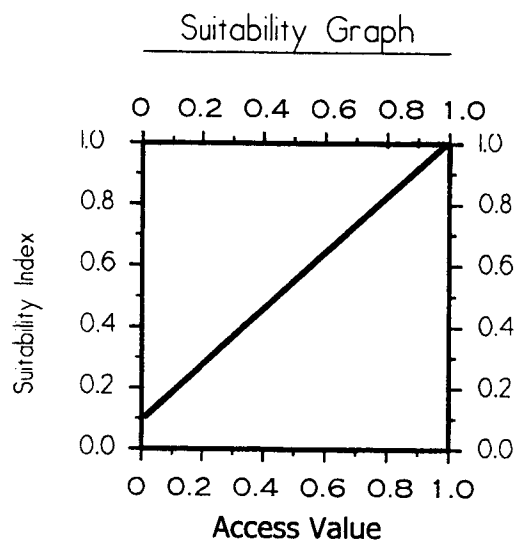
Line Formulas

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 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 \square 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.

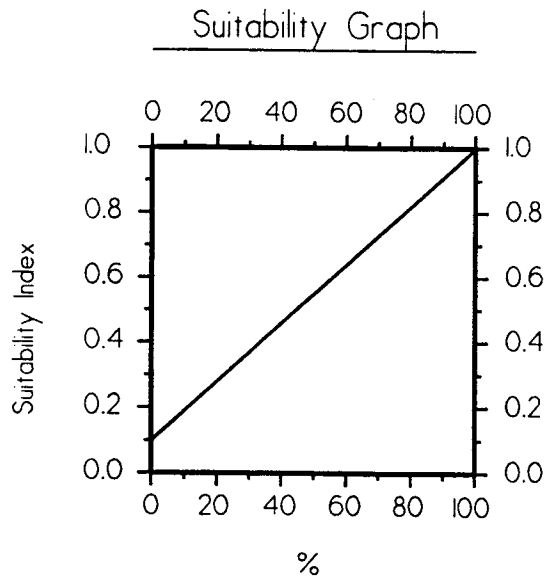
HSI Calculations:

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

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

SALINE MARSH

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

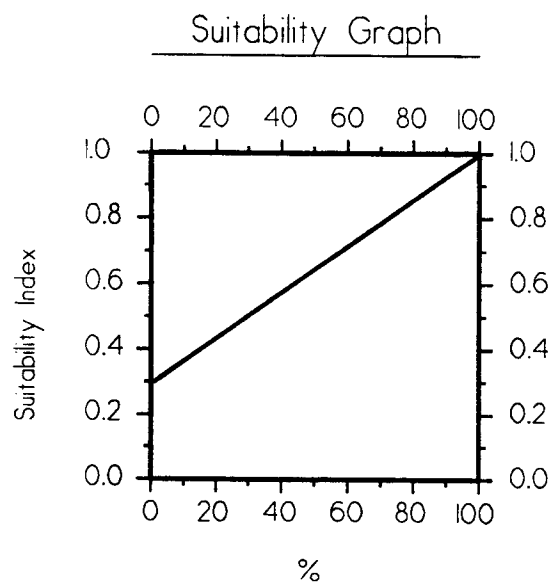


Line Formula

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

SALINE MARSH

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

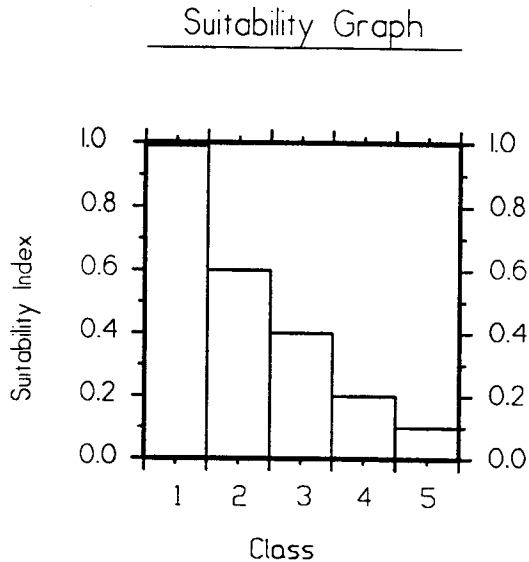


Line Formula

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

SALINE MARSH

Variable V₃ Marsh edge and interspersion.

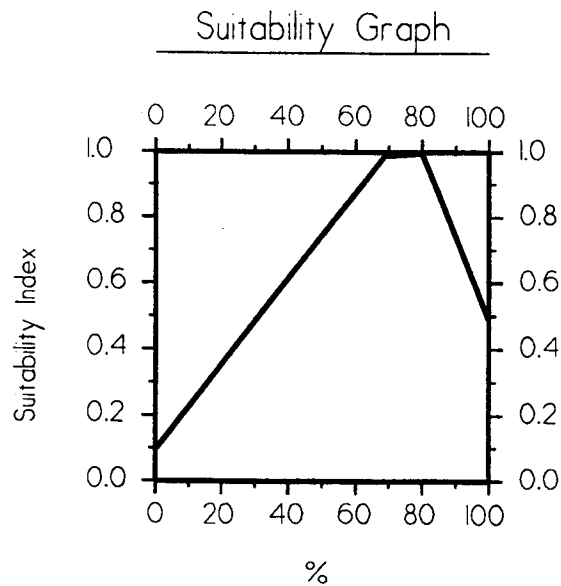


Instructions for Calculating SI for Variable V₃:

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 \leq 1.5 feet deep, in relation to marsh surface.



Line Formulas

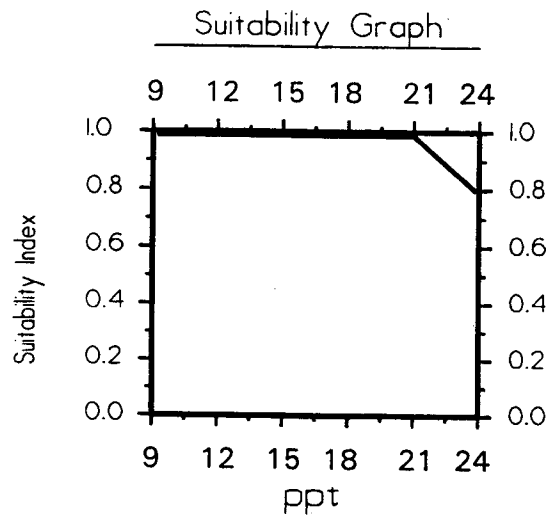
If $0 \leq \% < 70$, then $SI = (0.01286 * \%) + 0.1$

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

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

SALINE MARSH

Variable V₅ Average annual salinity.



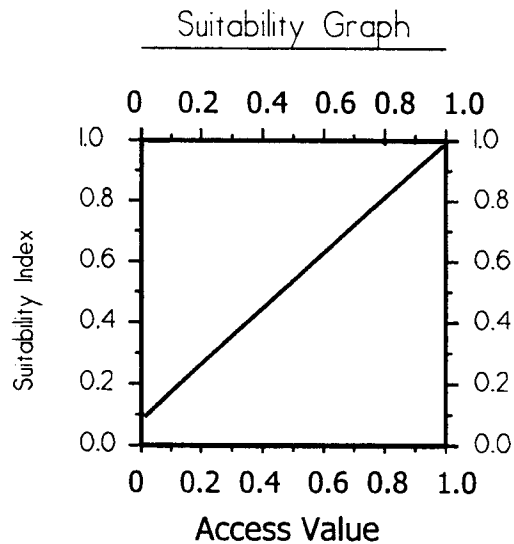
Line Formulas

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.

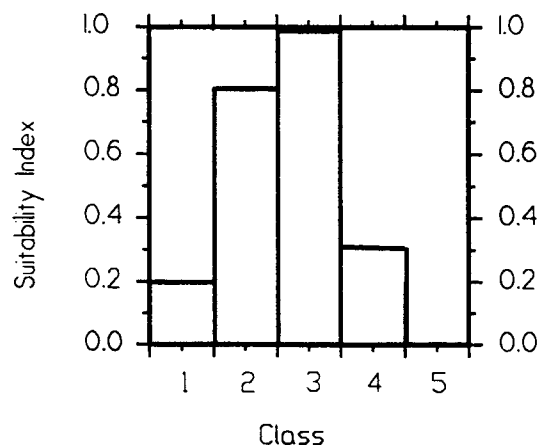
HSI Calculation:

$$\text{HSI} = (\text{SIV}_1 \times \text{SIV}_2 \times \text{SIV}_3)^{1/3}$$

CYPRESS-TUPELO SWAMP

Variable V₁ Water regime.

Suitability Graph

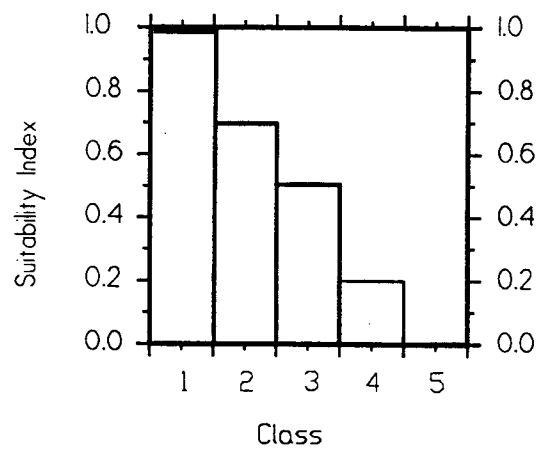


1. Permanently Flooded: water covers the substrate throughout the year in all years.
2. Semipermanently Flooded: surface water is present throughout the growing season in most years.
3. Seasonally Flooded: surface water is present for extended periods, especially in the growing season, but is absent 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.

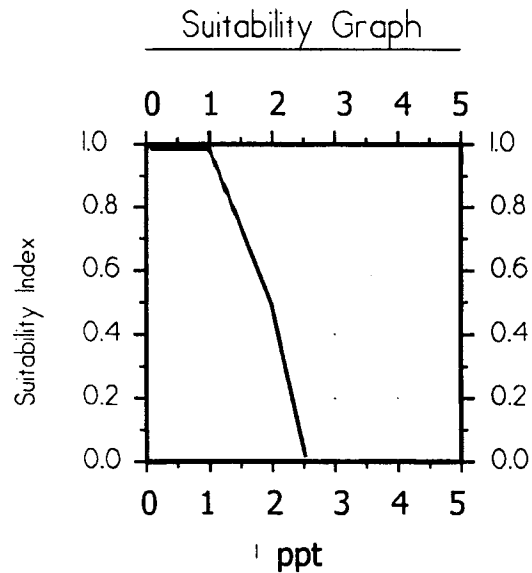
Suitability Graph



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 $SI = 1.0$

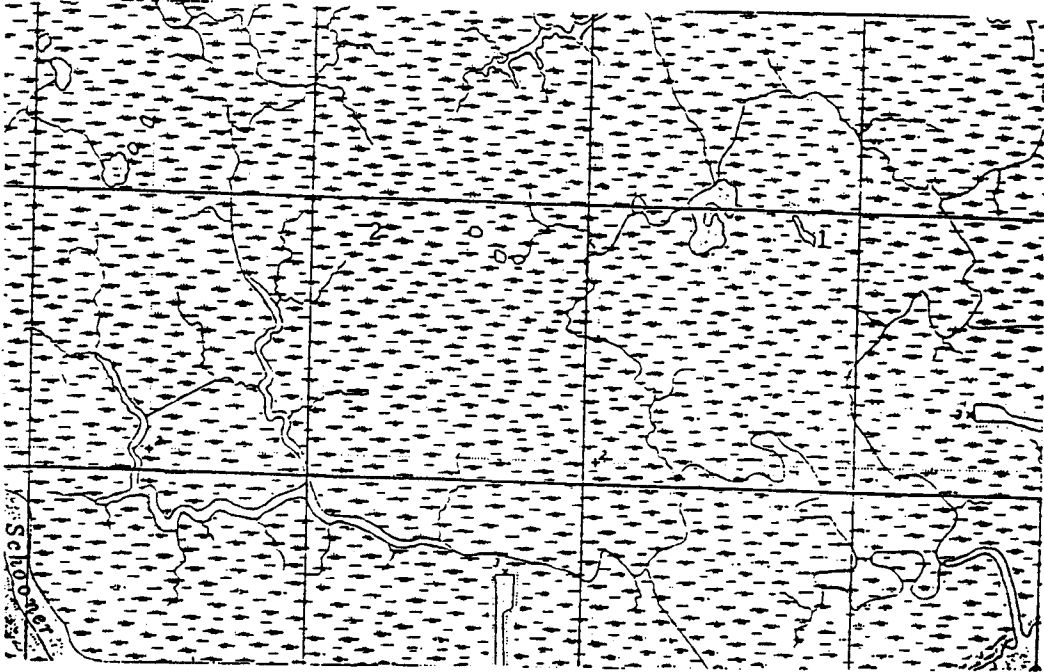
If $1 \leq \text{ppt} < 2$, then $SI = (-0.5 \times \text{ppt}) + 1.5$

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

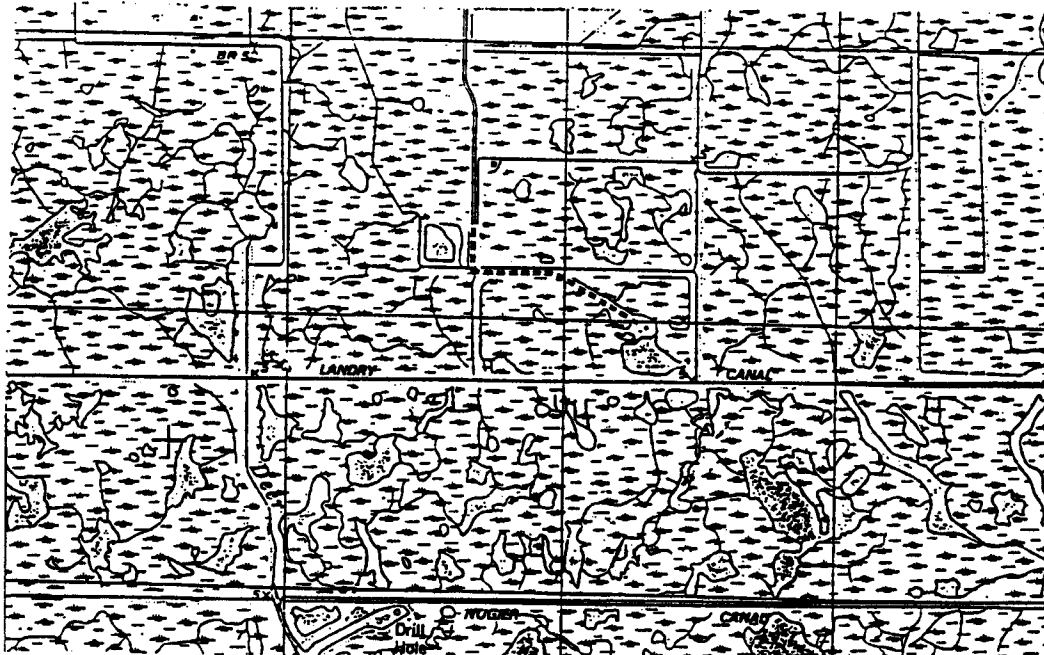
If $\text{ppt} \geq 2.5$, then $SI = 0$

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

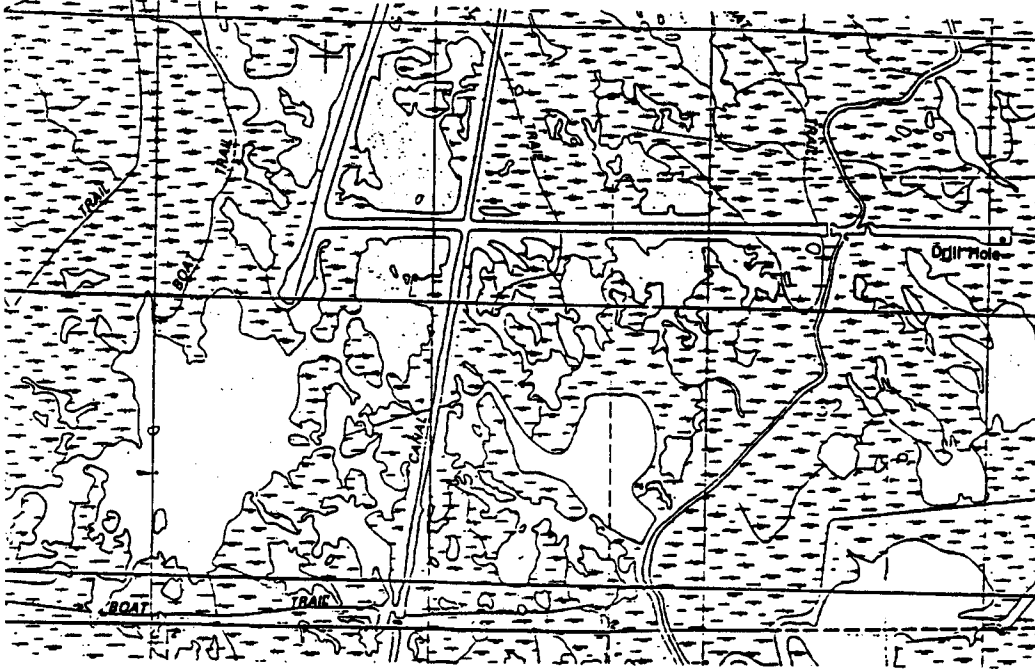
Variable V3 - Marsh Edge and Interspersion
Class 1



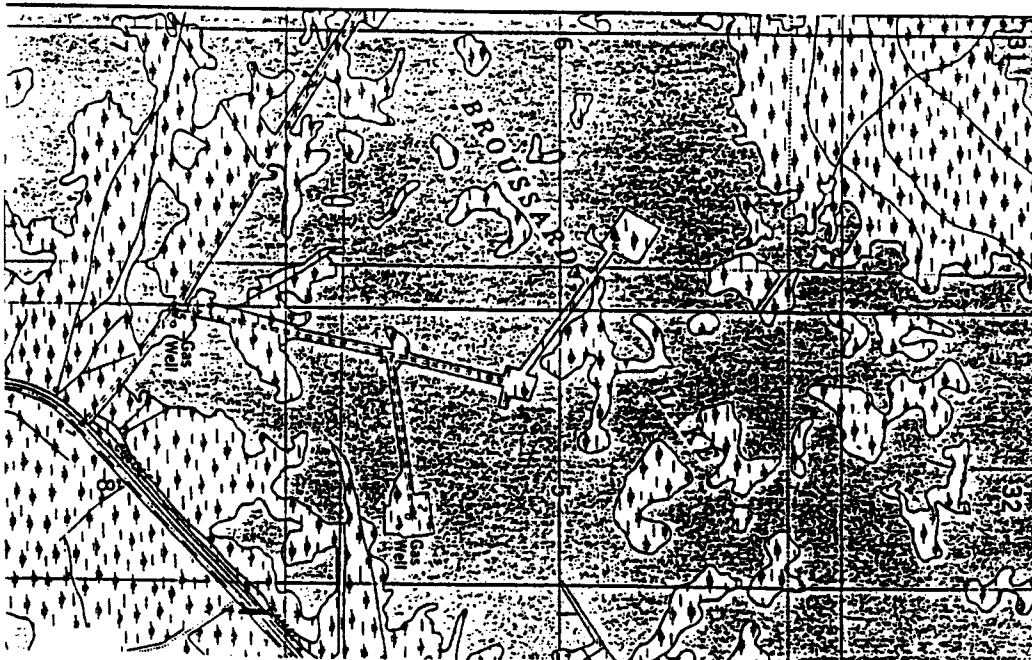
Class 2



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 \geq 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.

¹Below Marsh Level

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 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.

Access Value = weighted avg. of Access Values of the two accessible units

$$\begin{aligned} &= ([P_1 * R_1] + [P_2 * R_2]) / (P_1 + P_2) \\ &= (.30 * 0.35) + [.60 * 1.0] / (.30 + .60) \\ &= (.11 + .60) / .90 \\ &= .71 / .90 \\ &= .79 \end{aligned}$$

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

8th Priority Project List Report

Appendix C

Engineering



Appendix C

Engineering Designs and Cost Estimate, For Candidate Projects

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Legend

LF = Linear Foot
EA = Each
CY = Cubic Yard
SY = Square Yard
TN = Ton
LS = Lump Sum
SY = Square Yard
LB = Pound

Table C-1
Estimated Construction Cost
XCS-48/(SA-1), Sabine Refuge Marsh Creation, Alt. Nos. 1 thru 5

| | Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|--------|------|---------------------------------------|----------|------|----------------|--------------|
| Alt. 1 | 1 | Mob & Demob | 1 | LS | 400,000.00 | 400,000.00 |
| | 2 | Retention Dikes | 200,500 | CY | 3.26 | 653,000.00 |
| | 3 | 30" Steel Pipeline | 20,000 | LF | 171.75 | 3,435,000.00 |
| | 4 | Demolition & Removal of Timber Bridge | 1 | LS | 35,000.00 | 35,000.00 |
| | 5 | Excavation & Plmct of Dredged Mat'l | 900,000 | CY | 1.03 | 927,000.00 |
| | | TOTAL | | | | 5,450,000.00 |
| Alt. 2 | 1 | Mob & Demob | 1 | LS | 410,000.00 | 410,000.00 |
| | 2a | Retention & Closures | 1 | LS | 115,300.00 | 115,300.00 |
| | 2b | Interior Deflection | 141,000 | CY | 2.54 | 358,000.00 |
| | 3 | Excavation & Plmct of Dredged Mat'l | 900,000 | CY | 1.06 | 954,000.00 |
| | | TOTAL | | | | 1,837,300.00 |
| Alt. 3 | 1 | Mob & Demob | 1 | LS | 400,000.00 | 400,000.00 |
| | 2 | Retention Dikes | 1 | LS | 165,200.00 | 165,200.00 |
| | 3 | Excavation & Plmct of Dredged Mat'l | 900,000 | CY | 1.05 | 945,000.00 |
| | | TOTAL | | | | 1,510,200.00 |
| Alt. 4 | 1 | Mob & Demob | 1 | LS | 410,000.00 | 410,000.00 |
| | 2a | Retention & Closures | 1 | LS | 115,300.00 | 115,300.00 |
| | 2b | Interior Closures | 9,700 | CY | 3.42 | 33,000.00 |
| | 3 | Excavation & Plmct of Dredged Mat'l | 900,000 | CY | 1.03 | 927,000.00 |
| | | TOTAL | | | | 1,485,300.00 |
| Alt. 5 | 1 | Mob & Demob | 1 | LS | 400,000.00 | 400,000.00 |
| | 2a | Retention & Closures | 1 | LS | 114,100.00 | 144,100.00 |
| | 2b | Interior Closures | 15,500 | CY | 3.24 | 50,000.00 |
| | 3 | Excavation & Plmct of Dredged Mat'l | 900,000 | CY | 1.03 | 927,000.00 |
| | | TOTAL | | | | 1,521,100.00 |

Table C-2
Estimated Construction Cost
Barataria Basin Landbridge Shoreline Protection
Along Bayou Perot and Rigoletttes, Phase 2, Increments A, B, & C, BA-27a

| | Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|-------------|------|--------------------|----------|------|----------------|--------------|
| Phase 2 | | | | | | |
| Increment A | 1 | Mob & Demob | 1 | LS | 50,000.00 | 50,000.00 |
| | 2 | Bank Stabilization | 8,000 | LF | 505.00 | 4,040,000.00 |
| | | TOTAL | | | | 4,090,000.00 |
| Increment B | 1 | Foreshore Dike | 1 | LS | 50,000.00 | 50,000.00 |
| | 2 | Bank Stabilization | 8,000 | LF | 505.00 | 4,040,000.00 |
| | | TOTAL | | | | 4,090,000.00 |
| Increment C | 1 | Mob & Demob | 1 | LS | 50,000.00 | 50,000.00 |
| | | Bank Stabilization | 16,000 | LF | 505.00 | 8,080,000.00 |
| | | TOTAL | | | | 8,130,000.00 |

Table C-3
Estimated Construction Cost
Upper Oaks River Freshwater Introduction Siphon, PBS-1

| Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|------|-------------------------------|----------|------|----------------|--------------|
| 1 | Siphon & Appurtenances | 1 | LS | 5,658,000.00 | 5,658,000.00 |
| 2 | Conveyance Channel Excavation | 72,000 | CY | 5.00 | 360,000.00 |
| 3 | Clearing Conveyance Channel | 35 | AC | 800.00 | 28,000.00 |
| 4 | Oil Field Openings | 3 | EA | 10,000.00 | 30,000.00 |
| 5 | Mob & Demob | 1 | LS | 400,000.00 | 400,000.00 |
| | TOTAL | | | | 6,476,000.00 |

Table C-4
Estimated Construction Cost
Fort Jackson/Boothville Diversion, PBA-44)

| Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|------|---------------------------|----------|------|----------------|---------------|
| 1 | Levee Excavation | 326,000 | CY | 3.68 | 1,200,000.00 |
| 2 | Channel Excavation | 743,000 | CY | 3.00 | 2,230,000.00 |
| 3 | Rip-rap placed in the wet | 16,600 | TONS | 16.27 | 270,000.00 |
| 4 | Rip-rap placed in the dry | 19,200 | TONS | 19.79 | 380,000.00 |
| 5 | Bridge Relocation | 1 | LS | 6,000,000.00 | 6,000,000.00 |
| 6 | Relocations, general | 1 | LS | 600,000.00 | 600,000.00 |
| | TOTAL | | | | 10,680,000.00 |

Table C-5
Estimated Construction Cost
Fort Jackson Marsh Creation, XBA-73a

| Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|------|-------------|-----------|------|----------------|--------------|
| 1 | Dredging | 2,800,000 | CY | 2.50 | 7,000,000.00 |
| 2 | Mob & Demob | 1 | LS | 430,000.00 | 430,000.00 |
| | TOTAL | | | | 7,430,000.00 |

Table C-6
Estimated Construction Cost
Bayou Bienvenue Pump Outfall Management and Marsh Creation, (PO-74a)

| Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|------|-------------------------------|----------|------|----------------|--------------|
| 1 | Mob & Demob | 1 | LS | 64,141.00 | 64,141.00 |
| 2 | Rock Plug in Bayou | 1970 | TONS | 50.00 | 98,500.00 |
| 3 | Discharge Channel into Cell A | 30,100 | CY | 2.50 | 75,250.00 |
| 4 | Grass, Channel | 7000 | EA | 1.50 | 10,500.00 |
| 5 | Grass, Cell A | 46065 | EA | 2.00 | 92,130.00 |
| 6 | Terraces, Cell B | 286000 | CY | 2.50 | 715,000.00 |
| 7 | Grass, Cell B | 30000 | EA | 1.50 | 45,000.00 |
| 8 | Terraces, Cells C & D | 115560 | CY | 1.25 | 144,450.00 |
| 9 | Grass, Cells C & D | 30000 | EA | 1.50 | 45,000.00 |
| 10 | Weir with Boat Bay | 1100 | TONS | 50.00 | 55,000.00 |
| 11 | Plug in Pipeline Canal | 332 | CY | 3.00 | 996.00 |
| 12 | Plug in Pipeline Canal | 332 | CY | 3.00 | 996.00 |
| | TOTAL | | | | 1,346,963.00 |

Table C-7
Estimated Construction Cost
Hopedale Hydrologic Restoration, PPO-38)

| Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|------|--------------------------------|----------|------|----------------|-------------|
| 1 | Mob & Demob | 1 | LS | 28,075.00 | 28,075.00 |
| 2 | Sheet Pile | 100 | FT | 800.00 | 80,000.00 |
| 3 | 10' Flap Gates | 4 | EA | 56,000.00 | 224,000.00 |
| 4 | Counter Weights | 4 | EA | 2,600.00 | 10,400.00 |
| 5 | Fish Access Screw Gate | 2 | EA | 6,500.00 | 13,000.00 |
| 6 | 36" Flap Gates | 5 | EA | 1,200.00 | 6,000.00 |
| 7 | Extending 36" Pipes | 50 | FT | 50.00 | 2,500.00 |
| 8 | 60" Screw Gate | 1 | EA | 6,500.00 | 6,500.00 |
| 9 | Extending 60" Pipes | 10 | FT | 100.00 | 1,000.00 |
| 10 | 36" Screw Gate | 1 | EA | 2,400.00 | 2,400.00 |
| 11 | Extending 36" Pipes | 10 | FT | 50.00 | 500.00 |
| 12 | Channel Armoring | 3830 | TONS | 30.00 | 114,900.00 |
| 13 | Dewatering Main Structure | 1 | LS | 25,000.00 | 25,000.00 |
| 14 | Dewatering Highway Culverts | 1 | LS | 50,000.00 | 50,000.00 |
| 15 | Bypass Channel | 1 | LS | 13,700.00 | 13,700.00 |
| 16 | Warning Signs | 4 | EA | 400.00 | 16,000.00 |
| 17 | Removing Existing Structure | 1 | LS | 10,000.00 | 10,000.00 |
| | TOTAL | | | | 589,575.00 |

Table C-8
Estimated Construction Cost
Holley Beach Sand Management

| Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|------|-----------------|-----------|------|----------------|--------------|
| 1 | Mob & Demob | 1 | LS | 600,000.00 | 600,000.00 |
| 2 | Shore Handling | 1 | LS | 1,000,000.00 | 1,000,000.00 |
| 3 | Sand Beach Fill | 1,400,000 | CY | 3.00 | 4,200,000.00 |
| | TOTAL | | | | 5,800,000.00 |

Table C-9
Estimated Construction Cost
Humble Canal Hydrologic Restoration Project, PME-15

| Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|------|------------------------|----------|------|----------------|-------------|
| 1 | Non-Woven Geotextile | 250 | SY | 2.50 | 625.00 |
| 2 | Woven Geotextile | 800 | SY | 3.50 | 2,800.00 |
| 3 | Rip-rap, Corps 140# | 103 | TONS | 50.00 | 5,150.00 |
| 4 | Rip-rap, Corps 25# | 283 | TONS | 50.00 | 14,150.00 |
| 5 | 12" Class B Piles | 28 | EA | 730.00 | 20,440.00 |
| 6 | Hyacinth Fence | 140 | LF | 20.00 | 2,800.00 |
| 7 | 48" 10 Ga CMP | 114 | LF | 194.00 | 22,116.00 |
| 8 | Half-Round Drop Inlets | 3 | EA | 12,400.00 | 37,200.00 |
| 9 | Flap Gates | 3 | EA | 3,400.00 | 10,200.00 |
| 10 | Aluminum Sheet Pile | 1,770 | SF | 25.50 | 45,135.00 |
| 11 | Metal Fabrication | 1 | LS | 36,000.00 | 36,000.00 |
| 12 | Timber Fabrication | 1 | LS | 5,000.00 | 5,000.00 |
| 13 | Channel Excavation | 2,515 | CY | 2.00 | 5,030.00 |
| 14 | Dewatering | 1 | LS | 50,000.00 | 50,000.00 |
| 15 | Mob & Demob | 1 | LS | 27,500.00 | 27,500.00 |
| | TOTAL | | | | 284,146.00 |

Table C-10
Estimated Construction Cost
Lake Portage Land Bridge Project, PTV-20

| Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|------|---------------------|----------|------|----------------|--------------|
| 1 | Mob & Demob | 1 | LS | 90,000.00 | 90,000.00 |
| 2 | Dredge Material | 112,500 | CY | 2.50 | 281,250.00 |
| 3 | Rip-rap, Corps 200# | 46,700 | TONS | 35.00 | 1,634,500.00 |
| 4 | Woven Geotextile | 30,450 | SY | 3.00 | 91,350.00 |
| 5 | Channel Excavation | 4,450 | cy | 2.00 | 8,900.00 |
| | TOTAL | | | | 2,106,000.00 |

Table C-11
Estimated Construction Cost
Bayou Pelton Wetlands Protection Project

| Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|--------|------------------------|----------|------|----------------|-------------|
| Unit 1 | Rock Armored Plug | | | | |
| 1 | Mob & Demob | 1 | LS | 35,000.00 | 35,000.00 |
| 2 | Rip-rap | 117 | TONS | 40.00 | 4,667.00 |
| 3 | Earthen Fill | 1,778 | CY | 5.00 | 8,889.00 |
| 4 | Geotextile | 133 | SY | 3.00 | 399.00 |
| | SUBTOTAL | | | | 48,955.00 |
| Unit 2 | Gaps in Pipeline Canal | | | | |
| 1 | Mob & Demob | 1 | LS | 7,000.00 | 7,000.00 |
| 2 | Earthen Fill | 194 | CY | 5.00 | 972.00 |
| 3 | Clearing | 1 | LS | 500.00 | 500.00 |
| | SUBTOTAL | | | | 8,472.00 |
| Unit 3 | HNC Bank | | | | |
| 1 | Rip-rap | 23,664 | TONS | 30.00 | 709,920.00 |
| 2 | Earthen Fill | 20,622 | CY | 5.00 | 103,111.00 |
| 3 | Geotextile | 2,578 | SY | 3.00 | 7,733.00 |
| | SUBTOTAL | | | | 820,764.00 |
| Unit 4 | Bayou LaCarpe | | | | |
| 1 | Mob & Demob | 1 | LS | 10,000.00 | 10,000.00 |
| 2 | Earthen Fill | 7,407 | CY | 3.00 | 22,222.00 |
| | SUBTOTAL | | | | 32,222.00 |
| | TOTAL | | | | 910,413.00 |

Table C-12
Estimated Construction Cost
Periodic Introduction of Freshwater, Sediment, and Nutrients
At Selected Sites Along the Mississippi River - Demonstration Project

| Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|------|------------------|------------|------|----------------|-------------|
| 1 | Dredged Material | 23,100,000 | CY | 1.50 | 350,000.00 |
| | TOTAL | | | | 350,000.00 |

Table C-13
Estimated Construction Cost
Maintenance Dredging Matching Fund - Demonstration Project

| Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|------|------------------|----------|------|----------------|--------------|
| 1 | Dredged Material | 1 | LS | 1,000,000.00 | 1,000,000.00 |
| | TOTAL | | | | 1,000,000.00 |

Table C-14
Estimated Construction Cost
White Lake Demonstration Project

| | Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|--|------|---|----------|------|----------------|--------------|
| General | 1 | Mob & Demob | 1 | LS | 100,000.00 | 100,000.00 |
| | 2 | Floatation Channel | 1 | LS | 200,000.00 | 350,000.00 |
| | | SUBTOTAL | | | | 450,000.00 |
| Flyash Dike | 3 | Flyash (100-200#) | 5,000 | CY | 25.00 | 125,000.00 |
| | 4 | Geotextile | 4,000 | SY | 5.00 | 20,000.00 |
| | 5 | Marker Plates | 3 | EA | 375.00 | 1,125.00 |
| | | SUBTOTAL | | | | 146,125.00 |
| Timber Tire Dike | 6 | 8" Timber Piles | 8,500 | LF | 18.98 | 161,330.00 |
| | 7 | 12" Timber Piles | 4,000 | LF | 18.47 | 73,880.00 |
| | 8 | Timber Wales | 1,800 | LF | 26.32 | 47,376.00 |
| | 9 | Filler Blocks | 2,700 | LF | 16.06 | 43,362.00 |
| | 10 | Used Tires | 3,700 | EA | 8.00 | 29,600.00 |
| | 11 | Misc. Items | 1 | LS | 25,000.00 | 25,000.00 |
| | | SUBTOTAL | | | | 380,548.00 |
| Geotube Using Drydredge | 12 | Tube Geotextile (550#) | 3,500 | SY | 18.43 | 64,505.00 |
| | 13 | Tube Fill | 8,500 | CY | 10.63 | 90,355.00 |
| | 14 | Scour Apron and Anchor Tube Geotextile (550#) | 5,000 | SY | 17.78 | 88,900.00 |
| | 15 | Tube Refill | 4,000 | CY | 10.63 | 42,520.00 |
| | | SUBTOTAL | | | | 286,280.00 |
| Geotube Using Drydredge & Shred. Tires | 16 | Tube Geotextile (400#) | 3,500 | SY | 17.14 | 59,990.00 |
| | 17 | Tube Fill with Shredded Tires | 8,000 | CY | 12.50 | 100,000.00 |
| | 18 | Scour Apron and Anchor Tube Geotextile (400#) | 5,000 | SY | 16.32 | 81,600.00 |
| | 19 | Tube Refill | 4,000 | CY | 12.50 | 50,000.00 |
| | | SUBTOTAL | | | | 291,590.00 |
| Shredded Tire Core Dike | 20 | Stone (650# max) | 4,000 | TONS | 22.06 | 88,240.00 |
| | 21 | Shredded Tire Core | 1,000 | CY | 18.63 | 18,630.00 |
| | 22 | Geotextile (200#) | 4,500 | SY | 5.00 | 22,500.00 |
| | 23 | Marker Plates | 3 | EA | 375.00 | 1,125.00 |
| | | SUBTOTAL | | | | 130,495.00 |
| Unused Cement Bag Dike | 24 | Geotextile (200#) | 800 | SY | 7.50 | 6,000.00 |
| | 25 | Cement Bags | 650 | EA | 1,003.12 | 652,028.00 |
| | | SUBTOTAL | | | | 658,028.00 |
| Zigzag Fence | 26 | 12" Timber Piles | 5,000 | LF | 18.06 | 90,300.00 |
| | 27 | Timber Wales | 5,400 | LF | 18.75 | 101,250.00 |
| | | SUBTOTAL | | | | 191,550.00 |
| | | TOTAL | | | | 2,534,616.00 |

Table C-15
Estimated Construction Cost
Mandalay Demonstration Project

| | Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|--|------|---|----------|------|----------------|--------------|
| General | 1 | Mob & Demob | 1 | LS | 100,000.00 | 100,000.00 |
| | 2 | Flotatoin Channel | 1 | LS | 200,000.00 | 200,000.00 |
| | | SUBTOTAL | | | | 300,000.00 |
| Flyash Dike | 3 | Flyash (100-200#) | 5,250 | CY | 25.00 | 131,250.00 |
| | 4 | Geotextile | 4,000 | SY | 5.00 | 20,000.00 |
| | 5 | Marker Plates | 3 | EA | 375.00 | 1,125.00 |
| | | SUBTOTAL | | | | 152,375.00 |
| Timber Tire Dike | 6 | 8" Timber Piles | 11,000 | LF | 18.98 | 208,780.00 |
| | 7 | 12" Timber Piles | 4,500 | LF | 18.47 | 83,115.00 |
| | 8 | Timber Wales | 1,800 | LF | 26.32 | 47,376.00 |
| | 9 | Filler Blocks | 2,700 | LF | 16.06 | 43,362.00 |
| | 10 | Used Tires | 3,700 | EA | 8.00 | 29,600.00 |
| | 11 | Misc. Items | 1 | LS | 25,000.00 | 25,000.00 |
| | | SUBTOTAL | | | | 437,233.00 |
| Geotube Using Drydredge | 12 | Tube Geotextile (550#) | 3,500 | SY | 18.43 | 64,505.00 |
| | 13 | Tube Fill | 8,500 | CY | 10.63 | 90,355.00 |
| | 14 | Scour Apron and Anchor Tube Geotextile (550#) | 5,000 | SY | 17.78 | 88,900.00 |
| | 15 | Tube Refill | 4,000 | CY | 10.63 | 42,520.00 |
| | | SUBTOTAL | | | | 286,280.00 |
| Geotube Using Drydredge & Shred. Tires | 16 | Tube Geotextile (400#) | 3,500 | SY | 17.14 | 59,990.00 |
| | 17 | Tube Fill with Shredded Tires | 8,000 | CY | 12.50 | 100,000.00 |
| | 18 | Scour Apron and Anchor Tube Geotextile (400#) | 5,000 | SY | 16.32 | 81,600.00 |
| | 19 | Tube Refill | 4,000 | CY | 12.50 | 50,000.00 |
| | | SUBTOTAL | | | | 291,590.00 |
| Shredded Tire Core Dike | 20 | Stone (650# max) | 4,500 | TONS | 22.06 | 99,270.00 |
| | 21 | Shredded Tire Core | 1,000 | CY | 18.63 | 18,630.00 |
| | 22 | Geotextile (200#) | 4,500 | SY | 5.00 | 22,500.00 |
| | 23 | Marker Plates | 3 | EA | 375.00 | 1,125.00 |
| | | SUBTOTAL | | | | 141,525.00 |
| Unused Cement Bag Dike | 24 | Geotextile (200#) | 800 | SY | 7.50 | 6,000.00 |
| | 25 | Cement Bags | 650 | EA | 1,003.12 | 652,028.00 |
| | | SUBTOTAL | | | | 658,028.00 |
| Zigzag Fence | 26 | 12" Timber Piles | 5,800 | LF | 18.06 | 104,748.00 |
| | 27 | Timber Wales | 5,400 | LF | 18.75 | 101,250.00 |
| | | SUBTOTAL | | | | 205,998.00 |
| | | TOTAL | | | | 2,473,029.00 |

Table C-16
Estimated Construction Cost
Grand Lake Demonstration Project

| | Item | Description | Quantity | Unit | Unit Cost (\$) | Amount (\$) |
|--|------|---|----------|------|----------------|--------------|
| General | 1 | Mob & Demob | 1 | LS | 100,000.00 | 100,000.00 |
| | 2 | Floatation Channel | 1 | LS | 200,000.00 | 350,000.00 |
| | | SUBTOTAL | | | | 450,000.00 |
| Flyash Dike | 3 | Flyash (100-200#) | 5,000 | CY | 25.00 | 125,000.00 |
| | 4 | Geotextile | 4,000 | SY | 5.00 | 20,000.00 |
| | 5 | Marker Plates | 3 | EA | 375.00 | 1,125.00 |
| | | SUBTOTAL | | | | 146,125.00 |
| Timber Tire Dike | 6 | 8" Timber Piles | 8,500 | LF | 18.98 | 161,330.00 |
| | 7 | 12" Timber Piles | 4,000 | LF | 18.47 | 73,880.00 |
| | 8 | Timber Wales | 1,800 | LF | 26.32 | 47,376.00 |
| | 9 | Filler Blocks | 2,700 | LF | 16.06 | 43,362.00 |
| | 10 | Used Tires | 3,700 | EA | 8.00 | 29,600.00 |
| | 11 | Misc. Items | 1 | LS | 25,000.00 | 25,000.00 |
| | | SUBTOTAL | | | | 380,548.00 |
| Geotube Using Drydredge | 12 | Tube Geotextile (550#) | 3,500 | SY | 18.43 | 64,505.00 |
| | 13 | Tube Fill | 8,500 | CY | 10.63 | 90,355.00 |
| | 14 | Scour Apron and Anchor Tube Geotextile (550#) | 5,000 | SY | 17.78 | 88,900.00 |
| | 15 | Tube Refill | 4,000 | CY | 10.63 | 42,520.00 |
| | | SUBTOTAL | | | | 286,280.00 |
| Geotube Using Drydredge & Shred. Tires | 16 | Tube Geotextile (400#) | 3,500 | SY | 17.14 | 59,990.00 |
| | 17 | Tube Fill with Shredded Tires | 8,000 | CY | 12.50 | 100,000.00 |
| | 18 | Scour Apron and Anchor Tube Geotextile (400#) | 5,000 | SY | 16.32 | 81,600.00 |
| | 19 | Tube Refill | 4,000 | CY | 12.50 | 50,000.00 |
| | | SUBTOTAL | | | | 291,590.00 |
| Shredded Tire Core Dike | 20 | Stone (650# max) | 4,000 | TONS | 22.06 | 88,240.00 |
| | 21 | Shredded Tire Core | 1,000 | CY | 18.63 | 18,630.00 |
| | 22 | Geotextile (200#) | 4,500 | SY | 5.00 | 22,500.00 |
| | 23 | Marker Plates | 3 | EA | 375.00 | 1,125.00 |
| | | SUBTOTAL | | | | 130,495.00 |
| Unused Cement Bag Dike | 24 | Geotextile (200#) | 800 | SY | 7.50 | 6,000.00 |
| | 25 | Cement Bags | 650 | EA | 1,003.12 | 652,028.00 |
| | | SUBTOTAL | | | | 658,028.00 |
| Zigzag Fence | 26 | 12" Timber Piles | 5,000 | LF | 18.06 | 90,300.00 |
| | 27 | Timber Wales | 5,400 | LF | 18.75 | 101,250.00 |
| | | SUBTOTAL | | | | 191,550.00 |
| | | TOTAL | | | | 2,534,616.00 |

Coastal Wetlands Planning, Protection and
Restoration Act

8th Priority Project List Report

Appendix D

Economics Computational Summary
For Candidate Projects

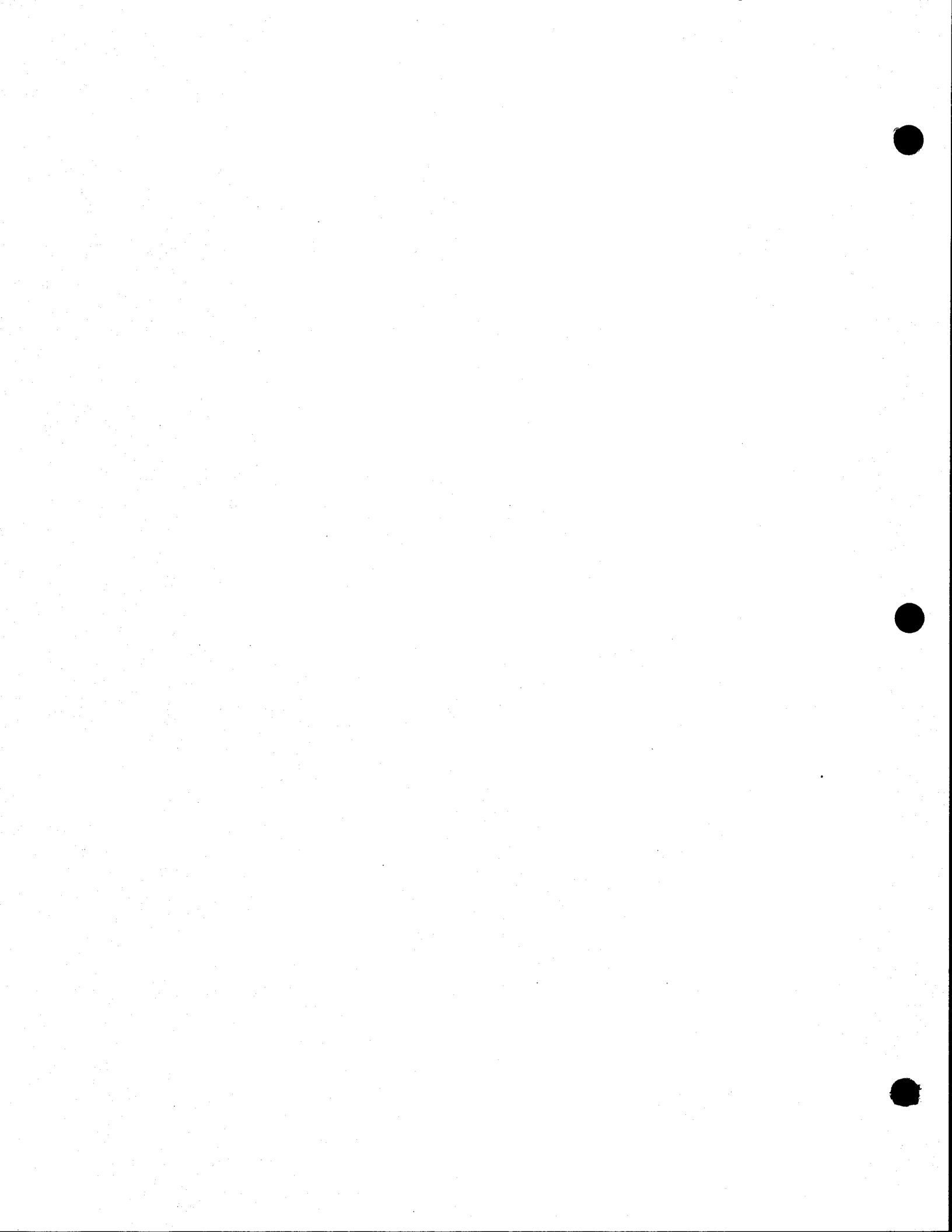


Appendix D

Economics Computational Summary For Candidate Projects

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

Sabine Marsh Creation (XCS-48)

| | | | |
|-----------------------------|--------------|--------------------------|--------------|
| Project Construction Years: | 3 | Total Project Years | 23 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$10,036,000 | Total Fully Funded Costs | \$10,264,400 |

| Annual Charges | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|----------------------|-----------------------|
| Interest & Amortization | \$8,892,100 | \$847,500 |
| Monitoring | \$67,600 | \$6,400 |
| O & M Costs | \$20,000 | \$1,900 |
| Other Costs | <u>\$6,900</u> | <u>\$700</u> |
| Total | \$8,986,600 | \$856,500 |

Average Annual Habitat Units

382

Cost Per Habitat Unit

\$2,242

Average Annual Acres of Emergent Marsh

711

Coastal Wetlands Conservation and Restoration Plan Priority Project List VIII

Sabine Marsh Creation (XCS-48)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|--------------------|
| 4 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | 2000 | \$143,000 | \$116,000 | \$58,235 | \$40,765 | \$13,091 | \$262,841 | \$1,051,364 | \$1,685,295 |
| 2 Compound | 2001 | \$0 | \$0 | \$51,765 | \$36,235 | \$34,909 | \$700,909 | \$2,803,636 | \$3,627,455 |
| 1 Compound | 2002 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -1 Discount | 2003 | \$79,000 | \$0 | \$58,235 | \$7,941 | \$13,091 | \$52,227 | \$208,909 | \$419,404 |
| -2 Discount | 2004 | \$0 | \$0 | \$51,765 | \$7,059 | \$34,909 | \$139,273 | \$557,091 | \$790,096 |
| -3 Discount | 2005 | \$79,000 | \$0 | \$58,235 | \$4,765 | \$13,091 | \$29,591 | \$118,364 | \$303,045 |
| -4 Discount | 2006 | \$0 | \$0 | \$51,765 | \$4,235 | \$34,909 | \$78,909 | \$315,636 | \$485,455 |
| -5 Discount | 2007 | \$79,000 | \$0 | \$58,235 | \$4,235 | \$13,091 | \$27,886 | \$111,545 | \$293,993 |
| -6 Discount | 2008 | \$0 | \$0 | \$51,765 | \$3,765 | \$34,909 | \$74,364 | \$297,455 | \$462,257 |
| -7 Discount | 2009 | \$79,000 | \$0 | \$58,235 | \$4,235 | \$13,091 | \$27,886 | \$111,545 | \$293,993 |
| -8 Discount | 2010 | \$0 | \$0 | \$51,765 | \$3,765 | \$34,909 | \$74,364 | \$297,455 | \$462,257 |
| TOTAL | | \$459,000 | \$116,000 | \$550,000 | \$117,000 | \$240,000 | \$1,468,250 | \$5,873,000 | \$8,623,250 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base year | 2001 | \$14,559 | | \$600 |
| 1 Discount | 2002 | \$5,059 | \$4,310 | \$600 |
| 2 Discount | 2003 | \$5,059 | \$0 | \$600 |
| 3 Discount | 2004 | \$5,059 | \$4,310 | \$600 |
| 4 Discount | 2005 | \$5,059 | \$0 | \$600 |
| 5 Discount | 2006 | \$5,059 | \$4,310 | \$600 |
| 6 Discount | 2007 | \$5,059 | \$0 | \$600 |
| 7 Discount | 2008 | \$5,059 | \$4,310 | \$600 |
| 8 Discount | 2009 | \$5,059 | \$0 | \$600 |
| 9 Discount | 2010 | \$5,059 | \$4,310 | \$600 |
| 10 Discount | 2011 | \$5,059 | \$0 | \$600 |
| 11 Discount | 2012 | \$5,059 | \$0 | \$600 |
| 12 Discount | 2013 | \$5,059 | \$4,310 | \$600 |
| 13 Discount | 2014 | \$5,059 | \$0 | \$600 |
| 14 Discount | 2015 | \$5,059 | \$0 | \$600 |
| 15 Discount | 2016 | \$5,059 | \$0 | \$600 |
| 16 Discount | 2017 | \$5,059 | \$4,310 | \$600 |
| 17 Discount | 2018 | \$5,059 | \$0 | \$600 |
| 18 Discount | 2019 | \$5,059 | \$0 | \$600 |
| 19 Discount | 2020 | \$5,059 | \$0 | \$600 |

| | | | | |
|-------------|-------|-----------|----------|----------|
| 20 Discount | 2021 | \$5,059 | \$4,310 | \$600 |
| | Total | \$115,739 | \$34,480 | \$12,604 |

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

Sabine Marsh Creation (XCS-48)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 4 | 1.317 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 2000 | \$175,796 | \$142,604 | \$71,591 | \$50,114 | \$16,093 | \$323,121 | \$1,292,485 | \$2,071,803 |
| 2 | 1.148 | 2001 | \$0 | \$0 | \$59,404 | \$41,583 | \$40,061 | \$804,347 | \$3,217,387 | \$4,162,782 |
| 1 | 1.071 | 2002 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -1 | 0.933 | 2003 | \$73,746 | \$0 | \$54,362 | \$7,413 | \$12,220 | \$48,754 | \$195,014 | \$391,509 |
| -2 | 0.871 | 2004 | \$0 | \$0 | \$45,108 | \$6,151 | \$30,420 | \$121,362 | \$485,450 | \$688,491 |
| -3 | 0.813 | 2005 | \$64,262 | \$0 | \$47,371 | \$3,876 | \$10,649 | \$24,071 | \$96,282 | \$246,510 |
| -4 | 0.759 | 2006 | \$0 | \$0 | \$39,307 | \$3,216 | \$26,508 | \$59,919 | \$239,676 | \$368,825 |
| -5 | 0.709 | 2007 | \$55,998 | \$0 | \$41,279 | \$3,002 | \$9,279 | \$19,767 | \$79,067 | \$208,393 |
| -6 | 0.662 | 2008 | \$0 | \$0 | \$34,252 | \$2,491 | \$23,099 | \$49,206 | \$196,823 | \$305,871 |
| -7 | 0.618 | 2009 | \$48,797 | \$0 | \$35,971 | \$2,616 | \$8,086 | \$17,225 | \$68,899 | \$181,594 |
| -8 | 0.577 | 2010 | \$0 | \$0 | \$29,847 | \$2,171 | \$20,129 | \$42,878 | \$171,512 | \$266,536 |
| Total | | | \$418,598 | \$142,604 | \$458,493 | \$122,632 | \$196,544 | \$1,510,649 | \$6,042,596 | \$8,892,115 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------------|----------------|
| 0 | Base year | 2001 | \$14,559 | \$0 | \$600 |
| -1 | 0.933 | 2002 | \$4,723 | \$4,023 | \$560 |
| -2 | 0.871 | 2003 | \$4,408 | \$0 | \$523 |
| -3 | 0.813 | 2004 | \$4,115 | \$3,506 | \$488 |
| -4 | 0.759 | 2005 | \$3,842 | \$0 | \$456 |
| -5 | 0.709 | 2006 | \$3,586 | \$3,055 | \$425 |
| -6 | 0.662 | 2007 | \$3,347 | \$0 | \$397 |
| -7 | 0.618 | 2008 | \$3,125 | \$2,662 | \$371 |
| -8 | 0.577 | 2009 | \$2,917 | \$0 | \$346 |
| -9 | 0.538 | 2010 | \$2,723 | \$2,320 | \$323 |
| -10 | 0.502 | 2011 | \$2,542 | \$0 | \$302 |
| -11 | 0.469 | 2012 | \$2,373 | \$0 | \$282 |
| -12 | 0.438 | 2013 | \$2,215 | \$1,887 | \$263 |
| -13 | 0.409 | 2014 | \$2,068 | \$0 | \$245 |
| -14 | 0.382 | 2015 | \$1,930 | \$0 | \$229 |
| -15 | 0.356 | 2016 | \$1,802 | \$0 | \$214 |
| -16 | 0.332 | 2017 | \$1,682 | \$1,433 | \$200 |
| -17 | 0.310 | 2018 | \$1,570 | \$0 | \$186 |
| -18 | 0.290 | 2019 | \$1,466 | \$0 | \$174 |
| -19 | 0.270 | 2020 | \$1,368 | \$0 | \$162 |
| -20 | 0.252 | 2021 | \$1,277 | \$1,088 | \$152 |
| Total | | | \$67,637 | \$19,974 | \$6,898 |
| Average Annual | | | \$6,447 | \$1,904 | \$687 |

Coastal Wetlands Conservation and Restoration Plan Priority Project List VIII

Sabine Marsh Creation (XCS-48)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 11 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 10 | 1.053 | 2000 | \$150,533 | \$122,110 | \$61,303 | \$42,912 | \$13,780 | \$276,686 | \$1,106,745 | \$1,774,070 |
| 9 | 1.080 | 2001 | \$0 | \$0 | \$55,908 | \$39,136 | \$37,703 | \$757,014 | \$3,028,055 | \$3,917,816 |
| 9 | 1.108 | 2002 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 8 | 1.137 | 2002 | \$89,818 | \$0 | \$66,210 | \$9,029 | \$14,884 | \$59,379 | \$237,517 | \$476,836 |
| 7 | 1.166 | 2003 | \$0 | \$0 | \$60,383 | \$8,234 | \$40,721 | \$162,461 | \$649,846 | \$921,646 |
| 6 | 1.197 | 2004 | \$94,549 | \$0 | \$69,698 | \$5,703 | \$15,668 | \$35,415 | \$141,661 | \$362,693 |
| 5 | 1.228 | 2005 | \$0 | \$0 | \$63,564 | \$5,201 | \$42,866 | \$96,896 | \$387,584 | \$596,111 |
| 4 | 1.260 | 2006 | \$99,530 | \$0 | \$73,369 | \$5,336 | \$16,493 | \$35,133 | \$140,533 | \$370,394 |
| 3 | 1.293 | 2007 | \$0 | \$0 | \$66,913 | \$4,866 | \$45,124 | \$96,125 | \$384,498 | \$597,526 |
| 2 | 1.326 | 2008 | \$104,773 | \$0 | \$77,234 | \$5,617 | \$17,362 | \$36,984 | \$147,936 | \$389,905 |
| 1 | 1.361 | 2010 | \$0 | \$0 | \$70,437 | \$5,123 | \$47,501 | \$101,188 | \$404,752 | \$629,001 |
| TOTAL | | | \$539,203 | \$122,110 | \$665,019 | \$131,156 | \$292,103 | \$1,657,282 | \$6,629,126 | \$10,035,999 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|-----------------|-----------------|
| 0 | Base year | 2001 | \$15,724 | \$0 | \$648 |
| -1 | 1.108 | 2002 | \$5,606 | \$5,028 | \$665 |
| -2 | 1.137 | 2003 | \$5,752 | \$0 | \$682 |
| -3 | 1.166 | 2004 | \$5,901 | \$5,292 | \$700 |
| -4 | 1.197 | 2005 | \$6,055 | \$0 | \$718 |
| -5 | 1.228 | 2006 | \$6,212 | \$5,571 | \$737 |
| -6 | 1.260 | 2007 | \$6,374 | \$0 | \$756 |
| -7 | 1.293 | 2008 | \$6,539 | \$5,865 | \$776 |
| -8 | 1.326 | 2009 | \$6,709 | \$0 | \$796 |
| -9 | 1.361 | 2010 | \$6,884 | \$6,174 | \$817 |
| -10 | 1.396 | 2011 | \$7,063 | \$0 | \$838 |
| -11 | 1.432 | 2012 | \$7,246 | \$0 | \$860 |
| -12 | 1.470 | 2013 | \$7,435 | \$6,668 | \$882 |
| -13 | 1.508 | 2014 | \$7,628 | \$0 | \$905 |
| -14 | 1.547 | 2015 | \$7,827 | \$0 | \$929 |
| -15 | 1.587 | 2016 | \$8,030 | \$0 | \$953 |
| -16 | 1.629 | 2017 | \$8,239 | \$7,389 | \$977 |
| -17 | 1.671 | 2018 | \$8,453 | \$0 | \$1,003 |
| -18 | 1.714 | 2019 | \$8,673 | \$0 | \$1,029 |
| -19 | 1.759 | 2020 | \$8,898 | \$0 | \$1,056 |
| -20 | 1.805 | 2021 | \$9,130 | \$8,188 | \$1,083 |
| Total | | | \$160,378 | \$50,174 | \$17,810 |

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

Sabine Marsh Creation (XCS-48)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 3 | Total Project Years | 23 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$5,691,900 | Total Fully Funded Costs | \$5,920,200 |

| Annual Charges | Present Worth | Average Annual |
|-------------------------|--------------------|-------------------|
| Interest & Amortization | \$5,819,900 | \$554,700 |
| Monitoring | \$67,600 | \$6,400 |
| O & M Costs | \$20,000 | \$1,900 |
| Other Costs | \$6,900 | \$700 |
| Total | \$5,914,400 | \$563,700 |

D - 6

Average Annual Habitats Units

382

Cost Per Habitat Unit

\$1,476

Average Annual Acres of Emergent Marsh

711

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

Sabine Marsh Creation (XCS-48)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|------------------|-------------------------|--------------------|
| 3 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 2000 | \$143,000 | \$116,000 | \$58,235 | \$40,765 | \$13,091 | \$262,841 | \$1,051,364 | \$1,685,295 |
| 1 Compound | 2001 | \$0 | \$0 | \$51,765 | \$36,235 | \$34,909 | \$700,909 | \$2,803,636 | \$3,627,455 |
| -1 Discount | 2002 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -2 Discount | 2003 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -3 Discount | 2004 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -4 Discount | 2005 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -5 Discount | 2006 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -6 Discount | 2007 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -7 Discount | 2008 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -8 Discount | 2009 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| TOTAL | | \$143,000 | \$116,000 | \$110,000 | \$77,000 | \$48,000 | \$563,750 | \$3,855,000 | \$5,312,750 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base year | 2001 | \$14,559 | | \$600 |
| 1 Discount | 2002 | \$5,059 | \$4,310 | \$600 |
| 2 Discount | 2003 | \$5,059 | \$0 | \$600 |
| 3 Discount | 2004 | \$5,059 | \$4,310 | \$600 |
| 4 Discount | 2005 | \$5,059 | \$0 | \$600 |
| 5 Discount | 2006 | \$5,059 | \$4,310 | \$600 |
| 6 Discount | 2007 | \$5,059 | \$0 | \$600 |
| 7 Discount | 2008 | \$5,059 | \$4,310 | \$600 |
| 8 Discount | 2009 | \$5,059 | \$0 | \$600 |
| 9 Discount | 2010 | \$5,059 | \$4,310 | \$600 |
| 10 Discount | 2011 | \$5,059 | \$0 | \$600 |
| 11 Discount | 2012 | \$5,059 | \$0 | \$600 |
| 12 Discount | 2013 | \$5,059 | \$4,310 | \$600 |
| 13 Discount | 2014 | \$5,059 | \$0 | \$600 |
| 14 Discount | 2015 | \$5,059 | \$0 | \$600 |
| 15 Discount | 2016 | \$5,059 | \$0 | \$600 |
| 16 Discount | 2017 | \$5,059 | \$4,310 | \$600 |
| 17 Discount | 2018 | \$5,059 | \$0 | \$600 |
| 18 Discount | 2019 | \$5,059 | \$0 | \$600 |
| 19 Discount | 2020 | \$5,059 | \$0 | \$600 |

| | | | | | |
|-------------|-------|-----------|----------|----------|--|
| 20 Discount | | | | | |
| | 2021 | \$5,059 | \$4,310 | \$600 | |
| | Total | \$115,739 | \$34,480 | \$12,604 | |

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

Sabine Marsh Creation (XCS-48)

| 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 | Supervision & Inspection | Contingency | Construction | Cost |
| 3 | 1.229 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2000 | \$164,103 | \$133,119 | \$66,829 | \$46,781 | \$15,023 | \$301,630 | \$1,206,520 | \$1,934,006 |
| 1 | 1.071 | 2001 | \$0 | \$0 | \$55,453 | \$38,817 | \$37,396 | \$750,849 | \$3,003,395 | \$3,885,911 |
| -1 | 0.933 | 2002 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -2 | 0.871 | 2003 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -3 | 0.813 | 2004 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -4 | 0.759 | 2005 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -5 | 0.709 | 2006 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -6 | 0.662 | 2007 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -7 | 0.618 | 2008 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| -8 | 0.577 | 2009 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| | | Total | \$164,103 | \$133,119 | \$122,282 | \$85,598 | \$52,419 | \$1,052,479 | \$4,209,916 | \$5,819,916 |

\$5,814,426

\$563,715

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|--------------|------------------|-----------------|----------------|
| 0 | Base year | 2001 | \$14,559 | | \$600 |
| -1 | 0.933 | 2002 | \$4,723 | \$4,023 | \$560 |
| -2 | 0.871 | 2003 | \$4,408 | \$0 | \$523 |
| -3 | 0.813 | 2004 | \$4,115 | \$3,506 | \$488 |
| -4 | 0.759 | 2005 | \$3,842 | \$0 | \$456 |
| -5 | 0.709 | 2006 | \$3,586 | \$3,055 | \$425 |
| -6 | 0.662 | 2007 | \$3,347 | \$0 | \$397 |
| -7 | 0.618 | 2008 | \$3,125 | \$2,662 | \$371 |
| -8 | 0.577 | 2009 | \$2,917 | \$0 | \$346 |
| -9 | 0.538 | 2010 | \$2,723 | \$2,320 | \$323 |
| -10 | 0.502 | 2011 | \$2,542 | \$0 | \$302 |
| -11 | 0.469 | 2012 | \$2,373 | \$0 | \$282 |
| -12 | 0.438 | 2013 | \$2,215 | \$1,887 | \$263 |
| -13 | 0.409 | 2014 | \$2,068 | \$0 | \$245 |
| -14 | 0.382 | 2015 | \$1,930 | \$0 | \$229 |
| -15 | 0.356 | 2016 | \$1,802 | \$0 | \$214 |
| -16 | 0.332 | 2017 | \$1,682 | \$1,433 | \$200 |
| -17 | 0.310 | 2018 | \$1,570 | \$0 | \$186 |
| -18 | 0.290 | 2019 | \$1,466 | \$0 | \$174 |
| -19 | 0.270 | 2020 | \$1,368 | \$0 | \$162 |
| -20 | 0.252 | 2021 | \$1,277 | \$1,088 | \$152 |
| | | Total | \$67,637 | \$19,974 | \$6,898 |
| Average Annual | | | \$6,447 | \$1,904 | \$657 |

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

Sabine Marsh Creation (XCS-48)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 11 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 10 | 1.053 | 2000 | \$150,533 | \$122,110 | \$61,303 | \$42,912 | \$13,780 | \$276,686 | \$1,106,745 | \$1,774,070 |
| 9 | 1.080 | 2001 | \$0 | \$0 | \$55,908 | \$39,136 | \$37,703 | \$757,014 | \$3,028,055 | \$3,917,816 |
| 8 | 1.108 | 2002 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 7 | 1.137 | 2003 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 6 | 1.166 | 2004 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 5 | 1.197 | 2005 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.228 | 2006 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.260 | 2007 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.293 | 2008 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 1 | 1.326 | 2009 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| TOTAL | | | \$150,533 | \$122,110 | \$117,211 | \$82,048 | \$51,484 | \$1,033,700 | \$4,134,800 | \$5,691,886 |

\$594,270

\$5,920,249

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|-----------------|-----------------|
| 0 | Base year | 2001 | \$15,724 | | \$648 |
| -1 | 1.108 | 2002 | \$5,606 | \$5,028 | \$665 |
| -2 | 1.137 | 2003 | \$5,752 | \$0 | \$682 |
| -3 | 1.166 | 2004 | \$5,901 | \$5,292 | \$700 |
| -4 | 1.197 | 2005 | \$6,055 | \$0 | \$718 |
| -5 | 1.228 | 2006 | \$6,212 | \$5,571 | \$737 |
| -6 | 1.260 | 2007 | \$6,374 | \$0 | \$756 |
| -7 | 1.293 | 2008 | \$6,539 | \$5,865 | \$776 |
| -8 | 1.326 | 2009 | \$6,709 | \$0 | \$796 |
| -9 | 1.361 | 2010 | \$6,884 | \$6,174 | \$817 |
| -10 | 1.396 | 2011 | \$7,063 | \$0 | \$838 |
| -11 | 1.432 | 2012 | \$7,246 | \$0 | \$860 |
| -12 | 1.470 | 2013 | \$7,435 | \$6,668 | \$882 |
| -13 | 1.508 | 2014 | \$7,628 | \$0 | \$905 |
| -14 | 1.547 | 2015 | \$7,827 | \$0 | \$929 |
| -15 | 1.587 | 2016 | \$8,030 | \$0 | \$953 |
| -16 | 1.629 | 2017 | \$8,239 | \$7,389 | \$977 |
| -17 | 1.671 | 2018 | \$8,453 | \$0 | \$1,003 |
| -18 | 1.714 | 2019 | \$8,673 | \$0 | \$1,029 |
| -19 | 1.759 | 2020 | \$8,898 | \$0 | \$1,056 |
| -20 | 1.805 | 2021 | \$9,130 | \$8,188 | \$1,083 |
| Total | | | \$160,378 | \$50,174 | \$17,810 |

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

Barataria Land Bridge Shore Protection - Phase 2 Increment A (XBA-63II)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 4 | Total Project Years | 24 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$6,499,500 | Total Fully Funded Costs | \$7,172,300 |

| | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|--------------------------|---------------------------|
| Annual Charges | | |
| Interest & Amortization | \$6,349,400 | \$605,200 |
| Monitoring | \$38,400 | \$3,700 |
| O & M Costs | \$196,200 | \$18,700 |
| Other Costs | \$6,900 | \$700 |
| Total | \$6,590,900 | \$628,300 |

Average Annual Habitat Units

129

Cost Per Habitat Unit

\$4,871

Average Annual Acres of Emergent Marsh

117

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

Barataria Land Bridge Shore Protection - Phase 2 Increment A (XBA-63ii)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|--------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 2001 | \$476,000 | \$50,000 | \$86,063 | \$28,125 | \$0 | \$0 | \$0 | \$640,188 |
| 1 Compound | 2002 | \$0 | \$0 | \$66,938 | \$21,875 | \$40,000 | \$1,022,500 | \$4,090,000 | \$5,241,313 |
| TOTAL | | \$476,000 | \$50,000 | \$153,000 | \$50,000 | \$40,000 | \$1,022,500 | \$4,090,000 | \$5,881,500 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base Year | 2002 | \$12,015 | | \$600 |
| 1 Discount | 2003 | \$2,515 | \$3,584 | \$600 |
| 2 Discount | 2004 | \$2,515 | \$3,584 | \$600 |
| 3 Discount | 2005 | \$2,515 | \$3,584 | \$600 |
| 4 Discount | 2006 | \$2,515 | \$3,584 | \$600 |
| 5 Discount | 2007 | \$2,515 | \$3,584 | \$600 |
| 6 Discount | 2008 | \$2,515 | \$3,584 | \$600 |
| 7 Discount | 2009 | \$2,515 | \$162,274 | \$600 |
| 8 Discount | 2010 | \$2,515 | \$3,584 | \$600 |
| 9 Discount | 2011 | \$2,515 | \$3,584 | \$600 |
| 10 Discount | 2012 | \$2,515 | \$3,584 | \$600 |
| 11 Discount | 2013 | \$2,515 | \$3,584 | \$600 |
| 12 Discount | 2014 | \$2,515 | \$3,584 | \$600 |
| 13 Discount | 2015 | \$2,515 | \$3,584 | \$600 |
| 14 Discount | 2016 | \$2,515 | \$162,274 | \$600 |
| 15 Discount | 2017 | \$2,515 | \$3,584 | \$600 |
| 16 Discount | 2018 | \$2,515 | \$3,584 | \$600 |
| 17 Discount | 2019 | \$2,515 | \$3,584 | \$600 |
| 18 Discount | 2020 | \$2,515 | \$3,584 | \$600 |
| 19 Discount | 2021 | \$2,515 | \$3,584 | \$600 |
| 20 Discount | 2022 | \$2,515 | \$3,584 | \$600 |

Total \$62,315 \$389,060 \$12,604

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

Barataria Land Bridge Shore Protection - Phase 2 Increment A (XBA-63II)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2001 | \$546,246 | \$57,379 | \$98,763 | \$32,276 | \$0 | \$0 | \$0 | \$734,664 |
| 1 | 1.071 | 2002 | \$0 | \$0 | \$71,707 | \$23,434 | \$42,850 | \$1,095,353 | \$4,381,413 | \$5,614,756 |
| Total | | | \$546,246 | \$57,379 | \$170,470 | \$55,709 | \$42,850 | \$1,095,353 | \$4,381,413 | \$6,349,420 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base Year | 2002 | \$12,015 | | \$600 |
| -1 | 0.933 | 2003 | \$2,348 | \$3,346 | \$560 |
| -2 | 0.871 | 2004 | \$2,192 | \$3,123 | \$523 |
| -3 | 0.813 | 2005 | \$2,046 | \$2,915 | \$488 |
| -4 | 0.759 | 2006 | \$1,910 | \$2,721 | \$456 |
| -5 | 0.709 | 2007 | \$1,783 | \$2,540 | \$425 |
| -6 | 0.662 | 2008 | \$1,664 | \$2,371 | \$397 |
| -7 | 0.618 | 2009 | \$1,553 | \$100,234 | \$371 |
| -8 | 0.577 | 2010 | \$1,450 | \$2,067 | \$346 |
| -9 | 0.538 | 2011 | \$1,354 | \$1,929 | \$323 |
| -10 | 0.502 | 2012 | \$1,264 | \$1,801 | \$302 |
| -11 | 0.469 | 2013 | \$1,180 | \$1,681 | \$282 |
| -12 | 0.438 | 2014 | \$1,101 | \$1,569 | \$263 |
| -13 | 0.409 | 2015 | \$1,028 | \$1,465 | \$245 |
| -14 | 0.382 | 2016 | \$960 | \$61,912 | \$229 |
| -15 | 0.356 | 2017 | \$896 | \$1,276 | \$214 |
| -16 | 0.332 | 2018 | \$836 | \$1,192 | \$200 |
| -17 | 0.310 | 2019 | \$781 | \$1,112 | \$186 |
| -18 | 0.290 | 2020 | \$729 | \$1,038 | \$174 |
| -19 | 0.270 | 2021 | \$680 | \$969 | \$162 |
| -20 | 0.252 | 2022 | \$635 | \$905 | \$152 |
| Total | | | \$38,402 | \$196,168 | \$6,898 |
| Average Annual | | | \$3,660 | \$18,697 | \$657 |

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

Barataria Land Bridge Shore Protection - Phase 2 Increment A (XBA-63II)

| 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 | Supervision & Inspection | Contingency | Construction | Cost |
| 5 | | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.053 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.080 | 2001 | \$514,102 | \$54,002 | \$92,951 | \$30,376 | \$0 | \$0 | \$0 | \$691,432 |
| 1 | 1.108 | 2002 | \$0 | \$0 | \$74,175 | \$24,240 | \$44,325 | \$1,133,060 | \$4,532,238 | \$5,808,039 |
| TOTAL | | | \$514,102 | \$54,002 | \$167,127 | \$54,617 | \$44,325 | \$1,133,060 | \$4,532,238 | \$6,499,470 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|------------------|-----------------|
| 0 Base Year | | 2002 | \$13,314 | | \$665 |
| -1 | 1.137 | 2003 | \$2,859 | \$4,075 | \$682 |
| -2 | 1.166 | 2004 | \$2,934 | \$4,181 | \$700 |
| -3 | 1.197 | 2005 | \$3,010 | \$4,289 | \$718 |
| -4 | 1.228 | 2006 | \$3,088 | \$4,401 | \$737 |
| -5 | 1.260 | 2007 | \$3,169 | \$4,515 | \$756 |
| -6 | 1.293 | 2008 | \$3,251 | \$4,633 | \$776 |
| -7 | 1.326 | 2009 | \$3,335 | \$215,214 | \$796 |
| -8 | 1.361 | 2010 | \$3,422 | \$4,877 | \$817 |
| -9 | 1.396 | 2011 | \$3,511 | \$5,004 | \$838 |
| -10 | 1.432 | 2012 | \$3,602 | \$5,134 | \$860 |
| -11 | 1.470 | 2013 | \$3,696 | \$5,267 | \$882 |
| -12 | 1.508 | 2014 | \$3,792 | \$5,404 | \$905 |
| -13 | 1.547 | 2015 | \$3,891 | \$5,545 | \$929 |
| -14 | 1.587 | 2016 | \$3,992 | \$257,574 | \$953 |
| -15 | 1.629 | 2017 | \$4,096 | \$5,837 | \$977 |
| -16 | 1.671 | 2018 | \$4,202 | \$5,988 | \$1,003 |
| -17 | 1.714 | 2019 | \$4,312 | \$6,144 | \$1,029 |
| -18 | 1.759 | 2020 | \$4,424 | \$6,304 | \$1,056 |
| -19 | 1.805 | 2021 | \$4,539 | \$6,468 | \$1,083 |
| -20 | 1.852 | 2022 | \$4,657 | \$6,636 | \$1,111 |
| Total | | | \$87,096 | \$567,489 | \$18,273 |

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

Barataria Land Bridge Shore Protection - Phase 2 Increment B (XBA-63ii)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 4 | Total Project Years | 24 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$6,499,500 | Total Fully Funded Costs | \$7,172,300 |

| Annual Charges | Present Worth | Average Annual |
|-------------------------|--------------------|-------------------|
| Interest & Amortization | \$6,349,400 | \$605,200 |
| Monitoring | \$38,400 | \$3,700 |
| O & M Costs | \$196,200 | \$18,700 |
| Other Costs | \$6,900 | \$700 |
| Total | \$6,590,900 | \$628,300 |

| | |
|---|-----------------|
| Average Annual Habitat Units | 30 |
| Cost Per Habitat Unit | \$20,943 |
| Average Annual Acres of Emergent Marsh | 42 |

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

Barataria Land Bridge Shore Protection - Phase 2 Increment B (XBA-63II)

First Costs and Annual Charges

| Year | Fiscal Year | Compound | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|------|-------------|--------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|--------------------|
| | 1999 | 5 Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| | 2000 | 4 Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| | 2001 | 3 Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| | 2002 | 2 Compound | \$476,000 | \$50,000 | \$86,063 | \$28,125 | \$0 | \$0 | \$0 | \$640,188 |
| | | 1 Compound | \$0 | \$0 | \$66,938 | \$21,875 | \$40,000 | \$1,022,500 | \$4,090,000 | \$5,241,313 |
| | | TOTAL | \$476,000 | \$50,000 | \$153,000 | \$50,000 | \$40,000 | \$1,022,500 | \$4,090,000 | \$5,861,500 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|------|-------------|------------------|-----------|-------------|
| | 2002 | \$12,015 | | \$600 |
| | 2003 | \$2,515 | \$3,584 | \$600 |
| | 2004 | \$2,515 | \$3,584 | \$600 |
| | 2005 | \$2,515 | \$3,584 | \$600 |
| | 2006 | \$2,515 | \$3,584 | \$600 |
| | 2007 | \$2,515 | \$3,584 | \$600 |
| | 2008 | \$2,515 | \$3,584 | \$600 |
| | 2009 | \$2,515 | \$162,274 | \$600 |
| | 2010 | \$2,515 | \$3,584 | \$600 |
| | 2011 | \$2,515 | \$3,584 | \$600 |
| | 2012 | \$2,515 | \$3,584 | \$600 |
| | 2013 | \$2,515 | \$3,584 | \$600 |
| | 2014 | \$2,515 | \$3,584 | \$600 |
| | 2015 | \$2,515 | \$3,584 | \$600 |
| | 2016 | \$2,515 | \$162,274 | \$600 |
| | 2017 | \$2,515 | \$3,584 | \$600 |
| | 2018 | \$2,515 | \$3,584 | \$600 |
| | 2019 | \$2,515 | \$3,584 | \$600 |
| | 2020 | \$2,515 | \$3,584 | \$600 |
| | 2021 | \$2,515 | \$3,584 | \$600 |
| | 2022 | \$2,515 | \$3,584 | \$600 |

Total

\$62,315

\$389,060

\$12,604

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

Barataria Land Bridge Shore Protection - Phase 2 Increment B (XBA-63II)

| Present Valued Costs | | Total Discounted Costs | | Amortized Costs | | | | | | |
|----------------------|----------------|------------------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| Year | Compound Rates | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2001 | \$546,246 | \$57,379 | \$98,763 | \$32,276 | \$0 | \$0 | \$0 | \$734,664 |
| 1 | 1.071 | 2002 | \$0 | \$0 | \$71,707 | \$23,434 | \$42,850 | \$1,095,353 | \$4,381,413 | \$5,614,756 |
| Total | | | \$546,246 | \$57,379 | \$170,470 | \$55,709 | \$42,850 | \$1,095,353 | \$4,381,413 | \$6,349,420 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base Year | 2002 | \$12,015 | | \$600 |
| -1 | 0.933 | 2003 | \$2,348 | \$3,346 | \$560 |
| -2 | 0.871 | 2004 | \$2,192 | \$3,123 | \$523 |
| -3 | 0.813 | 2005 | \$2,046 | \$2,915 | \$488 |
| -4 | 0.759 | 2006 | \$1,910 | \$2,721 | \$456 |
| -5 | 0.709 | 2007 | \$1,783 | \$2,540 | \$425 |
| -6 | 0.662 | 2008 | \$1,664 | \$2,371 | \$397 |
| -7 | 0.618 | 2009 | \$1,553 | \$100,234 | \$371 |
| -8 | 0.577 | 2010 | \$1,450 | \$2,067 | \$346 |
| -9 | 0.538 | 2011 | \$1,354 | \$1,929 | \$323 |
| -10 | 0.502 | 2012 | \$1,264 | \$1,801 | \$302 |
| -11 | 0.469 | 2013 | \$1,180 | \$1,681 | \$282 |
| -12 | 0.438 | 2014 | \$1,101 | \$1,569 | \$263 |
| -13 | 0.409 | 2015 | \$1,028 | \$1,465 | \$245 |
| -14 | 0.382 | 2016 | \$960 | \$61,912 | \$229 |
| -15 | 0.356 | 2017 | \$896 | \$1,276 | \$214 |
| -16 | 0.332 | 2018 | \$836 | \$1,192 | \$200 |
| -17 | 0.310 | 2019 | \$781 | \$1,112 | \$186 |
| -18 | 0.290 | 2020 | \$729 | \$1,038 | \$174 |
| -19 | 0.270 | 2021 | \$680 | \$969 | \$162 |
| -20 | 0.252 | 2022 | \$635 | \$905 | \$152 |
| Total | | | \$38,402 | \$196,168 | \$6,898 |
| Average Annual | | | \$3,666 | \$18,697 | \$657 |

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

Barataria Land Bridge Shore Protection - Phase 2 Increment B (XBA-63ii)

| Fully Funded Costs | | Total Fully Funded Costs | | Amortized Costs | | \$683,609 | | | | |
|--------------------|------------------|--------------------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| Year | Inflation Factor | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.053 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.080 | 2001 | \$514,102 | \$54,002 | \$92,951 | \$30,376 | \$0 | \$0 | \$0 | \$691,432 |
| 1 | 1.108 | 2002 | \$0 | \$0 | \$74,175 | \$24,240 | \$44,325 | \$1,133,060 | \$4,532,238 | \$5,808,039 |
| TOTAL | | | \$514,102 | \$54,002 | \$167,127 | \$54,617 | \$44,325 | \$1,133,060 | \$4,532,238 | \$6,499,470 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|-----------|-------------|
| 0 Base Year | | 2002 | \$13,314 | | \$665 |
| -1 | 1.137 | 2003 | \$2,859 | \$4,075 | \$682 |
| -2 | 1.166 | 2004 | \$2,934 | \$4,181 | \$700 |
| -3 | 1.197 | 2005 | \$3,010 | \$4,289 | \$718 |
| -4 | 1.228 | 2006 | \$3,088 | \$4,401 | \$737 |
| -5 | 1.260 | 2007 | \$3,169 | \$4,515 | \$756 |
| -6 | 1.293 | 2008 | \$3,251 | \$4,633 | \$776 |
| -7 | 1.326 | 2009 | \$3,335 | \$215,214 | \$796 |
| -8 | 1.361 | 2010 | \$3,422 | \$4,877 | \$817 |
| -9 | 1.396 | 2011 | \$3,511 | \$5,004 | \$838 |
| -10 | 1.432 | 2012 | \$3,602 | \$5,134 | \$860 |
| -11 | 1.470 | 2013 | \$3,696 | \$5,267 | \$882 |
| -12 | 1.508 | 2014 | \$3,792 | \$5,404 | \$905 |
| -13 | 1.547 | 2015 | \$3,891 | \$5,545 | \$929 |
| -14 | 1.587 | 2016 | \$3,992 | \$257,574 | \$953 |
| -15 | 1.629 | 2017 | \$4,096 | \$5,837 | \$977 |
| -16 | 1.671 | 2018 | \$4,202 | \$5,988 | \$1,003 |
| -17 | 1.714 | 2019 | \$4,312 | \$6,144 | \$1,029 |
| -18 | 1.759 | 2020 | \$4,424 | \$6,304 | \$1,056 |
| -19 | 1.805 | 2021 | \$4,539 | \$6,468 | \$1,083 |
| -20 | 1.852 | 2022 | \$4,657 | \$6,636 | \$1,111 |
| Total | | | \$87,096 | \$567,489 | \$18,273 |

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

Barataria Land Bridge Shore Protection - Phase 2 Increment C (XBA-63II)

| | | | |
|-----------------------------|--------------|--------------------------|--------------|
| Project Construction Years: | 4 | Total Project Years | 24 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$12,608,800 | Total Fully Funded Costs | \$13,679,100 |

| Annual Charges | Present Worth | Average Annual |
|-------------------------|---------------------|--------------------|
| Interest & Amortization | \$12,297,600 | \$1,172,100 |
| Monitoring | \$38,400 | \$3,700 |
| O & M Costs | \$332,500 | \$31,700 |
| Other Costs | \$6,900 | \$700 |
| Total | \$12,675,400 | \$1,208,200 |

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

159
\$7,599
159

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

Barataria Land Bridge Shore Protection - Phase 2 Increment C (XBA-63ii)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|---------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 2001 | \$770,000 | \$50,000 | \$171,563 | \$56,250 | \$0 | \$0 | \$0 | \$1,047,813 |
| 1 Compound | 2002 | \$0 | \$0 | \$133,438 | \$43,750 | \$60,000 | \$2,020,000 | \$8,080,000 | \$10,357,188 |
| TOTAL | | \$770,000 | \$50,000 | \$305,000 | \$100,000 | \$60,000 | \$2,020,000 | \$8,080,000 | \$11,405,000 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base Year | 2002 | \$12,015 | | \$600 |
| 1 Discount | 2003 | \$2,515 | \$3,584 | \$600 |
| 2 Discount | 2004 | \$2,515 | \$3,584 | \$600 |
| 3 Discount | 2005 | \$2,515 | \$3,584 | \$600 |
| 4 Discount | 2006 | \$2,515 | \$3,584 | \$600 |
| 5 Discount | 2007 | \$2,515 | \$3,584 | \$600 |
| 6 Discount | 2008 | \$2,515 | \$3,584 | \$600 |
| 7 Discount | 2009 | \$2,515 | \$298,693 | \$600 |
| 8 Discount | 2010 | \$2,515 | \$3,584 | \$600 |
| 9 Discount | 2011 | \$2,515 | \$3,584 | \$600 |
| 10 Discount | 2012 | \$2,515 | \$3,584 | \$600 |
| 11 Discount | 2013 | \$2,515 | \$3,584 | \$600 |
| 12 Discount | 2014 | \$2,515 | \$3,584 | \$600 |
| 13 Discount | 2015 | \$2,515 | \$3,584 | \$600 |
| 14 Discount | 2016 | \$2,515 | \$298,693 | \$600 |
| 15 Discount | 2017 | \$2,515 | \$3,584 | \$600 |
| 16 Discount | 2018 | \$2,515 | \$3,584 | \$600 |
| 17 Discount | 2019 | \$2,515 | \$3,584 | \$600 |
| 18 Discount | 2020 | \$2,515 | \$3,584 | \$600 |
| 19 Discount | 2021 | \$2,515 | \$3,584 | \$600 |

| | | | | |
|-------------|--------------|-----------------|------------------|-----------------|
| 20 Discount | 2022 | \$2,515 | \$3,584 | \$600 |
| | <u>Total</u> | <u>\$62,315</u> | <u>\$661,898</u> | <u>\$12,604</u> |

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

Barataria Land Bridge Shore Protection - Phase 2 Increment C (XBA-63ii)

\$1,208,113

Amortized Costs

\$12,575,361

Total Discounted Costs

Present Valued Costs

| Year | Compound Rates | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|------|----------------|--------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|---------------------|
| | | | | | | | | | | |
| 5 | 1.411 | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2001 | \$883,634 | \$57,379 | \$196,881 | \$64,551 | \$0 | \$0 | \$0 | \$1,202,445 |
| 1 | 1.071 | 2002 | \$0 | \$0 | \$142,945 | \$46,867 | \$85,700 | \$2,163,925 | \$8,655,700 | \$11,095,137 |
| | | Total | \$883,634 | \$57,379 | \$339,826 | \$111,418 | \$85,700 | \$2,163,925 | \$8,655,700 | \$12,297,582 |

| Discount Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs | | | | | | | | | | | | | | | | |
|---------------|-----------------------|-------------|------------------|------------------|----------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | | | | | 0 Base Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| 0 | Base Year | | \$12,015 | | \$600 | | | | | | | | | | | | | | | | |
| -1 | 0.933 | 2003 | \$2,348 | \$3,346 | \$560 | | | | | | | | | | | | | | | | |
| -2 | 0.871 | 2004 | \$2,192 | \$3,123 | \$523 | | | | | | | | | | | | | | | | |
| -3 | 0.813 | 2005 | \$2,046 | \$2,915 | \$488 | | | | | | | | | | | | | | | | |
| -4 | 0.759 | 2006 | \$1,910 | \$2,721 | \$456 | | | | | | | | | | | | | | | | |
| -5 | 0.709 | 2007 | \$1,783 | \$2,540 | \$425 | | | | | | | | | | | | | | | | |
| -6 | 0.662 | 2008 | \$1,664 | \$2,371 | \$397 | | | | | | | | | | | | | | | | |
| -7 | 0.618 | 2009 | \$1,553 | \$184,497 | \$371 | | | | | | | | | | | | | | | | |
| -8 | 0.577 | 2010 | \$1,450 | \$2,067 | \$346 | | | | | | | | | | | | | | | | |
| -9 | 0.538 | 2011 | \$1,354 | \$1,929 | \$323 | | | | | | | | | | | | | | | | |
| -10 | 0.502 | 2012 | \$1,264 | \$1,801 | \$302 | | | | | | | | | | | | | | | | |
| -11 | 0.469 | 2013 | \$1,180 | \$1,681 | \$282 | | | | | | | | | | | | | | | | |
| -12 | 0.438 | 2014 | \$1,101 | \$1,569 | \$263 | | | | | | | | | | | | | | | | |
| -13 | 0.409 | 2015 | \$1,028 | \$1,465 | \$245 | | | | | | | | | | | | | | | | |
| -14 | 0.382 | 2016 | \$960 | \$113,960 | \$229 | | | | | | | | | | | | | | | | |
| -15 | 0.356 | 2017 | \$896 | \$1,276 | \$214 | | | | | | | | | | | | | | | | |
| -16 | 0.332 | 2018 | \$836 | \$1,192 | \$200 | | | | | | | | | | | | | | | | |
| -17 | 0.310 | 2019 | \$781 | \$1,112 | \$186 | | | | | | | | | | | | | | | | |
| -18 | 0.290 | 2020 | \$729 | \$1,038 | \$174 | | | | | | | | | | | | | | | | |
| -19 | 0.270 | 2021 | \$680 | \$969 | \$162 | | | | | | | | | | | | | | | | |
| -20 | 0.252 | 2022 | \$635 | \$905 | \$152 | | | | | | | | | | | | | | | | |
| | Total | | \$38,402 | \$332,479 | \$6,898 | | | | | | | | | | | | | | | | |
| | Average Annual | | \$3,660 | \$31,689 | \$657 | | | | | | | | | | | | | | | | |

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

Barataria Land Bridge Shore Protection - Phase 2 Increment C (XBA-63II)

\$1,303,779

Amortized Costs

\$13,679,079

Total Fully Funded Costs

Fully Funded Costs

| Year | Inflation Factor | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Contingency | First Cost Construction | Total First Cost |
|--------------|------------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------|-------------------------|---------------------|
| 5 | | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.053 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.080 | 2001 | \$831,635 | \$54,002 | \$185,295 | \$60,753 | \$0 | \$0 | \$1,131,685 |
| 1 | 1.108 | 2002 | \$0 | \$0 | \$147,866 | \$48,481 | \$88,650 | \$8,953,664 | \$11,477,077 |
| TOTAL | | | \$831,635 | \$54,002 | \$333,161 | \$109,233 | \$2,238,416 | \$8,953,664 | \$12,608,762 |

D-25

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|------------------|-----------------|
| 0 | Base Year | 2002 | \$13,314 | | \$665 |
| -1 | 1.137 | 2003 | \$2,859 | \$4,075 | \$682 |
| -2 | 1.166 | 2004 | \$2,934 | \$4,181 | \$700 |
| -3 | 1.197 | 2005 | \$3,010 | \$4,289 | \$718 |
| -4 | 1.228 | 2006 | \$3,088 | \$4,401 | \$737 |
| -5 | 1.260 | 2007 | \$3,169 | \$4,515 | \$756 |
| -6 | 1.293 | 2008 | \$3,251 | \$4,633 | \$776 |
| -7 | 1.326 | 2009 | \$3,335 | \$396,138 | \$796 |
| -8 | 1.361 | 2010 | \$3,422 | \$4,877 | \$817 |
| -9 | 1.396 | 2011 | \$3,511 | \$5,004 | \$838 |
| -10 | 1.432 | 2012 | \$3,602 | \$5,134 | \$860 |
| -11 | 1.470 | 2013 | \$3,696 | \$5,267 | \$882 |
| -12 | 1.508 | 2014 | \$3,792 | \$5,404 | \$905 |
| -13 | 1.547 | 2015 | \$3,891 | \$5,545 | \$929 |
| -14 | 1.587 | 2016 | \$3,992 | \$474,108 | \$953 |
| -15 | 1.629 | 2017 | \$4,096 | \$5,837 | \$977 |
| -16 | 1.671 | 2018 | \$4,202 | \$5,988 | \$1,003 |
| -17 | 1.714 | 2019 | \$4,312 | \$6,144 | \$1,029 |
| -18 | 1.759 | 2020 | \$4,424 | \$6,304 | \$1,056 |
| -19 | 1.805 | 2021 | \$4,539 | \$6,468 | \$1,083 |
| -20 | 1.852 | 2022 | \$4,657 | \$6,636 | \$1,111 |
| Total | | | \$87,096 | \$964,947 | \$18,273 |

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

Upper Oaks River Siphon (PBS-1)

| | | | |
|-----------------------------|--------------|--------------------------|--------------|
| Project Construction Years: | 4 | Total Project Years | 24 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$10,578,000 | Total Fully Funded Costs | \$12,994,800 |

| Annual Charges | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|--------------------------|---------------------------|
| Interest & Amortization | \$10,340,900 | \$985,600 |
| Monitoring | \$255,000 | \$24,300 |
| O & M Costs | \$627,200 | \$59,800 |
| Other Costs | \$6,900 | \$700 |
| Total | \$11,230,000 | \$1,070,400 |

| | |
|--|---------|
| Average Annual Habitat Units | 153 |
| Cost Per Habitat Unit | \$6,996 |
| Average Annual Acres of Emergent Marsh | 178 |

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

Upper Oaks River Siphon (PBS-1)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|--------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 2001 | \$566,000 | \$405,000 | \$96,429 | \$42,857 | \$0 | \$0 | \$0 | \$1,110,286 |
| 1 Compound | 2002 | \$0 | \$0 | \$128,571 | \$57,143 | \$183,000 | \$1,619,000 | \$6,476,000 | \$8,463,714 |
| TOTAL | | \$566,000 | \$405,000 | \$225,000 | \$100,000 | \$183,000 | \$1,619,000 | \$6,476,000 | \$9,574,000 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base Year | 2002 | \$32,685 | | \$600 |
| 1 Discount | 2003 | \$21,185 | \$38,584 | \$600 |
| 2 Discount | 2004 | \$21,185 | \$38,584 | \$600 |
| 3 Discount | 2005 | \$21,185 | \$38,584 | \$600 |
| 4 Discount | 2006 | \$21,185 | \$144,155 | \$600 |
| 5 Discount | 2007 | \$21,185 | \$38,584 | \$600 |
| 6 Discount | 2008 | \$21,185 | \$38,584 | \$600 |
| 7 Discount | 2009 | \$21,185 | \$38,584 | \$600 |
| 8 Discount | 2010 | \$21,185 | \$144,155 | \$600 |
| 9 Discount | 2011 | \$21,185 | \$38,584 | \$600 |
| 10 Discount | 2012 | \$21,185 | \$38,584 | \$600 |
| 11 Discount | 2013 | \$21,185 | \$38,584 | \$600 |
| 12 Discount | 2014 | \$21,185 | \$144,155 | \$600 |
| 13 Discount | 2015 | \$21,185 | \$38,584 | \$600 |
| 14 Discount | 2016 | \$21,185 | \$38,584 | \$600 |
| 15 Discount | 2017 | \$21,185 | \$38,584 | \$600 |
| 16 Discount | 2018 | \$21,185 | \$144,155 | \$600 |
| 17 Discount | 2019 | \$21,185 | \$38,584 | \$600 |
| 18 Discount | 2020 | \$21,185 | \$38,584 | \$600 |
| 19 Discount | 2021 | \$21,185 | \$38,584 | \$600 |

| | | | | |
|-------------|--------------|------------------|--------------------|-----------------|
| 20 Discount | 2022 | \$21,185 | \$38,584 | \$600 |
| | <u>Total</u> | <u>\$456,385</u> | <u>\$1,193,964</u> | <u>\$12,604</u> |

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

Upper Oaks River Siphon (PBS-1)

\$1,070,345

Amortized Costs

\$11,229,920

Total Discounted Costs

Present Valued Costs

| Year | Compound Rates | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|----------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|---------------------|
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2001 | \$649,528 | \$464,769 | \$110,659 | \$49,182 | \$0 | \$0 | \$0 | \$1,274,138 |
| 1 | 1.071 | 2002 | \$0 | \$0 | \$137,732 | \$61,214 | \$196,039 | \$1,734,354 | \$6,937,415 | \$9,066,754 |
| Total | | | \$649,528 | \$464,769 | \$248,391 | \$110,396 | \$196,039 | \$1,734,354 | \$6,937,415 | \$10,340,892 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|------------------|----------------|
| 0 | Base Year | 2002 | \$32,685 | | \$600 |
| -1 | 0.933 | 2003 | \$19,776 | \$36,018 | \$560 |
| -2 | 0.871 | 2004 | \$18,461 | \$33,622 | \$523 |
| -3 | 0.813 | 2005 | \$17,233 | \$31,386 | \$488 |
| -4 | 0.759 | 2006 | \$16,087 | \$109,463 | \$456 |
| -5 | 0.709 | 2007 | \$15,017 | \$27,350 | \$425 |
| -6 | 0.662 | 2008 | \$14,018 | \$25,531 | \$397 |
| -7 | 0.618 | 2009 | \$13,086 | \$23,833 | \$371 |
| -8 | 0.577 | 2010 | \$12,215 | \$83,120 | \$346 |
| -9 | 0.538 | 2011 | \$11,403 | \$20,768 | \$323 |
| -10 | 0.502 | 2012 | \$10,644 | \$19,386 | \$302 |
| -11 | 0.469 | 2013 | \$9,936 | \$18,097 | \$282 |
| -12 | 0.438 | 2014 | \$9,276 | \$63,116 | \$263 |
| -13 | 0.409 | 2015 | \$8,659 | \$15,770 | \$245 |
| -14 | 0.382 | 2016 | \$8,083 | \$14,721 | \$229 |
| -15 | 0.356 | 2017 | \$7,545 | \$13,742 | \$214 |
| -16 | 0.332 | 2018 | \$7,043 | \$47,927 | \$200 |
| -17 | 0.310 | 2019 | \$6,575 | \$11,975 | \$186 |
| -18 | 0.290 | 2020 | \$6,138 | \$11,178 | \$174 |
| -19 | 0.270 | 2021 | \$5,729 | \$10,435 | \$162 |
| -20 | 0.252 | 2022 | \$5,348 | \$9,741 | \$152 |
| Total | | | \$254,955 | \$627,176 | \$6,898 |
| Average Annual | | | \$24,300 | \$59,777 | \$657 |

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

Upper Oaks River Siphon (PBS-1)

Amortized Costs
\$1,238,362

Total Fully Funded Costs
\$12,994,823

Total Fully Funded Costs

Fully Funded Costs

| Year | Inflation Factor | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|------|------------------|--------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| 5 | 0 | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.053 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.080 | 2001 | \$611,306 | \$437,418 | \$104,147 | \$46,288 | \$0 | \$0 | \$0 | \$1,199,159 |
| 1 | 1.108 | 2002 | \$0 | \$0 | \$142,473 | \$63,322 | \$202,787 | \$1,794,057 | \$7,176,229 | \$9,378,868 |
| | | TOTAL | \$611,306 | \$437,418 | \$246,621 | \$109,609 | \$202,787 | \$1,794,057 | \$7,176,229 | \$10,578,027 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|------|------------------|--------------|------------------|-------------|-------------|
| 0 | Base Year | 2002 | \$36,219 | | \$665 |
| -1 | 1.137 | 2003 | \$24,086 | \$43,868 | \$682 |
| -2 | 1.166 | 2004 | \$24,712 | \$45,008 | \$700 |
| -3 | 1.197 | 2005 | \$25,355 | \$46,178 | \$718 |
| -4 | 1.228 | 2006 | \$26,014 | \$177,014 | \$737 |
| -5 | 1.260 | 2007 | \$26,690 | \$48,611 | \$756 |
| -6 | 1.293 | 2008 | \$27,384 | \$49,875 | \$776 |
| -7 | 1.326 | 2009 | \$28,096 | \$51,172 | \$796 |
| -8 | 1.361 | 2010 | \$28,827 | \$196,154 | \$817 |
| -9 | 1.396 | 2011 | \$29,576 | \$53,867 | \$838 |
| -10 | 1.432 | 2012 | \$30,345 | \$55,268 | \$860 |
| -11 | 1.470 | 2013 | \$31,134 | \$56,705 | \$882 |
| -12 | 1.508 | 2014 | \$31,944 | \$217,364 | \$905 |
| -13 | 1.547 | 2015 | \$32,774 | \$59,691 | \$929 |
| -14 | 1.587 | 2016 | \$33,626 | \$61,243 | \$953 |
| -15 | 1.629 | 2017 | \$34,501 | \$62,836 | \$977 |
| -16 | 1.671 | 2018 | \$35,398 | \$240,867 | \$1,003 |
| -17 | 1.714 | 2019 | \$36,318 | \$66,146 | \$1,029 |
| -18 | 1.759 | 2020 | \$37,262 | \$67,866 | \$1,056 |
| -19 | 1.805 | 2021 | \$38,231 | \$69,630 | \$1,083 |
| -20 | 1.852 | 2022 | \$39,225 | \$71,440 | \$1,111 |
| | | Total | \$657,720 | \$1,740,802 | \$18,273 |

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

NOT COMPLETED ON 4/7/99

Upper Oaks River Siphon (PBS-1)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 4 | Total Project Years | 24 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$2,421,700 | Total Fully Funded Costs | \$2,500,200 |

| Annual Charges | Present Worth | Average Annual |
|-------------------------|--------------------|-------------------|
| Interest & Amortization | \$2,456,000 | \$234,100 |
| Monitoring | \$52,500 | \$5,000 |
| O & M Costs | \$0 | \$0 |
| Other Costs | \$6,900 | \$700 |
| Total | \$2,515,400 | \$239,800 |

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

153
\$1,567
178

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

Upper Oaks River Siphon (PBS-1)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|------------------|-------------------------|--------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 2001 | \$566,000 | \$405,000 | \$96,429 | \$42,857 | \$0 | \$0 | \$0 | \$1,110,286 |
| 1 Compound | 2002 | \$0 | \$0 | \$128,571 | \$57,143 | \$30,000 | \$177,500 | \$710,000 | \$1,103,214 |
| TOTAL | | \$566,000 | \$405,000 | \$225,000 | \$100,000 | \$30,000 | \$177,500 | \$710,000 | \$2,213,500 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base Year | 2002 | \$32,685 | | \$600 |
| 1 Discount | 2003 | \$21,185 | \$0 | \$600 |
| 2 Discount | 2004 | \$0 | \$0 | \$600 |
| 3 Discount | 2005 | \$0 | \$0 | \$600 |
| 4 Discount | 2006 | \$0 | \$0 | \$600 |
| 5 Discount | 2007 | \$0 | \$0 | \$600 |
| 6 Discount | 2008 | \$0 | \$0 | \$600 |
| 7 Discount | 2009 | \$0 | \$0 | \$600 |
| 8 Discount | 2010 | \$0 | \$0 | \$600 |
| 9 Discount | 2011 | \$0 | \$0 | \$600 |
| 10 Discount | 2012 | \$0 | \$0 | \$600 |
| 11 Discount | 2013 | \$0 | \$0 | \$600 |
| 12 Discount | 2014 | \$0 | \$0 | \$600 |
| 13 Discount | 2015 | \$0 | \$0 | \$600 |
| 14 Discount | 2016 | \$0 | \$0 | \$600 |
| 15 Discount | 2017 | \$0 | \$0 | \$600 |
| 16 Discount | 2018 | \$0 | \$0 | \$600 |
| 17 Discount | 2019 | \$0 | \$0 | \$600 |
| 18 Discount | 2020 | \$0 | \$0 | \$600 |
| 19 Discount | 2021 | \$0 | \$0 | \$600 |

| | | | | |
|-------------|--------------|----------|-----|----------|
| 20 Discount | 2022 | \$0 | \$0 | \$600 |
| | <u>Total</u> | \$53,870 | \$0 | \$12,604 |

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

Upper Oaks River Siphon (PBS-1)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2001 | \$649,528 | \$464,769 | \$110,659 | \$49,182 | \$0 | \$0 | \$0 | \$1,274,138 |
| 1 | 1.071 | 2002 | \$0 | \$0 | \$137,732 | \$61,214 | \$32,138 | \$190,147 | \$760,588 | \$1,181,818 |
| Total | | | \$649,528 | \$464,769 | \$248,391 | \$110,396 | \$32,138 | \$190,147 | \$760,588 | \$2,455,956 |

\$2,515,315

\$239,740

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base Year | 2002 | \$32,685 | | \$600 |
| -1 | 0.933 | 2003 | \$19,776 | \$0 | \$560 |
| -2 | 0.871 | 2004 | \$0 | \$0 | \$523 |
| -3 | 0.813 | 2005 | \$0 | \$0 | \$488 |
| -4 | 0.759 | 2006 | \$0 | \$0 | \$456 |
| -5 | 0.709 | 2007 | \$0 | \$0 | \$425 |
| -6 | 0.662 | 2008 | \$0 | \$0 | \$397 |
| -7 | 0.618 | 2009 | \$0 | \$0 | \$371 |
| -8 | 0.577 | 2010 | \$0 | \$0 | \$346 |
| -9 | 0.538 | 2011 | \$0 | \$0 | \$323 |
| -10 | 0.502 | 2012 | \$0 | \$0 | \$302 |
| -11 | 0.469 | 2013 | \$0 | \$0 | \$282 |
| -12 | 0.438 | 2014 | \$0 | \$0 | \$263 |
| -13 | 0.409 | 2015 | \$0 | \$0 | \$245 |
| -14 | 0.382 | 2016 | \$0 | \$0 | \$229 |
| -15 | 0.356 | 2017 | \$0 | \$0 | \$214 |
| -16 | 0.332 | 2018 | \$0 | \$0 | \$200 |
| -17 | 0.310 | 2019 | \$0 | \$0 | \$186 |
| -18 | 0.290 | 2020 | \$0 | \$0 | \$174 |
| -19 | 0.270 | 2021 | \$0 | \$0 | \$162 |
| -20 | 0.252 | 2022 | \$0 | \$0 | \$152 |
| Total | | | \$52,461 | \$0 | \$6,898 |
| Average Annual | | | \$5,000 | \$0 | \$657 |

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

Upper Oaks River Siphon (PBS-1)

| 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 & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 0 | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.053 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.080 | 2001 | \$611,306 | \$437,418 | \$104,147 | \$46,288 | \$0 | \$0 | \$1,199,159 |
| 1 | 1.108 | 2002 | \$0 | \$0 | \$142,473 | \$63,322 | \$196,693 | \$786,770 | \$1,222,501 |
| TOTAL | | | \$611,306 | \$437,418 | \$246,621 | \$109,609 | \$196,693 | \$786,770 | \$2,421,660 |

\$2,500,239

\$238,303

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|------------|-----------------|
| 0 Base Year | | 2002 | \$36,219 | | \$665 |
| -1 | 1.137 | 2003 | \$24,086 | \$0 | \$682 |
| -2 | 1.166 | 2004 | \$0 | \$0 | \$700 |
| -3 | 1.197 | 2005 | \$0 | \$0 | \$718 |
| -4 | 1.228 | 2006 | \$0 | \$0 | \$737 |
| -5 | 1.260 | 2007 | \$0 | \$0 | \$756 |
| -6 | 1.293 | 2008 | \$0 | \$0 | \$776 |
| -7 | 1.326 | 2009 | \$0 | \$0 | \$796 |
| -8 | 1.361 | 2010 | \$0 | \$0 | \$817 |
| -9 | 1.396 | 2011 | \$0 | \$0 | \$838 |
| -10 | 1.432 | 2012 | \$0 | \$0 | \$860 |
| -11 | 1.470 | 2013 | \$0 | \$0 | \$882 |
| -12 | 1.508 | 2014 | \$0 | \$0 | \$905 |
| -13 | 1.547 | 2015 | \$0 | \$0 | \$929 |
| -14 | 1.587 | 2016 | \$0 | \$0 | \$953 |
| -15 | 1.629 | 2017 | \$0 | \$0 | \$977 |
| -16 | 1.671 | 2018 | \$0 | \$0 | \$1,003 |
| -17 | 1.714 | 2019 | \$0 | \$0 | \$1,029 |
| -18 | 1.759 | 2020 | \$0 | \$0 | \$1,056 |
| -19 | 1.805 | 2021 | \$0 | \$0 | \$1,083 |
| -20 | 1.852 | 2022 | \$0 | \$0 | \$1,111 |
| Total | | | \$60,305 | \$0 | \$18,273 |

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

Ft. Jackson/Boothville Diversion (PBA-44)

| | | | |
|-----------------------------|--------------|--------------------------|--------------|
| Project Construction Years: | 6 | Total Project Years | 26 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$42,587,800 | Total Fully Funded Costs | \$45,592,400 |

| Annual Charges | Present Worth | Average Annual |
|-------------------------|---------------|----------------|
| Interest & Amortization | \$47,595,100 | \$4,536,400 |
| Monitoring | \$291,200 | \$27,800 |
| O & M Costs | \$743,400 | \$70,900 |
| Other Costs | \$6,900 | \$700 |
| Total | \$48,636,600 | \$4,635,800 |

Average Annual Habitat Units 4,010

Cost Per Habitat Unit \$1,156

Average Annual Acres of Emergent Marsh 6,249

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

Ft. Jackson/Boothville Diversion (PBA-44)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|------------------------|
| 5 Compound | 2000 | \$433,125 | \$6,416,667 | \$74,038 | \$13,462 | \$0 | \$0 | \$0 | \$6,937,292 |
| 4 Compound | 2001 | \$742,500 | \$11,000,000 | \$126,923 | \$23,077 | \$0 | \$0 | \$0 | \$11,892,500 |
| 3 Compound | 2002 | \$309,375 | \$4,583,333 | \$126,923 | \$23,077 | \$0 | \$0 | \$0 | \$5,042,708 |
| 2 Compound | 2003 | \$0 | \$0 | \$126,923 | \$23,077 | \$292,308 | \$821,538 | \$3,286,154 | \$4,550,000 |
| 1 Compound | 2004 | \$0 | \$0 | \$95,192 | \$17,308 | \$657,692 | \$1,848,462 | \$7,393,846 | \$10,012,500 |
| TOTAL | | \$1,485,000 | \$22,000,000 | \$550,000 | \$100,000 | \$950,000 | \$2,670,000 | \$10,680,000 | \$38,435,000.00 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|-------------|------------------|--------------------|-----------------|
| 0 Base Year | 2004 | \$37,212 | | \$600 |
| 1 Discount | 2005 | \$24,212 | \$3,584 | \$600 |
| 2 Discount | 2006 | \$24,212 | \$3,584 | \$600 |
| 3 Discount | 2007 | \$24,212 | \$3,584 | \$600 |
| 4 Discount | 2008 | \$24,212 | \$3,584 | \$600 |
| 5 Discount | 2009 | \$24,212 | \$319,130 | \$600 |
| 6 Discount | 2010 | \$24,212 | \$3,584 | \$600 |
| 7 Discount | 2011 | \$24,212 | \$214,993 | \$600 |
| 8 Discount | 2012 | \$24,212 | \$3,584 | \$600 |
| 9 Discount | 2013 | \$24,212 | \$3,584 | \$600 |
| 10 Discount | 2014 | \$24,212 | \$319,130 | \$600 |
| 11 Discount | 2015 | \$24,212 | \$3,584 | \$600 |
| 12 Discount | 2016 | \$24,212 | \$3,584 | \$600 |
| 13 Discount | 2017 | \$24,212 | \$3,584 | \$600 |
| 14 Discount | 2018 | \$24,212 | \$214,993 | \$600 |
| 15 Discount | 2019 | \$24,212 | \$319,130 | \$600 |
| 16 Discount | 2020 | \$24,212 | \$3,584 | \$600 |
| 17 Discount | 2021 | \$24,212 | \$3,584 | \$600 |
| 18 Discount | 2022 | \$24,212 | \$3,584 | \$600 |
| 19 Discount | 2023 | \$24,212 | \$3,584 | \$600 |
| 20 Discount | 2024 | \$24,212 | \$3,584 | \$600 |
| Total | | \$521,452 | \$1,441,136 | \$12,604 |

Coastal Wetlands Conservation and Restoration Plan Priority Project List VIII

Ft. Jackson/Boothville Diversion (PBA-44)

Amortized Costs
\$4,635,653

Amortized Costs
\$48,636,647

Total Discounted Costs
\$48,636,647

Total Discounted Costs
\$48,636,647

| Year | Compound Rates | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|----------------|-------------|----------------------|-------------------------|------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|---------------------|
| 5 | 1.411 | 2000 | \$611,037 | \$9,052,398 | \$104,451 | \$18,991 | \$0 | \$0 | \$0 | \$9,786,877 |
| 4 | 1.317 | 2001 | \$977,822 | \$14,486,252 | \$167,149 | \$30,391 | \$0 | \$0 | \$0 | \$15,661,613 |
| 3 | 1.229 | 2002 | \$380,327 | \$5,634,481 | \$156,032 | \$28,369 | \$0 | \$0 | \$0 | \$6,199,210 |
| 2 | 1.148 | 2003 | \$0 | \$0 | \$145,654 | \$26,483 | \$335,445 | \$942,778 | \$3,771,113 | \$5,221,473 |
| 1 | 1.071 | 2004 | \$0 | \$0 | \$101,975 | \$18,541 | \$704,553 | \$1,980,164 | \$7,920,658 | \$10,725,891 |
| Total | | | \$1,969,186 | \$29,173,131 | \$675,260 | \$122,775 | \$1,039,998 | \$2,922,943 | \$11,691,771 | \$47,595,064 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|------------------|----------------|
| 0 | Base Year | 2004 | \$37,212 | | \$600 |
| -1 | 0.933 | 2005 | \$22,602 | \$3,346 | \$560 |
| -2 | 0.871 | 2006 | \$21,098 | \$3,123 | \$523 |
| -3 | 0.813 | 2007 | \$19,695 | \$2,915 | \$488 |
| -4 | 0.759 | 2008 | \$18,385 | \$2,721 | \$456 |
| -5 | 0.709 | 2009 | \$17,162 | \$2,262 | \$425 |
| -6 | 0.662 | 2010 | \$16,021 | \$2,371 | \$397 |
| -7 | 0.618 | 2011 | \$14,955 | \$132,797 | \$371 |
| -8 | 0.577 | 2012 | \$13,961 | \$2,067 | \$346 |
| -9 | 0.538 | 2013 | \$13,032 | \$1,929 | \$323 |
| -10 | 0.502 | 2014 | \$12,165 | \$160,346 | \$302 |
| -11 | 0.469 | 2015 | \$11,356 | \$1,681 | \$282 |
| -12 | 0.438 | 2016 | \$10,601 | \$1,569 | \$263 |
| -13 | 0.409 | 2017 | \$9,896 | \$1,465 | \$245 |
| -14 | 0.382 | 2018 | \$9,238 | \$82,026 | \$229 |
| -15 | 0.356 | 2019 | \$8,623 | \$113,659 | \$214 |
| -16 | 0.332 | 2020 | \$8,050 | \$1,192 | \$200 |
| -17 | 0.310 | 2021 | \$7,514 | \$1,112 | \$186 |
| -18 | 0.290 | 2022 | \$7,014 | \$1,038 | \$174 |
| -19 | 0.270 | 2023 | \$6,548 | \$969 | \$162 |
| -20 | 0.252 | 2024 | \$6,112 | \$905 | \$152 |
| Total | | | \$291,241 | \$743,444 | \$6,898 |
| Average Annual | | | \$27,759 | \$70,859 | \$657 |

Coastal Wetlands Conservation and Restoration Plan Priority Project List VIII

Ft. Jackson/Boothville Diversion (PBA-44)

| 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 | Supervision & Inspection | Contingency | Construction | Total First Cost |
| 5 | 1.053 | 2000 | \$455,940 | \$6,754,671 | \$77,939 | \$14,171 | \$0 | \$0 | \$0 | \$7,302,720 |
| 4 | 1.080 | 2001 | \$801,934 | \$11,880,501 | \$137,083 | \$24,924 | \$0 | \$0 | \$0 | \$12,844,442 |
| 3 | 1.108 | 2002 | \$342,827 | \$5,078,914 | \$140,647 | \$25,572 | \$0 | \$0 | \$0 | \$5,587,960 |
| 2 | 1.137 | 2003 | \$0 | \$0 | \$144,304 | \$26,237 | \$332,336 | \$934,038 | \$3,736,153 | \$5,173,068 |
| 1 | 1.166 | 2004 | \$0 | \$0 | \$111,042 | \$20,189 | \$767,197 | \$2,156,228 | \$8,624,910 | \$11,679,566 |
| TOTAL | | | \$1,600,701 | \$23,714,087 | \$611,013 | \$111,093 | \$1,099,533 | \$3,090,266 | \$12,361,063 | \$42,587,756 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|--------------------|-----------------|
| 0 | Base Year | 2004 | \$43,408 | | \$700 |
| -1 | 1.197 | 2005 | \$28,978 | \$4,289 | \$718 |
| -2 | 1.228 | 2006 | \$29,731 | \$4,401 | \$737 |
| -3 | 1.260 | 2007 | \$30,504 | \$4,515 | \$756 |
| -4 | 1.293 | 2008 | \$31,297 | \$4,633 | \$776 |
| -5 | 1.326 | 2009 | \$32,111 | \$4,756 | \$796 |
| -6 | 1.361 | 2010 | \$32,946 | \$4,877 | \$817 |
| -7 | 1.396 | 2011 | \$33,802 | \$5,000 | \$838 |
| -8 | 1.432 | 2012 | \$34,681 | \$5,134 | \$860 |
| -9 | 1.470 | 2013 | \$35,583 | \$5,267 | \$882 |
| -10 | 1.508 | 2014 | \$36,508 | \$5,400 | \$905 |
| -11 | 1.547 | 2015 | \$37,457 | \$5,545 | \$929 |
| -12 | 1.587 | 2016 | \$38,431 | \$5,689 | \$953 |
| -13 | 1.629 | 2017 | \$39,430 | \$5,837 | \$977 |
| -14 | 1.671 | 2018 | \$40,456 | \$5,989 | \$1,003 |
| -15 | 1.714 | 2019 | \$41,507 | \$6,144 | \$1,029 |
| -16 | 1.759 | 2020 | \$42,587 | \$6,304 | \$1,056 |
| -17 | 1.805 | 2021 | \$43,694 | \$6,468 | \$1,083 |
| -18 | 1.852 | 2022 | \$44,830 | \$6,636 | \$1,111 |
| -19 | 1.900 | 2023 | \$45,995 | \$6,809 | \$1,140 |
| -20 | 1.949 | 2024 | \$47,191 | \$6,986 | \$1,170 |
| Total | | | \$791,127 | \$2,194,304 | \$19,236 |

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

Ft. Jackson/Boothville Marsh Creation - Increment 1 (XBA-73ai)

| | | | |
|-----------------------------|--------------|--------------------------|--------------|
| Project Construction Years: | 2 | Total Project Years | 22 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$10,308,000 | Total Fully Funded Costs | \$10,500,000 |

| Annual Charges | Present Worth | Average Annual |
|-------------------------|---------------------|--------------------|
| Interest & Amortization | \$10,536,800 | \$1,004,300 |
| Monitoring | \$53,100 | \$5,100 |
| O & M Costs | \$14,700 | \$1,400 |
| Other Costs | \$6,300 | \$600 |
| Total | \$10,610,900 | \$1,011,400 |

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

21

\$48,162

42

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

Ft. Jackson/Boothville Marsh Creation - Increment 1 (XBA-73a)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| 5 | Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | Compound | \$250,000 | \$55,000 | \$148,600 | \$0 | \$0 | \$0 | \$0 | \$453,600 |
| 1 | Compound | \$0 | \$0 | \$148,600 | \$100,000 | \$371,500 | \$1,746,001 | \$6,984,002 | \$9,350,103 |
| TOTAL | | \$250,000 | \$55,000 | \$297,200 | \$100,000 | \$371,500 | \$1,746,001 | \$6,984,002 | \$9,883,703 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|------|-------------|------------------|-----------|-------------|
| 0 | Base Year | \$14,559 | | \$600 |
| 1 | Discount | \$5,059 | \$3,584 | \$600 |
| 2 | Discount | \$5,059 | \$3,584 | \$600 |
| 3 | Discount | \$5,059 | \$0 | \$600 |
| 4 | Discount | \$5,059 | \$3,584 | \$600 |
| 5 | Discount | \$5,059 | \$0 | \$600 |
| 6 | Discount | \$5,059 | \$0 | \$600 |
| 7 | Discount | \$5,059 | \$0 | \$600 |
| 8 | Discount | \$5,059 | \$3,584 | \$600 |
| 9 | Discount | \$5,059 | \$0 | \$600 |
| 10 | Discount | \$5,059 | \$0 | \$600 |
| 11 | Discount | \$5,059 | \$0 | \$600 |
| 12 | Discount | \$5,059 | \$0 | \$600 |
| 13 | Discount | \$5,059 | \$3,584 | \$600 |
| 14 | Discount | \$5,059 | \$0 | \$600 |
| 15 | Discount | \$5,059 | \$0 | \$600 |
| 16 | Discount | \$5,059 | \$0 | \$600 |
| 17 | Discount | \$5,059 | \$0 | \$600 |
| 18 | Discount | \$5,059 | \$3,584 | \$600 |
| 19 | Discount | \$5,059 | \$0 | \$600 |

| | | | | |
|-------------|--------------|------------------|-----------------|-----------------|
| 20 Discount | 2020 | \$5,059 | \$3,584 | \$600 |
| | <u>Total</u> | <u>\$101,180</u> | <u>\$25,088</u> | <u>\$12,004</u> |

Coastal Wetlands Conservation and Restoration Plan Priority Project List VIII

Ft. Jackson/Boothville Marsh Creation - Increment 1 (XBA-73ai)

Present Valued Costs Total Discounted Costs Amortized Costs Total First Cost

\$10,610,878 \$1,011,343

| Year | Compound Rates | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|----------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 1999 | \$286,894 | \$63,117 | \$170,530 | \$0 | \$0 | \$0 | \$0 | \$520,541 |
| 1 | 1.071 | 2000 | \$0 | \$0 | \$159,188 | \$107,125 | \$397,969 | \$1,870,403 | \$7,481,612 | \$10,016,297 |
| Total | | | \$286,894 | \$63,117 | \$329,718 | \$107,125 | \$397,969 | \$1,870,403 | \$7,481,612 | \$10,536,838 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base Year | 2000 | | | |
| -1 | 0.933 | 2001 | \$4,723 | \$3,346 | \$560 |
| -2 | 0.871 | 2002 | \$4,408 | \$3,123 | \$523 |
| -3 | 0.813 | 2003 | \$4,115 | \$0 | \$488 |
| -4 | 0.759 | 2004 | \$3,842 | \$2,721 | \$456 |
| -5 | 0.709 | 2005 | \$3,586 | \$0 | \$425 |
| -6 | 0.662 | 2006 | \$3,347 | \$0 | \$397 |
| -7 | 0.618 | 2007 | \$3,125 | \$0 | \$371 |
| -8 | 0.577 | 2008 | \$2,917 | \$2,067 | \$346 |
| -9 | 0.538 | 2009 | \$2,723 | \$0 | \$323 |
| -10 | 0.502 | 2010 | \$2,542 | \$0 | \$302 |
| -11 | 0.469 | 2011 | \$2,373 | \$0 | \$282 |
| -12 | 0.438 | 2012 | \$2,215 | \$0 | \$263 |
| -13 | 0.409 | 2013 | \$2,068 | \$1,465 | \$245 |
| -14 | 0.382 | 2014 | \$1,930 | \$0 | \$229 |
| -15 | 0.356 | 2015 | \$1,802 | \$0 | \$214 |
| -16 | 0.332 | 2016 | \$1,682 | \$0 | \$200 |
| -17 | 0.310 | 2017 | \$1,570 | \$0 | \$186 |
| -18 | 0.290 | 2018 | \$1,466 | \$1,038 | \$174 |
| -19 | 0.270 | 2019 | \$1,368 | \$0 | \$162 |
| -20 | 0.252 | 2020 | \$1,277 | \$905 | \$152 |
| Total | | | \$53,078 | \$14,665 | \$6,297 |
| Average Annual | | | \$5,059 | \$1,398 | \$600 |

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

Ft. Jackson/Boothville Marsh Creation - Increment 1 (XBA-73ai)

Fully Funded Costs Total Fully Funded Costs Amortized Costs **\$1,000,777**

| Year | Inflation Factor | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|------------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|---------------------|
| 5 | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.026 | 1999 | \$256,500 | \$56,430 | \$152,464 | \$0 | \$0 | \$0 | \$0 | \$465,394 |
| 1 | 1.053 | 2000 | \$0 | \$0 | \$156,428 | \$105,268 | \$391,069 | \$1,837,973 | \$7,351,891 | \$9,842,628 |
| TOTAL | | | \$256,500 | \$56,430 | \$308,891 | \$105,268 | \$391,069 | \$1,837,973 | \$7,351,891 | \$10,308,022 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|-----------------|-----------------|
| 0 | Base Year | 2000 | \$15,326 | \$632 | \$648 |
| -1 | 1.080 | 2001 | \$5,464 | \$3,871 | \$665 |
| -2 | 1.108 | 2002 | \$5,606 | \$3,972 | \$682 |
| -3 | 1.137 | 2003 | \$5,752 | \$0 | \$700 |
| -4 | 1.166 | 2004 | \$5,901 | \$4,181 | \$718 |
| -5 | 1.197 | 2005 | \$6,055 | \$0 | \$737 |
| -6 | 1.228 | 2006 | \$6,212 | \$0 | \$756 |
| -7 | 1.260 | 2007 | \$6,374 | \$0 | \$776 |
| -8 | 1.293 | 2008 | \$6,539 | \$4,633 | \$796 |
| -9 | 1.326 | 2009 | \$6,709 | \$0 | \$817 |
| -10 | 1.361 | 2010 | \$6,884 | \$0 | \$838 |
| -11 | 1.396 | 2011 | \$7,063 | \$0 | \$860 |
| -12 | 1.432 | 2012 | \$7,246 | \$0 | \$882 |
| -13 | 1.470 | 2013 | \$7,435 | \$5,267 | \$905 |
| -14 | 1.508 | 2014 | \$7,628 | \$0 | \$929 |
| -15 | 1.547 | 2015 | \$7,827 | \$0 | \$953 |
| -16 | 1.587 | 2016 | \$8,030 | \$0 | \$977 |
| -17 | 1.629 | 2017 | \$8,239 | \$0 | \$1,003 |
| -18 | 1.671 | 2018 | \$8,453 | \$5,988 | \$1,029 |
| -19 | 1.714 | 2019 | \$8,673 | \$0 | \$1,056 |
| -20 | 1.759 | 2020 | \$8,898 | \$6,304 | \$1,056 |
| Total | | | \$140,988 | \$34,215 | \$16,727 |

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

Ft. Jackson/Boothville Marsh Creation - Increment 2 (XBA-73ail)

| | | | |
|-----------------------------|--------------|--------------------------|--------------|
| Project Construction Years: | 2 | Total Project Years | 22 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$10,965,900 | Total Fully Funded Costs | \$11,157,900 |

| | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|--------------------------|---------------------------|
| Annual Charges | | |
| Interest & Amortization | \$11,206,400 | \$1,068,100 |
| Monitoring | \$53,100 | \$5,100 |
| O & M Costs | \$14,700 | \$1,400 |
| Other Costs | \$6,300 | \$600 |
| Total | <u>\$11,280,500</u> | <u>\$1,075,200</u> |

Average Annual Habitat Units

83

Cost Per Habitat Unit

\$12,954

Average Annual Acres of Emergent Marsh

195

Coastal Wetlands Conservation and Restoration Plan Priority Project List VIII

Ft. Jackson/Boothville Marsh Creation - Increment 2 (XBA-73aii)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| 5 | Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | Compound | \$250,000 | \$55,000 | \$148,600 | \$0 | \$0 | \$0 | \$0 | \$453,600 |
| 1 | Compound | \$0 | \$0 | \$148,600 | \$100,000 | \$371,500 | \$1,871,001 | \$7,484,002 | \$9,975,103 |
| TOTAL | | \$250,000 | \$55,000 | \$297,200 | \$100,000 | \$371,500 | \$1,871,001 | \$7,484,002 | \$10,428,703 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|------|-------------|------------------|-----------|-------------|
| 0 | Base Year | \$14,559 | | \$600 |
| 1 | Discount | \$5,059 | \$3,584 | \$600 |
| 2 | Discount | \$5,059 | \$3,584 | \$600 |
| 3 | Discount | \$5,059 | \$0 | \$600 |
| 4 | Discount | \$5,059 | \$3,584 | \$600 |
| 5 | Discount | \$5,059 | \$0 | \$600 |
| 6 | Discount | \$5,059 | \$0 | \$600 |
| 7 | Discount | \$5,059 | \$0 | \$600 |
| 8 | Discount | \$5,059 | \$3,584 | \$600 |
| 9 | Discount | \$5,059 | \$0 | \$600 |
| 10 | Discount | \$5,059 | \$0 | \$600 |
| 11 | Discount | \$5,059 | \$0 | \$600 |
| 12 | Discount | \$5,059 | \$0 | \$600 |
| 13 | Discount | \$5,059 | \$3,584 | \$600 |
| 14 | Discount | \$5,059 | \$0 | \$600 |
| 15 | Discount | \$5,059 | \$0 | \$600 |
| 16 | Discount | \$5,059 | \$0 | \$600 |
| 17 | Discount | \$5,059 | \$0 | \$600 |
| 18 | Discount | \$5,059 | \$3,584 | \$600 |
| 19 | Discount | \$5,059 | \$0 | \$600 |

| | | | | |
|-------------|-------|-----------|----------|----------|
| 20 Discount | 2020 | \$5,059 | \$3,584 | \$600 |
| | Total | \$101,180 | \$25,088 | \$12,004 |

Coastal Wetlands Conservation and Restoration Plan Priority Project List VIII

Ft. Jackson/Boothville Marsh Creation - Increment 2 (XBA-73aII)

| 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 | Contingency | Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 1999 | \$286,894 | \$63,117 | \$170,530 | \$0 | \$0 | \$0 | \$520,541 |
| 1 | 1.071 | 2000 | \$0 | \$0 | \$159,188 | \$107,125 | \$2,004,309 | \$8,017,237 | \$10,685,829 |
| Total | | | \$286,894 | \$63,117 | \$329,718 | \$107,125 | \$2,004,309 | \$8,017,237 | \$11,206,369 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base Year | 2000 | \$14,559 | | |
| -1 | 0.933 | 2001 | \$4,723 | \$3,346 | \$560 |
| -2 | 0.871 | 2002 | \$4,408 | \$3,123 | \$523 |
| -3 | 0.813 | 2003 | \$4,115 | \$0 | \$488 |
| -4 | 0.759 | 2004 | \$3,842 | \$2,721 | \$456 |
| -5 | 0.709 | 2005 | \$3,586 | \$0 | \$425 |
| -6 | 0.662 | 2006 | \$3,347 | \$0 | \$397 |
| -7 | 0.618 | 2007 | \$3,125 | \$0 | \$371 |
| -8 | 0.577 | 2008 | \$2,917 | \$2,067 | \$346 |
| -9 | 0.538 | 2009 | \$2,723 | \$0 | \$323 |
| -10 | 0.502 | 2010 | \$2,542 | \$0 | \$302 |
| -11 | 0.469 | 2011 | \$2,373 | \$0 | \$282 |
| -12 | 0.438 | 2012 | \$2,215 | \$0 | \$263 |
| -13 | 0.409 | 2013 | \$2,068 | \$1,465 | \$245 |
| -14 | 0.382 | 2014 | \$1,930 | \$0 | \$229 |
| -15 | 0.356 | 2015 | \$1,802 | \$0 | \$214 |
| -16 | 0.332 | 2016 | \$1,682 | \$0 | \$200 |
| -17 | 0.310 | 2017 | \$1,570 | \$0 | \$186 |
| -18 | 0.290 | 2018 | \$1,466 | \$1,038 | \$174 |
| -19 | 0.270 | 2019 | \$1,368 | \$0 | \$162 |
| -20 | 0.252 | 2020 | \$1,277 | \$905 | \$152 |
| Total | | | \$53,078 | \$14,665 | \$6,297 |
| Average Annual | | | \$5,059 | \$1,398 | \$600 |

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

Ft. Jackson/Boothville Marsh Creation - Increment 2 (XBA-73aii)

\$1,053,479

Amortized Costs

\$1,157,876

Total Fully Funded Costs

Fully Funded Costs

| Year | Inflation Factor | Fiscal Year | Engineering & Design | Easements & Land Rights | LDNR | | Contingency | First Cost Construction | Total First Cost |
|--------------|------------------|-------------|----------------------|-------------------------|--------------------------------------|--------------------------|--------------------|-------------------------|------------------|
| | | | | | Federal Supervision & Administration | Supervision & Inspection | | | |
| 5 | | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| 4 | | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| 3 | | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| 2 | 1.026 | 1999 | \$256,500 | \$56,430 | \$152,464 | \$0 | \$0 | \$465,394 | |
| 1 | 1.053 | 2000 | \$0 | \$0 | \$156,428 | \$105,268 | \$7,878,229 | \$10,500,551 | |
| TOTAL | | | \$256,500 | \$56,430 | \$308,891 | \$105,268 | \$1,969,557 | \$10,965,945 | |

D-49

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs | Total |
|--------------|------------------|-------------|------------------|-----------------|-----------------|------------------|
| | | | | | | |
| -1 | 1.080 | 2001 | \$5,464 | \$3,871 | \$648 | \$10,000 |
| -2 | 1.108 | 2002 | \$5,606 | \$3,972 | \$665 | \$10,243 |
| -3 | 1.137 | 2003 | \$5,752 | \$0 | \$682 | \$6,434 |
| -4 | 1.166 | 2004 | \$5,901 | \$4,181 | \$700 | \$10,782 |
| -5 | 1.197 | 2005 | \$6,055 | \$0 | \$718 | \$6,773 |
| -6 | 1.228 | 2006 | \$6,212 | \$0 | \$737 | \$6,949 |
| -7 | 1.260 | 2007 | \$6,374 | \$0 | \$756 | \$7,130 |
| -8 | 1.293 | 2008 | \$6,539 | \$4,633 | \$776 | \$11,948 |
| -9 | 1.326 | 2009 | \$6,709 | \$0 | \$796 | \$7,505 |
| -10 | 1.361 | 2010 | \$6,884 | \$0 | \$817 | \$7,701 |
| -11 | 1.396 | 2011 | \$7,063 | \$0 | \$838 | \$7,901 |
| -12 | 1.432 | 2012 | \$7,246 | \$0 | \$860 | \$8,106 |
| -13 | 1.470 | 2013 | \$7,435 | \$5,267 | \$882 | \$13,584 |
| -14 | 1.508 | 2014 | \$7,628 | \$0 | \$905 | \$8,533 |
| -15 | 1.547 | 2015 | \$7,827 | \$0 | \$929 | \$8,756 |
| -16 | 1.587 | 2016 | \$8,030 | \$0 | \$953 | \$8,983 |
| -17 | 1.629 | 2017 | \$8,239 | \$0 | \$977 | \$9,216 |
| -18 | 1.671 | 2018 | \$8,453 | \$5,988 | \$1,003 | \$15,444 |
| -19 | 1.714 | 2019 | \$8,673 | \$0 | \$1,029 | \$9,702 |
| -20 | 1.759 | 2020 | \$8,898 | \$6,304 | \$1,056 | \$16,258 |
| Total | | | \$140,988 | \$34,215 | \$16,727 | \$191,930 |

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

Bayou Bienvenue Pumping Station and Terracing (PO-24/XPO-74a)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 3 | Total Project Years | 23 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$2,439,300 | Total Fully Funded Costs | \$3,295,600 |

| Annual Charges | Present Worth | Average Annual |
|-------------------------|--------------------|-------------------|
| Interest & Amortization | \$2,466,200 | \$235,100 |
| Monitoring | \$255,000 | \$24,300 |
| O & M Costs | \$120,100 | \$11,400 |
| Other Costs | \$6,900 | \$700 |
| Total | \$2,848,200 | \$271,500 |

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

203
\$1,337
284

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

Bayou Bienvenue Pumping Station and Terracing (PO-24/XPO-74a)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|------------------|-------------------------|--------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 2000 | \$242,026 | \$150,000 | \$45,269 | \$15,090 | \$0 | \$0 | \$0 | \$452,385 |
| 1 Compound | 2001 | \$0 | \$0 | \$40,743 | \$13,581 | \$43,006 | \$344,051 | \$1,376,205 | \$1,817,586 |
| TOTAL | | \$242,026 | \$150,000 | \$86,012 | \$28,671 | \$43,006 | \$344,051 | \$1,376,205 | \$2,269,971 |

D-51

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base Year | 2001 | \$32,685 | | \$600 |
| 1 Discount | 2002 | \$21,185 | \$3,584 | \$600 |
| 2 Discount | 2003 | \$21,185 | \$3,584 | \$600 |
| 3 Discount | 2004 | \$21,185 | \$71,040 | \$600 |
| 4 Discount | 2005 | \$21,185 | \$3,584 | \$600 |
| 5 Discount | 2006 | \$21,185 | \$69,267 | \$600 |
| 6 Discount | 2007 | \$21,185 | \$0 | \$600 |
| 7 Discount | 2008 | \$21,185 | \$0 | \$600 |
| 8 Discount | 2009 | \$21,185 | \$0 | \$600 |
| 9 Discount | 2010 | \$21,185 | \$0 | \$600 |
| 10 Discount | 2011 | \$21,185 | \$3,584 | \$600 |
| 11 Discount | 2012 | \$21,185 | \$0 | \$600 |
| 12 Discount | 2013 | \$21,185 | \$0 | \$600 |
| 13 Discount | 2014 | \$21,185 | \$0 | \$600 |
| 14 Discount | 2015 | \$21,185 | \$0 | \$600 |
| 15 Discount | 2016 | \$21,185 | \$3,584 | \$600 |
| 16 Discount | 2017 | \$21,185 | \$0 | \$600 |
| 17 Discount | 2018 | \$21,185 | \$0 | \$600 |
| 18 Discount | 2019 | \$21,185 | \$0 | \$600 |
| 19 Discount | 2020 | \$21,185 | \$0 | \$600 |

| | | | | |
|-------------|-------|-----------|-----------|----------|
| 20 Discount | 2021 | \$21,185 | \$3,584 | \$600 |
| | Total | \$456,385 | \$161,811 | \$12,604 |

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

Bayou Bienvenue Pumping Station and Terracing (PO-24/XPO-74a)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2000 | \$277,743 | \$172,136 | \$51,950 | \$17,317 | \$0 | \$0 | \$0 | \$519,147 |
| 1 | 1.071 | 2001 | \$0 | \$0 | \$43,645 | \$14,549 | \$46,071 | \$368,565 | \$1,474,260 | \$1,947,089 |
| Total | | | \$277,743 | \$172,136 | \$95,596 | \$31,866 | \$46,071 | \$368,565 | \$1,474,260 | \$2,466,236 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|------------------|----------------|
| 0 | Base Year | 2001 | \$32,685 | | \$600 |
| -1 | 0.933 | 2002 | \$19,776 | \$3,346 | \$560 |
| -2 | 0.871 | 2003 | \$18,461 | \$3,123 | \$523 |
| -3 | 0.813 | 2004 | \$17,233 | \$57,787 | \$488 |
| -4 | 0.759 | 2005 | \$16,087 | \$2,721 | \$456 |
| -5 | 0.709 | 2006 | \$15,017 | \$49,099 | \$425 |
| -6 | 0.662 | 2007 | \$14,018 | \$0 | \$397 |
| -7 | 0.618 | 2008 | \$13,086 | \$0 | \$371 |
| -8 | 0.577 | 2009 | \$12,215 | \$0 | \$346 |
| -9 | 0.538 | 2010 | \$11,403 | \$0 | \$323 |
| -10 | 0.502 | 2011 | \$10,644 | \$1,801 | \$302 |
| -11 | 0.469 | 2012 | \$9,936 | \$0 | \$282 |
| -12 | 0.438 | 2013 | \$9,276 | \$0 | \$263 |
| -13 | 0.409 | 2014 | \$8,659 | \$0 | \$245 |
| -14 | 0.382 | 2015 | \$8,083 | \$0 | \$229 |
| -15 | 0.356 | 2016 | \$7,545 | \$1,276 | \$214 |
| -16 | 0.332 | 2017 | \$7,043 | \$0 | \$200 |
| -17 | 0.310 | 2018 | \$6,575 | \$0 | \$186 |
| -18 | 0.290 | 2019 | \$6,138 | \$0 | \$174 |
| -19 | 0.270 | 2020 | \$5,729 | \$0 | \$162 |
| -20 | 0.252 | 2021 | \$5,348 | \$905 | \$152 |
| Total | | | \$254,955 | \$120,059 | \$6,898 |
| Average Annual | | | \$24,300 | \$11,443 | \$657 |

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

Bayou Bienvenue Pumping Station and Terracing (PO-24/XPO-74a)

Fully Funded Costs Total Fully Funded Costs \$3,295,574 Amortized Costs \$314,108

| Year | Inflation Factor | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|------|------------------|--------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|------------------|-------------------------|--------------------|
| 5 | | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.000 | 1998 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.053 | 2000 | \$254,775 | \$157,901 | \$47,654 | \$15,885 | \$0 | \$0 | \$0 | \$476,215 |
| 1 | 1.080 | 2001 | \$0 | \$0 | \$44,004 | \$14,668 | \$46,449 | \$371,591 | \$1,486,364 | \$1,963,076 |
| | | TOTAL | \$254,775 | \$157,901 | \$91,658 | \$30,553 | \$46,449 | \$371,591 | \$1,486,364 | \$2,439,291 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|------|------------------|--------------|------------------|------------------|-----------------|
| 0 | 1.080 | 2001 | \$35,301 | | \$648 |
| -1 | 1.108 | 2002 | \$23,476 | \$3,972 | \$665 |
| -2 | 1.137 | 2003 | \$24,086 | \$4,075 | \$682 |
| -3 | 1.166 | 2004 | \$24,712 | \$82,868 | \$700 |
| -4 | 1.197 | 2005 | \$25,355 | \$4,289 | \$718 |
| -5 | 1.228 | 2006 | \$26,014 | \$85,056 | \$737 |
| -6 | 1.260 | 2007 | \$26,690 | \$0 | \$756 |
| -7 | 1.293 | 2008 | \$27,384 | \$0 | \$776 |
| -8 | 1.326 | 2009 | \$28,096 | \$0 | \$796 |
| -9 | 1.361 | 2010 | \$28,827 | \$0 | \$817 |
| -10 | 1.396 | 2011 | \$29,576 | \$5,004 | \$838 |
| -11 | 1.432 | 2012 | \$30,345 | \$0 | \$860 |
| -12 | 1.470 | 2013 | \$31,134 | \$0 | \$882 |
| -13 | 1.508 | 2014 | \$31,944 | \$0 | \$905 |
| -14 | 1.547 | 2015 | \$32,774 | \$0 | \$929 |
| -15 | 1.587 | 2016 | \$33,626 | \$5,689 | \$953 |
| -16 | 1.629 | 2017 | \$34,501 | \$0 | \$977 |
| -17 | 1.671 | 2018 | \$35,398 | \$0 | \$1,003 |
| -18 | 1.714 | 2019 | \$36,318 | \$0 | \$1,029 |
| -19 | 1.759 | 2020 | \$37,262 | \$0 | \$1,056 |
| -20 | 1.805 | 2021 | \$38,231 | \$6,468 | \$1,083 |
| | | Total | \$641,052 | \$197,421 | \$17,810 |

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

Hopedale Hydrologic Restoration (PPO-38)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 3 | Total Project Years | 23 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$1,071,400 | Total Fully Funded Costs | \$2,179,500 |

| | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|--------------------------|---------------------------|
| Annual Charges | | |
| Interest & Amortization | \$1,083,000 | \$103,200 |
| Monitoring | \$255,000 | \$24,300 |
| O & M Costs | \$167,300 | \$15,900 |
| Other Costs | \$6,900 | \$700 |
| Total | \$1,512,200 | \$144,100 |

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

269

\$536

54

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

Hopedale Hydrologic Restoration (PPO-38)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 2000 | \$119,750 | \$50,000 | \$19,671 | \$6,557 | \$0 | \$0 | \$0 | \$195,978 |
| 1 Compound | 2001 | \$0 | \$0 | \$17,704 | \$5,901 | \$29,900 | \$149,499 | \$597,998 | \$801,002 |
| TOTAL | | \$119,750 | \$50,000 | \$37,375 | \$12,458 | \$29,900 | \$149,499 | \$597,998 | \$896,978 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base Year | 2001 | \$32,685 | | \$600 |
| 1 Discount | 2002 | \$21,185 | \$10,084 | \$600 |
| 2 Discount | 2003 | \$21,185 | \$10,084 | \$600 |
| 3 Discount | 2004 | \$21,185 | \$10,084 | \$600 |
| 4 Discount | 2005 | \$21,185 | \$10,084 | \$600 |
| 5 Discount | 2006 | \$21,185 | \$6,500 | \$600 |
| 6 Discount | 2007 | \$21,185 | \$6,500 | \$600 |
| 7 Discount | 2008 | \$21,185 | \$6,500 | \$600 |
| 8 Discount | 2009 | \$21,185 | \$10,084 | \$600 |
| 9 Discount | 2010 | \$21,185 | \$10,084 | \$600 |
| 10 Discount | 2011 | \$21,185 | \$164,022 | \$600 |
| 11 Discount | 2012 | \$21,185 | \$10,084 | \$600 |
| 12 Discount | 2013 | \$21,185 | \$6,500 | \$600 |
| 13 Discount | 2014 | \$21,185 | \$6,500 | \$600 |
| 14 Discount | 2015 | \$21,185 | \$6,500 | \$600 |
| 15 Discount | 2016 | \$21,185 | \$10,084 | \$600 |
| 16 Discount | 2017 | \$21,185 | \$6,500 | \$600 |
| 17 Discount | 2018 | \$21,185 | \$6,500 | \$600 |
| 18 Discount | 2019 | \$21,185 | \$6,500 | \$600 |
| 19 Discount | 2020 | \$21,185 | \$6,500 | \$600 |
| 20 Discount | 2021 | \$21,185 | \$10,084 | \$600 |

Total \$456,385 \$319,778 \$12,604

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

Hopedale Hydrologic Restoration (PPO-38)

| Present Valued Costs | | Total Discounted Costs | Amortized Costs | | | | | Total First Cost | | |
|----------------------|----------------|------------------------|----------------------|-------------------------|------------------------|---------------------|--------------------------|------------------|-------------------------|------------------|
| Year | Compound Rates | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Administration | LDNR Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2000 | \$137,422 | \$57,379 | \$22,574 | \$7,524 | \$0 | \$0 | \$0 | \$224,899 |
| 1 | 1.071 | 2001 | \$0 | \$0 | \$18,965 | \$6,322 | \$32,030 | \$160,151 | \$640,605 | \$858,073 |
| Total | | | \$137,422 | \$57,379 | \$41,539 | \$13,846 | \$32,030 | \$160,151 | \$640,605 | \$1,082,973 |

\$1,512,132

\$144,124

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base Year | 2001 | \$32,685 | | \$600 |
| -1 | 0.933 | 2002 | \$19,776 | \$9,413 | \$560 |
| -2 | 0.871 | 2003 | \$18,461 | \$8,787 | \$523 |
| -3 | 0.813 | 2004 | \$17,233 | \$8,203 | \$488 |
| -4 | 0.759 | 2005 | \$16,087 | \$7,657 | \$456 |
| -5 | 0.709 | 2006 | \$15,017 | \$7,145 | \$425 |
| -6 | 0.662 | 2007 | \$14,018 | \$6,657 | \$397 |
| -7 | 0.618 | 2008 | \$13,086 | \$6,195 | \$371 |
| -8 | 0.577 | 2009 | \$12,215 | \$5,754 | \$346 |
| -9 | 0.538 | 2010 | \$11,403 | \$5,328 | \$323 |
| -10 | 0.502 | 2011 | \$10,644 | \$4,922 | \$302 |
| -11 | 0.469 | 2012 | \$9,936 | \$4,530 | \$282 |
| -12 | 0.438 | 2013 | \$9,276 | \$4,166 | \$263 |
| -13 | 0.409 | 2014 | \$8,659 | \$3,825 | \$245 |
| -14 | 0.382 | 2015 | \$8,083 | \$3,496 | \$229 |
| -15 | 0.356 | 2016 | \$7,545 | \$3,181 | \$214 |
| -16 | 0.332 | 2017 | \$7,043 | \$2,881 | \$200 |
| -17 | 0.310 | 2018 | \$6,575 | \$2,594 | \$186 |
| -18 | 0.290 | 2019 | \$6,138 | \$2,320 | \$174 |
| -19 | 0.270 | 2020 | \$5,729 | \$2,066 | \$162 |
| -20 | 0.252 | 2021 | \$5,348 | \$1,821 | \$152 |
| Total | | | \$254,955 | \$167,307 | \$6,898 |
| Average Annual | | | \$24,300 | \$15,946 | \$657 |

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

Hopedale Hydrologic Restoration (PPO-38)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.000 | 1998 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.053 | 2000 | \$126,058 | \$52,634 | \$20,707 | \$6,902 | \$0 | \$0 | \$0 | \$206,301 |
| 1 | 1.080 | 2001 | \$0 | \$0 | \$19,121 | \$6,374 | \$32,293 | \$161,466 | \$645,865 | \$865,119 |
| | | TOTAL | \$126,058 | \$52,634 | \$39,828 | \$13,276 | \$32,293 | \$161,466 | \$645,865 | \$1,071,419 |

\$2,179,491

\$267,732

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|------|------------------|--------------|------------------|------------------|-----------------|
| 0 | Base Year | 2001 | \$35,301 | | \$648 |
| -1 | 1.108 | 2002 | \$23,476 | \$11,174 | \$665 |
| -2 | 1.137 | 2003 | \$24,086 | \$11,465 | \$682 |
| -3 | 1.166 | 2004 | \$24,712 | \$11,763 | \$700 |
| -4 | 1.197 | 2005 | \$25,355 | \$12,069 | \$718 |
| -5 | 1.228 | 2006 | \$26,014 | \$12,382 | \$737 |
| -6 | 1.260 | 2007 | \$26,690 | \$12,706 | \$756 |
| -7 | 1.293 | 2008 | \$27,384 | \$13,042 | \$776 |
| -8 | 1.326 | 2009 | \$28,096 | \$13,374 | \$796 |
| -9 | 1.361 | 2010 | \$28,827 | \$13,721 | \$817 |
| -10 | 1.396 | 2011 | \$29,576 | \$14,074 | \$838 |
| -11 | 1.432 | 2012 | \$30,345 | \$14,444 | \$860 |
| -12 | 1.470 | 2013 | \$31,134 | \$14,822 | \$882 |
| -13 | 1.508 | 2014 | \$31,944 | \$15,211 | \$905 |
| -14 | 1.547 | 2015 | \$32,774 | \$15,611 | \$929 |
| -15 | 1.587 | 2016 | \$33,626 | \$16,022 | \$953 |
| -16 | 1.629 | 2017 | \$34,501 | \$16,444 | \$977 |
| -17 | 1.671 | 2018 | \$35,398 | \$16,877 | \$1,003 |
| -18 | 1.714 | 2019 | \$36,318 | \$17,322 | \$1,029 |
| -19 | 1.759 | 2020 | \$37,262 | \$17,777 | \$1,056 |
| -20 | 1.805 | 2021 | \$38,231 | \$18,244 | \$1,083 |
| | | Total | \$641,052 | \$449,209 | \$17,810 |

D-59

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

Constance-Holly Beach Sand Management Plan (CS-1d)

| | | | |
|-----------------------------|--------------|--------------------------|--------------|
| Project Construction Years: | 5 | Total Project Years | 25 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$26,200,400 | Total Fully Funded Costs | \$26,313,100 |

| Annual Charges | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|--------------------------|---------------------------|
| Interest & Amortization | \$26,073,500 | \$2,485,100 |
| Monitoring | \$38,400 | \$3,700 |
| O & M Costs | \$7,100 | \$700 |
| Other Costs | \$6,900 | \$700 |
| Total | \$26,125,900 | \$2,490,200 |

| | |
|--|----------|
| Average Annual Habitat Units | 54 |
| Cost Per Habitat Unit | \$46,115 |
| Average Annual Acres of Emergent Marsh | 31 |

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

Constance-Holly Beach Sand Management Plan (CS-1d)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|---------------------|
| 5 | Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | Compound | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | Compound | \$417,000 | \$101,250 | \$264,706 | \$52,941 | \$0 | \$0 | \$0 | \$835,897 |
| 1 | Compound | \$139,000 | \$33,750 | \$235,294 | \$47,059 | \$1,301,250 | \$4,337,500 | \$17,350,000 | \$23,443,853 |
| TOTAL | | \$556,000 | \$135,000 | \$500,000 | \$100,000 | \$1,301,250 | \$4,337,500 | \$17,350,000 | \$24,279,750 |

D-19

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|-------------|------------------|--------------|---------------|
| 0 | Base year | \$12,015 | | \$600 |
| 1 | Discount | \$2,515 | \$4,310 | \$600 |
| 2 | Discount | \$2,515 | \$0 | \$600 |
| 3 | Discount | \$2,515 | \$0 | \$600 |
| 4 | Discount | \$2,515 | \$0 | \$600 |
| 5 | Discount | \$2,515 | \$4,310 | \$600 |
| 6 | Discount | \$2,515 | \$0 | \$600 |
| 7 | Discount | \$2,515 | \$0 | \$600 |
| 8 | Discount | \$2,515 | \$0 | \$600 |
| 9 | Discount | \$2,515 | \$0 | \$600 |
| 10 | Discount | \$2,515 | \$0 | \$600 |
| 11 | Discount | \$2,515 | \$0 | \$600 |
| 12 | Discount | \$2,515 | \$0 | \$600 |
| 13 | Discount | \$2,515 | \$0 | \$600 |
| 14 | Discount | \$2,515 | \$0 | \$600 |
| 15 | Discount | \$2,515 | \$0 | \$600 |
| 16 | Discount | \$2,515 | \$0 | \$600 |
| 17 | Discount | \$2,515 | \$0 | \$600 |
| 18 | Discount | \$2,515 | \$0 | \$600 |
| 19 | Discount | \$2,515 | \$0 | \$600 |
| 20 | Discount | \$2,515 | \$0 | \$600 |
| 20 | Discount | \$2,515 | \$0 | \$600 |
| Total | | 62,315 | 8,620 | 12,604 |

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

Constance-Holly Beach Sand Management Plan (CS-1d)

Present Valued Costs Total Discounted Costs \$26,125,861 Amortized Costs \$2,490,105

| Year | Compound Rates | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|----------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|---------------------|
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2000 | \$478,539 | \$116,192 | \$303,770 | \$60,754 | \$0 | \$0 | \$0 | \$959,256 |
| 1 | 1.071 | 2001 | \$148,904 | \$36,155 | \$252,059 | \$50,412 | \$1,393,964 | \$4,646,547 | \$18,586,188 | \$25,114,227 |
| Total | | | \$627,443 | \$152,347 | \$555,829 | \$111,166 | \$1,393,964 | \$4,646,547 | \$18,586,188 | \$26,073,483 |

| Discount Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|----------------|----------------|
| 0 | Base year | 2001 | \$12,015 | | \$600 |
| -1 | 0.933 | 2002 | \$2,348 | \$4,023 | \$560 |
| -2 | 0.871 | 2003 | \$2,192 | \$0 | \$523 |
| -3 | 0.813 | 2004 | \$2,046 | \$0 | \$488 |
| -4 | 0.759 | 2005 | \$1,910 | \$0 | \$456 |
| -5 | 0.709 | 2006 | \$1,783 | \$3,055 | \$425 |
| -6 | 0.662 | 2007 | \$1,664 | \$0 | \$397 |
| -7 | 0.618 | 2008 | \$1,553 | \$0 | \$371 |
| -8 | 0.577 | 2009 | \$1,450 | \$0 | \$346 |
| -9 | 0.538 | 2010 | \$1,354 | \$0 | \$323 |
| -10 | 0.502 | 2011 | \$1,264 | \$0 | \$302 |
| -11 | 0.469 | 2012 | \$1,180 | \$0 | \$282 |
| -12 | 0.438 | 2013 | \$1,101 | \$0 | \$263 |
| -13 | 0.409 | 2014 | \$1,028 | \$0 | \$245 |
| -14 | 0.382 | 2015 | \$960 | \$0 | \$229 |
| -15 | 0.356 | 2016 | \$896 | \$0 | \$214 |
| -16 | 0.332 | 2017 | \$836 | \$0 | \$200 |
| -17 | 0.310 | 2018 | \$781 | \$0 | \$186 |
| -18 | 0.290 | 2019 | \$729 | \$0 | \$174 |
| -19 | 0.270 | 2020 | \$680 | \$0 | \$162 |
| -20 | 0.252 | 2021 | \$635 | \$0 | \$152 |
| Total | | | \$38,402 | \$7,078 | \$6,898 |
| Average Annual | | | \$3,660 | \$675 | \$657 |

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

Constance-Holly Beach Sand Management Plan (CS-1d)

\$2,507,955

Amortized Costs

\$26,313,126

Total Fully Funded Costs

Fully Funded Costs

| Year | Inflation Factor | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|------|------------------|--------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|--------------------|-------------------------|---------------------|
| | | | | | | | | | | |
| 5 | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.000 | 1998 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.053 | 2000 | \$438,966 | \$106,583 | \$278,650 | \$55,730 | \$0 | \$0 | \$0 | \$879,929 |
| 1 | 1.080 | 2001 | \$150,126 | \$36,452 | \$254,128 | \$50,826 | \$1,405,409 | \$4,684,698 | \$18,738,791 | \$25,320,430 |
| | | TOTAL | \$589,092 | \$143,035 | \$532,778 | \$106,556 | \$1,405,409 | \$4,684,698 | \$18,738,791 | \$26,200,358 |

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| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs | TOTAL | | | | | | | | | | | | | | | |
|------|------------------|--------------|------------------|-----------------|-----------------|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | | | | | | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| 0 | Base year | | \$12,977 | \$0 | \$648 | \$13,625 | | | | | | | | | | | | | | | |
| -1 | 1.108 | 2002 | \$2,787 | \$4,776 | \$665 | \$8,228 | | | | | | | | | | | | | | | |
| -2 | 1.137 | 2003 | \$2,859 | \$0 | \$682 | \$3,541 | | | | | | | | | | | | | | | |
| -3 | 1.166 | 2004 | \$2,934 | \$0 | \$700 | \$3,634 | | | | | | | | | | | | | | | |
| -4 | 1.197 | 2005 | \$3,010 | \$0 | \$718 | \$3,728 | | | | | | | | | | | | | | | |
| -5 | 1.228 | 2006 | \$3,088 | \$5,292 | \$737 | \$9,117 | | | | | | | | | | | | | | | |
| -6 | 1.260 | 2007 | \$3,169 | \$0 | \$756 | \$3,925 | | | | | | | | | | | | | | | |
| -7 | 1.293 | 2008 | \$3,251 | \$0 | \$776 | \$4,027 | | | | | | | | | | | | | | | |
| -8 | 1.326 | 2009 | \$3,335 | \$0 | \$796 | \$4,131 | | | | | | | | | | | | | | | |
| -9 | 1.361 | 2010 | \$3,422 | \$0 | \$817 | \$4,239 | | | | | | | | | | | | | | | |
| -10 | 1.396 | 2011 | \$3,511 | \$0 | \$838 | \$4,349 | | | | | | | | | | | | | | | |
| -11 | 1.432 | 2012 | \$3,602 | \$0 | \$860 | \$4,462 | | | | | | | | | | | | | | | |
| -12 | 1.470 | 2013 | \$3,696 | \$0 | \$882 | \$4,578 | | | | | | | | | | | | | | | |
| -13 | 1.508 | 2014 | \$3,792 | \$0 | \$905 | \$4,697 | | | | | | | | | | | | | | | |
| -14 | 1.547 | 2015 | \$3,891 | \$0 | \$929 | \$4,820 | | | | | | | | | | | | | | | |
| -15 | 1.587 | 2016 | \$3,992 | \$0 | \$953 | \$4,945 | | | | | | | | | | | | | | | |
| -16 | 1.629 | 2017 | \$4,096 | \$0 | \$977 | \$5,073 | | | | | | | | | | | | | | | |
| -17 | 1.671 | 2018 | \$4,202 | \$0 | \$1,003 | \$5,205 | | | | | | | | | | | | | | | |
| -18 | 1.714 | 2019 | \$4,312 | \$0 | \$1,029 | \$5,341 | | | | | | | | | | | | | | | |
| -19 | 1.759 | 2020 | \$4,424 | \$0 | \$1,056 | \$5,480 | | | | | | | | | | | | | | | |
| -20 | 1.805 | 2021 | \$4,539 | \$0 | \$1,083 | \$5,622 | | | | | | | | | | | | | | | |
| | | Total | \$84,889 | \$10,068 | \$17,810 | \$112,767 | | | | | | | | | | | | | | | |

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

Humble Canal (PME-15)

| | | | |
|-----------------------------|-----------|--------------------------|-------------|
| Project Construction Years: | 4 | Total Project Years | 24 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$577,700 | Total Fully Funded Costs | \$1,253,700 |

| | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|--------------------------|---------------------------|
| Annual Charges | | |
| Interest & Amortization | \$571,000 | \$54,400 |
| Monitoring | \$164,400 | \$15,700 |
| O & M Costs | \$86,100 | \$8,200 |
| Other Costs | \$6,900 | \$700 |
| Total | \$828,400 | \$79,000 |

Average Annual Habitat Units

297

Cost Per Habitat Unit

\$266

Average Annual Acres of Emergent Marsh

277

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

Humble Canal (PME-15)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-----------------|-------------------------|------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 2001 | \$57,000 | \$50,000 | \$9,214 | \$4,586 | \$0 | \$0 | \$0 | \$120,800 |
| 1 Compound | 2002 | \$0 | \$0 | \$12,286 | \$6,114 | \$30,000 | \$71,037 | \$284,146 | \$403,583 |
| TOTAL | | \$57,000 | \$50,000 | \$21,500 | \$10,700 | \$30,000 | \$71,037 | \$284,146 | \$524,383 |

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| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base Year | 2002 | \$24,808 | | \$600 |
| 1 Discount | 2003 | \$13,308 | \$3,584 | \$600 |
| 2 Discount | 2004 | \$13,308 | \$3,584 | \$600 |
| 3 Discount | 2005 | \$13,308 | \$3,584 | \$600 |
| 4 Discount | 2006 | \$13,308 | \$3,584 | \$600 |
| 5 Discount | 2007 | \$13,308 | \$27,691 | \$600 |
| 6 Discount | 2008 | \$13,308 | \$3,584 | \$600 |
| 7 Discount | 2009 | \$13,308 | \$3,584 | \$600 |
| 8 Discount | 2010 | \$13,308 | \$3,584 | \$600 |
| 9 Discount | 2011 | \$13,308 | \$3,584 | \$600 |
| 10 Discount | 2012 | \$13,308 | \$49,021 | \$600 |
| 11 Discount | 2013 | \$13,308 | \$3,584 | \$600 |
| 12 Discount | 2014 | \$13,308 | \$3,584 | \$600 |
| 13 Discount | 2015 | \$13,308 | \$3,584 | \$600 |
| 14 Discount | 2016 | \$13,308 | \$3,584 | \$600 |
| 15 Discount | 2017 | \$13,308 | \$27,691 | \$600 |
| 16 Discount | 2018 | \$13,308 | \$3,584 | \$600 |
| 17 Discount | 2019 | \$13,308 | \$3,584 | \$600 |
| 18 Discount | 2020 | \$13,308 | \$3,584 | \$600 |
| 19 Discount | 2021 | \$13,308 | \$3,584 | \$600 |

| | | | | |
|-------------|-------|-----------|-----------|----------|
| 20 Discount | 2022 | \$13,308 | \$3,584 | \$600 |
| | Total | \$290,972 | \$165,331 | \$12,604 |

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

Humble Canal (PME-15)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2001 | \$65,412 | \$57,379 | \$10,574 | \$5,262 | \$0 | \$0 | \$0 | \$138,627 |
| 1 | 1.071 | 2002 | \$0 | \$0 | \$13,161 | \$6,550 | \$32,138 | \$76,098 | \$304,391 | \$432,338 |
| Total | | | \$65,412 | \$57,379 | \$23,735 | \$11,812 | \$32,138 | \$76,098 | \$304,391 | \$570,965 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base Year | 2002 | \$24,808 | | \$600 |
| -1 | 0.933 | 2003 | \$12,423 | \$3,346 | \$560 |
| -2 | 0.871 | 2004 | \$11,597 | \$3,123 | \$523 |
| -3 | 0.813 | 2005 | \$10,825 | \$2,915 | \$488 |
| -4 | 0.759 | 2006 | \$10,105 | \$2,721 | \$456 |
| -5 | 0.709 | 2007 | \$9,433 | \$19,628 | \$425 |
| -6 | 0.662 | 2008 | \$8,806 | \$2,371 | \$397 |
| -7 | 0.618 | 2009 | \$8,220 | \$2,214 | \$371 |
| -8 | 0.577 | 2010 | \$7,673 | \$2,067 | \$346 |
| -9 | 0.538 | 2011 | \$7,163 | \$1,929 | \$323 |
| -10 | 0.502 | 2012 | \$6,687 | \$24,631 | \$302 |
| -11 | 0.469 | 2013 | \$6,242 | \$1,681 | \$282 |
| -12 | 0.438 | 2014 | \$5,827 | \$1,569 | \$263 |
| -13 | 0.409 | 2015 | \$5,439 | \$1,465 | \$245 |
| -14 | 0.382 | 2016 | \$5,077 | \$1,367 | \$229 |
| -15 | 0.356 | 2017 | \$4,740 | \$9,862 | \$214 |
| -16 | 0.332 | 2018 | \$4,425 | \$1,192 | \$200 |
| -17 | 0.310 | 2019 | \$4,130 | \$1,112 | \$186 |
| -18 | 0.290 | 2020 | \$3,856 | \$1,038 | \$174 |
| -19 | 0.270 | 2021 | \$3,599 | \$969 | \$162 |
| -20 | 0.252 | 2022 | \$3,360 | \$905 | \$152 |
| Total | | | \$164,436 | \$86,106 | \$6,898 |
| Average Annual | | | \$15,673 | \$8,207 | \$657 |

Coastal Wetlands Conservation and Restoration Plan Priority Project List VIII

Humble Canal (PME-15)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.053 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.080 | 2001 | \$61,563 | \$54,002 | \$9,952 | \$4,953 | \$0 | \$0 | \$0 | \$130,470 |
| 1 | 1.108 | 2002 | \$0 | \$0 | \$13,614 | \$6,775 | \$33,244 | \$78,717 | \$314,870 | \$447,221 |
| | | TOTAL | \$61,563 | \$54,002 | \$23,566 | \$11,728 | \$33,244 | \$78,717 | \$314,870 | \$577,690 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|------------------|--------------|------------------|-----------|-------------|
| 0 Base Year | | 2002 | \$27,491 | | \$665 |
| -1 | 1.137 | 2003 | \$15,131 | \$4,075 | \$682 |
| -2 | 1.166 | 2004 | \$15,524 | \$4,181 | \$700 |
| -3 | 1.197 | 2005 | \$15,928 | \$4,289 | \$718 |
| -4 | 1.228 | 2006 | \$16,342 | \$4,401 | \$737 |
| -5 | 1.260 | 2007 | \$16,767 | \$4,513 | \$756 |
| -6 | 1.293 | 2008 | \$17,203 | \$4,633 | \$776 |
| -7 | 1.326 | 2009 | \$17,650 | \$4,753 | \$796 |
| -8 | 1.361 | 2010 | \$18,109 | \$4,877 | \$817 |
| -9 | 1.396 | 2011 | \$18,580 | \$5,004 | \$838 |
| -10 | 1.432 | 2012 | \$19,063 | \$5,131 | \$860 |
| -11 | 1.470 | 2013 | \$19,558 | \$5,267 | \$882 |
| -12 | 1.508 | 2014 | \$20,067 | \$5,404 | \$905 |
| -13 | 1.547 | 2015 | \$20,588 | \$5,545 | \$929 |
| -14 | 1.587 | 2016 | \$21,124 | \$5,689 | \$953 |
| -15 | 1.629 | 2017 | \$21,673 | \$5,836 | \$977 |
| -16 | 1.671 | 2018 | \$22,237 | \$5,988 | \$1,003 |
| -17 | 1.714 | 2019 | \$22,815 | \$6,144 | \$1,029 |
| -18 | 1.759 | 2020 | \$23,408 | \$6,304 | \$1,056 |
| -19 | 1.805 | 2021 | \$24,016 | \$6,468 | \$1,083 |
| -20 | 1.852 | 2022 | \$24,641 | \$6,636 | \$1,111 |
| | | Total | \$417,911 | \$239,858 | \$18,273 |

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

Lake Portage Land Bridge (PTV-20)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 4 | Total Project Years | 24 |
| Interest Rate | 7.125% | Amortization Factor | 0.095311938 |
| Total First Costs | \$3,524,800 | Total Fully Funded Costs | \$4,559,400 |

| | Present Worth | Average Annual |
|---|--------------------|-------------------|
| Annual Charges | | |
| Interest & Amortization | \$3,446,800 | \$328,500 |
| Monitoring | \$38,400 | \$3,700 |
| O & M Costs | \$217,800 | \$20,800 |
| Other Costs | \$6,900 | \$700 |
| Total | \$3,709,900 | \$353,700 |
| Average Annual Habitat Units | | 34 |
| Cost Per Habitat Unit | | \$10,403 |
| Average Annual Acres of Emergent Marsh | | 43 |

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

Lake Portage Land Bridge (PTV-20)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 2001 | \$220,000 | \$70,000 | \$55,714 | \$33,429 | \$0 | \$0 | \$0 | \$379,143 |
| 1 Compound | 2002 | \$0 | \$0 | \$74,286 | \$44,571 | \$60,000 | \$526,500 | \$2,106,000 | \$2,811,357 |
| TOTAL | | \$220,000 | \$70,000 | \$130,000 | \$78,000 | \$60,000 | \$526,500 | \$2,106,000 | \$3,196,900 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base Year | 2002 | \$12,015 | | \$600 |
| 1 Discount | 2003 | \$2,515 | \$3,584 | \$600 |
| 2 Discount | 2004 | \$2,515 | \$3,584 | \$600 |
| 3 Discount | 2005 | \$2,515 | \$3,584 | \$600 |
| 4 Discount | 2006 | \$2,515 | \$3,584 | \$600 |
| 5 Discount | 2007 | \$2,515 | \$3,584 | \$600 |
| 6 Discount | 2008 | \$2,515 | \$3,584 | \$600 |
| 7 Discount | 2009 | \$2,515 | \$3,584 | \$600 |
| 8 Discount | 2010 | \$2,515 | \$3,584 | \$600 |
| 9 Discount | 2011 | \$2,515 | \$3,584 | \$600 |
| 10 Discount | 2012 | \$2,515 | \$3,584 | \$600 |
| 11 Discount | 2013 | \$2,515 | \$3,584 | \$600 |
| 12 Discount | 2014 | \$2,515 | \$3,584 | \$600 |
| 13 Discount | 2015 | \$2,515 | \$3,584 | \$600 |
| 14 Discount | 2016 | \$2,515 | \$3,584 | \$600 |
| 15 Discount | 2017 | \$2,515 | \$509,565 | \$600 |
| 16 Discount | 2018 | \$2,515 | \$3,584 | \$600 |
| 17 Discount | 2019 | \$2,515 | \$3,584 | \$600 |
| 18 Discount | 2020 | \$2,515 | \$3,584 | \$600 |
| 19 Discount | 2021 | \$2,515 | \$3,584 | \$600 |

| | | | | |
|-------------|-------|----------|-----------|----------|
| 20 Discount | 2022 | \$2,515 | \$3,584 | \$600 |
| | Total | \$62,315 | \$577,661 | \$12,604 |

Coastal Wetlands Conservation and Restoration Plan Priority Project List VIII

Lake Portage Land Bridge (PTV-20)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2001 | \$252,467 | \$80,330 | \$63,936 | \$38,362 | \$0 | \$0 | \$0 | \$435,095 |
| 1 | 1.071 | 2002 | \$0 | \$0 | \$79,579 | \$47,747 | \$64,275 | \$564,013 | \$2,256,053 | \$3,011,666 |
| Total | | | \$252,467 | \$80,330 | \$143,515 | \$86,109 | \$64,275 | \$564,013 | \$2,256,053 | \$3,446,762 |

| Discount Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base Year | 2002 | \$12,015 | | \$600 |
| -1 | 0.933 | 2003 | \$2,348 | \$3,346 | \$560 |
| -2 | 0.871 | 2004 | \$2,192 | \$3,123 | \$523 |
| -3 | 0.813 | 2005 | \$2,046 | \$2,915 | \$488 |
| -4 | 0.759 | 2006 | \$1,910 | \$2,721 | \$456 |
| -5 | 0.709 | 2007 | \$1,783 | \$2,540 | \$425 |
| -6 | 0.662 | 2008 | \$1,664 | \$2,371 | \$397 |
| -7 | 0.618 | 2009 | \$1,553 | \$2,214 | \$371 |
| -8 | 0.577 | 2010 | \$1,450 | \$2,067 | \$346 |
| -9 | 0.538 | 2011 | \$1,354 | \$1,929 | \$323 |
| -10 | 0.502 | 2012 | \$1,264 | \$1,801 | \$302 |
| -11 | 0.469 | 2013 | \$1,180 | \$1,681 | \$282 |
| -12 | 0.438 | 2014 | \$1,101 | \$1,569 | \$263 |
| -13 | 0.409 | 2015 | \$1,028 | \$1,465 | \$245 |
| -14 | 0.382 | 2016 | \$960 | \$1,367 | \$229 |
| -15 | 0.356 | 2017 | \$896 | \$1,274 | \$214 |
| -16 | 0.332 | 2018 | \$836 | \$1,192 | \$200 |
| -17 | 0.310 | 2019 | \$781 | \$1,112 | \$186 |
| -18 | 0.290 | 2020 | \$729 | \$1,038 | \$174 |
| -19 | 0.270 | 2021 | \$680 | \$969 | \$162 |
| -20 | 0.252 | 2022 | \$635 | \$905 | \$152 |
| Total | | | \$38,402 | \$217,810 | \$6,898 |
| Average Annual | | | \$3,660 | \$20,760 | \$657 |

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

Lake Portage Land Bridge (PTV-20)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.053 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.080 | 2001 | \$237,610 | \$75,603 | \$60,174 | \$36,104 | \$0 | \$0 | \$0 | \$409,492 |
| 1 | 1.108 | 2002 | \$0 | \$0 | \$82,318 | \$49,391 | \$66,488 | \$583,429 | \$2,333,715 | \$3,115,340 |
| TOTAL | | | \$237,610 | \$75,603 | \$142,492 | \$85,495 | \$66,488 | \$583,429 | \$2,333,715 | \$3,524,832 |

\$4,559,357

\$434,561

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| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|------------------|-----------------|
| 0 | Base Year | 2002 | \$13,314 | | \$665 |
| -1 | 1.137 | 2003 | \$2,859 | \$4,075 | \$682 |
| -2 | 1.166 | 2004 | \$2,934 | \$4,181 | \$700 |
| -3 | 1.197 | 2005 | \$3,010 | \$4,289 | \$718 |
| -4 | 1.228 | 2006 | \$3,088 | \$4,401 | \$737 |
| -5 | 1.260 | 2007 | \$3,169 | \$4,515 | \$756 |
| -6 | 1.293 | 2008 | \$3,251 | \$4,633 | \$776 |
| -7 | 1.326 | 2009 | \$3,335 | \$4,753 | \$796 |
| -8 | 1.361 | 2010 | \$3,422 | \$4,877 | \$817 |
| -9 | 1.396 | 2011 | \$3,511 | \$5,004 | \$838 |
| -10 | 1.432 | 2012 | \$3,602 | \$5,134 | \$860 |
| -11 | 1.470 | 2013 | \$3,696 | \$5,267 | \$882 |
| -12 | 1.508 | 2014 | \$3,792 | \$5,404 | \$905 |
| -13 | 1.547 | 2015 | \$3,891 | \$5,545 | \$929 |
| -14 | 1.587 | 2016 | \$3,992 | \$5,689 | \$953 |
| -15 | 1.629 | 2017 | \$4,096 | \$829,849 | \$977 |
| -16 | 1.671 | 2018 | \$4,202 | \$5,988 | \$1,003 |
| -17 | 1.714 | 2019 | \$4,312 | \$6,144 | \$1,029 |
| -18 | 1.759 | 2020 | \$4,424 | \$6,304 | \$1,056 |
| -19 | 1.805 | 2021 | \$4,539 | \$6,468 | \$1,083 |
| -20 | 1.852 | 2022 | \$4,657 | \$6,636 | \$1,111 |
| Total | | | \$87,096 | \$929,156 | \$18,273 |

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

Lake Portage Land Bridge (PTV-20)

| | | | |
|-----------------------------|-----------|--------------------------|-------------|
| Project Construction Years: | 4 | Total Project Years | 24 |
| Interest Rate | 7.125% | Amortization Factor | 0.095311938 |
| Total First Costs | \$803,300 | Total Fully Funded Costs | \$1,013,800 |

| Annual Charges | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|--------------------------|---------------------------|
| Interest & Amortization | \$795,300 | \$75,800 |
| Monitoring | \$38,400 | \$3,700 |
| O & M Costs | \$37,600 | \$3,600 |
| Other Costs | <u>\$6,900</u> | <u>\$700</u> |
| Total | \$878,200 | \$83,800 |

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

34

\$2,465

43

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

Lake Portage Land Bridge (PTV-20)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 2001 | \$86,289 | \$70,000 | \$21,429 | \$3,428.57 | \$0 | \$0 | \$0 | \$181,146 |
| 1 Compound | 2002 | \$0 | \$0 | \$28,571 | \$4,571.43 | \$15,225 | \$100,000 | \$400,000 | \$548,368 |
| TOTAL | | \$86,289 | \$70,000 | \$50,000 | \$8,000 | \$15,225 | \$100,000 | \$400,000 | \$729,514 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base Year | 2002 | \$12,015 | | \$600 |
| 1 Discount | 2003 | \$2,515 | \$3,584 | \$600 |
| 2 Discount | 2004 | \$2,515 | \$3,584 | \$600 |
| 3 Discount | 2005 | \$2,515 | \$3,584 | \$600 |
| 4 Discount | 2006 | \$2,515 | \$3,584 | \$600 |
| 5 Discount | 2007 | \$2,515 | \$3,584 | \$600 |
| 6 Discount | 2008 | \$2,515 | \$3,584 | \$600 |
| 7 Discount | 2009 | \$2,515 | \$3,584 | \$600 |
| 8 Discount | 2010 | \$2,515 | \$3,584 | \$600 |
| 9 Discount | 2011 | \$2,515 | \$3,584 | \$600 |
| 10 Discount | 2012 | \$2,515 | \$3,584 | \$600 |
| 11 Discount | 2013 | \$2,515 | \$3,584 | \$600 |
| 12 Discount | 2014 | \$2,515 | \$3,584 | \$600 |
| 13 Discount | 2015 | \$2,515 | \$3,584 | \$600 |
| 14 Discount | 2016 | \$2,515 | \$3,584 | \$600 |
| 15 Discount | 2017 | \$2,515 | \$3,584 | \$600 |
| 16 Discount | 2018 | \$2,515 | \$3,584 | \$600 |
| 17 Discount | 2019 | \$2,515 | \$3,584 | \$600 |
| 18 Discount | 2020 | \$2,515 | \$3,584 | \$600 |
| 19 Discount | 2021 | \$2,515 | \$3,584 | \$600 |

| | | | | |
|-------------|-------|----------|----------|----------|
| 20 Discount | 2022 | \$2,515 | \$3,584 | \$600 |
| | Total | \$62,315 | \$71,680 | \$12,604 |

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

Lake Portage Land Bridge (PTV-20)

Present Valued Costs Total Discounted Costs Amortized Costs **\$83,705**

| Year | Compound Rates | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Construction | Total First Cost |
|--------------|----------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|--------------------|------------------|
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2001 | \$99,023 | \$80,330 | \$24,591 | \$3,935 | \$0 | \$0 | \$0 | \$207,879 |
| 1 | 1.071 | 2002 | \$0 | \$0 | \$30,607 | \$4,897 | \$16,310 | \$107,125 | \$428,500 | \$587,439 |
| Total | | | \$99,023 | \$80,330 | \$55,198 | \$8,832 | \$16,310 | \$107,125 | \$428,500 | \$795,318 |

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| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base Year | 2002 | \$12,015 | | \$600 |
| -1 | 0.933 | 2003 | \$2,348 | \$3,346 | \$560 |
| -2 | 0.871 | 2004 | \$2,192 | \$3,123 | \$523 |
| -3 | 0.813 | 2005 | \$2,046 | \$2,915 | \$488 |
| -4 | 0.759 | 2006 | \$1,910 | \$2,721 | \$456 |
| -5 | 0.709 | 2007 | \$1,783 | \$2,540 | \$425 |
| -6 | 0.662 | 2008 | \$1,664 | \$2,371 | \$397 |
| -7 | 0.618 | 2009 | \$1,553 | \$2,214 | \$371 |
| -8 | 0.577 | 2010 | \$1,450 | \$2,067 | \$346 |
| -9 | 0.538 | 2011 | \$1,354 | \$1,929 | \$323 |
| -10 | 0.502 | 2012 | \$1,264 | \$1,801 | \$302 |
| -11 | 0.469 | 2013 | \$1,180 | \$1,681 | \$282 |
| -12 | 0.438 | 2014 | \$1,101 | \$1,569 | \$263 |
| -13 | 0.409 | 2015 | \$1,028 | \$1,465 | \$245 |
| -14 | 0.382 | 2016 | \$960 | \$1,367 | \$229 |
| -15 | 0.356 | 2017 | \$896 | \$1,276 | \$214 |
| -16 | 0.332 | 2018 | \$836 | \$1,192 | \$200 |
| -17 | 0.310 | 2019 | \$781 | \$1,112 | \$186 |
| -18 | 0.290 | 2020 | \$729 | \$1,038 | \$174 |
| -19 | 0.270 | 2021 | \$680 | \$969 | \$162 |
| -20 | 0.252 | 2022 | \$635 | \$905 | \$152 |
| Total | | | \$38,402 | \$37,603 | \$6,898 |
| Average Annual | | | \$3,660 | \$3,584 | \$657 |

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

Lake Portage Land Bridge (PTV-20)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.026 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.053 | 2000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.080 | 2001 | \$93,196 | \$75,603 | \$23,144 | \$3,703 | \$0 | \$0 | \$0 | \$195,646 |
| 1 | 1.108 | 2002 | \$0 | \$0 | \$31,661 | \$5,066 | \$16,871 | \$110,813 | \$443,251 | \$607,661 |
| TOTAL | | | \$93,196 | \$75,603 | \$54,805 | \$8,769 | \$16,871 | \$110,813 | \$443,251 | \$803,307 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|-----------|-------------|
| 0 | Base Year | 2002 | \$13,314 | | \$665 |
| -1 | 1.137 | 2003 | \$2,859 | \$4,075 | \$682 |
| -2 | 1.166 | 2004 | \$2,934 | \$4,181 | \$700 |
| -3 | 1.197 | 2005 | \$3,010 | \$4,289 | \$718 |
| -4 | 1.228 | 2006 | \$3,088 | \$4,401 | \$737 |
| -5 | 1.260 | 2007 | \$3,169 | \$4,515 | \$756 |
| -6 | 1.293 | 2008 | \$3,251 | \$4,633 | \$776 |
| -7 | 1.326 | 2009 | \$3,335 | \$4,753 | \$796 |
| -8 | 1.361 | 2010 | \$3,422 | \$4,877 | \$817 |
| -9 | 1.396 | 2011 | \$3,511 | \$5,004 | \$838 |
| -10 | 1.432 | 2012 | \$3,602 | \$5,134 | \$860 |
| -11 | 1.470 | 2013 | \$3,696 | \$5,267 | \$882 |
| -12 | 1.508 | 2014 | \$3,792 | \$5,404 | \$905 |
| -13 | 1.547 | 2015 | \$3,891 | \$5,545 | \$929 |
| -14 | 1.587 | 2016 | \$3,992 | \$5,689 | \$953 |
| -15 | 1.629 | 2017 | \$4,096 | \$5,837 | \$977 |
| -16 | 1.671 | 2018 | \$4,202 | \$5,988 | \$1,003 |
| -17 | 1.714 | 2019 | \$4,312 | \$6,144 | \$1,029 |
| -18 | 1.759 | 2020 | \$4,424 | \$6,304 | \$1,056 |
| -19 | 1.805 | 2021 | \$4,539 | \$6,468 | \$1,083 |
| -20 | 1.852 | 2022 | \$4,657 | \$6,636 | \$1,111 |
| Total | | | \$87,096 | \$105,143 | \$18,273 |

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

Bayou Pelton Wetland Protection (TE-8)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 3 | Total Project Years | 23 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$1,725,100 | Total Fully Funded Costs | \$3,099,500 |

| | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|--------------------------|---------------------------|
| Annual Charges | | |
| Interest & Amortization | \$1,784,300 | \$170,100 |
| Monitoring | \$220,200 | \$21,000 |
| O & M Costs | \$385,600 | \$36,800 |
| Other Costs | <u>\$6,900</u> | <u>\$700</u> |
| Total | \$2,397,000 | \$228,600 |

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

24

\$9,525

#N/A

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

Bayou Pelton Wetland Protection (TE-8)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|------------------|-------------------------|--------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 2000 | \$193,249 | \$50,000 | \$22,944 | \$11,472 | \$0 | \$0 | \$0 | \$277,666 |
| 1 Compound | 2001 | \$0 | \$0 | \$18,356 | \$9,178 | \$50,000 | \$258,122 | \$1,032,489 | \$1,368,145 |
| TOTAL | | \$193,249 | \$50,000 | \$41,300 | \$20,650 | \$50,000 | \$258,122 | \$1,032,489 | \$1,645,810 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base Year | 2001 | \$29,659 | | \$600 |
| 1 Discount | 2002 | \$18,159 | \$0 | \$600 |
| 2 Discount | 2003 | \$18,159 | \$3,584 | \$600 |
| 3 Discount | 2004 | \$18,159 | \$0 | \$600 |
| 4 Discount | 2005 | \$18,159 | \$3,584 | \$600 |
| 5 Discount | 2006 | \$18,159 | \$345,452 | \$600 |
| 6 Discount | 2007 | \$18,159 | \$3,584 | \$600 |
| 7 Discount | 2008 | \$18,159 | \$46,634 | \$600 |
| 8 Discount | 2009 | \$18,159 | \$3,584 | \$600 |
| 9 Discount | 2010 | \$18,159 | \$0 | \$600 |
| 10 Discount | 2011 | \$18,159 | \$154,866 | \$600 |
| 11 Discount | 2012 | \$18,159 | \$0 | \$600 |
| 12 Discount | 2013 | \$18,159 | \$3,584 | \$600 |
| 13 Discount | 2014 | \$18,159 | \$0 | \$600 |
| 14 Discount | 2015 | \$18,159 | \$50,218 | \$600 |
| 15 Discount | 2016 | \$18,159 | \$0 | \$600 |
| 16 Discount | 2017 | \$18,159 | \$3,584 | \$600 |
| 17 Discount | 2018 | \$18,159 | \$0 | \$600 |
| 18 Discount | 2019 | \$18,159 | \$3,584 | \$600 |
| 19 Discount | 2020 | \$18,159 | \$0 | \$600 |
| 20 Discount | 2021 | \$18,159 | \$3,584 | \$600 |

Total \$392,839 \$625,842 \$12,604

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

Bayou Peilton Wetland Protection (TE-8)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 2000 | \$221,768 | \$57,379 | \$26,331 | \$13,165 | \$0 | \$0 | \$0 | \$318,643 |
| 1 | 1.071 | 2001 | \$0 | \$0 | \$19,663 | \$9,832 | \$53,563 | \$276,513 | \$1,106,054 | \$1,465,625 |
| Total | | | \$221,768 | \$57,379 | \$45,994 | \$22,997 | \$53,563 | \$276,513 | \$1,106,054 | \$1,784,267 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 Base Year | | 2001 | \$29,659 | | \$600 |
| -1 | 0.933 | 2002 | \$16,951 | \$0 | \$560 |
| -2 | 0.871 | 2003 | \$15,824 | \$3,123 | \$523 |
| -3 | 0.813 | 2004 | \$14,771 | \$0 | \$488 |
| -4 | 0.759 | 2005 | \$13,789 | \$2,721 | \$456 |
| -5 | 0.709 | 2006 | \$12,872 | \$244,869 | \$425 |
| -6 | 0.662 | 2007 | \$12,016 | \$2,371 | \$397 |
| -7 | 0.618 | 2008 | \$11,216 | \$28,805 | \$371 |
| -8 | 0.577 | 2009 | \$10,470 | \$2,067 | \$346 |
| -9 | 0.538 | 2010 | \$9,774 | \$0 | \$323 |
| -10 | 0.502 | 2011 | \$9,124 | \$77,812 | \$302 |
| -11 | 0.469 | 2012 | \$8,517 | \$0 | \$282 |
| -12 | 0.438 | 2013 | \$7,951 | \$1,569 | \$263 |
| -13 | 0.409 | 2014 | \$7,422 | \$0 | \$245 |
| -14 | 0.382 | 2015 | \$6,928 | \$19,160 | \$229 |
| -15 | 0.356 | 2016 | \$6,467 | \$0 | \$214 |
| -16 | 0.332 | 2017 | \$6,037 | \$1,192 | \$200 |
| -17 | 0.310 | 2018 | \$5,636 | \$0 | \$186 |
| -18 | 0.290 | 2019 | \$5,261 | \$1,038 | \$174 |
| -19 | 0.270 | 2020 | \$4,911 | \$0 | \$162 |
| -20 | 0.252 | 2021 | \$4,584 | \$905 | \$152 |
| Total | | | \$220,181 | \$385,632 | \$6,898 |
| Average Annual | | | \$20,986 | \$36,755 | \$657 |

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

Bayou Pelton Wetland Protection (TE-8)

| 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 | 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 |
| 3 | 1.000 | 1998 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.026 | 1999 | \$198,273 | \$51,300 | \$23,541 | \$11,771 | \$0 | \$0 | \$0 | \$284,885 |
| 1 | 1.053 | 2000 | \$0 | \$0 | \$19,322 | \$9,661 | \$52,634 | \$271,719 | \$1,086,876 | \$1,440,213 |
| TOTAL | | | \$198,273 | \$51,300 | \$42,863 | \$21,432 | \$52,634 | \$271,719 | \$1,086,876 | \$1,725,098 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|------------------|-----------------|
| 0 | Base Year | 2000 | \$31,221 | | \$632 |
| -1 | 1.080 | 2001 | \$19,613 | \$0 | \$648 |
| -2 | 1.108 | 2002 | \$20,122 | \$4,075 | \$665 |
| -3 | 1.137 | 2003 | \$20,646 | \$0 | \$682 |
| -4 | 1.166 | 2004 | \$21,182 | \$4,289 | \$700 |
| -5 | 1.197 | 2005 | \$21,733 | \$424,196 | \$718 |
| -6 | 1.228 | 2006 | \$22,298 | \$4,515 | \$737 |
| -7 | 1.260 | 2007 | \$22,878 | \$60,280 | \$756 |
| -8 | 1.293 | 2008 | \$23,473 | \$4,753 | \$776 |
| -9 | 1.326 | 2009 | \$24,083 | \$0 | \$796 |
| -10 | 1.361 | 2010 | \$24,709 | \$216,208 | \$817 |
| -11 | 1.396 | 2011 | \$25,352 | \$0 | \$838 |
| -12 | 1.432 | 2012 | \$26,011 | \$5,267 | \$860 |
| -13 | 1.470 | 2013 | \$26,687 | \$0 | \$882 |
| -14 | 1.508 | 2014 | \$27,381 | \$77,690 | \$905 |
| -15 | 1.547 | 2015 | \$28,093 | \$0 | \$929 |
| -16 | 1.587 | 2016 | \$28,823 | \$5,837 | \$953 |
| -17 | 1.629 | 2017 | \$29,573 | \$0 | \$977 |
| -18 | 1.671 | 2018 | \$30,342 | \$6,144 | \$1,003 |
| -19 | 1.714 | 2019 | \$31,131 | \$0 | \$1,029 |
| -20 | 1.759 | 2020 | \$31,940 | \$6,468 | \$1,056 |
| Total | | | \$537,291 | \$819,723 | \$17,359 |

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

Periodic Introduction of Mississippi River Freshwater, Sediment, and Nutrients Project (PMR-Demonstration)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 2 | Total Project Years | 22 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$1,837,900 | Total Fully Funded Costs | \$1,890,800 |

| Annual Charges | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|--------------------------|---------------------------|
| Interest & Amortization | \$1,885,000 | \$179,700 |
| Monitoring | \$23,700 | \$2,300 |
| O & M Costs | \$7,800 | \$700 |
| Other Costs | \$6,900 | \$700 |
| Total | \$1,923,400 | \$183,400 |

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

0
∞
0

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

Periodic Introduction of Mississippi River Freshwater, Sediment, and Nutrients Project (PMR-Demonstration)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|------------------|-------------------------|--------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 1999 | \$44,052 | \$50,000 | \$35,988 | \$11,996 | \$0 | \$0 | \$0 | \$142,036 |
| 1 Compound | 2000 | \$0 | \$0 | \$35,988 | \$11,996 | \$59,980 | \$299,900 | \$1,199,600 | \$1,607,464 |
| TOTAL | | \$44,052 | \$50,000 | \$71,976 | \$23,992 | \$59,980 | \$299,900 | \$1,199,600 | \$1,749,500 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base year | 2000 | \$14,559 | | \$600 |
| 1 Discount | 2001 | \$5,059 | \$4,310 | \$600 |
| 2 Discount | 2002 | \$5,059 | \$4,310 | \$600 |
| 3 Discount | 2003 | \$0 | \$0 | \$600 |
| 4 Discount | 2004 | \$0 | \$0 | \$600 |
| 5 Discount | 2005 | \$0 | \$0 | \$600 |
| 6 Discount | 2006 | \$0 | \$0 | \$600 |
| 7 Discount | 2007 | \$0 | \$0 | \$600 |
| 8 Discount | 2008 | \$0 | \$0 | \$600 |
| 9 Discount | 2009 | \$0 | \$0 | \$600 |
| 10 Discount | 2010 | \$0 | \$0 | \$600 |
| 11 Discount | 2011 | \$0 | \$0 | \$600 |
| 12 Discount | 2012 | \$0 | \$0 | \$600 |
| 13 Discount | 2013 | \$0 | \$0 | \$600 |
| 14 Discount | 2014 | \$0 | \$0 | \$600 |
| 15 Discount | 2015 | \$0 | \$0 | \$600 |
| 16 Discount | 2016 | \$0 | \$0 | \$600 |
| 17 Discount | 2017 | \$0 | \$0 | \$600 |
| 18 Discount | 2018 | \$0 | \$0 | \$600 |
| 19 Discount | 2019 | \$0 | \$0 | \$600 |

| | | | | |
|-------------|-------|----------|---------|----------|
| 20 Discount | 2020 | \$0 | \$0 | \$600 |
| | Total | \$24,677 | \$8,620 | \$12,604 |

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

Periodic Introduction of Mississippi River Freshwater, Sediment, and Nutrients Project (PMR-Demonstration)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 1999 | \$50,553 | \$57,379 | \$41,299 | \$13,766 | \$0 | \$0 | \$0 | \$162,997 |
| 1 | 1.071 | 2000 | \$0 | \$0 | \$38,552 | \$12,851 | \$64,254 | \$321,268 | \$1,285,072 | \$1,721,996 |
| Total | | | \$50,553 | \$57,379 | \$79,851 | \$26,617 | \$64,254 | \$321,268 | \$1,285,072 | \$1,884,993 |

\$183,319

\$1,923,360

Total Discounted Costs

D-07

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base year | 2000 | \$14,559 | | \$600 |
| -1 | 0.933 | 2001 | \$4,723 | \$4,023 | \$560 |
| -2 | 0.871 | 2002 | \$4,408 | \$3,756 | \$523 |
| -3 | 0.813 | 2003 | \$0 | \$0 | \$488 |
| -4 | 0.759 | 2004 | \$0 | \$0 | \$456 |
| -5 | 0.709 | 2005 | \$0 | \$0 | \$425 |
| -6 | 0.662 | 2006 | \$0 | \$0 | \$397 |
| -7 | 0.618 | 2007 | \$0 | \$0 | \$371 |
| -8 | 0.577 | 2008 | \$0 | \$0 | \$346 |
| -9 | 0.538 | 2009 | \$0 | \$0 | \$323 |
| -10 | 0.502 | 2010 | \$0 | \$0 | \$302 |
| -11 | 0.469 | 2011 | \$0 | \$0 | \$282 |
| -12 | 0.438 | 2012 | \$0 | \$0 | \$263 |
| -13 | 0.409 | 2013 | \$0 | \$0 | \$245 |
| -14 | 0.382 | 2014 | \$0 | \$0 | \$229 |
| -15 | 0.356 | 2015 | \$0 | \$0 | \$214 |
| -16 | 0.332 | 2016 | \$0 | \$0 | \$200 |
| -17 | 0.310 | 2017 | \$0 | \$0 | \$186 |
| -18 | 0.290 | 2018 | \$0 | \$0 | \$174 |
| -19 | 0.270 | 2019 | \$0 | \$0 | \$162 |
| -20 | 0.252 | 2020 | \$0 | \$0 | \$152 |
| Total | | | \$23,690 | \$7,779 | \$6,898 |
| Average Annual | | | \$2,258 | \$741 | \$657 |

Coastal Wetlands Conservation and Restoration Plan Priority Project List VIII

Periodic Introduction of Mississippi River Freshwater, Sediment, and Nutrients Project (PMR-Demonstration)

Amortized Costs **\$180,217**

Total Fully Funded Costs **\$1,890,815**

Total Fully Funded Costs **\$1,890,815**

Total Fully Funded Costs **\$1,890,815**

Total Fully Funded Costs **\$1,890,815**

Total Fully Funded Costs **\$1,890,815**

Total Fully Funded Costs **\$1,890,815**

Total Fully Funded Costs **\$1,890,815**

Total Fully Funded Costs **\$1,890,815**

Total Fully Funded Costs **\$1,890,815**

| Year | Inflation Factor | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | 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 | 1.000 | 1998 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.026 | 1999 | \$45,197 | \$51,300 | \$36,924 | \$12,308 | \$0 | \$0 | \$0 | \$145,729 |
| 1 | 1.053 | 2000 | \$0 | \$0 | \$37,884 | \$12,628 | \$63,140 | \$315,698 | \$1,262,790 | \$1,692,139 |
| TOTAL | | | \$45,197 | \$51,300 | \$74,807 | \$24,936 | \$63,140 | \$315,698 | \$1,262,790 | \$1,837,868 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|----------------|-----------------|
| 0 | Base year | 2000 | \$15,326 | | \$632 |
| -1 | 1.080 | 2001 | \$5,464 | \$4,537 | \$648 |
| -2 | 1.108 | 2002 | \$5,606 | \$4,655 | \$665 |
| -3 | 1.137 | 2003 | \$0 | \$0 | \$682 |
| -4 | 1.166 | 2004 | \$0 | \$0 | \$700 |
| -5 | 1.197 | 2005 | \$0 | \$0 | \$718 |
| -6 | 1.228 | 2006 | \$0 | \$0 | \$737 |
| -7 | 1.260 | 2007 | \$0 | \$0 | \$756 |
| -8 | 1.293 | 2008 | \$0 | \$0 | \$776 |
| -9 | 1.326 | 2009 | \$0 | \$0 | \$796 |
| -10 | 1.361 | 2010 | \$0 | \$0 | \$817 |
| -11 | 1.396 | 2011 | \$0 | \$0 | \$838 |
| -12 | 1.432 | 2012 | \$0 | \$0 | \$860 |
| -13 | 1.470 | 2013 | \$0 | \$0 | \$882 |
| -14 | 1.508 | 2014 | \$0 | \$0 | \$905 |
| -15 | 1.547 | 2015 | \$0 | \$0 | \$929 |
| -16 | 1.587 | 2016 | \$0 | \$0 | \$953 |
| -17 | 1.629 | 2017 | \$0 | \$0 | \$977 |
| -18 | 1.671 | 2018 | \$0 | \$0 | \$1,003 |
| -19 | 1.714 | 2019 | \$0 | \$0 | \$1,029 |
| -20 | 1.759 | 2020 | \$0 | \$0 | \$1,056 |
| Total | | | \$26,396 | \$9,192 | \$17,359 |

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

Maintenance Dredging Matching Fund (XCW-Demonstration)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 4 | Total Project Years | 24 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$1,525,400 | Total Fully Funded Costs | \$1,641,400 |

| | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|--------------------------|---------------------------|
| Annual Charges | | |
| Interest & Amortization | \$1,633,000 | \$155,600 |
| Monitoring | \$35,200 | \$3,400 |
| O & M Costs | \$43,900 | \$4,200 |
| Other Costs | \$3,100 | \$300 |
| Total | \$1,715,200 | \$163,500 |

Average Annual Habitat Units

Cost Per Habitat Unit

Average Annual Acres of Emergent Marsh

0

∞

0

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

Maintenance Dredging Matching Fund (XCW-Demonstration)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| 5 Compound | 1999 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | 2000 | \$0 | \$8,000 | \$17,361 | \$6,944 | \$0 | \$0 | \$0 | \$32,306 |
| 3 Compound | 2001 | \$0 | \$8,000 | \$20,833 | \$6,944 | \$16,667 | \$83,333 | \$333,333 | \$469,111 |
| 2 Compound | 2002 | \$0 | \$8,000 | \$20,833 | \$6,944 | \$16,667 | \$83,333 | \$333,333 | \$469,111 |
| 1 Compound | 2002 | \$0 | \$0 | \$3,472 | \$6,944 | \$16,667 | \$83,333 | \$333,333 | \$443,750 |
| TOTAL | | \$0 | \$24,000 | \$62,500 | \$27,778 | \$50,000 | \$250,000 | \$1,000,000 | \$1,414,278 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-------------|-------------|------------------|-----------|-------------|
| 0 Base Year | 2002 | \$14,559 | | \$600 |
| 1 Discount | 2003 | \$5,059 | \$10,752 | \$600 |
| 2 Discount | 2004 | \$5,059 | \$10,752 | \$600 |
| 3 Discount | 2005 | \$5,059 | \$10,752 | \$600 |
| 4 Discount | 2006 | \$5,059 | \$10,752 | \$600 |
| 5 Discount | 2007 | \$5,059 | \$10,752 | \$600 |
| 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 | \$39,854 | \$53,760 | \$3,601 |

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

Maintenance Dredging Matching Fund (XCW-Demonstration)

| Present Valued Costs | | Total Discounted Costs | Amortized Costs | | Total First Cost | Total First Cost | | | | |
|----------------------|----------------|------------------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| Year | Compound Rates | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 1999 | \$0 | \$10,535 | \$22,863 | \$9,145 | \$0 | \$0 | \$0 | \$42,544 |
| 3 | 1.229 | 2000 | \$0 | \$9,835 | \$25,611 | \$8,537 | \$20,489 | \$102,445 | \$409,780 | \$576,698 |
| 2 | 1.148 | 2001 | \$0 | \$9,181 | \$23,908 | \$7,969 | \$19,126 | \$95,631 | \$382,526 | \$538,341 |
| 1 | 1.071 | 2002 | \$0 | \$0 | \$3,720 | \$7,439 | \$17,854 | \$89,271 | \$357,083 | \$475,367 |
| Total | | | \$0 | \$29,551 | \$76,102 | \$33,091 | \$57,469 | \$287,347 | \$1,149,389 | \$1,632,950 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base Year | 2002 | \$14,559 | | \$600 |
| -1 | 0.933 | 2003 | \$4,723 | \$10,037 | \$560 |
| -2 | 0.871 | 2004 | \$4,408 | \$9,369 | \$523 |
| -3 | 0.813 | 2005 | \$4,115 | \$8,746 | \$488 |
| -4 | 0.759 | 2006 | \$3,842 | \$8,164 | \$456 |
| -5 | 0.709 | 2007 | \$3,586 | \$7,621 | \$425 |
| -6 | 0.662 | 2008 | \$0 | \$0 | \$0 |
| -7 | 0.618 | 2009 | \$0 | \$0 | \$0 |
| -8 | 0.577 | 2010 | \$0 | \$0 | \$0 |
| -9 | 0.538 | 2011 | \$0 | \$0 | \$0 |
| -10 | 0.502 | 2012 | \$0 | \$0 | \$0 |
| -11 | 0.469 | 2013 | \$0 | \$0 | \$0 |
| -12 | 0.438 | 2014 | \$0 | \$0 | \$0 |
| -13 | 0.409 | 2015 | \$0 | \$0 | \$0 |
| -14 | 0.382 | 2016 | \$0 | \$0 | \$0 |
| -15 | 0.356 | 2017 | \$0 | \$0 | \$0 |
| -16 | 0.332 | 2018 | \$0 | \$0 | \$0 |
| -17 | 0.310 | 2019 | \$0 | \$0 | \$0 |
| -18 | 0.290 | 2020 | \$0 | \$0 | \$0 |
| -19 | 0.270 | 2021 | \$0 | \$0 | \$0 |
| -20 | 0.252 | 2022 | \$0 | \$0 | \$0 |
| Total | | | \$35,233 | \$43,938 | \$3,053 |
| Average Annual | | | \$3,358 | \$4,188 | \$291 |

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

Maintenance Dredging Matching Fund (XCW-Demonstration)

Fully Funded Costs **Total Fully Funded Costs** **Amortized Costs**

\$1,641,408

\$156,446

D-1-03

| Year | Inflation Factor | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|------------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|------------------|-------------------------|--------------------|
| 5 | 0 | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.026 | 1999 | \$0 | \$8,208 | \$17,813 | \$7,125 | \$0 | \$0 | \$0 | \$33,146 |
| 3 | 1.053 | 2000 | \$0 | \$8,421 | \$21,931 | \$7,310 | \$17,545 | \$87,723 | \$350,892 | \$493,822 |
| 2 | 1.080 | 2001 | \$0 | \$8,640 | \$22,501 | \$7,500 | \$18,001 | \$90,004 | \$360,015 | \$506,661 |
| 1 | 1.108 | 2002 | \$0 | \$0 | \$3,848 | \$7,695 | \$18,469 | \$92,344 | \$369,376 | \$491,731 |
| TOTAL | | | \$0 | \$25,270 | \$66,092 | \$29,631 | \$54,014 | \$270,071 | \$1,080,283 | \$1,525,360 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|-----------------|----------------|
| 0 | Base Year | 2002 | \$16,133 | | \$665 |
| -1 | 1.137 | 2003 | \$5,752 | \$12,542 | \$682 |
| -2 | 1.137 | 2004 | \$5,752 | \$12,868 | \$682 |
| -3 | 1.166 | 2005 | \$5,901 | \$13,203 | \$700 |
| -4 | 1.197 | 2006 | \$6,055 | \$13,546 | \$718 |
| -5 | 1.228 | 2007 | \$6,212 | \$13,898 | \$737 |
| -6 | 1.260 | 2008 | \$0 | \$0 | \$0 |
| -7 | 1.293 | 2009 | \$0 | \$0 | \$0 |
| -8 | 1.326 | 2010 | \$0 | \$0 | \$0 |
| -9 | 1.361 | 2011 | \$0 | \$0 | \$0 |
| -10 | 1.396 | 2012 | \$0 | \$0 | \$0 |
| -11 | 1.432 | 2013 | \$0 | \$0 | \$0 |
| -12 | 1.470 | 2014 | \$0 | \$0 | \$0 |
| -13 | 1.508 | 2015 | \$0 | \$0 | \$0 |
| -14 | 1.547 | 2016 | \$0 | \$0 | \$0 |
| -15 | 1.587 | 2017 | \$0 | \$0 | \$0 |
| -16 | 1.629 | 2018 | \$0 | \$0 | \$0 |
| -17 | 1.671 | 2019 | \$0 | \$0 | \$0 |
| -18 | 1.714 | 2020 | \$0 | \$0 | \$0 |
| -19 | 1.759 | 2021 | \$0 | \$0 | \$0 |
| -20 | 1.805 | 2022 | \$0 | \$0 | \$0 |
| Total | | | \$45,805 | \$66,058 | \$4,185 |

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

White Lake Shore Protection Project (PME-Demonstration)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 2 | Total Project Years | 22 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$1,502,900 | Total Fully Funded Costs | \$1,571,700 |

| | <u>Present Worth</u> | <u>Average Annual</u> |
|--|--------------------------|---------------------------|
| Annual Charges | | |
| Interest & Amortization | \$1,545,700 | \$147,300 |
| Monitoring | \$22,300 | \$2,100 |
| O & M Costs | \$17,600 | \$1,700 |
| Other Costs | \$6,900 | \$700 |
| Total | \$1,592,500 | \$151,800 |
| Average Annual Habitat Units | | 0 |
| Cost Per Habitat Unit | | ∞ |
| Average Annual Acres of Emergent Marsh | | 0 |

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

White Lake Shore Protection Project (PME-Demonstration)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|------------------|-------------------------|--------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 1999 | \$95,045 | \$25,000 | \$28,514 | \$9,505 | \$0 | \$0 | \$0 | \$158,063 |
| 1 Compound | 2000 | \$0 | \$0 | \$28,514 | \$9,505 | \$47,523 | \$237,613 | \$950,453 | \$1,273,607 |
| TOTAL | | \$95,045 | \$25,000 | \$57,027 | \$19,009 | \$47,523 | \$237,613 | \$950,453 | \$1,431,670 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|-------------|------------------|---------------|---------------|
| 0 Base year | 2000 | \$12,015 | | \$600 |
| 1 Discount | 2001 | \$2,515 | \$4,310 | \$600 |
| 2 Discount | 2002 | \$2,515 | \$4,310 | \$600 |
| 3 Discount | 2003 | \$2,515 | \$4,310 | \$600 |
| 4 Discount | 2004 | \$2,515 | \$4,310 | \$600 |
| 5 Discount | 2005 | \$2,515 | \$4,310 | \$600 |
| 6 Discount | 2006 | \$0 | \$0 | \$600 |
| 7 Discount | 2007 | \$0 | \$0 | \$600 |
| 8 Discount | 2008 | \$0 | \$0 | \$600 |
| 9 Discount | 2009 | \$0 | \$0 | \$600 |
| 10 Discount | 2010 | \$0 | \$0 | \$600 |
| 11 Discount | 2011 | \$0 | \$0 | \$600 |
| 12 Discount | 2012 | \$0 | \$0 | \$600 |
| 13 Discount | 2013 | \$0 | \$0 | \$600 |
| 14 Discount | 2014 | \$0 | \$0 | \$600 |
| 15 Discount | 2015 | \$0 | \$0 | \$600 |
| 16 Discount | 2016 | \$0 | \$0 | \$600 |
| 17 Discount | 2017 | \$0 | \$0 | \$600 |
| 18 Discount | 2018 | \$0 | \$0 | \$600 |
| 19 Discount | 2019 | \$0 | \$0 | \$600 |
| 20 Discount | 2020 | \$0 | \$0 | \$600 |
| Total | | 24,590 | 21,550 | 12,604 |

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

White Lake Shore Protection Project (PME-Demonstration)

| 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 | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 1999 | \$109,072 | \$28,689 | \$32,722 | \$10,907 | \$0 | \$0 | \$0 | \$181,390 |
| 1 | 1.071 | 2000 | \$0 | \$0 | \$30,545 | \$10,182 | \$50,909 | \$254,543 | \$1,018,173 | \$1,364,352 |
| Total | | | \$109,072 | \$28,689 | \$63,267 | \$21,089 | \$50,909 | \$254,543 | \$1,018,173 | \$1,545,741 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base year | 2000 | \$12,015 | \$0 | \$600 |
| -1 | 0.933 | 2001 | \$2,348 | \$4,023 | \$560 |
| -2 | 0.871 | 2002 | \$2,192 | \$3,756 | \$523 |
| -3 | 0.813 | 2003 | \$2,046 | \$3,506 | \$488 |
| -4 | 0.759 | 2004 | \$1,910 | \$3,273 | \$456 |
| -5 | 0.709 | 2005 | \$1,783 | \$3,055 | \$425 |
| -6 | 0.662 | 2006 | \$0 | \$0 | \$397 |
| -7 | 0.618 | 2007 | \$0 | \$0 | \$371 |
| -8 | 0.577 | 2008 | \$0 | \$0 | \$346 |
| -9 | 0.538 | 2009 | \$0 | \$0 | \$323 |
| -10 | 0.502 | 2010 | \$0 | \$0 | \$302 |
| -11 | 0.469 | 2011 | \$0 | \$0 | \$282 |
| -12 | 0.438 | 2012 | \$0 | \$0 | \$263 |
| -13 | 0.409 | 2013 | \$0 | \$0 | \$245 |
| -14 | 0.382 | 2014 | \$0 | \$0 | \$229 |
| -15 | 0.356 | 2015 | \$0 | \$0 | \$214 |
| -16 | 0.332 | 2016 | \$0 | \$0 | \$200 |
| -17 | 0.310 | 2017 | \$0 | \$0 | \$186 |
| -18 | 0.290 | 2018 | \$0 | \$0 | \$174 |
| -19 | 0.270 | 2019 | \$0 | \$0 | \$162 |
| -20 | 0.252 | 2020 | \$0 | \$0 | \$152 |
| Total | | | \$22,293 | \$17,613 | \$6,898 |
| Average Annual | | | \$2,125 | \$1,679 | \$657 |

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

White Lake Shore Protection Project (PME-Demonstration)

| 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 | 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 | 1998 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.026 | 1999 | \$97,516 | \$25,650 | \$29,255 | \$9,752 | \$0 | \$0 | \$0 | \$162,173 |
| 1 | 1.053 | 2000 | \$0 | \$0 | \$30,016 | \$10,005 | \$50,026 | \$250,130 | \$1,000,519 | \$1,340,696 |
| TOTAL | | | \$97,516 | \$25,650 | \$59,271 | \$19,757 | \$50,026 | \$250,130 | \$1,000,519 | \$1,502,869 |

\$1,571,689

\$149,802

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|---------------|---------------|
| 0 Base year | | 2000 | \$12,648 | | \$632 |
| -1 | 1.080 | 2001 | \$2,716 | \$4,655 | \$648 |
| -2 | 1.108 | 2002 | \$2,787 | \$4,776 | \$665 |
| -3 | 1.137 | 2003 | \$2,859 | \$4,900 | \$682 |
| -4 | 1.166 | 2004 | \$2,934 | \$5,028 | \$700 |
| -5 | 1.197 | 2005 | \$3,010 | \$5,158 | \$718 |
| -6 | 1.228 | 2006 | \$0 | \$0 | \$737 |
| -7 | 1.260 | 2007 | \$0 | \$0 | \$756 |
| -8 | 1.293 | 2008 | \$0 | \$0 | \$776 |
| -9 | 1.326 | 2009 | \$0 | \$0 | \$796 |
| -10 | 1.361 | 2010 | \$0 | \$0 | \$817 |
| -11 | 1.396 | 2011 | \$0 | \$0 | \$838 |
| -12 | 1.432 | 2012 | \$0 | \$0 | \$860 |
| -13 | 1.470 | 2013 | \$0 | \$0 | \$882 |
| -14 | 1.508 | 2014 | \$0 | \$0 | \$905 |
| -15 | 1.547 | 2015 | \$0 | \$0 | \$929 |
| -16 | 1.587 | 2016 | \$0 | \$0 | \$953 |
| -17 | 1.629 | 2017 | \$0 | \$0 | \$977 |
| -18 | 1.671 | 2018 | \$0 | \$0 | \$1,003 |
| -19 | 1.714 | 2019 | \$0 | \$0 | \$1,029 |
| -20 | 1.759 | 2020 | \$0 | \$0 | \$1,056 |
| Total | | | 26,954 | 24,517 | 17,359 |

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

Mandalay Bank Protection Project (PTE-Demonstration)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 2 | Total Project Years | 22 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$1,580,600 | Total Fully Funded Costs | \$1,649,400 |

| Annual Charges | <u>Present Worth</u> | <u>Average Annual</u> |
|--|----------------------|-----------------------|
| Interest & Amortization | \$1,625,600 | \$154,900 |
| Monitoring | \$22,300 | \$2,100 |
| O & M Costs | \$17,600 | \$1,700 |
| Other Costs | <u>\$6,900</u> | <u>\$700</u> |
| Total | \$1,672,400 | \$159,400 |
| Average Annual Habitat Units | | 0 |
| Cost Per Habitat Unit | | ∞ |
| Average Annual Acres of Emergent Marsh | | 0 |

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

Mandalay Bank Protection Project (PTE-Demonstration)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|------------------|-------------------------|--------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 1999 | \$100,046 | \$25,000 | \$30,014 | \$10,005 | \$0 | \$0 | \$0 | \$165,065 |
| 1 Compound | 2000 | \$0 | \$0 | \$30,014 | \$10,005 | \$50,023 | \$250,116 | \$1,000,464 | \$1,340,622 |
| TOTAL | | \$100,046 | \$25,000 | \$60,028 | \$20,009 | \$50,023 | \$250,116 | \$1,000,464 | \$1,605,687 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|-------------|------------------|-----------------|-----------------|
| 0 Base year | 2000 | \$12,015 | | \$600 |
| 1 Discount | 2001 | \$2,515 | \$4,310 | \$600 |
| 2 Discount | 2002 | \$2,515 | \$4,310 | \$600 |
| 3 Discount | 2003 | \$2,515 | \$4,310 | \$600 |
| 4 Discount | 2004 | \$2,515 | \$4,310 | \$600 |
| 5 Discount | 2005 | \$2,515 | \$4,310 | \$600 |
| 6 Discount | 2006 | \$0 | \$0 | \$600 |
| 7 Discount | 2007 | \$0 | \$0 | \$600 |
| 8 Discount | 2008 | \$0 | \$0 | \$600 |
| 9 Discount | 2009 | \$0 | \$0 | \$600 |
| 10 Discount | 2010 | \$0 | \$0 | \$600 |
| 11 Discount | 2011 | \$0 | \$0 | \$600 |
| 12 Discount | 2012 | \$0 | \$0 | \$600 |
| 13 Discount | 2013 | \$0 | \$0 | \$600 |
| 14 Discount | 2014 | \$0 | \$0 | \$600 |
| 15 Discount | 2015 | \$0 | \$0 | \$600 |
| 16 Discount | 2016 | \$0 | \$0 | \$600 |
| 17 Discount | 2017 | \$0 | \$0 | \$600 |
| 18 Discount | 2018 | \$0 | \$0 | \$600 |
| 19 Discount | 2019 | \$0 | \$0 | \$600 |
| 20 Discount | 2020 | \$0 | \$0 | \$600 |
| Total | | \$24,590 | \$21,550 | \$12,604 |

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

Mandalay Bank Protection Project (PTE-Demonstration)

Present Valued Costs

Total Discounted Costs

\$1,672,389

Amortized Costs

\$159,397

| Year | Compound Rates | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|----------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|-------------|-------------------------|------------------|
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 1999 | \$114,811 | \$28,689 | \$34,443 | \$11,481 | \$0 | \$0 | \$0 | \$189,425 |
| 1 | 1.071 | 2000 | \$0 | \$0 | \$32,152 | \$10,717 | \$53,587 | \$267,937 | \$1,071,747 | \$1,436,141 |
| Total | | | \$114,811 | \$28,689 | \$66,596 | \$22,199 | \$53,587 | \$267,937 | \$1,071,747 | \$1,625,566 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------|-------------|
| 0 | Base year | 2000 | \$12,015 | | \$600 |
| -1 | 0.933 | 2001 | \$2,348 | \$4,023 | \$560 |
| -2 | 0.871 | 2002 | \$2,192 | \$3,756 | \$523 |
| -3 | 0.813 | 2003 | \$2,046 | \$3,506 | \$488 |
| -4 | 0.759 | 2004 | \$1,910 | \$3,273 | \$456 |
| -5 | 0.709 | 2005 | \$1,783 | \$3,055 | \$425 |
| -6 | 0.662 | 2006 | \$0 | \$0 | \$397 |
| -7 | 0.618 | 2007 | \$0 | \$0 | \$371 |
| -8 | 0.577 | 2008 | \$0 | \$0 | \$346 |
| -9 | 0.538 | 2009 | \$0 | \$0 | \$323 |
| -10 | 0.502 | 2010 | \$0 | \$0 | \$302 |
| -11 | 0.469 | 2011 | \$0 | \$0 | \$282 |
| -12 | 0.438 | 2012 | \$0 | \$0 | \$263 |
| -13 | 0.409 | 2013 | \$0 | \$0 | \$245 |
| -14 | 0.382 | 2014 | \$0 | \$0 | \$229 |
| -15 | 0.356 | 2015 | \$0 | \$0 | \$214 |
| -16 | 0.332 | 2016 | \$0 | \$0 | \$200 |
| -17 | 0.310 | 2017 | \$0 | \$0 | \$186 |
| -18 | 0.290 | 2018 | \$0 | \$0 | \$174 |
| -19 | 0.270 | 2019 | \$0 | \$0 | \$162 |
| -20 | 0.252 | 2020 | \$0 | \$0 | \$152 |
| Total | | | \$22,293 | \$17,613 | \$6,898 |
| Average Annual | | | \$2,125 | \$1,679 | \$657 |

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

Mandalay Bank Protection Project (PTE-Demonstration)

| 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 | 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 | 1998 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.026 | 1999 | \$102,648 | \$25,650 | \$30,794 | \$10,265 | \$0 | \$0 | \$0 | \$169,357 |
| 1 | 1.053 | 2000 | \$0 | \$0 | \$31,595 | \$10,532 | \$52,658 | \$263,291 | \$1,053,164 | \$1,411,240 |
| TOTAL | | | \$102,648 | \$25,650 | \$62,389 | \$20,796 | \$52,658 | \$263,291 | \$1,053,164 | \$1,580,597 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|-----------|-------------|
| 0 | Base year | 2000 | 12,648 | | \$632 |
| -1 | 1.080 | 2001 | 2,716 | \$4,655 | \$648 |
| -2 | 1.108 | 2002 | 2,787 | \$4,776 | \$665 |
| -3 | 1.137 | 2003 | 2,859 | \$4,900 | \$682 |
| -4 | 1.166 | 2004 | 2,934 | \$5,028 | \$700 |
| -5 | 1.197 | 2005 | 3,010 | \$5,158 | \$718 |
| -6 | 1.228 | 2006 | \$0 | \$0 | \$737 |
| -7 | 1.260 | 2007 | \$0 | \$0 | \$756 |
| -8 | 1.293 | 2008 | \$0 | \$0 | \$776 |
| -9 | 1.326 | 2009 | \$0 | \$0 | \$796 |
| -10 | 1.361 | 2010 | \$0 | \$0 | \$817 |
| -11 | 1.396 | 2011 | \$0 | \$0 | \$838 |
| -12 | 1.432 | 2012 | \$0 | \$0 | \$860 |
| -13 | 1.470 | 2013 | \$0 | \$0 | \$882 |
| -14 | 1.508 | 2014 | \$0 | \$0 | \$905 |
| -15 | 1.547 | 2015 | \$0 | \$0 | \$929 |
| -16 | 1.587 | 2016 | \$0 | \$0 | \$953 |
| -17 | 1.629 | 2017 | \$0 | \$0 | \$977 |
| -18 | 1.671 | 2018 | \$0 | \$0 | \$1,003 |
| -19 | 1.714 | 2019 | \$0 | \$0 | \$1,029 |
| -20 | 1.759 | 2020 | \$0 | \$0 | \$1,056 |
| Total | | | 26,954 | 24,517 | 17,359 |

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

Grand Lake Shore Protection Project (PME-Demonstration)

| | | | |
|-----------------------------|-------------|--------------------------|-------------|
| Project Construction Years: | 2 | Total Project Years | 22 |
| Interest Rate | 7.125% | Amortization Factor | 0.0953119 |
| Total First Costs | \$1,502,900 | Total Fully Funded Costs | \$1,571,700 |

| | <u>Present Worth</u> | <u>Average Annual</u> |
|-------------------------|--------------------------|---------------------------|
| Annual Charges | | |
| Interest & Amortization | \$1,545,700 | \$147,300 |
| Monitoring | \$22,300 | \$2,100 |
| O & M Costs | \$17,600 | \$1,700 |
| Other Costs | \$6,900 | \$700 |
| Total | \$1,592,500 | \$151,800 |

Average Annual Habitat Units: 0

Cost Per Habitat Unit: ∞

Average Annual Acres of Emergent Marsh: 0

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

Grand Lake Shore Protection Project (PME-Demonstration)

First Costs and Annual Charges

| Year | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|------------------|-------------------------|--------------------|
| 5 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 Compound | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 Compound | 1999 | \$95,045 | \$25,000 | \$28,514 | \$9,505 | \$0 | \$0 | \$0 | \$158,063 |
| 1 Compound | 2000 | \$0 | \$0 | \$28,514 | \$9,505 | \$47,523 | \$237,613 | \$950,453 | \$1,273,607 |
| TOTAL | | \$95,045 | \$25,000 | \$57,027 | \$19,009 | \$47,523 | \$237,613 | \$950,453 | \$1,433,670 |

| Year | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|-------------|------------------|---------------|---------------|
| 0 Base year | 2000 | \$12,015 | | \$600 |
| 1 Discount | 2001 | \$2,515 | \$4,310 | \$600 |
| 2 Discount | 2002 | \$2,515 | \$4,310 | \$600 |
| 3 Discount | 2003 | \$2,515 | \$4,310 | \$600 |
| 4 Discount | 2004 | \$2,515 | \$4,310 | \$600 |
| 5 Discount | 2005 | \$2,515 | \$4,310 | \$600 |
| 6 Discount | 2006 | - | - | \$600 |
| 7 Discount | 2007 | - | - | \$600 |
| 8 Discount | 2008 | - | - | \$600 |
| 9 Discount | 2009 | - | - | \$600 |
| 10 Discount | 2010 | - | - | \$600 |
| 11 Discount | 2011 | - | - | \$600 |
| 12 Discount | 2012 | - | - | \$600 |
| 13 Discount | 2013 | - | - | \$600 |
| 14 Discount | 2014 | - | - | \$600 |
| 15 Discount | 2015 | - | - | \$600 |
| 16 Discount | 2016 | - | - | \$600 |
| 17 Discount | 2017 | - | - | \$600 |
| 18 Discount | 2018 | - | - | \$600 |
| 19 Discount | 2019 | - | - | \$600 |
| 20 Discount | 2020 | - | - | \$600 |
| Total | | 24,590 | 21,550 | 12,604 |

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

Grand Lake Shore Protection Project (PME-Demonstration)

Present Valued Costs Total Discounted Costs \$1,592,544 Amortized Costs \$151,789

| Year | Compound Rates | Fiscal Year | Engineering & Design | Easements & Land Rights | Federal Supervision & Administration | LDNR Supervision & Administration | Supervision & Inspection | Contingency | First Cost Construction | Total First Cost |
|--------------|----------------|-------------|----------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|------------------|-------------------------|--------------------|
| 5 | 1.411 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 1.317 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1.229 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1.148 | 1999 | \$109,072 | \$28,689 | \$32,722 | \$10,907 | \$0 | \$0 | \$0 | \$181,390 |
| 1 | 1.071 | 2000 | \$0 | \$0 | \$30,545 | \$10,182 | \$50,909 | \$254,543 | \$1,018,173 | \$1,364,352 |
| Total | | | \$109,072 | \$28,689 | \$63,267 | \$21,089 | \$50,909 | \$254,543 | \$1,018,173 | \$1,545,741 |

| Year | Discount Rates | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|-----------------------|----------------|-------------|------------------|-----------------|----------------|
| 0 | Base year | 2000 | \$12,015 | - | \$600 |
| -1 | 0.933 | 2001 | \$2,348 | \$4,023 | \$560 |
| -2 | 0.871 | 2002 | \$2,192 | \$3,756 | \$523 |
| -3 | 0.813 | 2003 | \$2,046 | \$3,506 | \$488 |
| -4 | 0.759 | 2004 | \$1,910 | \$3,273 | \$456 |
| -5 | 0.709 | 2005 | \$1,783 | \$3,055 | \$425 |
| -6 | 0.662 | 2006 | - | - | \$397 |
| -7 | 0.618 | 2007 | - | - | \$371 |
| -8 | 0.577 | 2008 | - | - | \$346 |
| -9 | 0.538 | 2009 | - | - | \$323 |
| -10 | 0.502 | 2010 | - | - | \$302 |
| -11 | 0.469 | 2011 | - | - | \$282 |
| -12 | 0.438 | 2012 | - | - | \$263 |
| -13 | 0.409 | 2013 | - | - | \$245 |
| -14 | 0.382 | 2014 | - | - | \$229 |
| -15 | 0.356 | 2015 | - | - | \$214 |
| -16 | 0.332 | 2016 | - | - | \$200 |
| -17 | 0.310 | 2017 | - | - | \$186 |
| -18 | 0.290 | 2018 | - | - | \$174 |
| -19 | 0.270 | 2019 | - | - | \$162 |
| -20 | 0.252 | 2020 | - | - | \$152 |
| Total | | | \$22,293 | \$17,613 | \$6,898 |
| Average Annual | | | \$2,325 | \$1,679 | \$657 |

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

Grand Lake Shore Protection Project (PME-Demonstration)

| 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 | Supervision & Inspection | Contingency | Construction | Total Cost |
| 5 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4 | 0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3 | 1998 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2 | 1999 | \$97,516 | \$25,650 | \$29,255 | \$9,752 | \$0 | \$0 | \$0 | \$162,173 |
| 1 | 2000 | \$0 | \$0 | \$30,016 | \$10,005 | \$50,026 | \$250,130 | \$1,000,519 | \$1,340,696 |
| TOTAL | | \$97,516 | \$25,650 | \$59,271 | \$19,757 | \$50,026 | \$250,130 | \$1,000,519 | \$1,502,869 |

| Year | Inflation Factor | Fiscal Year | Monitoring Costs | O&M Costs | Other Costs |
|--------------|------------------|-------------|------------------|-----------------|-----------------|
| 0 | Base year | 2000 | \$12,648 | - | \$632 |
| -1 | 1.080 | 2001 | \$2,716 | \$4,655 | \$648 |
| -2 | 1.108 | 2002 | \$2,787 | \$4,776 | \$665 |
| -3 | 1.137 | 2003 | \$2,859 | \$4,900 | \$682 |
| -4 | 1.166 | 2004 | \$2,934 | \$5,028 | \$700 |
| -5 | 1.197 | 2005 | \$3,010 | \$5,158 | \$718 |
| -6 | 1.228 | 2006 | - | - | \$737 |
| -7 | 1.260 | 2007 | - | - | \$756 |
| -8 | 1.293 | 2008 | - | - | \$776 |
| -9 | 1.326 | 2009 | - | - | \$796 |
| -10 | 1.361 | 2010 | - | - | \$817 |
| -11 | 1.396 | 2011 | - | - | \$838 |
| -12 | 1.432 | 2012 | - | - | \$860 |
| -13 | 1.470 | 2013 | - | - | \$882 |
| -14 | 1.508 | 2014 | - | - | \$905 |
| -15 | 1.547 | 2015 | - | - | \$929 |
| -16 | 1.587 | 2016 | - | - | \$953 |
| -17 | 1.629 | 2017 | - | - | \$977 |
| -18 | 1.671 | 2018 | - | - | \$1,003 |
| -19 | 1.714 | 2019 | - | - | \$1,029 |
| -20 | 1.759 | 2020 | - | - | \$1,056 |
| Total | | | \$26,954 | \$24,517 | \$17,359 |

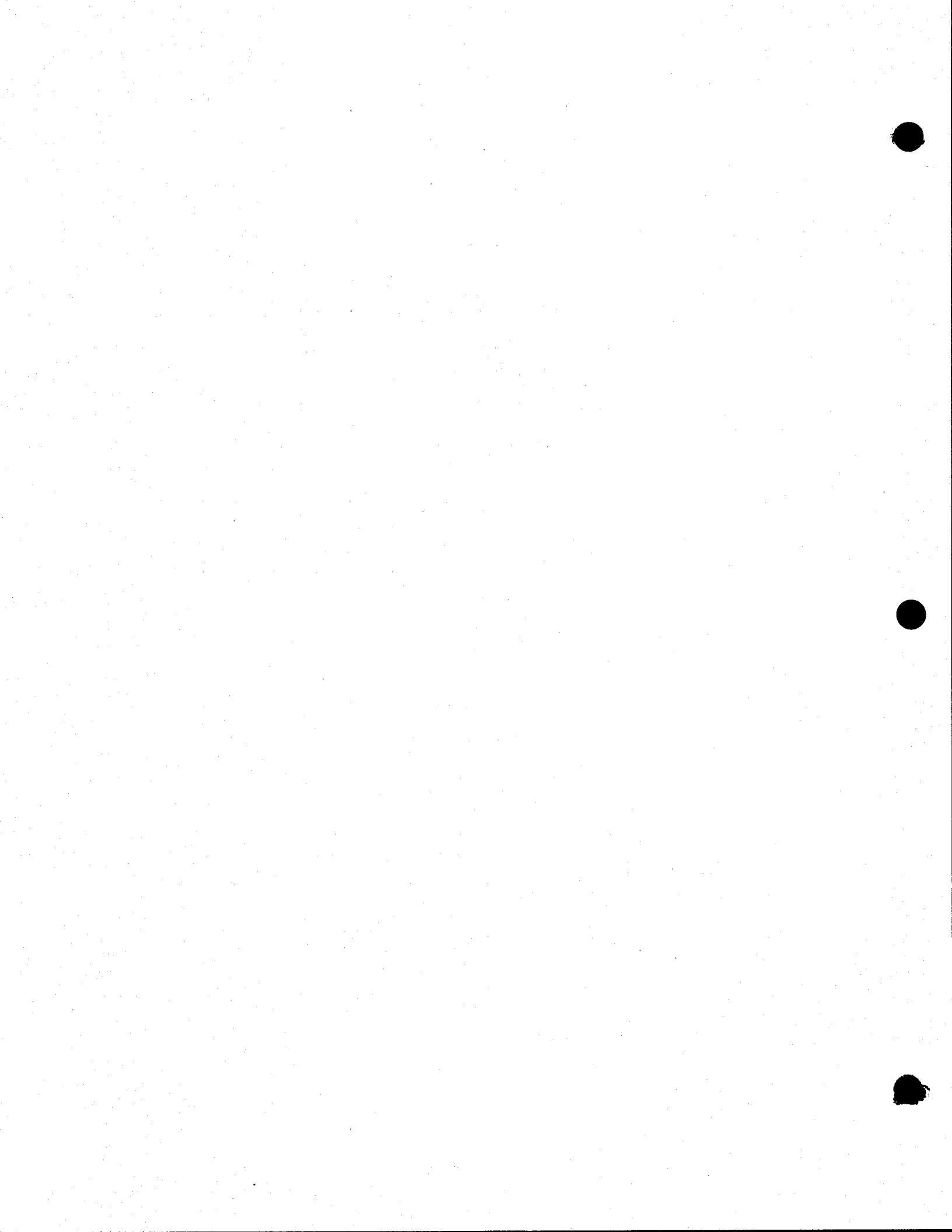


Coastal Wetlands Planning, Protection and
Restoration Act

8th Priority Project List Report

Appendix E

Wetland Value Assessments

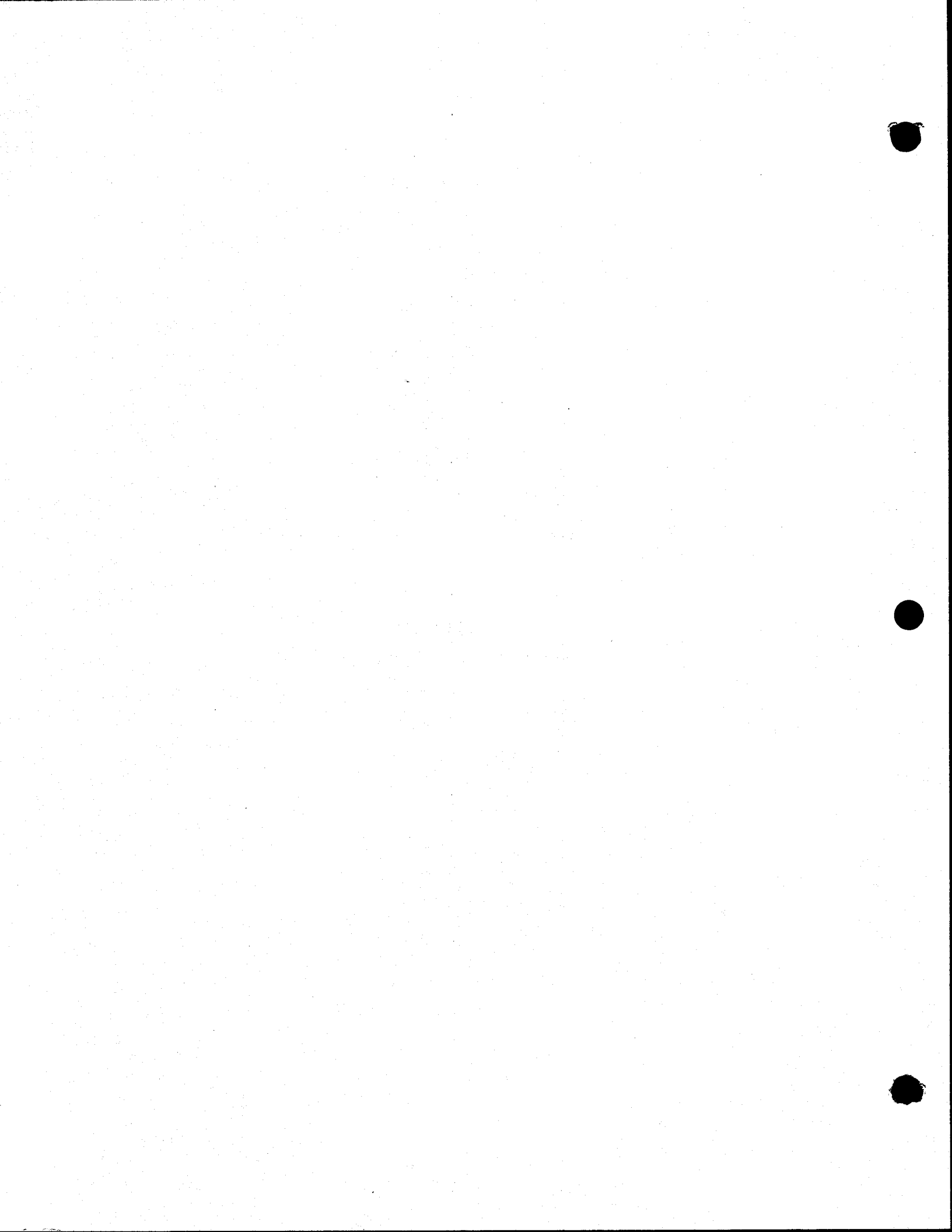


Appendix E

Wetland Value Assessment
For Candidate Projects

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**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: PBA-44 Fort Jackson/Boothville Diversion

The WVA analysis for project PBA-44 includes 3 areas: Area 1, consisting of intermediate marsh; Area 2, consisting of saline marsh; and Area 3, consisting of brackish marsh. Total WVA benefits (AAHUs) for this project are obtained by adding the benefits calculated for each area, as summarized below:

| <u>Area</u> | <u>AAHUs</u> |
|-------------|--------------|
| 1 | 1,538.80 |
| 2 | 2,353.05 |
| 3 | 117.86 |

| |
|-------------------------------------|
| TOTAL BENEFITS = 4,010 AAHUS |
|-------------------------------------|

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 1
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate. 14,892

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|--------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 26 | 0.33 | 24 | 0.32 | 9 | 0.18 |
| V2 | % Aquatic | 15 | 0.24 | 15 | 0.24 | 5 | 0.15 |
| V3 | Interspersion | % | 0.32 | % | 0.32 | % | 0.20 |
| | Class 1 | | | | | | |
| | Class 2 | 20 | | 20 | | | |
| | Class 3 | 20 | | 20 | | | |
| | Class 4 | 60 | | 60 | | 100 | |
| V4 | %OW <= 1.5ft | 10 | 0.21 | 10 | 0.21 | 3 | 0.13 |
| V5 | Salinity (ppt) | | 0.20 | | 0.20 | | 0.20 |
| | fresh | | | | | | |
| | intermediate | 8 | | 8 | | 8 | |
| V6 | Access Value | | 1.00 | | 1.00 | | 1.00 |
| | fresh | | | | | | |
| | intermediat | 1.00 | | 1.00 | | 1.00 | |
| Emergent Marsh HSI | | = | 0.37 | EM HSI = | 0.36 | EM HSI = | 0.23 |
| Open Water HSI | | = | 0.32 | OW HSI = | 0.32 | OW HSI = | 0.22 |

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 1
Condition: Future With Project

Project Area:
Fresh.....
Intermediate. 14,892

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|--------------------|----------------|-------|------|----------|------|----------|------|
| | | 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 | 60 | 0.64 |
| V3 | Interspersion | % | 0.32 | % | 0.32 | % | 0.35 |
| | Class 1 | | | | | | |
| | Class 2 | 20 | | 20 | | 25 | |
| | Class 3 | 20 | | 20 | | 25 | |
| | Class 4 | 60 | | 60 | | 50 | |
| V4 | %OW <= 1.5ft | 10 | 0.21 | 10 | 0.21 | 40 | 0.55 |
| V5 | Salinity (ppt) | | 0.20 | | 1.00 | | 1.00 |
| | fresh | | | | | | |
| | intermediate | 8 | | 1 | | 1 | |
| V6 | Access Value | | 1.00 | | 1.00 | | 1.00 |
| | fresh | | | | | | |
| | intermediat | 1.00 | | 1.00 | | 1.00 | |
| Emergent Marsh HSI | | = | 0.37 | EM HSI = | 0.46 | EM HSI = | 0.47 |
| Open Water HSI | | = | 0.32 | OW HSI = | 0.41 | OW HSI = | 0.70 |

AAHU CALCULATION - EMERGENT MARSH

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 1

| Future Without Project | | | Total | Cummulative |
|------------------------|-------------|-------|---------------|-------------|
| TY | Marsh Acres | x HSI | HUs | HUs |
| 0 | 3824 | 0.37 | 1413.54 | |
| 1 | 3838 | 0.36 | 1293.60 | 1353.14 |
| 20 | 1408 | 0.23 | 326.12 | 14512.03 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs = | | | 793.26 | |

| Future With Project | | | Total | Cummulative |
|---------------------|-------------|-------|----------------|-------------|
| TY | Marsh Acres | x HSI | HUs | HUs |
| 0 | 3824 | 0.37 | 1413.54 | |
| 1 | 3805 | 0.46 | 1744.74 | 1579.42 |
| 20 | 3968 | 0.47 | 1860.44 | 34243.89 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs | | | 1791.17 | |

| NET CHANGE IN AAHUs DUE TO PROJECT | | | | |
|--|----------|--|--|---------------|
| A. Future With Project Emergent Marsh AAHUs | = | | | 1791.17 |
| B. Future Without Project Emergent Marsh AAHUs | = | | | 793.26 |
| Net Change (FWP - FWOP) | = | | | 997.91 |

AAHU CALCULATION - OPEN WATER

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 1

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|--------------------|
| TY | Water Acres | x HSI | | |
| 0 | 11068 | 0.32 | 3506.07 | |
| 1 | 11254 | 0.32 | 3564.99 | 3535.53 |
| 20 | 13484 | 0.22 | 2997.46 | 63010.44 |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 3327.30 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|--------------------|
| TY | Water Acres | x HSI | | |
| 0 | 11068 | 0.32 | 3506.07 | |
| 1 | 11087 | 0.41 | 4577.82 | 4041.64 |
| 20 | 10924 | 0.70 | 7617.01 | 115997.65 |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 6001.96 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | |
|--|---|---------|
| A. Future With Project Open Water AAHUs | = | 6001.96 |
| B. Future Without Project Open Water AAHUs | = | 3327.30 |
| Net Change (FWP - FWOP) | = | 2674.67 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | | |
|--|---|---------|
| A. Emergent Marsh Habitat Net AAHUs | = | 997.91 |
| B. Open Water Habitat Net AAHUs | = | 2674.67 |
| Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1 | | 1538.80 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 2

Project Area: 63,176

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|--------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 23 | 0.31 | 22 | 0.30 | 8 | 0.17 |
| V2 | % Aquatic | 1 | 0.31 | 1 | 0.31 | 1 | 0.31 |
| V3 | Interspersion | % | 0.29 | % | 0.29 | % | 0.20 |
| | Class 1 | | | | | | |
| | Class 2 | 15 | | 15 | | | |
| | Class 3 | 15 | | 15 | | | |
| | Class 4 | 70 | | 70 | | 100 | |
| V4 | %OW <= 1.5ft | 10 | 0.23 | 10 | 0.23 | 3 | 0.14 |
| V5 | Salinity (ppt) | 10 | 1.00 | 10 | 1.00 | 14 | 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 = | 0.34 |
| Open Water HSI | | = | 0.67 | OW HSI = | 0.67 | OW HSI = | 0.65 |

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 2

Project Area: 63,176

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|--------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 23 | 0.31 | 23 | 0.31 | 24 | 0.32 |
| V2 | % Aquatic | 1 | 0.31 | 5 | 0.34 | 40 | 0.58 |
| V3 | Interspersion | % | 0.29 | % | 0.29 | % | 0.32 |
| | Class 1 | | | | | | |
| | Class 2 | 15 | | 15 | | 20 | |
| | Class 3 | 15 | | 15 | | 20 | |
| | Class 4 | 70 | | 70 | | 60 | |
| V4 | %OW <= 1.5ft | 10 | 0.23 | 10 | 0.23 | 30 | 0.49 |
| V5 | Salinity (ppt) | 10 | 1.00 | 9 | 1.00 | 9 | 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 = | 0.47 |
| Open Water HSI | | = | 0.67 | OW HSI = | 0.68 | OW HSI = | 0.80 |

AAHU CALCULATION - EMERGENT MARSH

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 2

| Future Without Project | | | Total | Cummulative |
|------------------------|-------------|-------|----------------|-------------|
| TY | Marsh Acres | x HSI | HUs | HUs |
| 0 | 14472 | 0.46 | 6716.67 | |
| 1 | 13767 | 0.46 | 6292.01 | 6503.51 |
| 20 | 5330 | 0.34 | 1817.87 | 73945.48 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs = | | | 4022.45 | |

| Future With Project | | | Total | Cummulative |
|---------------------|-------------|-------|----------------|-------------|
| TY | Marsh Acres | x HSI | HUs | HUs |
| 0 | 14472 | 0.46 | 6716.67 | |
| 1 | 14401 | 0.46 | 6683.72 | 6700.19 |
| 20 | 15265 | 0.47 | 7242.87 | 132274.24 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs | | | 6948.72 | |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|----------------|
| A. Future With Project Emergent Marsh AAHUs = | 6948.72 |
| B. Future Without Project Emergent Marsh AAHUs = | 4022.45 |
| Net Change (FWP - FWOP) = | 2926.27 |

AAHU CALCULATION - OPEN WATER

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 2

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 48704 | 0.67 | 32511.29 | |
| 1 | 49409 | 0.67 | 32981.89 | 32746.59 |
| 20 | 57846 | 0.65 | 37842.46 | 673187.66 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 35296.71 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 48704 | 0.67 | 32511.29 | |
| 1 | 48775 | 0.68 | 33242.29 | 32876.62 |
| 20 | 47911 | 0.80 | 38301.97 | 679993.01 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 35643.48 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | |
|--|---|---------------|
| A. Future With Project Open Water AAHUs | = | 35643.48 |
| B. Future Without Project Open Water AAHUs | = | 35296.71 |
| Net Change (FWP - FWOP) | = | 346.77 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | | |
|---|---|----------------|
| A. Emergent Marsh Habitat Net AAHUs | = | 2926.27 |
| B. Open Water Habitat Net AAHUs | = | 346.77 |
| Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5 | | 2353.05 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 3

Project Area: 3,700

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 10 | |
|----------------------|--|----------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 98 | 0.98 | 98 | 0.98 | 98 | 0.98 |
| V2 | % Aquatic | 20 | 0.28 | 20 | 0.28 | 20 | 0.28 |
| 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 | 95 | 0.70 | 95 | 0.70 | 85 | 0.90 |
| V5 | Salinity (ppt) | 7 | 1.00 | 7 | 1.00 | 8 | 1.00 |
| V6 | Access Value | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Emergent Marsh HSI = | | 0.99 | | EM HSI = | | 0.99 | |
| Open Water HSI = | | 0.56 | | OW HSI = | | 0.56 | |

Project: PBA-44 Fort Jackson/Boothville Diversion
FWOP

| Variable | | TY 20 | | | | | |
|----------|--|---------------|------|----------|----|-------|----|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 85 | 0.87 | | | | |
| V2 | % Aquatic | 15 | 0.24 | | | | |
| V3 | Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 | % 90 10 | 0.96 | % | | % | |
| V4 | %OW <= 1.5ft | 75 | 1.00 | | | | |
| V5 | Salinity (ppt) | 10 | 1.00 | | | | |
| V6 | Access Value | 1.00 | 1.00 | | | | |
| EM HSI = | | 0.91 | | EM HSI = | | | |
| OW HSI = | | 0.55 | | OW HSI = | | | |

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WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 3

Project Area: 3,700

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 10 | |
|----------------------|--|----------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 98 | 0.98 | 98 | 0.98 | 98 | 0.98 |
| V2 | % Aquatic | 20 | 0.28 | 20 | 0.28 | 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 | 95 | 0.70 | 95 | 0.70 | 92 | 0.76 |
| V5 | Salinity (ppt) | 7 | 1.00 | 2 | 1.00 | 2 | 1.00 |
| V6 | Access Value | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Emergent Marsh HSI = | | 0.99 | | EM HSI = | | 0.99 | |
| Open Water HSI = | | 0.56 | | OW HSI = | | 0.56 | |

Project: PBA-44 Fort Jackson/Boothville Diversion
FWP

| Variable | | TY 20 | | Value | SI | Value | SI |
|----------|--|----------|------|----------|----|-------|----|
| | | Value | SI | | | | |
| V1 | % Emergent | 98 | 0.98 | | | | |
| V2 | % Aquatic | 40 | 0.46 | | | | |
| V3 | Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 | % 100 | 1.00 | % | | % | |
| V4 | %OW <= 1.5ft | 90 | 0.80 | | | | |
| V5 | Salinity (ppt) | 2 | 1.00 | | | | |
| V6 | Access Value | 1.00 | 1.00 | | | | |
| EM HSI = | | 0.99 | | EM HSI = | | | |
| OW HSI = | | 0.70 | | OW HSI = | | | |

AAHU CALCULATION - EMERGENT MARSH

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 3

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 3640 | 0.99 | 3600.72 | |
| 1 | 3640 | 0.99 | 3600.72 | 3600.72 |
| 10 | 3640 | 0.99 | 3600.72 | 32406.46 |
| 20 | 3128 | 0.91 | 2857.28 | 32225.35 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 3411.63 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 3640 | 0.99 | 3600.72 | |
| 1 | 3640 | 0.99 | 3600.72 | 3600.72 |
| 10 | 3640 | 0.99 | 3600.72 | 32406.46 |
| 20 | 3640 | 0.99 | 3600.72 | 36007.18 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 3600.72 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | | | |
|--|---|--|--|---------------|
| A. Future With Project Emergent Marsh AAHUs | = | | | 3600.72 |
| B. Future Without Project Emergent Marsh AAHUs | = | | | 3411.63 |
| Net Change (FWP - FWOP) | = | | | 189.09 |

AAHU CALCULATION - OPEN WATER

Project: PBA-44 Fort Jackson/Boothville Diversion
Area 3

| Future Without Project | | | Total HUs | Cumulative HUs |
|------------------------|-------------|-------|---------------|----------------|
| TY | Water Acres | x HSI | | |
| 0 | 60 | 0.56 | 33.74 | |
| 1 | 60 | 0.56 | 33.74 | 33.74 |
| 10 | 60 | 0.58 | 34.63 | 307.68 |
| 20 | 572 | 0.55 | 312.01 | 1760.26 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs = | | | 105.08 | |

| Future With Project | | | Total HUs | Cumulative HUs |
|---------------------|-------------|-------|--------------|----------------|
| TY | Water Acres | x HSI | | |
| 0 | 60 | 0.56 | 33.74 | |
| 1 | 60 | 0.56 | 33.74 | 33.74 |
| 10 | 60 | 0.63 | 37.97 | 322.69 |
| 20 | 60 | 0.70 | 41.73 | 398.48 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs | | | 37.75 | |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|---------------|
| A. Future With Project Open Water AAHUs = | 37.75 |
| B. Future Without Project Open Water AAHUs = | 105.08 |
| Net Change (FWP - FWOP) = | -67.34 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | |
|--|---------------|
| A. Emergent Marsh Habitat Net AAHUs = | 189.09 |
| B. Open Water Habitat Net AAHUs = | -67.34 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | 117.86 |

Wetland Value Assessment
Average Annual Acres of Emergent Marsh

Project: PBA -44 Fort Jackson/Boothville Diversion - Area 1

Marsh Type: Intermediate

Project Area: 14,892

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|---------------|----|--------------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 3,824 | 26 | 3,824 | 26 | -- |
| 1 | 3,638 | 24 | 3,805 | 26 | 168 |
| 2 | 3,460 | 23 | 3,814 | 26 | 353 |
| 3 | 3,292 | 22 | 3,823 | 26 | 531 |
| 4 | 3,131 | 21 | 3,831 | 26 | 700 |
| 5 | 2,979 | 20 | 3,840 | 26 | 861 |
| 6 | 2,834 | 19 | 3,848 | 26 | 1,014 |
| 7 | 2,696 | 18 | 3,857 | 26 | 1,161 |
| 8 | 2,564 | 17 | 3,865 | 26 | 1,301 |
| 9 | 2,439 | 16 | 3,874 | 26 | 1,435 |
| 10 | 2,321 | 16 | 3,883 | 26 | 1,562 |
| 11 | 2,208 | 15 | 3,891 | 26 | 1,684 |
| 12 | 2,100 | 14 | 3,900 | 26 | 1,800 |
| 13 | 1,998 | 13 | 3,908 | 26 | 1,911 |
| 14 | 1,900 | 13 | 3,917 | 26 | 2,017 |
| 15 | 1,808 | 12 | 3,925 | 26 | 2,118 |
| 16 | 1,720 | 12 | 3,934 | 26 | 2,214 |
| 17 | 1,636 | 11 | 3,943 | 26 | 2,307 |
| 18 | 1,556 | 10 | 3,951 | 27 | 2,395 |
| 19 | 1,480 | 10 | 3,960 | 27 | 2,479 |
| 20 | 1,408 | 9 | 3,968 | 27 | 2,560 |
| Total | 47,168 | | 77,737 | | |
| Average Annual | 2,358 | | 3,887 | | 1,528 |

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Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: PBA -44 Fort Jackson/Boothville Diversion - Area 2

Marsh Type: Saline

Project Area: 63,176

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|----------------|----|--------------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 14,472 | 23 | 14,472 | 23 | -- |
| 1 | 13,767 | 22 | 14,401 | 23 | 635 |
| 2 | 13,096 | 21 | 14,447 | 23 | 1,351 |
| 3 | 12,458 | 20 | 14,492 | 23 | 2,034 |
| 4 | 11,851 | 19 | 14,538 | 23 | 2,687 |
| 5 | 11,274 | 18 | 14,583 | 23 | 3,310 |
| 6 | 10,725 | 17 | 14,629 | 23 | 3,904 |
| 7 | 10,202 | 16 | 14,674 | 23 | 4,472 |
| 8 | 9,705 | 15 | 14,720 | 23 | 5,015 |
| 9 | 9,232 | 15 | 14,765 | 23 | 5,533 |
| 10 | 8,782 | 14 | 14,811 | 23 | 6,028 |
| 11 | 8,355 | 13 | 14,856 | 24 | 6,502 |
| 12 | 7,947 | 13 | 14,902 | 24 | 6,954 |
| 13 | 7,560 | 12 | 14,947 | 24 | 7,387 |
| 14 | 7,192 | 11 | 14,993 | 24 | 7,801 |
| 15 | 6,842 | 11 | 15,038 | 24 | 8,197 |
| 16 | 6,508 | 10 | 15,084 | 24 | 8,575 |
| 17 | 6,191 | 10 | 15,129 | 24 | 8,938 |
| 18 | 5,890 | 9 | 15,175 | 24 | 9,285 |
| 19 | 5,603 | 9 | 15,220 | 24 | 9,617 |
| 20 | 5,330 | 8 | 15,265 | 24 | 9,936 |
| Total | 178,509 | | 296,670 | | |
| Average Annual | 8,925 | | 14,833 | | 5,908 |

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Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: PBA -44 Fort Jackson/Boothville Diversion - Area 3

Marsh Type: Brackish

Project Area: 3,700

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|---------------|----|------------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 3,640 | 98 | 3,640 | 98 | -- |
| 1 | 3,640 | 98 | 3,640 | 98 | 0 |
| 2 | 3,640 | 98 | 3,640 | 98 | 0 |
| 3 | 3,640 | 98 | 3,640 | 98 | 0 |
| 4 | 3,640 | 98 | 3,640 | 98 | 0 |
| 5 | 3,640 | 98 | 3,640 | 98 | 0 |
| 6 | 3,640 | 98 | 3,640 | 98 | 0 |
| 7 | 3,640 | 98 | 3,640 | 98 | 0 |
| 8 | 3,640 | 98 | 3,640 | 98 | 0 |
| 9 | 3,640 | 98 | 3,640 | 98 | 0 |
| 10 | 3,640 | 98 | 3,640 | 98 | 0 |
| 11 | 3,585 | 97 | 3,640 | 98 | 55 |
| 12 | 3,531 | 95 | 3,640 | 98 | 109 |
| 13 | 3,478 | 94 | 3,640 | 98 | 162 |
| 14 | 3,426 | 93 | 3,640 | 98 | 214 |
| 15 | 3,374 | 91 | 3,640 | 98 | 266 |
| 16 | 3,324 | 90 | 3,640 | 98 | 316 |
| 17 | 3,274 | 88 | 3,640 | 98 | 366 |
| 18 | 3,224 | 87 | 3,640 | 98 | 416 |
| 19 | 3,176 | 86 | 3,640 | 98 | 464 |
| 20 | 3,128 | 85 | 3,640 | 98 | 512 |
| Total | 69,921 | | 72,800 | | |
| Average Annual | 3,496 | | 3,640 | | 144 |

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**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: XCS-48 Sabine NWR Marsh Creation

The WVA analysis for project XCS-48 includes 2 areas: Area A, consisting of brackish marsh; and, Area 2, consisting of brackish marsh. Total WVA benefits (AAHUs) for this project are obtained by adding the benefits calculated for each area, as summarized below:

| <u>Area</u> | <u>AAHUs</u> |
|-------------|--------------|
| 1 | 11.72 |
| 2 | 374.53 |

| | |
|-------------------------|------------------|
| TOTAL BENEFITS = | 386 AAHUS |
|-------------------------|------------------|

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: XCS-48 Sabine NWR Marsh Creation
Area A

Project Area: 4,775

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|----------|--------------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 18 | 0.26 | 18 | 0.26 | 18 | 0.26 |
| V2 | % Aquatic | 3 | 0.13 | 3 | 0.13 | 4 | 0.14 |
| 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 | 10 | 0.23 | 10 | 0.23 | 10 | 0.23 |
| V5 | Salinity (ppt) | 4 | 1.00 | 4 | 1.00 | 4 | 1.00 |
| V6 | Access Value | 0.35 | 0.41 | 0.35 | 0.41 | 0.35 | 0.41 |
| | Emergent Marsh HSI | = | 0.36 | EM HSI = | 0.36 | EM HSI = | 0.36 |
| | Open Water HSI | = | 0.26 | OW HSI = | 0.26 | OW HSI = | 0.27 |

Project: XCS-48 Sabine NWR Marsh Creation
Area A

Project Area: 4,775

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 5 | |
|----------|--------------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 18 | 0.26 | 18 | 0.26 | 18 | 0.26 |
| V2 | % Aquatic | 3 | 0.13 | 3 | 0.13 | 6 | 0.15 |
| 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 | 10 | 0.23 | 10 | 0.23 | 10 | 0.23 |
| V5 | Salinity (ppt) | 4 | 1.00 | 4 | 1.00 | 3 | 1.00 |
| V6 | Access Value | 0.35 | 0.41 | 0.35 | 0.41 | 0.35 | 0.41 |
| | Emergent Marsh HSI | = | 0.36 | EM HSI = | 0.36 | EM HSI = | 0.36 |
| | Open Water HSI | = | 0.26 | OW HSI = | 0.26 | OW HSI = | 0.28 |

Project: XCS-48 Sabine NWR Marsh Creation
FWP

| Variable | | TY 20 | | | | | |
|----------|--|------------------|------|----------|----|----------|----|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 16 | 0.24 | | | | |
| V2 | % Aquatic | 6 | 0.15 | | | | |
| V3 | Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 | % 100 | 0.20 | % | | % | |
| V4 | %OW <= 1.5ft | 10 | 0.23 | | | | |
| V5 | Salinity (ppt) | 3 | 1.00 | | | | |
| V6 | Access Value | 0.35 | 0.41 | | | | |
| | | EM HSI = | 0.35 | EM HSI = | | EM HSI = | |
| | | OW HSI = | 0.28 | OW HSI = | | OW HSI = | |

AAHU CALCULATION - EMERGENT MARSH

Project: XCS-48 Sabine NWR Marsh Creation
Area A

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|--------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 881 | 0.36 | 316.90 | |
| 1 | 879 | 0.36 | 316.18 | 316.54 |
| 20 | 838 | 0.36 | 301.43 | 5867.28 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 309.19 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 881 | 0.36 | 316.90 | |
| 1 | 879 | 0.36 | 316.18 | 316.54 |
| 5 | 870 | 0.36 | 312.94 | 1258.24 |
| 20 | 838 | 0.35 | 291.32 | 4531.02 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 305.29 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|----------|
| A. Future With Project Emergent Marsh AAHUs | = 305.29 |
| B. Future Without Project Emergent Marsh AAHUs | = 309.19 |
| Net Change (FWP - FWOP) | = -3.90 |

AAHU CALCULATION - OPEN WATER

Project: XCS-48 Sabine NWR Marsh Creation
Area A

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|--------------------|
| TY | Water Acres | x HSI | | |
| 0 | 3894 | 0.26 | 1028.66 | |
| 1 | 3896 | 0.26 | 1029.19 | 1028.93 |
| 20 | 3937 | 0.27 | 1066.17 | 19905.04 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 1046.70 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|--------------------|
| TY | Water Acres | x HSI | | |
| 0 | 3894 | 0.26 | 1028.66 | |
| 1 | 3896 | 0.26 | 1029.19 | 1028.93 |
| 5 | 3905 | 0.28 | 1107.39 | 4273.04 |
| 20 | 3937 | 0.28 | 1116.46 | 16678.84 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 1099.04 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|--------------|
| A. Future With Project Open Water AAHUs = | 1099.04 |
| B. Future Without Project Open Water AAHUs = | 1046.70 |
| Net Change (FWP - FWOP) = | 52.34 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | |
|---|--------------|
| A. Emergent Marsh Habitat Net AAHUs = | -3.90 |
| B. Open Water Habitat Net AAHUs = | 52.34 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | 11.72 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: XCS-48 Sabine NWR Marsh Creation
Area B

Project Area: 5,776

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|----------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 18 | 0.26 | 18 | 0.26 | 16 | 0.24 |
| V2 | % Aquatic | 1 | 0.11 | 1 | 0.11 | 1 | 0.11 |
| V3 | Interspersion | % | 0.21 | % | 0.21 | % | 0.21 |
| | Class 1 | | | | | | |
| | Class 2 | | | | | | |
| | Class 3 | 6 | | 6 | | 6 | |
| | Class 4 | 94 | | 94 | | 94 | |
| V4 | %OW <= 1.5ft | 5 | 0.16 | 5 | 0.16 | 5 | 0.16 |
| V5 | Salinity (ppt) | 9 | 1.00 | 9 | 1.00 | 9 | 1.00 |
| V6 | Access Value | 0.35 | 0.41 | 0.35 | 0.41 | 0.35 | 0.41 |
| Emergent Marsh HSI = | | | 0.36 | EM HSI = | 0.36 | EM HSI = | 0.35 |
| Open Water HSI = | | | 0.25 | OW HSI = | 0.25 | OW HSI = | 0.25 |

Project: XCS-48 Sabine NWR Marsh Creation
Area B

Project Area: 5,776

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 3 | |
|----------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 18 | 0.26 | 19 | 0.27 | 22 | 0.30 |
| V2 | % Aquatic | 1 | 0.11 | 2 | 0.12 | 5 | 0.15 |
| V3 | Interspersion | % | 0.21 | % | 0.24 | % | 0.28 |
| | Class 1 | | | 4 | | 8 | |
| | Class 2 | | | | | | |
| | Class 3 | 6 | | 6 | | 6 | |
| | Class 4 | 94 | | 90 | | 86 | |
| V4 | %OW <= 1.5ft | 5 | 0.16 | 6 | 0.18 | 8 | 0.20 |
| V5 | Salinity (ppt) | 9 | 1.00 | 9 | 1.00 | 9 | 1.00 |
| V6 | Access Value | 0.35 | 0.41 | 0.35 | 0.41 | 0.35 | 0.41 |
| Emergent Marsh HSI = | | | 0.36 | EM HSI = | 0.37 | EM HSI = | 0.39 |
| Open Water HSI = | | | 0.25 | OW HSI = | 0.26 | OW HSI = | 0.28 |

Project: XCS-48 Sabine NWR Marsh Creation
FWP

| Variable | | TY 5 | | TY 7 | | TY 9 | |
|----------|----------------|----------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 25 | 0.33 | 28 | 0.35 | 31 | 0.38 |
| V2 | % Aquatic | 10 | 0.19 | 15 | 0.24 | 30 | 0.37 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 12 | 0.31 | 17 | 0.35 | 20 | 0.37 |
| | Class 2 | | | | | | |
| | Class 3 | 6 | | 6 | | 6 | |
| | Class 4 | 82 | | 77 | | 74 | |
| V4 | %OW <= 1.5ft | 9 | 0.22 | 10 | 0.23 | 12 | 0.25 |
| V5 | Salinity (ppt) | 9 | 1.00 | 9 | 1.00 | 9 | 1.00 |
| V6 | Access Value | 0.35 | 0.41 | 0.35 | 0.41 | 0.35 | 0.41 |
| | | EM HSI = | 0.41 | EM HSI = | 0.43 | EM HSI = | 0.45 |
| | | OW HSI = | 0.31 | OW HSI = | 0.35 | OW HSI = | 0.42 |

Project: XCS-48 Sabine NWR Marsh Creation
FWP

| Variable | | TY 11 | | TY 20 | | Value | SI |
|----------|----------------|----------|------|----------|------|----------|----|
| | | Value | SI | Value | SI | | |
| V1 | % Emergent | 34 | 0.41 | 33 | 0.40 | | |
| V2 | % Aquatic | 30 | 0.37 | 30 | 0.37 | | |
| V3 | Interspersion | % | | % | | | % |
| | Class 1 | 20 | 0.37 | 20 | 0.37 | | |
| | Class 2 | | | | | | |
| | Class 3 | 6 | | 6 | | | |
| | Class 4 | 74 | | 74 | | | |
| V4 | %OW <= 1.5ft | 12 | 0.25 | 12 | 0.25 | | |
| V5 | Salinity (ppt) | 9 | 1.00 | 9 | 1.00 | | |
| V6 | Access Value | 0.35 | 0.41 | 0.35 | 0.41 | | |
| | | EM HSI = | 0.47 | EM HSI = | 0.46 | EM HSI = | |
| | | OW HSI = | 0.42 | OW HSI = | 0.42 | OW HSI = | |

AAHU CALCULATION - EMERGENT MARSH

Project: XCS-48 Sabine NWR Marsh Creation
Area B

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 1041 | 0.36 | 375.84 | |
| 1 | 1034 | 0.36 | 373.31 | 374.57 |
| 20 | 909 | 0.35 | 317.22 | 6555.25 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 346.49 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 1041 | 0.36 | 375.84 | |
| 1 | 1079 | 0.37 | 399.82 | 387.77 |
| 3 | 1249 | 0.39 | 489.25 | 887.87 |
| 5 | 1437 | 0.41 | 592.78 | 1080.73 |
| 7 | 1629 | 0.43 | 706.78 | 1298.19 |
| 9 | 1817 | 0.45 | 823.39 | 1528.96 |
| 11 | 1942 | 0.47 | 911.78 | 1734.49 |
| 20 | 1902 | 0.46 | 882.69 | 8074.79 |
| | | | | |
| | | | AAHUs | 749.64 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|--------|
| A. Future With Project Emergent Marsh AAHUs = | 749.64 |
| B. Future Without Project Emergent Marsh AAHUs = | 346.49 |
| Net Change (FWP - FWOP) = | 403.15 |

Wetland Value Assessment
Average Annual Acres of Emergent Marsh

Project: XCS-48 Sabine NWR Marsh Creation - Area A

Marsh Type: Brackish

Project Area: 4,775

| Project Year | Emergent Marsh | | | | Net Acres |
|-----------------------|-----------------|----|---------------|----|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 881 | 18 | 881 | 18 | -- |
| 1 | 879 | 18 | 879 | 18 | 0 |
| 2 | 877 | 18 | 877 | 18 | 0 |
| 3 | 874 | 18 | 874 | 18 | 0 |
| 4 | 872 | 18 | 872 | 18 | 0 |
| 5 | 870 | 18 | 870 | 18 | 0 |
| 6 | 868 | 18 | 868 | 18 | 0 |
| 7 | 866 | 18 | 866 | 18 | 0 |
| 8 | 864 | 18 | 864 | 18 | 0 |
| 9 | 861 | 18 | 861 | 18 | 0 |
| 10 | 859 | 18 | 859 | 18 | 0 |
| 11 | 857 | 18 | 857 | 18 | 0 |
| 12 | 855 | 18 | 855 | 18 | 0 |
| 13 | 853 | 18 | 853 | 18 | 0 |
| 14 | 851 | 18 | 851 | 18 | 0 |
| 15 | 849 | 18 | 849 | 18 | 0 |
| 16 | 847 | 18 | 847 | 18 | 0 |
| 17 | 844 | 18 | 844 | 18 | 0 |
| 18 | 842 | 18 | 842 | 18 | 0 |
| 19 | 840 | 18 | 840 | 18 | 0 |
| 20 | 838 | 18 | 838 | 18 | 0 |
| Total | 17,167 | | 17,167 | | |
| Average Annual | 858 | | 858 | | 0 |

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Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: XCS-48 Sabine NWR Marsh Creation - Area B

Marsh Type: Brackish

Project Area: 5,776

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|---------------|----|------------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 1,041 | 18 | 1,041 | 18 | -- |
| 1 | 1,034 | 18 | 1,079 | 19 | 45 |
| 2 | 1,027 | 18 | 1,072 | 19 | 45 |
| 3 | 1,020 | 18 | 1,249 | 22 | 229 |
| 4 | 1,013 | 18 | 1,242 | 22 | 229 |
| 5 | 1,006 | 17 | 1,437 | 25 | 430 |
| 6 | 999 | 17 | 1,433 | 25 | 434 |
| 7 | 993 | 17 | 1,629 | 28 | 636 |
| 8 | 986 | 17 | 1,626 | 28 | 641 |
| 9 | 979 | 17 | 1,817 | 31 | 838 |
| 10 | 973 | 17 | 1,816 | 31 | 843 |
| 11 | 966 | 17 | 1,943 | 34 | 977 |
| 12 | 959 | 17 | 1,938 | 34 | 979 |
| 13 | 953 | 16 | 1,933 | 33 | 981 |
| 14 | 946 | 16 | 1,929 | 33 | 983 |
| 15 | 940 | 16 | 1,924 | 33 | 984 |
| 16 | 934 | 16 | 1,920 | 33 | 986 |
| 17 | 927 | 16 | 1,915 | 33 | 988 |
| 18 | 921 | 16 | 1,911 | 33 | 990 |
| 19 | 915 | 16 | 1,906 | 33 | 992 |
| 20 | 909 | 16 | 1,902 | 33 | 993 |
| Total | 19,400 | | 33,622 | | |
| Average Annual | 970 | | 1,681 | | 711 |

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**WETLAND VALUE ASSESSMENT
SUMMARY SHEET**

Project: PME-15 Humble Canal Hydrologic Restoration

The WVA analysis for project PME-15 consists of one area of fresh marsh. Total WVA benefits (AAHUs) for this project are:

| | |
|-------------------------|------------------|
| TOTAL BENEFITS = | 297 AAHUS |
|-------------------------|------------------|

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: PME-15 Humble Canal Hydrologic Restoration

Project Area:
Fresh..... 4,030
Intermediate..

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|--------------------|-----------------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 74 | 0.77 | 74 | 0.77 | 73 | 0.76 |
| V2 | % Aquatic | 60 | 0.64 | 60 | 0.64 | 60 | 0.64 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 35 | 0.58 | 35 | 0.58 | 35 | 0.58 |
| | Class 2 | 15 | | 15 | | 15 | |
| | Class 3 | 20 | | 20 | | 20 | |
| | Class 4 | 30 | | 30 | | 30 | |
| V4 | %OW <= 1.5ft | 30 | 0.44 | 30 | 0.44 | 30 | 0.44 |
| V5 | Salinity (ppt) | | | | | | |
| | fresh intermediate | 0 | 1.00 | 0 | 1.00 | 0 | 1.00 |
| V6 | Access Value | | | | | | |
| | fresh intermediate | 0.02 | 0.31 | 0.02 | 0.31 | 0.02 | 0.31 |
| Emergent Marsh HSI | | = | 0.69 | EM HSI = | 0.69 | EM HSI = | 0.68 |
| Open Water HSI | | = | 0.57 | OW HSI = | 0.57 | OW HSI = | 0.57 |

Project: PME-15 Humble Canal Hydrologic Restoration

Project Area:
Fresh..... 4,030
Intermediate....

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 10 | |
|--------------------|-----------------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 74 | 0.77 | 74 | 0.77 | 82 | 0.84 |
| V2 | % Aquatic | 60 | 0.64 | 65 | 0.69 | 80 | 0.82 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 35 | 0.58 | 35 | 0.58 | 70 | 0.80 |
| | Class 2 | 15 | | 15 | | 10 | |
| | Class 3 | 20 | | 20 | | | |
| | Class 4 | 30 | | 30 | | 20 | |
| V4 | %OW <= 1.5ft | 30 | 0.44 | 30 | 0.44 | 30 | 0.44 |
| V5 | Salinity (ppt) | | | | | | |
| | fresh intermediate | 0 | 1.00 | 0 | 1.00 | 0 | 1.00 |
| V6 | Access Value | | | | | | |
| | fresh intermediate | 0.02 | 0.31 | 0.25 | 0.48 | 0.25 | 0.48 |
| Emergent Marsh HSI | | = | 0.69 | EM HSI = | 0.73 | EM HSI = | 0.79 |
| Open Water HSI | | = | 0.57 | OW HSI = | 0.64 | OW HSI = | 0.72 |

Project: PME-15 Humble Canal Hydrologic Restoration
FWP

| Variable | | TY 20 | | Value | SI | Value | SI |
|----------|----------------|-----------------|------|-------------|-----------------|-------|-------------|
| | | Value | SI | | | | |
| V1 | % Emergent | 82 | 0.84 | | | | |
| V2 | % Aquatic | 80 | 0.82 | | | | |
| V3 | Interspersion | % | 0.80 | % | | % | |
| | Class 1 | 70 | | | | | |
| | Class 2 | 10 | | | | | |
| | Class 3 | | | | | | |
| | Class 4 | 20 | | | | | |
| | Class 5 | | | | | | |
| V4 | %OW <= 1.5ft | 30 | 0.44 | | | | |
| V5 | Salinity (ppt) | | | | | | |
| | fresh | 0 | 1.00 | | | | |
| | intermediate | | | | | | |
| V6 | Access Value | | | | | | |
| | fresh | 0.25 | 0.48 | | | | |
| | intermediate | | | | | | |
| | | EM HSI = | | 0.79 | EM HSI = | | 0.79 |
| | | OW HSI = | | 0.72 | OW HSI = | | 0.72 |

AAHU CALCULATION - EMERGENT MARSH

Project: PME-15 Humble Canal Hydrologic Restoration

| Future Without Project | | | Total | Cummulative |
|------------------------|-------------|-------|----------------|----------------|
| TY | Marsh Acres | x HSI | HUs | HUs |
| 0 | 2987 | 0.69 | 2058.19 | |
| 1 | 2984 | 0.69 | 2056.12 | 2057.15 |
| 20 | 2922 | 0.68 | 1998.69 | 38519.75 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 2028.85 |

| Future With Project | | | Total | Cummulative |
|---------------------|-------------|-------|--------------|----------------|
| TY | Marsh Acres | x HSI | HUs | HUs |
| 0 | 2987 | 0.69 | 2058.19 | |
| 1 | 2987 | 0.73 | 2167.74 | 2112.96 |
| 10 | 3300 | 0.79 | 2616.69 | 21498.35 |
| 20 | 3300 | 0.79 | 2616.69 | 26166.89 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 2488.91 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|---------------|
| A. Future With Project Emergent Marsh AAHUs = | 2488.91 |
| B. Future Without Project Emergent Marsh AAHUs = | 2028.85 |
| Net Change (FWP - FWOP) = | 460.06 |

AAHU CALCULATION - OPEN WATER

Project: PME-15 Humble Canal Hydrologic Restoration

| Future Without Project | | | Total | Cummulative |
|------------------------|-------------|-------|----------------|---------------|
| TY | Water Acres | x HSI | HUs | HUs |
| 0 | 1043 | 0.57 | 590.39 | |
| 1 | 1046 | 0.57 | 592.09 | 591.24 |
| 20 | 1108 | 0.57 | 627.18 | 11583.04 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 608.71 |

| Future With Project | | | Total | Cummulative |
|---------------------|-------------|-------|--------------|---------------|
| TY | Water Acres | x HSI | HUs | HUs |
| 0 | 1043 | 0.57 | 590.39 | |
| 1 | 1043 | 0.64 | 662.96 | 626.67 |
| 10 | 730 | 0.72 | 527.16 | 5396.16 |
| 20 | 730 | 0.72 | 527.16 | 5271.65 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 564.72 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|-----------------|
| A. Future With Project Open Water AAHUs | = 564.72 |
| B. Future Without Project Open Water AAHUs | = 608.71 |
| Net Change (FWP - FWOP) | = -43.99 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | |
|---|---------------|
| A. Emergent Marsh Habitat Net AAHUs | = 460.06 |
| B. Open Water Habitat Net AAHUs | = -43.99 |
| Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1 | 297.47 |

Wetland Value Assessment
Average Annual Acres of Emergent Marsh

Project: PME-15 Humble Canal Hydrologic Restoration

Marsh Type: Fresh

Project Area: 4,030

| Project Year | Emergent Marsh | | | | Net Acres |
|-----------------------|-----------------|----|---------------|----|------------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 2,987 | 74 | 2,987 | 74 | -- |
| 1 | 2,984 | 74 | 3,018 | 75 | 35 |
| 2 | 2,980 | 74 | 3,050 | 76 | 69 |
| 3 | 2,977 | 74 | 3,081 | 76 | 104 |
| 4 | 2,974 | 74 | 3,112 | 77 | 138 |
| 5 | 2,971 | 74 | 3,144 | 78 | 173 |
| 6 | 2,967 | 74 | 3,175 | 79 | 207 |
| 7 | 2,964 | 74 | 3,206 | 80 | 242 |
| 8 | 2,961 | 73 | 3,237 | 80 | 277 |
| 9 | 2,958 | 73 | 3,269 | 81 | 311 |
| 10 | 2,954 | 73 | 3,300 | 82 | 346 |
| 11 | 2,951 | 73 | 3,300 | 82 | 349 |
| 12 | 2,948 | 73 | 3,300 | 82 | 352 |
| 13 | 2,945 | 73 | 3,300 | 82 | 355 |
| 14 | 2,941 | 73 | 3,300 | 82 | 359 |
| 15 | 2,938 | 73 | 3,300 | 82 | 362 |
| 16 | 2,935 | 73 | 3,300 | 82 | 365 |
| 17 | 2,932 | 73 | 3,300 | 82 | 368 |
| 18 | 2,928 | 73 | 3,300 | 82 | 372 |
| 19 | 2,925 | 73 | 3,300 | 82 | 375 |
| 20 | 2,922 | 73 | 3,300 | 82 | 378 |
| Total | 59,055 | | 64,592 | | |
| Average Annual | 2,953 | | 3,230 | | 277 |

12/09/98

WETLAND VALUE ASSESSMENT SUMMARY SHEET

Project: PPO-38 Hopedale Hydrologic Restoration

The WVA analysis for project PPO-38 consists of one area of brackish marsh. Total WVA benefits (AAHUs) for this project are:

| | | |
|-------------------------|------------|--------------|
| TOTAL BENEFITS = | 269 | AAHUS |
|-------------------------|------------|--------------|

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: PPO-38 Hopedale Hydrologic Restoration

Project Area: 3,805

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 5 | |
|----------------------|----------------|-------|------|----------|------|---------------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 81 | 0.83 | 81 | 0.83 | 80 | 0.82 |
| V2 | % Aquatic | 20 | 0.28 | 20 | 0.28 | 20 | 0.28 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 40 | 0.67 | 40 | 0.67 | 40 | 0.67 |
| | Class 2 | 20 | | 20 | | 20 | |
| | Class 3 | 35 | | 35 | | 35 | |
| | Class 4 | 5 | | 5 | | 5 | |
| V4 | %OW <= 1.5ft | 65 | 0.94 | 65 | 0.94 | 65 | 0.94 |
| V5 | Salinity (ppt) | 10 | 1.00 | 10 | 1.00 | 10 | 1.00 |
| V6 | Access Value | 0.31 | 0.38 | 0.31 | 0.38 | 0.25 | 0.33 |
| Emergent Marsh HSI = | | 0.72 | | EM HSI = | | 0.72 | |
| Open Water HSI = | | 0.44 | | OW HSI = | | 0.44 | |
| | | | | | | EM HSI = 0.70 | |
| | | | | | | OW HSI = 0.42 | |

Project: PPO-38 Hopedale Hydrologic Restoration

FWOP

| Variable | | TY 15 | | TY 20 | | Value | SI |
|----------|----------------|---------------|------|---------------|------|----------|----|
| | | Value | SI | Value | SI | | |
| V1 | % Emergent | 78 | 0.80 | 77 | 0.79 | | |
| V2 | % Aquatic | 17 | 0.25 | 15 | 0.24 | | |
| V3 | Interspersion | % | | % | | | % |
| | Class 1 | 40 | 0.66 | 40 | 0.66 | | |
| | Class 2 | 15 | | 15 | | | |
| | Class 3 | 40 | | 40 | | | |
| | Class 4 | 5 | | 5 | | | |
| V4 | %OW <= 1.5ft | 60 | 0.87 | 60 | 0.87 | | |
| V5 | Salinity (ppt) | 11 | 0.85 | 11 | 0.85 | | |
| V6 | Access Value | 0.13 | 0.21 | 0.13 | 0.21 | | |
| | | EM HSI = 0.63 | | EM HSI = 0.62 | | EM HSI = | |
| | | OW HSI = 0.36 | | OW HSI = 0.35 | | OW HSI = | |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: PPO-38 Hopedale Hydrologic Restoration

Project Area: 3,805

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|----------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 81 | 0.83 | 81 | 0.83 | 80 | 0.82 |
| V2 | % Aquatic | 20 | 0.28 | 25 | 0.33 | 30 | 0.37 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 40 | 0.67 | 40 | 0.67 | 40 | 0.67 |
| | Class 2 | 20 | | 20 | | 20 | |
| | Class 3 | 35 | | 35 | | 35 | |
| | Class 4 | 5 | | 5 | | 5 | |
| | Class 5 | | | | | | |
| V4 | %OW <= 1.5ft | 65 | 0.94 | 67 | 0.96 | 67 | 0.96 |
| V5 | Salinity (ppt) | 10 | 1.00 | 8 | 1.00 | 8 | 1.00 |
| V6 | Access Value | 0.31 | 0.38 | 0.50 | 0.55 | 0.50 | 0.55 |
| Emergent Marsh HSI = | | 0.72 | | EM HSI = | 0.77 | EM HSI = | 0.77 |
| Open Water HSI = | | 0.44 | | OW HSI = | 0.51 | OW HSI = | 0.53 |

AAHU CALCULATION - EMERGENT MARSH

Project: PPO-38 Hopedale Hydrologic Restoration

| Future Without Project | | | Total HUs | Cumulative HUs |
|------------------------|-------------|-------|-----------|----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 3086 | 0.72 | 2235.87 | |
| 1 | 3080 | 0.72 | 2231.53 | 2233.70 |
| 5 | 3058 | 0.70 | 2142.69 | 8748.09 |
| 15 | 2986 | 0.63 | 1871.89 | 20064.08 |
| 20 | 2915 | 0.62 | 1815.82 | 9219.04 |
| | | | | |
| | | | AAHUs = | 2013.25 |

| Future With Project | | | Total HUs | Cumulative HUs |
|---------------------|-------------|-------|-----------|----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 3086 | 0.72 | 2235.87 | |
| 1 | 3084 | 0.77 | 2381.11 | 2308.51 |
| 20 | 3049 | 0.77 | 2339.13 | 44841.70 |
| | | | | |
| | | | AAHUs | 2357.51 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|---------|
| A. Future With Project Emergent Marsh AAHUs = | 2357.51 |
| B. Future Without Project Emergent Marsh AAHUs = | 2013.25 |
| Net Change (FWP - FWOP) = | 344.26 |

AAHU CALCULATION - OPEN WATER

Project: PPO-38 Hopedale Hydrologic Restoration

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|--------------------|
| TY | Water Acres | x HSI | | |
| 0 | 719 | 0.44 | 315.95 | |
| 1 | 725 | 0.44 | 318.58 | 317.27 |
| 5 | 747 | 0.42 | 316.87 | 1271.12 |
| 15 | 819 | 0.36 | 294.78 | 3065.95 |
| 20 | 890 | 0.35 | 313.26 | 1520.58 |
| | | | | |
| | | | | |
| | | | AAHUs = | 308.75 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|--------------------|
| TY | Water Acres | x HSI | | |
| 0 | 719 | 0.44 | 315.95 | |
| 1 | 721 | 0.51 | 365.49 | 340.69 |
| 20 | 756 | 0.53 | 402.31 | 7291.32 |
| | | | | |
| | | | | |
| | | | AAHUs | 381.60 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | |
|--|---|--------------|
| A. Future With Project Open Water AAHUs | = | 381.60 |
| B. Future Without Project Open Water AAHUs | = | 308.75 |
| Net Change (FWP - FWOP) | = | 72.85 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | | |
|---|---|---------------|
| A. Emergent Marsh Habitat Net AAHUs | = | 344.26 |
| B. Open Water Habitat Net AAHUs | = | 72.85 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | | 268.87 |

Wetland Value Assessment
Average Annual Acres of Emergent Marsh

Project: PPO-38 Hopedale Hydrologic Restoration

Marsh Type: Brackish

Project Area: 3,805

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|---------------|----|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 3,086 | 81 | 3,086 | 81 | — |
| 1 | 3,080 | 81 | 3,084 | 81 | 4 |
| 2 | 3,075 | 81 | 3,082 | 81 | 7 |
| 3 | 3,069 | 81 | 3,080 | 81 | 11 |
| 4 | 3,064 | 81 | 3,079 | 81 | 15 |
| 5 | 3,058 | 80 | 3,077 | 81 | 18 |
| 6 | 3,051 | 80 | 3,075 | 81 | 24 |
| 7 | 3,044 | 80 | 3,073 | 81 | 29 |
| 8 | 3,036 | 80 | 3,071 | 81 | 35 |
| 9 | 3,029 | 80 | 3,069 | 81 | 40 |
| 10 | 3,022 | 79 | 3,068 | 81 | 46 |
| 11 | 3,015 | 79 | 3,066 | 81 | 51 |
| 12 | 3,007 | 79 | 3,064 | 81 | 57 |
| 13 | 3,000 | 79 | 3,062 | 80 | 62 |
| 14 | 2,993 | 79 | 3,060 | 80 | 67 |
| 15 | 2,986 | 78 | 3,058 | 80 | 73 |
| 16 | 2,971 | 78 | 3,057 | 80 | 85 |
| 17 | 2,957 | 78 | 3,055 | 80 | 98 |
| 18 | 2,943 | 77 | 3,053 | 80 | 110 |
| 19 | 2,929 | 77 | 3,051 | 80 | 122 |
| 20 | 2,915 | 77 | 3,049 | 80 | 134 |
| Total | 60,244 | | 61,333 | | |
| Average Annual | 3,012 | | 3,067 | | 54 |

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**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: PO-74a Bayou Bienvenue Pumping Station/Terracing

The WVA analysis for project PO-74a includes 3 areas; each area consists of brackish marsh. Total WVA benefits (AAHUs) for this project are obtained by adding the benefits calculated for each area, as summarized below:

| <u>Area</u> | <u>AAHUs</u> |
|-------------|--------------|
| 1 | 68.16 |
| 2 | 102.86 |
| 3 | 31.71 |

| | |
|-------------------------|------------------|
| TOTAL BENEFITS = | 203 AAHUS |
|-------------------------|------------------|

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: PO-74a Bayou Bienvenue Pump OM and Terracing
Area 1

Project Area: 430

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 | 3 | 0.13 |
| V2 | % Aquatic | 0 | 0.10 | 0 | 0.10 | 0 | 0.10 |
| V3 | Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 | % 100 | 0.20 | % 100 | 0.20 | % 100 | 0.20 |
| V4 | %OW <= 1.5ft | 100 | 0.60 | 100 | 0.60 | 100 | 0.60 |
| 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 = | | 0.26 | | EM HSI = | | 0.26 | |
| Open Water HSI = | | 0.31 | | OW HSI = | | 0.31 | |

Project: PO-74a Bayou Bienvenue Pump OM and Terracing
Area 1

Project Area: 430

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|----------------------|--|------------------|------|------------------|------|------------------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 3 | 0.13 | 7 | 0.16 | 81 | 0.83 |
| V2 | % Aquatic | 0 | 0.10 | 0 | 0.10 | 0 | 0.10 |
| V3 | Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 | % 100 | 0.20 | % 100 | 0.20 | % 100 | 1.00 |
| V4 | %OW <= 1.5ft | 100 | 0.60 | 99 | 0.62 | 97 | 0.66 |
| V5 | Salinity (ppt) | 12 | 0.70 | 10 | 1.00 | 10 | 1.00 |
| V6 | Access Value | 1.00 | 1.00 | 0.63 | 0.66 | 0.63 | 0.66 |
| Emergent Marsh HSI = | | 0.26 | | EM HSI = | | 0.31 | |
| Open Water HSI = | | 0.31 | | OW HSI = | | 0.30 | |

AAHU CALCULATION - EMERGENT MARSH

Project: PO-74a Bayou Bienvenue Pump OM and Terracin Area 1

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|-----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 13 | 0.26 | 3.37 | |
| 1 | 13 | 0.26 | 3.37 | 3.37 |
| 20 | 13 | 0.26 | 3.37 | 63.98 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 3.37 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|-----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 13 | 0.26 | 3.37 | |
| 1 | 30 | 0.31 | 9.26 | 6.17 |
| 20 | 347 | 0.83 | 289.57 | 2310.88 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 115.85 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|--------|
| A. Future With Project Emergent Marsh AAHUs = | 115.85 |
| B. Future Without Project Emergent Marsh AAHUs = | 3.37 |
| Net Change (FWP - FWOP) = | 112.49 |

AAHU CALCULATION - OPEN WATER

Project: PO-74a Bayou Bienvenue Pump OM and Terracin Area 1

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 417 | 0.31 | 127.80 | |
| 1 | 417 | 0.31 | 127.80 | 127.80 |
| 20 | 417 | 0.31 | 127.80 | 2428.24 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 127.80 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 417 | 0.31 | 127.80 | |
| 1 | 400 | 0.30 | 120.21 | 123.99 |
| 20 | 83 | 0.36 | 30.11 | 1490.45 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 80.72 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | | |
|--|---|--|--------|
| A. Future With Project Open Water AAHUs | = | | 80.72 |
| B. Future Without Project Open Water AAHUs | = | | 127.80 |
| Net Change (FWP - FWOP) | = | | -47.08 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | | | |
|---|---|--|--------|
| A. Emergent Marsh Habitat Net AAHUs | = | | 112.49 |
| B. Open Water Habitat Net AAHUs | = | | -47.08 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | | | 68.16 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: PO-74a Bayou Bienvenue Pump OM and Terracing
Area 2
Condition: Future Without Project

Project Area: 1,060

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|--------------------|--|------------------|------|------------------|------|------------------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 1 | 0.11 | 1 | 0.11 | 1 | 0.11 |
| V2 | % Aquatic | 5 | 0.15 | 5 | 0.15 | 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 | 25 | 0.42 | 25 | 0.42 | 25 | 0.42 |
| V5 | Salinity (ppt) | 13 | 0.55 | 13 | 0.55 | 13 | 0.55 |
| V6 | Access Value | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Emergent Marsh HSI | | = | 0.22 | EM HSI = | 0.22 | EM HSI = | 0.22 |
| Open Water HSI | | = | 0.33 | OW HSI = | 0.33 | OW HSI = | 0.33 |

Project: PO-74a Bayou Bienvenue Pump OM and Terracing
Area 2
Condition: Future With Project

Project Area: 1,060

| Variable | | TY 0 | | TY 1 | | TY 3 | |
|--------------------|--|------------------|------|-----------------------|------|-----------------------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 1 | 0.11 | 3 | 0.13 | 8 | 0.17 |
| V2 | % Aquatic | 5 | 0.15 | 50 | 0.55 | 60 | 0.64 |
| V3 | Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 | % 100 | 0.20 | % 50 50 | 0.30 | % 50 50 | 0.30 |
| V4 | %OW <= 1.5ft | 25 | 0.42 | 25 | 0.42 | 25 | 0.42 |
| V5 | Salinity (ppt) | 13 | 0.55 | 11 | 0.85 | 11 | 0.85 |
| V6 | Access Value | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Emergent Marsh HSI | | = | 0.22 | EM HSI = | 0.29 | EM HSI = | 0.33 |
| Open Water HSI | | = | 0.33 | OW HSI = | 0.66 | OW HSI = | 0.71 |

Project: PO-74a Bayou Bienvenue Pump OM and Terracing
FWP

| Variable | | TY 20 | | Value | SI | Value | SI |
|----------|----------------|---------------|------|----------|----|----------|----|
| | | Value | SI | | | | |
| V1 | % Emergent | 6 | 0.15 | | | | |
| V2 | % Aquatic | 50 | 0.55 | | | | |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | | 0.30 | | | | |
| | Class 2 | | | | | | |
| | Class 3 | 50 | | | | | |
| | Class 4 | 50 | | | | | |
| V4 | %OW <= 1.5ft | 25 | 0.42 | | | | |
| V5 | Salinity (ppt) | 11 | 0.85 | | | | |
| V6 | Access Value | 1.00 | 1.00 | | | | |
| | | EM HSI = 0.31 | | EM HSI = | | EM HSI = | |
| | | OW HSI = 0.66 | | OW HSI = | | OW HSI = | |

AAHU CALCULATION - EMERGENT MARSH

Project: PO-74a Bayou Bienvenue Pump OM and Terracing
Area 2

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|-----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 11 | 0.22 | 2.47 | |
| 1 | 11 | 0.22 | 2.47 | 2.47 |
| 20 | 11 | 0.22 | 2.47 | 46.97 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 2.47 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|-----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 11 | 0.22 | 2.47 | |
| 1 | 28 | 0.29 | 8.03 | 5.08 |
| 3 | 80 | 0.33 | 26.29 | 33.59 |
| 20 | 62 | 0.31 | 19.36 | 387.15 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 21.29 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|-------|
| A. Future With Project Emergent Marsh AAHUs = | 21.29 |
| B. Future Without Project Emergent Marsh AAHUs = | 2.47 |
| Net Change (FWP - FWOP) = | 18.82 |

AAHU CALCULATION - OPEN WATER

Project: PO-74a Bayou Bienvenue Pump OM and Terracing
Area 2

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|--------------------|
| TY | Water Acres | x HSI | | |
| 0 | 1049 | 0.33 | 347.15 | |
| 1 | 1049 | 0.33 | 347.15 | 347.15 |
| 20 | 1049 | 0.33 | 347.15 | 6595.94 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 347.16 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|--------------------|
| TY | Water Acres | x HSI | | |
| 0 | 1049 | 0.33 | 347.15 | |
| 1 | 980 | 0.66 | 646.55 | 500.64 |
| 3 | 980 | 0.71 | 697.24 | 1343.80 |
| 20 | 998 | 0.66 | 658.43 | 11525.85 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 668.51 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | |
|--|---|--------|
| A. Future With Project Open Water AAHUs | = | 668.51 |
| B. Future Without Project Open Water AAHUs | = | 347.15 |
| Net Change (FWP - FWOP) | = | 321.36 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | | |
|---|---|--------|
| A. Emergent Marsh Habitat Net AAHUs | = | 18.82 |
| B. Open Water Habitat Net AAHUs | = | 321.36 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | | 102.86 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: PO-74a Bayou Bienvenue Pump OM and Terracing
Area 3

Project Area: 1,171

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|--------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 32 | 0.39 | 31 | 0.38 | 18 | 0.26 |
| V2 | % Aquatic | 2 | 0.12 | 2 | 0.12 | 1 | 0.11 |
| V3 | Interspersion | % | 0.50 | % | 0.50 | % | 0.35 |
| | Class 1 | | | | | | |
| | Class 2 | 50 | | 50 | | 25 | |
| | Class 3 | 50 | | 50 | | 25 | |
| | Class 4 | | | | | 50 | |
| V4 | %OW <= 1.5ft | 85 | 0.90 | 85 | 0.90 | 70 | 1.00 |
| V5 | Salinity (ppt) | 13 | 0.55 | 13 | 0.55 | 13 | 0.55 |
| 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 = | 0.38 |
| Open Water HSI | | = | 0.36 | OW HSI = | 0.36 | OW HSI = | 0.35 |

Project: PO-74a Bayou Bienvenue Pump OM and Terracing
Area 3

Project Area: 1,171

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 3 | |
|--------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 32 | 0.39 | 33 | 0.40 | 34 | 0.41 |
| V2 | % Aquatic | 2 | 0.12 | 5 | 0.15 | 5 | 0.15 |
| V3 | Interspersion | % | 0.50 | % | 0.52 | % | 0.52 |
| | Class 1 | | | | | | |
| | Class 2 | 50 | | 60 | | 60 | |
| | Class 3 | 50 | | 40 | | 40 | |
| | Class 4 | | | | | | |
| V4 | %OW <= 1.5ft | 85 | 0.90 | 80 | 1.00 | 80 | 1.00 |
| V5 | Salinity (ppt) | 13 | 0.55 | 12 | 0.70 | 12 | 0.70 |
| V6 | Access Value | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Emergent Marsh HSI | | = | 0.49 | EM HSI = | 0.52 | EM HSI = | 0.52 |
| Open Water HSI | | = | 0.36 | OW HSI = | 0.41 | OW HSI = | 0.41 |

Project: PO-74a Bayou Bienvenue Pump OM and Terracing
FWP

| Variable | | TY 20 | | | | | |
|----------|----------------|-----------------|-------------|-----------------|----|-----------------|----|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 22 | 0.30 | | | | |
| V2 | % Aquatic | 4 | 0.14 | | | | |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | | 0.38 | | | | |
| | Class 2 | 30 | | | | | |
| | Class 3 | 30 | | | | | |
| | Class 4 | 40 | | | | | |
| | Class 5 | | | | | | |
| V4 | %OW <= 1.5ft | 75 | 1.00 | | | | |
| V5 | Salinity (ppt) | 12 | 0.70 | | | | |
| V6 | Access Value | 1.00 | 1.00 | | | | |
| | | EM HSI = | 0.43 | EM HSI = | | EM HSI = | |
| | | OW HSI = | 0.39 | OW HSI = | | OW HSI = | |

AAHU CALCULATION - EMERGENT MARSH

Project: PO-74a Bayou Bienvenue Pump OM and Terracing
Area 3

| Future Without Project | | | Total | Cummulative |
|------------------------|-------------|-------|----------------|---------------|
| TY | Marsh Acres | x HSI | HUs | HUs |
| 0 | 379 | 0.49 | 186.52 | |
| 1 | 368 | 0.49 | 178.63 | 182.56 |
| 20 | 206 | 0.38 | 77.78 | 2380.63 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 128.16 |

| Future With Project | | | Total | Cummulative |
|---------------------|-------------|-------|--------------|---------------|
| TY | Marsh Acres | x HSI | HUs | HUs |
| 0 | 379 | 0.49 | 186.52 | |
| 1 | 382 | 0.52 | 197.76 | 192.13 |
| 3 | 398 | 0.52 | 208.69 | 406.42 |
| 20 | 263 | 0.43 | 112.17 | 2689.85 |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 164.42 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|--------|
| A. Future With Project Emergent Marsh AAHUs = | 164.42 |
| B. Future Without Project Emergent Marsh AAHUs = | 128.16 |
| Net Change (FWP - FWOP) = | 36.26 |

AAHU CALCULATION - OPEN WATER

Project: PO-74a Bayou Bienvenue Pump OM and Terracing Area 3

| Future Without Project | | | Total | Cummulative |
|------------------------|-------------|-------|----------------|---------------|
| TY | Water Acres | x HSI | HUs | HUs |
| 0 | 792 | 0.36 | 285.29 | |
| 1 | 803 | 0.36 | 289.25 | 287.27 |
| 20 | 965 | 0.35 | 334.35 | 5931.25 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 310.93 |

| Future With Project | | | Total | Cummulative |
|---------------------|-------------|-------|--------------|---------------|
| TY | Water Acres | x HSI | HUs | HUs |
| 0 | 792 | 0.36 | 285.29 | |
| 1 | 755 | 0.41 | 308.50 | 297.19 |
| 3 | 773 | 0.41 | 315.85 | 624.35 |
| 20 | 908 | 0.39 | 353.24 | 5694.73 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 330.81 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | | |
|--|---|--|--------|
| A. Future With Project Open Water AAHUs | = | | 330.81 |
| B. Future Without Project Open Water AAHUs | = | | 310.93 |
| Net Change (FWP - FWOP) | = | | 19.89 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | | | |
|---|---|--|-------|
| A. Emergent Marsh Habitat Net AAHUs | = | | 36.26 |
| B. Open Water Habitat Net AAHUs | = | | 19.89 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | | | 31.71 |

Wetland Value Assessment
Average Annual Acres of Emergent Marsh

**Project: PO-74a Bayou Bienvenue Pumping Station/Terracing
Area 1**

Marsh Type: Brackish

Project Area: 430

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|---|--------------|----|------------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 13 | 3 | 13 | 3 | — |
| 1 | 13 | 3 | 30 | 7 | 17 |
| 2 | 13 | 3 | 47 | 11 | 34 |
| 3 | 13 | 3 | 63 | 15 | 50 |
| 4 | 13 | 3 | 80 | 19 | 67 |
| 5 | 13 | 3 | 97 | 22 | 84 |
| 6 | 13 | 3 | 113 | 26 | 100 |
| 7 | 13 | 3 | 130 | 30 | 117 |
| 8 | 13 | 3 | 147 | 34 | 134 |
| 9 | 13 | 3 | 163 | 38 | 150 |
| 10 | 13 | 3 | 180 | 42 | 167 |
| 11 | 13 | 3 | 197 | 46 | 184 |
| 12 | 13 | 3 | 214 | 50 | 201 |
| 13 | 13 | 3 | 230 | 54 | 217 |
| 14 | 13 | 3 | 247 | 57 | 234 |
| 15 | 13 | 3 | 264 | 61 | 251 |
| 16 | 13 | 3 | 280 | 65 | 267 |
| 17 | 13 | 3 | 297 | 69 | 284 |
| 18 | 13 | 3 | 314 | 73 | 301 |
| 19 | 13 | 3 | 330 | 77 | 317 |
| 20 | 13 | 3 | 347 | 81 | 334 |
| Total | 260 | | 3,770 | | |
| Average Annual | 13 | | 189 | | 176 |

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Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: PO-74a Bayou Bienvenue Pumping Station/Terracing
Area 2

Marsh Type: Brackish

Project Area: 1,060

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|---|--------------|---|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 11 | 1 | 11 | 1 | -- |
| 1 | 11 | 1 | 28 | 3 | 17 |
| 2 | 11 | 1 | 54 | 5 | 43 |
| 3 | 11 | 1 | 80 | 8 | 69 |
| 4 | 11 | 1 | 79 | 7 | 68 |
| 5 | 11 | 1 | 78 | 7 | 67 |
| 6 | 11 | 1 | 76 | 7 | 65 |
| 7 | 11 | 1 | 75 | 7 | 64 |
| 8 | 11 | 1 | 74 | 7 | 63 |
| 9 | 11 | 1 | 73 | 7 | 62 |
| 10 | 11 | 1 | 72 | 7 | 61 |
| 11 | 11 | 1 | 71 | 7 | 60 |
| 12 | 11 | 1 | 70 | 7 | 59 |
| 13 | 11 | 1 | 69 | 6 | 58 |
| 14 | 11 | 1 | 68 | 6 | 57 |
| 15 | 11 | 1 | 67 | 6 | 56 |
| 16 | 11 | 1 | 66 | 6 | 55 |
| 17 | 11 | 1 | 65 | 6 | 54 |
| 18 | 11 | 1 | 64 | 6 | 53 |
| 19 | 11 | 1 | 63 | 6 | 52 |
| 20 | 11 | 1 | 62 | 6 | 51 |
| Total | 220 | | 1,352 | | |
| Average Annual | 11 | | 68 | | 57 |

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Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: PO-74a Bayou Bienvenue Pumping Station/Terracing Area 3

Marsh Type: Brackish

Project Area: 1,171

| Project Year | Emergent Marsh | | | | Net Acres |
|-----------------------|-----------------|----|--------------|----|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 379 | 32 | 379 | 32 | — |
| 1 | 368 | 31 | 370 | 32 | 2 |
| 2 | 357 | 30 | 361 | 31 | 4 |
| 3 | 346 | 30 | 398 | 34 | 52 |
| 4 | 336 | 29 | 388 | 33 | 53 |
| 5 | 325 | 28 | 379 | 32 | 54 |
| 6 | 316 | 27 | 370 | 32 | 54 |
| 7 | 306 | 26 | 361 | 31 | 55 |
| 8 | 297 | 25 | 352 | 30 | 55 |
| 9 | 288 | 25 | 344 | 29 | 56 |
| 10 | 279 | 24 | 336 | 29 | 56 |
| 11 | 271 | 23 | 328 | 28 | 57 |
| 12 | 263 | 22 | 320 | 27 | 57 |
| 13 | 255 | 22 | 312 | 27 | 57 |
| 14 | 247 | 21 | 305 | 26 | 57 |
| 15 | 240 | 20 | 297 | 25 | 57 |
| 16 | 233 | 20 | 290 | 25 | 57 |
| 17 | 226 | 19 | 283 | 24 | 57 |
| 18 | 219 | 19 | 276 | 24 | 57 |
| 19 | 212 | 18 | 270 | 23 | 57 |
| 20 | 206 | 18 | 263 | 22 | 57 |
| Total | 5,590 | | 6,605 | | |
| Average Annual | 280 | | 330 | | 51 |

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WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET

Project: XBA-63 Barataria Basin Landbridge Shoreline Protection - Phase 2

The WVA analysis for project PBA-44 includes 3 areas: Increment 1, consisting of brackish marsh; and Increment 2 which consists of Area 1 which is intermediate marsh and Area 2 which is brackish marsh. Increment 3 consists of Increments 1 and 2 combined. Total WVA benefits (AAHUs) for each increment are summarized below:

| <u>Increment</u> | <u>AAHUs</u> |
|------------------|--------------|
| 1 | 129 |
| 2 | 30 |
| 3 | 159 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: XBA-63 Barataria Basin Landbridge Protection - Phase 2 Project Area: 813
Increment 1

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|----------------------|----------------|-------|------|----------|------|-------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 73 | 0.76 | 70 | 0.73 | 23 | 0.31 |
| V2 | % Aquatic | 30 | 0.37 | 27 | 0.34 | 5 | 0.15 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 30 | 0.65 | 30 | 0.65 | | 0.24 |
| | Class 2 | 35 | | 35 | | | |
| | Class 3 | 35 | | 35 | | 20 | |
| | Class 5 | | | | | 80 | |
| V4 | %OW <= 1.5ft | 60 | 0.87 | 60 | 0.87 | 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 = | | 0.81 | | EM HSI = | | 0.79 | |
| Open Water HSI = | | 0.62 | | OW HSI = | | 0.60 | |
| | | | | EM HSI = | | 0.45 | |
| | | | | OW HSI = | | 0.36 | |

Project: XBA-63 Barataria Basin Landbridge Protection - Phase 2 Project Area: 813
Increment 1

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|----------------------|----------------|-------|------|----------|------|-------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 73 | 0.76 | 72 | 0.75 | 65 | 0.69 |
| V2 | % Aquatic | 30 | 0.37 | 60 | 0.64 | 50 | 0.55 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 30 | 0.65 | 30 | 0.65 | 30 | 0.64 |
| | Class 2 | 35 | | 35 | | 30 | |
| | Class 3 | 35 | | 35 | | 40 | |
| | 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 = | | 0.81 | | EM HSI = | | 0.81 | |
| Open Water HSI = | | 0.62 | | OW HSI = | | 0.78 | |
| | | | | EM HSI = | | 0.76 | |
| | | | | OW HSI = | | 0.73 | |

AAHU CALCULATION - EMERGENT MARSH

Project: XBA-63 Barataria Basin Landbridge Protection - Phase 2
Increment 1

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|---------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 592 | 0.81 | 480.22 | |
| 1 | 572 | 0.79 | 454.10 | 467.10 |
| 20 | 190 | 0.45 | 85.76 | 4714.31 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs = | | | 259.07 | |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|---------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 592 | 0.81 | 480.22 | |
| 1 | 589 | 0.81 | 474.40 | 477.30 |
| 20 | 527 | 0.76 | 402.42 | 8321.56 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs | | | 439.94 | |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|---------------|
| A. Future With Project Emergent Marsh AAHUs = | 439.94 |
| B. Future Without Project Emergent Marsh AAHUs = | 259.07 |
| Net Change (FWP - FWOP) = | 180.87 |

AAHU CALCULATION - OPEN WATER

Project: XBA-63 Barataria Basin Landbridge Protection - Phase 2
Increment 1

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|--------------------|
| TY | Water Acres | x HSI | | |
| 0 | 221 | 0.62 | 135.94 | |
| 1 | 241 | 0.60 | 143.65 | 139.86 |
| 20 | 623 | 0.36 | 225.82 | 3792.59 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 196.62 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|--------------------|
| TY | Water Acres | x HSI | | |
| 0 | 221 | 0.62 | 135.94 | |
| 1 | 224 | 0.78 | 175.13 | 155.45 |
| 20 | 286 | 0.73 | 208.60 | 3655.82 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 190.56 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | |
|--|---|--------|
| A. Future With Project Open Water AAHUs | = | 190.56 |
| B. Future Without Project Open Water AAHUs | = | 196.62 |
| Net Change (FWP - FWOP) | = | -6.06 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | | |
|--|---|--------|
| A. Emergent Marsh Habitat Net AAHUs | = | 180.87 |
| B. Open Water Habitat Net AAHUs | = | -6.06 |
| Net Benefits = (2.6xEMAAHUs+OWAAHUs)/3.6 | | 128.95 |

Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: XBA-63 Barataria Basin Landbridge Shoreline Protection
Increment 1

Marsh Type: Brackish

Project Area: 813

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|---------------|----|------------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 592 | 73 | 592 | 73 | -- |
| 1 | 572 | 70 | 589 | 72 | 17 |
| 2 | 552 | 68 | 586 | 72 | 34 |
| 3 | 532 | 65 | 582 | 72 | 51 |
| 4 | 512 | 63 | 579 | 71 | 68 |
| 5 | 492 | 60 | 576 | 71 | 84 |
| 6 | 471 | 58 | 573 | 70 | 101 |
| 7 | 451 | 56 | 569 | 70 | 118 |
| 8 | 431 | 53 | 566 | 70 | 135 |
| 9 | 411 | 51 | 563 | 69 | 152 |
| 10 | 391 | 48 | 560 | 69 | 169 |
| 11 | 371 | 46 | 556 | 68 | 185 |
| 12 | 351 | 43 | 553 | 68 | 202 |
| 13 | 331 | 41 | 550 | 68 | 219 |
| 14 | 311 | 38 | 547 | 67 | 236 |
| 15 | 291 | 36 | 543 | 67 | 253 |
| 16 | 270 | 33 | 540 | 66 | 270 |
| 17 | 250 | 31 | 537 | 66 | 286 |
| 18 | 230 | 28 | 534 | 66 | 303 |
| 19 | 210 | 26 | 530 | 65 | 320 |
| 20 | 190 | 23 | 527 | 65 | 337 |
| Total | 7,620 | | 11,160 | | |
| Average Annual | 381 | | 558 | | 177 |

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WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: XBA-63 Barataria Basin Landbridge Protection - Phase 2
Increment 2 - Area 1
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate.. 185

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|----------------------|--|----------|------|---------------|------|---------------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 92 | 0.93 | 92 | 0.93 | 79 | 0.81 |
| V2 | % Aquatic | 50 | 0.55 | 47 | 0.52 | 18 | 0.26 |
| V3 | Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 | % 100 | 1.00 | % 100 | 1.00 | % 85 15 | 0.88 |
| V4 | %OW <= 1.5ft | 80 | 1.00 | 73 | 0.92 | 28 | 0.42 |
| 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 = | | 0.95 | | EM HSI = 0.95 | | EM HSI = 0.86 | |
| Open Water HSI = | | 0.72 | | OW HSI = 0.69 | | OW HSI = 0.45 | |

Project: XBA-63 Barataria Basin Landbridge Protection - Phase 2
Increment 2 - Area 1
Condition: Future With Project

Project Area:
Fresh.....
Intermediate....

| Variable | | TY 0 | | TY 1 | | TY | |
|----------------------|--|----------|------|---------------|------|---------------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 92 | 0.93 | 92 | 0.93 | 92 | 0.93 |
| 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 | 80 | 1.00 | 80 | 1.00 | 80 | 1.00 |
| 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 = | | 0.95 | | EM HSI = 0.95 | | EM HSI = 0.95 | |
| Open Water HSI = | | 0.72 | | OW HSI = 0.72 | | OW HSI = 0.72 | |

AAHU CALCULATION - EMERGENT MARSH

Project: XBA-63 Barataria Basin Landbridge Protection - Phase 2
Increment 2 - Area 1

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|--------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 171 | 0.95 | 162.97 | |
| 1 | 170 | 0.95 | 162.02 | 162.49 |
| 20 | 146 | 0.86 | 125.86 | 2727.96 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs = | | | | 144.52 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 171 | 0.95 | 162.97 | |
| 1 | 171 | 0.95 | 162.97 | 162.97 |
| 20 | 171 | 0.95 | 162.97 | 3096.44 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs | | | | 162.97 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|--------------|
| A. Future With Project Emergent Marsh AAHUs = | 162.97 |
| B. Future Without Project Emergent Marsh AAHUs = | 144.52 |
| Net Change (FWP - FWOP) = | 18.45 |

AAHU CALCULATION - OPEN WATER

Project: XBA-63 Barataria Basin Landbridge Protection - Phase 2
Increment 2 - Area 1

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|-----------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 14 | 0.72 | 10.07 | |
| 1 | 15 | 0.69 | 10.42 | 10.25 |
| 20 | 39 | 0.45 | 17.74 | 285.74 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs = | | | | 14.80 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|-----------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 14 | 0.72 | 10.07 | |
| 1 | 14 | 0.72 | 10.07 | 10.07 |
| 20 | 14 | 0.72 | 10.07 | 191.24 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs | | | | 10.07 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|-------|
| A. Future With Project Open Water AAHUs = | 10.07 |
| B. Future Without Project Open Water AAHUs = | 14.80 |
| Net Change (FWP - FWOP) = | -4.73 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | |
|--|-------|
| A. Emergent Marsh Habitat Net AAHUs = | 18.45 |
| B. Open Water Habitat Net AAHUs = | -4.73 |
| Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1 | 10.97 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: XBA-63 Barataria Basin Landbridge Protection - Phase 2 Project Area: 165
Area 1b

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|----------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 67 | 0.70 | 65 | 0.69 | 34 | 0.41 |
| V2 | % Aquatic | 30 | 0.37 | 28 | 0.35 | 15 | 0.24 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | | 0.60 | | 0.60 | | 0.40 |
| | Class 2 | 100 | | 100 | | 50 | |
| | Class 3 | | | | | 50 | |
| | Class 4 | | | | | | |
| | Class 5 | | | | | | |
| V4 | %OW <= 1.5ft | 30 | 0.49 | 28 | 0.46 | 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 = | | | 0.77 | EM HSI = | 0.76 | EM HSI = | 0.54 |
| Open Water HSI = | | | 0.58 | OW HSI = | 0.57 | OW HSI = | 0.45 |

Project: XBA-63 Barataria Basin Landbridge Protection - Phase 2 Project Area: 165
Area 1b

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 | 67 | 0.70 |
| V2 | % Aquatic | 30 | 0.37 | 30 | 0.37 | 30 | 0.37 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | | 0.60 | | 0.60 | | 0.60 |
| | Class 2 | 100 | | 100 | | 100 | |
| | Class 3 | | | | | | |
| | Class 4 | | | | | | |
| | Class 5 | | | | | | |
| 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 = | 0.77 |
| Open Water HSI = | | | 0.58 | OW HSI = | 0.58 | OW HSI = | 0.58 |

AAHU CALCULATION - EMERGENT MARSH

Project: XBA-63 Baratara Basin Landbridge Protection - Phase 2
Area 1b

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|--------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 111 | 0.77 | 85.57 | |
| 1 | 108 | 0.76 | 81.99 | 83.77 |
| 20 | 56 | 0.54 | 30.48 | 1033.12 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs = | | | 55.84 | |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 111 | 0.77 | 85.57 | |
| 1 | 111 | 0.77 | 85.57 | 85.57 |
| 20 | 111 | 0.77 | 85.57 | 1625.78 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| AAHUs | | | 85.57 | |

| NET CHANGE IN AAHUs DUE TO PROJECT | | | | |
|--|---|--|--|-------|
| A. Future With Project Emergent Marsh AAHUs | = | | | 85.57 |
| B. Future Without Project Emergent Marsh AAHUs | = | | | 55.84 |
| Net Change (FWP - FWOP) | = | | | 29.72 |

AAHU CALCULATION - OPEN WATER

Project: XBA-63 Barataria Basin Landbridge Protection - Phase 2
Area 1b

| Future Without Project | | | Total HU's | Cummulative HU's |
|------------------------|-------------|-------|----------------|------------------|
| TY | Water Acres | x HSI | | |
| 0 | 54 | 0.58 | 31.47 | |
| 1 | 57 | 0.57 | 32.39 | 31.94 |
| 20 | 109 | 0.45 | 49.23 | 794.59 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 41.33 |

| Future With Project | | | Total HU's | Cummulative HU's |
|---------------------|-------------|-------|--------------|------------------|
| TY | Water Acres | x HSI | | |
| 0 | 54 | 0.58 | 31.47 | |
| 1 | 54 | 0.58 | 31.47 | 31.47 |
| 20 | 54 | 0.58 | 31.47 | 597.99 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 31.47 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | |
|--|---|-------|
| A. Future With Project Open Water AAHUs | = | 31.47 |
| B. Future Without Project Open Water AAHUs | = | 41.33 |
| Net Change (FWP - FWOP) | = | -9.85 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | | |
|---|---|-------|
| A. Emergent Marsh Habitat Net AAHUs | = | 29.72 |
| B. Open Water Habitat Net AAHUs | = | -9.85 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | | 18.73 |

Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: XBA-63 Barataria Basin Landbridge Shoreline Protection
Increment 2 - Area 1

Marsh Type: Intermediate

Project Area: 185

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|--------------|----|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 171 | 92 | 171 | 92 | — |
| 1 | 170 | 92 | 171 | 92 | 1 |
| 2 | 169 | 91 | 171 | 92 | 2 |
| 3 | 167 | 91 | 171 | 92 | 4 |
| 4 | 166 | 90 | 171 | 92 | 5 |
| 5 | 165 | 89 | 171 | 92 | 6 |
| 6 | 164 | 88 | 171 | 92 | 7 |
| 7 | 162 | 88 | 171 | 92 | 9 |
| 8 | 161 | 87 | 171 | 92 | 10 |
| 9 | 160 | 86 | 171 | 92 | 11 |
| 10 | 159 | 86 | 171 | 92 | 12 |
| 11 | 157 | 85 | 171 | 92 | 14 |
| 12 | 156 | 84 | 171 | 92 | 15 |
| 13 | 155 | 84 | 171 | 92 | 16 |
| 14 | 154 | 83 | 171 | 92 | 17 |
| 15 | 152 | 82 | 171 | 92 | 19 |
| 16 | 151 | 82 | 171 | 92 | 20 |
| 17 | 150 | 81 | 171 | 92 | 21 |
| 18 | 149 | 80 | 171 | 92 | 22 |
| 19 | 147 | 80 | 171 | 92 | 24 |
| 20 | 146 | 79 | 171 | 92 | 25 |
| Total | 3,160 | | 3,420 | | |
| Average Annual | 158 | | 171 | | 13 |

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Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: XBA-63 Barataria Basin Landbridge Shoreline Protection
Increment 2 - Area 2

Marsh Type: Brackish

Project Area: 165

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|--------------|----|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 111 | 67 | 111 | 67 | — |
| 1 | 108 | 65 | 111 | 67 | 3 |
| 2 | 105 | 64 | 111 | 67 | 6 |
| 3 | 103 | 62 | 111 | 67 | 8 |
| 4 | 100 | 60 | 111 | 67 | 11 |
| 5 | 97 | 59 | 111 | 67 | 14 |
| 6 | 94 | 57 | 111 | 67 | 17 |
| 7 | 92 | 56 | 111 | 67 | 19 |
| 8 | 89 | 54 | 111 | 67 | 22 |
| 9 | 86 | 52 | 111 | 67 | 25 |
| 10 | 83 | 51 | 111 | 67 | 28 |
| 11 | 81 | 49 | 111 | 67 | 30 |
| 12 | 78 | 47 | 111 | 67 | 33 |
| 13 | 75 | 46 | 111 | 67 | 36 |
| 14 | 72 | 44 | 111 | 67 | 39 |
| 15 | 70 | 42 | 111 | 67 | 41 |
| 16 | 67 | 41 | 111 | 67 | 44 |
| 17 | 64 | 39 | 111 | 67 | 47 |
| 18 | 61 | 37 | 111 | 67 | 50 |
| 19 | 59 | 36 | 111 | 67 | 52 |
| 20 | 56 | 34 | 111 | 67 | 55 |
| Total | 1,640 | | 2,220 | | |
| Average Annual | 82 | | 111 | | 29 |

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**WETLAND VALUE ASSESSMENT COMMUNITY MODEL
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: PBS-1 Upper Oak River Siphon

The WVA analysis for project PBS-1 includes 3 areas: Area 1 consisting of intermediate marsh; and Areas 2 and 3 consisting of brackish marsh. Total WVA benefits (AAHUs) are obtained by adding the benefits calculated for each subarea, as summarized below:

| <u>Area</u> | <u>AAHUs</u> |
|-------------|--------------|
| 1 | 117.12 |
| 2 | 17.32 |
| 3 | 18.60 |

| | |
|-------------------------|------------------|
| TOTAL BENEFITS = | 153 AAHUs |
|-------------------------|------------------|

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: PBS-1 Upper Oaks River Siphon
Area 1
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate.. 474

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|----------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 33 | 0.40 | 33 | 0.40 | 32 | 0.39 |
| V2 | % Aquatic | 10 | 0.19 | 10 | 0.19 | 10 | 0.19 |
| 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 | 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 | | 0.20 | | 0.20 | | 0.20 |
| | intermediat | 0.001 | | 0.001 | | 0.001 | |
| Emergent Marsh HSI = | | | 0.43 | EM HSI = | 0.43 | EM HSI = | 0.42 |
| Open Water HSI = | | | 0.32 | OW HSI = | 0.32 | OW HSI = | 0.32 |

Project: PBS-1 Upper Oaks River Siphon
Area 1
Condition: Future With Project

Project Area:
Fresh.....
Intermediate....

| Variable | | TY 0 | | TY 1 | | TY 5 | |
|----------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 33 | 0.40 | 36 | 0.42 | 47 | 0.52 |
| V2 | % Aquatic | 10 | 0.19 | 40 | 0.46 | 80 | 0.82 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 20 | 0.36 | 20 | 0.36 | 50 | 0.60 |
| | Class 2 | | | | | | |
| | Class 3 | | | | | | |
| | Class 4 | 80 | | 80 | | 50 | |
| | Class 5 | | | | | | |
| V4 | %OW <= 1.5ft | 90 | 1.00 | 90 | 1.00 | 95 | 0.80 |
| V5 | Salinity (ppt) | | | | | | |
| | fresh | | 1.00 | | 1.00 | | 1.00 |
| | intermediate | 2 | | 0 | | 0 | |
| V6 | Access Value | | | | | | |
| | fresh | | 0.20 | | 1.00 | | 1.00 |
| | intermediat | 0.001 | | 1.00 | | 1.00 | |
| Emergent Marsh HSI = | | | 0.43 | EM HSI = | 0.53 | EM HSI = | 0.63 |
| Open Water HSI = | | | 0.32 | OW HSI = | 0.61 | OW HSI = | 0.85 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: PBS-1 Upper Oaks River Siphon
Area 2

Project Area: 1,814

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|----------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 58 | 0.62 | 58 | 0.62 | 56 | 0.60 |
| V2 | % Aquatic | 50 | 0.55 | 50 | 0.55 | 50 | 0.55 |
| V3 | Interspersion | % | 0.54 | % | 0.54 | % | 0.54 |
| | Class 1 | 15 | | 15 | | 15 | |
| | Class 2 | 25 | | 25 | | 25 | |
| | Class 3 | 60 | | 60 | | 60 | |
| | Class 4 | | | | | | |
| V4 | %OW <= 1.5ft | 65 | 0.94 | 65 | 0.94 | 65 | 0.94 |
| 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 = | | | 0.71 | EM HSI = | 0.71 | EM HSI = | 0.70 |
| Open Water HSI = | | | 0.73 | OW HSI = | 0.73 | OW HSI = | 0.73 |

Project: PBS-1 Upper Oaks River Siphon
Area 2

Project Area: 1,814

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | Switch to Intermediate Model | |
|----------------------|----------------|-------|------|----------|------|------------------------------|----|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 58 | 0.62 | 58 | 0.62 | | |
| V2 | % Aquatic | 50 | 0.55 | 60 | 0.64 | | |
| V3 | Interspersion | % | 0.54 | % | 0.54 | % | |
| | Class 1 | 15 | | 15 | | | |
| | Class 2 | 25 | | 25 | | | |
| | Class 3 | 60 | | 60 | | | |
| | Class 4 | | | | | | |
| V4 | %OW <= 1.5ft | 65 | 0.94 | 65 | 0.94 | | |
| V5 | Salinity (ppt) | 5 | 1.00 | 4 | 1.00 | | |
| V6 | Access Value | 1.00 | 1.00 | 1.00 | 1.00 | | |
| Emergent Marsh HSI = | | | 0.71 | EM HSI = | 0.71 | EM HSI = | |
| Open Water HSI = | | | 0.73 | OW HSI = | 0.78 | OW HSI = | |

AAHU CALCULATION - OPEN WATER

Project: PBS-1 Upper Oaks River Siphon
Area 2

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 757 | 0.73 | 550.14 | |
| 1 | 759 | 0.73 | 551.60 | 550.87 |
| 20 | 799 | 0.73 | 580.67 | 10756.51 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 565.37 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 757 | 0.73 | 550.14 | |
| 1 | 758 | 0.78 | 590.08 | 570.10 |
| 5 | 760 | 0.82 | 623.65 | 2427.39 |
| 20 | 768 | 0.83 | 634.69 | 9437.41 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 621.74 |

*HSI calculated using Fresh/Intermediate Model
 *HSI calculated using Fresh/Intermediate Model

| NET CHANGE IN AAHUs DUE TO PROJECT | | |
|--|---|--------|
| A. Future With Project Open Water AAHUs | = | 621.74 |
| B. Future Without Project Open Water AAHUs | = | 565.37 |
| Net Change (FWP - FWOP) | = | 56.38 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | | |
|---|---|-------|
| A. Emergent Marsh Habitat Net AAHUs | = | 2.30 |
| B. Open Water Habitat Net AAHUs | = | 56.38 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | | 17.32 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: PBS-1 Upper Oaks River Siphon
Area 3

Project Area: 2,330

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 | 65 | 0.69 |
| V2 | % Aquatic | 60 | 0.64 | 60 | 0.64 | 60 | 0.64 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 60 | 0.80 | 60 | 0.80 | 60 | 0.80 |
| | Class 2 | 20 | | 20 | | 20 | |
| | Class 3 | 20 | | 20 | | 20 | |
| | Class 4 | | | | | | |
| V4 | %OW <= 1.5ft | 45 | 0.68 | 45 | 0.68 | 45 | 0.68 |
| V5 | Salinity (ppt) | 7 | 1.00 | 7 | 1.00 | 7 | 1.00 |
| V6 | Access Value | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Emergent Marsh HSI | | = | 0.79 | EM HSI = | 0.79 | EM HSI = | 0.78 |
| Open Water HSI | | = | 0.78 | OW HSI = | 0.78 | OW HSI = | 0.78 |

Project: PBS-1 Upper Oaks River Siphon
Area 3

Project Area: 2,330

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 | 60 | 0.64 | 70 | 0.73 | 70 | 0.73 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 60 | 0.80 | 60 | 0.80 | 60 | 0.80 |
| | Class 2 | 20 | | 20 | | 20 | |
| | Class 3 | 20 | | 20 | | 20 | |
| | Class 4 | | | | | | |
| V4 | %OW <= 1.5ft | 45 | 0.68 | 45 | 0.68 | 45 | 0.68 |
| V5 | Salinity (ppt) | 7 | 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 | | = | 0.79 | EM HSI = | 0.79 | EM HSI = | 0.79 |
| Open Water HSI | | = | 0.78 | OW HSI = | 0.83 | OW HSI = | 0.83 |

AAHU CALCULATION - EMERGENT MARSH

Project: PBS-1 Upper Oaks River Siphon
Area 3

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|-----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 1568 | 0.79 | 1243.58 | |
| 1 | 1565 | 0.79 | 1241.20 | 1242.39 |
| 20 | 1506 | 0.78 | 1176.77 | 22968.52 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 1210.55 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|-----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 1568 | 0.79 | 1243.58 | |
| 1 | 1566 | 0.79 | 1242.00 | 1242.79 |
| 20 | 1536 | 0.79 | 1209.22 | 23285.99 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 1226.44 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|--------------|
| A. Future With Project Emergent Marsh AAHUs = | 1226.44 |
| B. Future Without Project Emergent Marsh AAHUs = | 1210.55 |
| Net Change (FWP - FWOP) = | 15.89 |

AAHU CALCULATION - OPEN WATER

Project: PBS-1 Upper Oaks River Siphon
Area 3

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 762 | 0.78 | 593.35 | |
| 1 | 765 | 0.78 | 595.68 | 594.52 |
| 20 | 824 | 0.78 | 641.63 | 11754.43 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 617.45 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 762 | 0.78 | 593.35 | |
| 1 | 764 | 0.83 | 632.25 | 612.78 |
| 20 | 794 | 0.83 | 657.08 | 12248.61 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 643.07 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|--------|
| A. Future With Project Open Water AAHUs = | 643.07 |
| B. Future Without Project Open Water AAHUs = | 617.45 |
| Net Change (FWP - FWOP) = | 25.62 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | |
|---|-------|
| A. Emergent Marsh Habitat Net AAHUs = | 15.89 |
| B. Open Water Habitat Net AAHUs = | 25.62 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | 18.60 |

Wetland Value Assessment
Average Annual Acres of Emergent Marsh

Project: PBA-1 Upper Oak River Siphon - Area 1

Marsh Type: Intermediate

Project Area: 474

| Project Year | Emergent Marsh | | | | Net Acres |
|-----------------------|-----------------|----|--------------|----|------------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 156 | 33 | 156 | 33 | - |
| 1 | 156 | 33 | 170 | 36 | 14 |
| 2 | 155 | 33 | 184 | 39 | 28 |
| 3 | 155 | 33 | 197 | 42 | 42 |
| 4 | 155 | 33 | 211 | 44 | 56 |
| 5 | 154 | 33 | 224 | 47 | 70 |
| 6 | 154 | 33 | 237 | 50 | 83 |
| 7 | 154 | 32 | 251 | 53 | 97 |
| 8 | 153 | 32 | 264 | 56 | 111 |
| 9 | 153 | 32 | 278 | 59 | 125 |
| 10 | 153 | 32 | 291 | 61 | 138 |
| 11 | 153 | 32 | 305 | 64 | 152 |
| 12 | 152 | 32 | 318 | 67 | 166 |
| 13 | 152 | 32 | 332 | 70 | 180 |
| 14 | 152 | 32 | 345 | 73 | 194 |
| 15 | 151 | 32 | 359 | 76 | 207 |
| 16 | 151 | 32 | 372 | 79 | 221 |
| 17 | 151 | 32 | 386 | 81 | 235 |
| 18 | 150 | 32 | 399 | 84 | 249 |
| 19 | 150 | 32 | 413 | 87 | 262 |
| 20 | 150 | 32 | 426 | 90 | 276 |
| Total | 3,054 | | 5,961 | | |
| Average Annual | 153 | | 298 | | 145 |

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Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: PBA-1 Upper Oak River Siphon - Area 2

Marsh Type: Brackish

Project Area: 1,814

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|---------------|----|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 1,057 | 58 | 1,057 | 58 | — |
| 1 | 1,055 | 58 | 1,056 | 58 | 2 |
| 2 | 1,053 | 58 | 1,056 | 58 | 3 |
| 3 | 1,051 | 58 | 1,055 | 58 | 5 |
| 4 | 1,048 | 58 | 1,055 | 58 | 6 |
| 5 | 1,046 | 58 | 1,054 | 58 | 8 |
| 6 | 1,044 | 58 | 1,054 | 58 | 10 |
| 7 | 1,042 | 57 | 1,053 | 58 | 11 |
| 8 | 1,040 | 57 | 1,053 | 58 | 13 |
| 9 | 1,038 | 57 | 1,052 | 58 | 14 |
| 10 | 1,036 | 57 | 1,052 | 58 | 16 |
| 11 | 1,034 | 57 | 1,051 | 58 | 18 |
| 12 | 1,032 | 57 | 1,051 | 58 | 19 |
| 13 | 1,029 | 57 | 1,050 | 58 | 21 |
| 14 | 1,027 | 57 | 1,050 | 58 | 22 |
| 15 | 1,025 | 57 | 1,049 | 58 | 24 |
| 16 | 1,023 | 56 | 1,049 | 58 | 25 |
| 17 | 1,021 | 56 | 1,048 | 58 | 27 |
| 18 | 1,019 | 56 | 1,048 | 58 | 28 |
| 19 | 1,017 | 56 | 1,047 | 58 | 30 |
| 20 | 1,015 | 56 | 1,046 | 58 | 32 |
| Total | 20,695 | | 21,029 | | |
| Average Annual | 1,035 | | 1,051 | | 17 |

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Wetland Value Assessment
Average Annual Acres of Emergent Marsh

Project: PBA-1 Upper Oak River Siphon - Area 3

Marsh Type: Brackish

Project Area: 2,330

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|---------------|----|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 1,568 | 67 | 1,568 | 67 | — |
| 1 | 1,565 | 67 | 1,566 | 67 | 2 |
| 2 | 1,562 | 67 | 1,565 | 67 | 3 |
| 3 | 1,558 | 67 | 1,563 | 67 | 5 |
| 4 | 1,555 | 67 | 1,562 | 67 | 6 |
| 5 | 1,552 | 67 | 1,560 | 67 | 8 |
| 6 | 1,549 | 66 | 1,558 | 67 | 9 |
| 7 | 1,546 | 66 | 1,557 | 67 | 11 |
| 8 | 1,543 | 66 | 1,555 | 67 | 13 |
| 9 | 1,540 | 66 | 1,554 | 67 | 14 |
| 10 | 1,536 | 66 | 1,552 | 67 | 16 |
| 11 | 1,533 | 66 | 1,550 | 67 | 17 |
| 12 | 1,530 | 66 | 1,549 | 66 | 19 |
| 13 | 1,527 | 66 | 1,547 | 66 | 20 |
| 14 | 1,524 | 65 | 1,546 | 66 | 22 |
| 15 | 1,521 | 65 | 1,544 | 66 | 23 |
| 16 | 1,518 | 65 | 1,543 | 66 | 25 |
| 17 | 1,515 | 65 | 1,541 | 66 | 26 |
| 18 | 1,512 | 65 | 1,539 | 66 | 28 |
| 19 | 1,509 | 65 | 1,538 | 66 | 29 |
| 20 | 1,506 | 65 | 1,536 | 66 | 31 |
| Total | 30,700 | | 31,026 | | |
| Average Annual | 1,535 | | 1,551 | | 16 |

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**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: XBA-73a Fort Jackson/Boothville Marsh Creation

The WVA analysis for project XBA-73a includes 2 increments each consisting of brackish marsh. Total WVA benefits (AAHUs) for this project are summarized below:

| <u>Increment</u> | <u>AAHUs</u> |
|------------------|--------------|
| 1 | 21 |
| 2 | 83 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: XBA-73a Fort Jackson Marsh Creation
Increment 1

Project Area: 65

Condition: Future Without Project

| 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 | 10 | 0.19 | 10 | 0.19 | 7 | 0.16 |
| 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 | 0 | 0.10 | 0 | 0.10 | 0 | 0.10 |
| V5 | Salinity (ppt) | 6 | 1.00 | 6 | 1.00 | 7 | 1.00 |
| 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 | | = | 0.38 | OW HSI = | 0.38 | OW HSI = | 0.35 |

Project: XBA-73a Fort Jackson Marsh Creation
Increment 1

Project Area: 65

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 3 | |
|--------------------|--|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------|--------------------------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 0 | 0.10 | 22 | 0.30 | 83 | 0.85 |
| V2 | % Aquatic | 10 | 0.19 | 90 | 0.91 | 95 | 0.96 |
| V3 | Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 | % 100 | 0.10 | % 100 | 1.00 | % 20 | 0.84 |
| V4 | %OW <= 1.5ft | 0 | 0.10 | 30 | 0.49 | 20 | 0.36 |
| 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 | | = | 0.25 | EM HSI = | 0.63 | EM HSI = | 0.89 |
| Open Water HSI | | = | 0.38 | OW HSI = | 0.92 | OW HSI = | 0.92 |

Project: XBA-73a Fort Jackson Marsh Creation
FWP

| Variable | | TY 20 | | | | | |
|----------|--|-------------------|------|----------|----|----------|----|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 50 | 0.55 | | | | |
| V2 | % Aquatic | 85 | 0.87 | | | | |
| V3 | Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 | % 50 50 | 0.60 | % | | % | |
| V4 | %OW <= 1.5ft | 10 | 0.23 | | | | |
| V5 | Salinity (ppt) | 7 | 1.00 | | | | |
| V6 | Access Value | 1.00 | 1.00 | | | | |
| | | EM HSI = | 0.67 | EM HSI = | | EM HSI = | |
| | | OW HSI = | 0.85 | OW HSI = | | OW HSI = | |

AAHU CALCULATION - EMERGENT MARSH

Project: XBA-73a Fort Jackson Marsh Creation
Increment 1

| Future Without Project | | | Total HUs | Cumulative HUs |
|------------------------|-------------|-------|-----------|----------------|
| TY | Marsh Acres | x HSI | | |
| 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 HUs | Cumulative HUs |
|---------------------|-------------|-------|-----------|----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 0 | 0.25 | 0.00 | |
| 1 | 14 | 0.53 | 7.40 | 3.06 |
| 3 | 54 | 0.89 | 48.00 | 50.60 |
| 20 | 33 | 0.67 | 22.07 | 582.54 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 31.81 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | | |
|------------------------------------|---|---|-------|
| A. | Future With Project Emergent Marsh AAHUs | = | 31.81 |
| B. | Future Without Project Emergent Marsh AAHUs | = | 0.00 |
| | Net Change (FWP - FWOP) | = | 31.81 |

AAHU CALCULATION - OPEN WATER

Project: XBA-73a Fort Jackson Marsh Creation
Increment 1

| Future Without Project | | | Total | Cummulative |
|------------------------|-------------|-------|----------------|--------------|
| TY | Water Acres | x HSI | HUs | HUs |
| 0 | 65 | 0.38 | 24.44 | |
| 1 | 65 | 0.38 | 24.44 | 24.44 |
| 20 | 65 | 0.35 | 22.80 | 448.83 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 23.66 |

| Future With Project | | | Total | Cummulative |
|---------------------|-------------|-------|--------------|--------------|
| TY | Water Acres | x HSI | HUs | HUs |
| 0 | 65 | 0.38 | 24.44 | |
| 1 | 8 | 0.92 | 7.35 | 21.06 |
| 3 | 11 | 0.92 | 10.11 | 17.47 |
| 20 | 32 | 0.85 | 27.15 | 320.95 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 17.97 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|--------------|
| A. Future With Project Open Water AAHUs = | 17.97 |
| B. Future Without Project Open Water AAHUs = | 23.66 |
| Net Change (FWP - FWOP) = | -5.69 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | |
|---|--------------|
| A. Emergent Marsh Habitat Net AAHUs = | 31.81 |
| B. Open Water Habitat Net AAHUs = | -5.69 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | 21.39 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: XBA-73a Fort Jackson Marsh Creation
Increment 2

Project Area: 335

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|--------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 16 | 0.24 | 15 | 0.24 | 6 | 0.15 |
| V2 | % Aquatic | 85 | 0.87 | 85 | 0.87 | 70 | 0.73 |
| V3 | Interspersion | % | 0.20 | % | 0.20 | % | 0.20 |
| | Class 1 | | | | | | |
| | Class 2 | | | | | | |
| | Class 3 | | | | | | |
| | Class 4 | | | | | | |
| | Class 5 | 100 | | 100 | | 100 | |
| V4 | %OW <= 1.5ft | 2 | 0.13 | 2 | 0.13 | 0 | 0.10 |
| V5 | Salinity (ppt) | 6 | 1.00 | 6 | 1.00 | 7 | 1.00 |
| V6 | Access Value | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Emergent Marsh HSI | | = | 0.40 | EM HSI = | 0.39 | EM HSI = | 0.32 |
| Open Water HSI | | = | 0.81 | OW HSI = | 0.81 | OW HSI = | 0.74 |

Project: XBA-73a Fort Jackson Marsh Creation
Increment 2

Project Area: 335

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 3 | |
|--------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 16 | 0.24 | 35 | 0.42 | 88 | 0.89 |
| V2 | % Aquatic | 85 | 0.87 | 90 | 0.91 | 95 | 0.96 |
| V3 | Interspersion | % | 0.20 | % | 1.00 | % | 1.00 |
| | Class 1 | | | | | | |
| | Class 2 | | | | | | |
| | Class 3 | | | | | | |
| | Class 4 | | | | | | |
| | Class 5 | 100 | | | | | |
| V4 | %OW <= 1.5ft | 2 | 0.13 | 75 | 1.00 | 70 | 1.00 |
| 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 | | = | 0.40 | EM HSI = | 0.82 | EM HSI = | 0.93 |
| Open Water HSI | | = | 0.81 | OW HSI = | 0.96 | OW HSI = | 0.98 |

Project: XBA-73a Fort Jackson Marsh Creation
FWP

| Variable | | TY 20 | | Value | SI | Value | SI |
|----------|----------------|---------------|------|----------|----|----------|----|
| | | Value | SI | | | | |
| V1 | % Emergent | 53 | 0.58 | | | | |
| V2 | % Aquatic | 85 | 0.87 | | | | |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 30 | 0.64 | | | | |
| | Class 2 | 30 | | | | | |
| | Class 3 | 40 | | | | | |
| | Class 4 | | | | | | |
| Class 5 | | | | | | | |
| V4 | %OW <= 1.5ft | 30 | 0.49 | | | | |
| V5 | Salinity (ppt) | 7 | 1.00 | | | | |
| V6 | Access Value | 1.00 | 1.00 | | | | |
| | | EM HSI = 0.69 | | EM HSI = | | EM HSI = | |
| | | OW HSI = 0.87 | | OW HSI = | | OW HSI = | |

AAHU CALCULATION - EMERGENT MARSH

Project: XBA-73a Fort Jackson Marsh Creation
Increment 2

| Future Without Project | | | Total HUs | Cumulative HUs |
|------------------------|-------------|-------|----------------|----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 53 | 0.40 | 20.99 | |
| 1 | 50 | 0.39 | 19.43 | 20.21 |
| 20 | 20 | 0.32 | 6.36 | 238.25 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 12.92 |

| Future With Project | | | Total HUs | Cumulative HUs |
|---------------------|-------------|-------|--------------|----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 53 | 0.40 | 20.99 | |
| 1 | 117 | 0.62 | 72.26 | 44.27 |
| 3 | 295 | 0.93 | 275.69 | 329.15 |
| 20 | 179 | 0.69 | 123.82 | 3316.01 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 184.47 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | |
|--|---|--------|
| A. Future With Project Emergent Marsh AAHUs | = | 184.47 |
| B. Future Without Project Emergent Marsh AAHUs | = | 12.92 |
| Net Change (FWP - FWOP) | = | 171.55 |

AAHU CALCULATION - OPEN WATER

Project: XBA-73a Fort Jackson Marsh Creation
Increment 2

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 282 | 0.81 | 228.75 | |
| 1 | 285 | 0.81 | 231.18 | 229.96 |
| 20 | 315 | 0.74 | 233.18 | 4418.13 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 232.40 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 282 | 0.81 | 228.75 | |
| 1 | 22 | 0.96 | 21.06 | 131.23 |
| 3 | 40 | 0.98 | 39.15 | 60.08 |
| 20 | 156 | 0.87 | 135.79 | 1522.60 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 85.70 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|----------------|
| A. Future With Project Open Water AAHUs = | 85.70 |
| B. Future Without Project Open Water AAHUs = | 232.40 |
| Net Change (FWP - FWOP) = | -146.71 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | |
|---|--------------|
| A. Emergent Marsh Habitat Net AAHUs = | 171.55 |
| B. Open Water Habitat Net AAHUs = | -146.71 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | 83.14 |

Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: XBA-73a Fort Jackson/Boothville Marsh Creation - Inc. 1

Marsh Type: Brackish

Project Area: 65

| Project Year | Emergent Marsh | | | | Net Acres |
|-------------------|-----------------|---|--------------|----|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 0 | 0 | 0 | 0 | — |
| 1 | 0 | 0 | 14 | 22 | 14 |
| 2 | 0 | 0 | 34 | 52 | 34 |
| 3 | 0 | 0 | 54 | 83 | 54 |
| 4 | 0 | 0 | 53 | 81 | 53 |
| 5 | 0 | 0 | 52 | 79 | 52 |
| 6 | 0 | 0 | 50 | 77 | 50 |
| 7 | 0 | 0 | 49 | 75 | 49 |
| 8 | 0 | 0 | 48 | 74 | 48 |
| 9 | 0 | 0 | 47 | 72 | 47 |
| 10 | 0 | 0 | 45 | 70 | 45 |
| 11 | 0 | 0 | 44 | 68 | 44 |
| 12 | 0 | 0 | 43 | 66 | 43 |
| 13 | 0 | 0 | 42 | 64 | 42 |
| 14 | 0 | 0 | 40 | 62 | 40 |
| 15 | 0 | 0 | 39 | 60 | 39 |
| 16 | 0 | 0 | 38 | 58 | 38 |
| 17 | 0 | 0 | 37 | 56 | 37 |
| 18 | 0 | 0 | 35 | 55 | 35 |
| 19 | 0 | 0 | 34 | 53 | 34 |
| 20 | 0 | 0 | 33 | 51 | 33 |
| Total | 0 | | 831 | | |
| Average Annual | 0 | | 42 | | 42 |

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Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: XBA-73a Fort Jackson/Boothville Marsh Creation - Inc. 2

Marsh Type: Brackish

Project Area: 335

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|--------------|----|------------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 53 | 16 | 0 | 0 | — |
| 1 | 50 | 15 | 117 | 35 | 67 |
| 2 | 48 | 14 | 206 | 61 | 158 |
| 3 | 46 | 14 | 295 | 88 | 249 |
| 4 | 44 | 13 | 288 | 86 | 245 |
| 5 | 42 | 12 | 281 | 84 | 240 |
| 6 | 40 | 12 | 275 | 82 | 235 |
| 7 | 38 | 11 | 268 | 80 | 230 |
| 8 | 36 | 11 | 261 | 78 | 225 |
| 9 | 34 | 10 | 254 | 76 | 220 |
| 10 | 33 | 10 | 247 | 74 | 215 |
| 11 | 31 | 9 | 240 | 72 | 209 |
| 12 | 30 | 9 | 234 | 70 | 204 |
| 13 | 28 | 8 | 227 | 68 | 199 |
| 14 | 27 | 8 | 220 | 66 | 193 |
| 15 | 26 | 8 | 213 | 64 | 188 |
| 16 | 24 | 7 | 206 | 62 | 182 |
| 17 | 23 | 7 | 199 | 60 | 176 |
| 18 | 22 | 7 | 193 | 58 | 171 |
| 19 | 21 | 6 | 186 | 55 | 165 |
| 20 | 20 | 6 | 179 | 53 | 159 |
| Total | 661 | | 4,589 | | |
| Average Annual | 33 | | 229 | | 196 |

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**WETLAND VALUE ASSESSMENT
SUMMARY SHEET**

Project: CS-1d Constance/Holly Beach Sand Management Plan

The WVA analysis for project CS-1d consists of one area of intermediate marsh. Total WVA benefits (AAHUs) for this project are:

| | |
|-------------------------|-----------------|
| TOTAL BENEFITS = | 54 AAHUS |
|-------------------------|-----------------|

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: CS-1d Constance/Holly Beach Sand Management Plan

Project Area:

Fresh.....

Condition: Future Without Project

Intermediate. 1,693

| Variable | | TY 0 | | TY 1 | | TY 5 | |
|----------------------|-----------------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 82 | 0.84 | 82 | 0.84 | 81 | 0.83 |
| V2 | % Aquatic | 20 | 0.28 | 20 | 0.28 | 20 | 0.28 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 70 | 0.84 | 70 | 0.84 | 70 | 0.84 |
| | Class 2 | 20 | | 20 | | 20 | |
| | Class 3 | | | | | | |
| | Class 4 | 10 | | 10 | | 10 | |
| V4 | %OW <= 1.5ft | 50 | 0.66 | 50 | 0.66 | 48 | 0.64 |
| V5 | Salinity (ppt) | | | | | | |
| | fresh intermediate | 3 | 1.00 | 3 | 1.00 | 3 | 1.00 |
| V6 | Access Value | | | | | | |
| | fresh intermediate | 0.50 | 0.60 | 0.50 | 0.60 | 0.50 | 0.60 |
| Emergent Marsh HSI = | | | 0.82 | EM HSI = | 0.82 | EM HSI = | 0.82 |
| Open Water HSI = | | | 0.45 | OW HSI = | 0.45 | OW HSI = | 0.45 |

Project: CS-1d Constance/Holly Beach Sand Management Plan
FWOP

| Variable | | TY 10 | | TY 20 | | | |
|----------|-----------------------|-------|------|----------|------|----------|----|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 81 | 0.83 | 75 | 0.78 | | |
| V2 | % Aquatic | 10 | 0.19 | 5 | 0.15 | | |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 70 | 0.84 | 65 | 0.80 | | |
| | Class 2 | 20 | | 20 | | | |
| | Class 3 | | | | | | |
| | Class 4 | 10 | | 15 | | | |
| V4 | %OW <= 1.5ft | 44 | 0.60 | 36 | 0.51 | | |
| V5 | Salinity (ppt) | | | | | | |
| | fresh intermediate | 6 | 0.60 | 8 | 0.20 | | |
| V6 | Access Value | | | | | | |
| | fresh intermediate | 0.50 | 0.60 | 0.50 | 0.60 | | |
| EM HSI = | | | 0.77 | EM HSI = | 0.69 | EM HSI = | |
| OW HSI = | | | 0.35 | OW HSI = | 0.27 | OW HSI = | |

Project: CS-1d Constance/Holly Beach Sand Management Plan

Project Area:
Fresh.....
Intermediate....

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 2 | |
|----------------------|-----------------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 82 | 0.84 | 85 | 0.87 | 83 | 0.85 |
| V2 | % Aquatic | 20 | 0.28 | 20 | 0.28 | 20 | 0.28 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 70 | 0.84 | 72 | 0.86 | 72 | 0.86 |
| | Class 2 | 20 | | 20 | | 20 | |
| | Class 3 | | | | | | |
| | Class 4 | 10 | | 8 | | 8 | |
| Class 5 | | | | | | | |
| V4 | %OW <= 1.5ft | 50 | 0.66 | 59 | 0.76 | 58 | 0.75 |
| V5 | Salinity (ppt) | | | | | | |
| | fresh intermediate | 3 | 1.00 | 3 | 1.00 | 3 | 1.00 |
| V6 | Access Value | | | | | | |
| | fresh intermediate | 0.50 | 0.60 | 0.50 | 0.60 | 0.50 | 0.60 |
| Emergent Marsh HSI = | | 0.82 | | EM HSI = | 0.84 | EM HSI = | 0.83 |
| Open Water HSI = | | 0.45 | | OW HSI = | 0.46 | OW HSI = | 0.46 |

Project: CS-1d Constance/Holly Beach Sand Management Plan
FWP

| Variable | | TY 8 | | TY 13 | | TY 18 | |
|----------|-----------------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 81 | 0.83 | 81 | 0.83 | 80 | 0.82 |
| V2 | % Aquatic | 20 | 0.28 | 20 | 0.28 | 10 | 0.19 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 70 | 0.84 | 70 | 0.84 | 70 | 0.84 |
| | Class 2 | 20 | | 20 | | 20 | |
| | Class 3 | | | | | | |
| | Class 4 | 10 | | 10 | | 10 | |
| Class 5 | | | | | | | |
| V4 | %OW <= 1.5ft | 49 | 0.65 | 47 | 0.63 | 43 | 0.58 |
| V5 | Salinity (ppt) | | | | | | |
| | fresh intermediate | 3 | 1.00 | 3 | 1.00 | 6 | 0.60 |
| V6 | Access Value | | | | | | |
| | fresh intermediate | 0.50 | 0.60 | 0.50 | 0.60 | 0.50 | 0.60 |
| EM HSI = | | 0.82 | | EM HSI = | 0.82 | EM HSI = | 0.77 |
| OW HSI = | | 0.45 | | OW HSI = | 0.45 | OW HSI = | 0.35 |

Project: CS-1d Constance/Holly Beach Sand Management Plan
FWP

| Variable | | TY 20 | | Value | SI | Value | SI |
|----------|--|---------------------|------|-------------|-----------------|-------|----|
| | | Value | SI | | | | |
| V1 | % Emergent | 79 | 0.81 | | | | |
| V2 | % Aquatic | 8 | 0.17 | | | | |
| V3 | Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 | % 68 20 12 | 0.82 | % | | % | |
| V4 | %OW <= 1.5ft | 42 | 0.57 | | | | |
| V5 | Salinity (ppt) fresh intermediate | 6 | 0.60 | | | | |
| V6 | Access Value fresh intermediate | 0.50 | 0.60 | | | | |
| | | EM HSI = | | 0.76 | EM HSI = | | |
| | | OW HSI = | | 0.33 | OW HSI = | | |

AAHU CALCULATION - EMERGENT MARSH

Project: CS-1d Constance/Holly Beach Sand Management Plan

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|------------------------|-----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 1388 | 0.82 | 1139.44 | |
| 1 | 1386 | 0.82 | 1137.80 | 1138.62 |
| 5 | 1380 | 0.82 | 1125.25 | 4526.08 |
| 10 | 1363 | 0.77 | 1050.81 | 5439.53 |
| 20 | 1273 | 0.69 | 876.74 | 9625.41 |
| | | | AAHUs = 1036.48 | |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|----------------------|-----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 1388 | 0.82 | 1139.44 | |
| 1 | 1444 | 0.84 | 1211.82 | 1175.46 |
| 2 | 1413 | 0.83 | 1170.26 | 1190.98 |
| 8 | 1375 | 0.82 | 1121.17 | 6873.83 |
| 13 | 1367 | 0.82 | 1114.65 | 5589.57 |
| 18 | 1351 | 0.77 | 1034.09 | 5371.18 |
| 20 | 1332 | 0.76 | 1009.79 | 2043.83 |
| | | | AAHUs 1112.24 | |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|-----------|
| A. Future With Project Emergent Marsh AAHUs | = 1112.24 |
| B. Future Without Project Emergent Marsh AAHUs | = 1036.48 |
| Net Change (FWP - FWOP) | = 75.76 |

AAHU CALCULATION - OPEN WATER

Project: CS-1d Constance/Holly Beach Sand Management Plan

| Future Without Project | | | Total | Cummulative |
|------------------------|-------------|-------|----------------|---------------|
| TY | Water Acres | x HSI | HUs | HUs |
| 0 | 305 | 0.45 | 136.90 | |
| 1 | 307 | 0.45 | 137.80 | 137.35 |
| 5 | 313 | 0.45 | 139.97 | 555.55 |
| 10 | 330 | 0.35 | 114.75 | 638.22 |
| 20 | 420 | 0.27 | 114.38 | 1156.97 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 124.40 |

| Future With Project | | | Total | Cummulative |
|---------------------|-------------|-------|--------------|---------------|
| TY | Water Acres | x HSI | HUs | HUs |
| 0 | 305 | 0.45 | 136.90 | |
| 1 | 249 | 0.46 | 113.93 | 125.50 |
| 2 | 280 | 0.46 | 127.88 | 120.91 |
| 8 | 318 | 0.45 | 142.47 | 811.38 |
| 13 | 326 | 0.45 | 145.51 | 719.97 |
| 18 | 342 | 0.35 | 118.64 | 661.71 |
| 20 | 361 | 0.33 | 119.39 | 238.13 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 133.88 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|-------------|
| A. Future With Project Open Water AAHUs = | 133.88 |
| B. Future Without Project Open Water AAHUs = | 124.40 |
| Net Change (FWP - FWOP) = | 9.48 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | |
|---|--------------|
| A. Emergent Marsh Habitat Net AAHUs = | 75.76 |
| B. Open Water Habitat Net AAHUs = | 9.48 |
| Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1 | 54.38 |

Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: CS-1d Constance/Holly Beach Sand Management Plan

Marsh Type: Intermediate

Project Area: 1,693

| Project Year | Emergent Marsh | | | | Net Acres |
|---------------------------|-----------------|----|---------------|----|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 1,388 | 82 | 1,388 | 82 | -- |
| 1 | 1,386 | 82 | 1,444 | 85 | 58 |
| 2 | 1,385 | 82 | 1,413 | 83 | 28 |
| 3 | 1,383 | 82 | 1,407 | 83 | 24 |
| 4 | 1,381 | 82 | 1,400 | 83 | 19 |
| 5 | 1,380 | 81 | 1,394 | 82 | 14 |
| 6 | 1,376 | 81 | 1,388 | 82 | 11 |
| 7 | 1,373 | 81 | 1,381 | 82 | 8 |
| 8 | 1,370 | 81 | 1,375 | 81 | 5 |
| 9 | 1,367 | 81 | 1,373 | 81 | 7 |
| 10 | 1,363 | 81 | 1,372 | 81 | 8 |
| 11 | 1,354 | 80 | 1,370 | 81 | 16 |
| 12 | 1,345 | 79 | 1,368 | 81 | 24 |
| 13 | 1,336 | 79 | 1,367 | 81 | 31 |
| 14 | 1,326 | 78 | 1,364 | 81 | 37 |
| 15 | 1,317 | 78 | 1,360 | 80 | 43 |
| 16 | 1,308 | 77 | 1,357 | 80 | 49 |
| 17 | 1,299 | 77 | 1,354 | 80 | 55 |
| 18 | 1,290 | 76 | 1,351 | 80 | 60 |
| 19 | 1,282 | 76 | 1,341 | 79 | 60 |
| 20 | 1,273 | 75 | 1,332 | 79 | 59 |
| Total | 26,896 | | 27,512 | | |
| Average Annual | 1,345 | | 1,376 | | 31 |

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**WETLAND VALUE ASSESSMENT
MULTIPLE AREA BENEFITS SUMMARY SHEET**

Project: PTV-20 Lake Portage Landbridge

The WVA analysis for project PTV-20 includes 2 areas, each consisting of brackish marsh. Total WVA benefits (AAHUs) for this project are obtained by adding the benefits calculated for each area, as summarized below:

| <u>Area</u> | <u>AAHUs</u> |
|-------------|--------------|
| 1 | 25.51 |
| 2 | 8.75 |

| | |
|-------------------------|-----------------|
| TOTAL BENEFITS = | 34 AAHUS |
|-------------------------|-----------------|

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: PTV-20 Lake Portage Landbridge
Area 1

Project Area: 56

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|--------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 79 | 0.81 | 75 | 0.78 | 0 | 0.10 |
| V2 | % Aquatic | 0 | 0.10 | 0 | 0.10 | 0 | 0.10 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 80 | 0.84 | 80 | 0.84 | | 0.10 |
| | Class 2 | | | | | | |
| | Class 3 | | | | | | |
| | Class 4 | 20 | | 20 | | | |
| | Class 5 | | | | | 100 | |
| V4 | %OW <= 1.5ft | 100 | 0.60 | 100 | 0.60 | 33 | 0.52 |
| V5 | Salinity (ppt) | 8 | 1.00 | 8 | 1.00 | 15 | 0.25 |
| V6 | Access Value | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Emergent Marsh HSI | | = | 0.87 | EM HSI = | 0.84 | EM HSI = | 0.17 |
| Open Water HSI | | = | 0.38 | OW HSI = | 0.38 | OW HSI = | 0.26 |

Project: PTV-20 Lake Portage Landbridge
Area 1

Project Area: 56

Condition: Future With Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|--------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 79 | 0.81 | 100 | 1.00 | 100 | 1.00 |
| V2 | % Aquatic | 0 | 0.10 | 0 | 0.10 | 0 | 0.10 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 80 | 0.84 | 100 | 1.00 | 100 | 1.00 |
| | Class 2 | | | | | | |
| | Class 3 | | | | | | |
| | Class 4 | 20 | | | | | |
| | Class 5 | | | | | | |
| V4 | %OW <= 1.5ft | 100 | 0.60 | 100 | 0.60 | 100 | 0.60 |
| V5 | Salinity (ppt) | 8 | 1.00 | 8 | 1.00 | 8 | 1.00 |
| V6 | Access Value | 1.00 | 1.00 | 0.79 | 0.81 | 0.79 | 0.81 |
| Emergent Marsh HSI | | = | 0.87 | EM HSI = | 0.96 | EM HSI = | 0.96 |
| Open Water HSI | | = | 0.38 | OW HSI = | 0.37 | OW HSI = | 0.37 |

AAHU CALCULATION - EMERGENT MARSH

Project: PTV-20 Lake Portage Landbridge
Area 1

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 44 | 0.87 | 38.12 | |
| 1 | 42 | 0.84 | 35.44 | 36.77 |
| 20 | 0 | 0.17 | 0.00 | 247.21 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 14.20 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|--------------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 44 | 0.87 | 38.12 | |
| 1 | 56 | 0.96 | 53.94 | 45.84 |
| 20 | 56 | 0.96 | 53.94 | 1024.94 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 53.54 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|-------|
| A. Future With Project Emergent Marsh AAHUs = | 53.54 |
| B. Future Without Project Emergent Marsh AAHUs = | 14.20 |
| Net Change (FWP - FWOP) = | 39.34 |

AAHU CALCULATION - OPEN WATER

Project: PTV-20 Lake Portage Landbridge
Area 1

| Future Without Project | | | Total | Cummulative |
|------------------------|-------------|-------|----------------|--------------|
| TY | Water Acres | x HSI | HUs | HUs |
| 0 | 12 | 0.38 | 4.51 | |
| 1 | 14 | 0.38 | 5.27 | 4.89 |
| 20 | 56 | 0.26 | 14.57 | 203.84 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 10.44 |

| Future With Project | | | Total | Cummulative |
|---------------------|-------------|-------|--------------|-------------|
| TY | Water Acres | x HSI | HUs | HUs |
| 0 | 0 | 0.38 | 0.00 | |
| 1 | 0 | 0.37 | 0.00 | 0.00 |
| 20 | 0 | 0.37 | 0.00 | 0.00 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 0.00 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|--------|
| A. Future With Project Open Water AAHUs = | 0.00 |
| B. Future Without Project Open Water AAHUs = | 10.44 |
| Net Change (FWP - FWOP) = | -10.44 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | |
|---|--------|
| A. Emergent Marsh Habitat Net AAHUs = | 39.34 |
| B. Open Water Habitat Net AAHUs = | -10.44 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | 25.51 |

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: PTV-20 Lake Portage Landbridge
Area 2

Project Area: 1,496

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 14 | |
|----------------------|----------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 80 | 0.82 | 80 | 0.82 | 79 | 0.81 |
| V2 | % Aquatic | 5 | 0.15 | 5 | 0.15 | 5 | 0.15 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 80 | 0.84 | 80 | 0.84 | 80 | 0.84 |
| | Class 2 | | | | | | |
| | Class 3 | | | | | | |
| | Class 4 | 20 | | 20 | | 20 | |
| V4 | %OW <= 1.5ft | 5 | 0.16 | 5 | 0.16 | 5 | 0.16 |
| 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 = | | | 0.87 | EM HSI = | 0.87 | EM HSI = | 0.87 |
| Open Water HSI = | | | 0.39 | OW HSI = | 0.39 | OW HSI = | 0.39 |

Project: PTV-20 Lake Portage Landbridge
FWOP

| Variable | | TY 15 | | TY 20 | | | |
|----------|----------------|-------|------|----------|------|----------|----|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 79 | 0.81 | 78 | 0.80 | | |
| V2 | % Aquatic | 0 | 0.10 | 0 | 0.10 | | |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 80 | 0.84 | 80 | 0.84 | | |
| | Class 2 | | | | | | |
| | Class 3 | | | | | | |
| | Class 4 | 20 | | 20 | | | |
| V4 | %OW <= 1.5ft | 5 | 0.16 | 5 | 0.16 | | |
| V5 | Salinity (ppt) | 8 | 1.00 | 11 | 0.85 | | |
| V6 | Access Value | 1.00 | 1.00 | 1.00 | 1.00 | | |
| EM HSI = | | | 0.87 | EM HSI = | 0.84 | EM HSI = | |
| OW HSI = | | | 0.34 | OW HSI = | 0.33 | OW HSI = | |

Project: PTV-20 Lake Portage Landbridge
 Area 2
 Condition: Future With Project

Project Area: 1,496

| Variable | | TY 0 | | TY 1 | | TY 3 | |
|----------|--------------------|-------|------|----------|------|----------|------|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 80 | 0.82 | 80 | 0.82 | 80 | 0.82 |
| V2 | % Aquatic | 5 | 0.15 | 5 | 0.15 | 5 | 0.15 |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 80 | 0.84 | 80 | 0.84 | 80 | 0.84 |
| | Class 2 | | | | | | |
| | Class 3 | | | | | | |
| | Class 4 | 20 | | 20 | | 20 | |
| V4 | %OW <= 1.5ft | 5 | 0.16 | 5 | 0.16 | 5 | 0.16 |
| 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 | = | 0.87 | EM HSI = | 0.87 | EM HSI = | 0.87 |
| | Open Water HSI | = | 0.39 | OW HSI = | 0.39 | OW HSI = | 0.39 |

Project: PTV-20 Lake Portage Landbridge
 FWP

| Variable | | TY 20 | | | | | |
|----------|----------------|-------|------|----------|----|----------|----|
| | | Value | SI | Value | SI | Value | SI |
| V1 | % Emergent | 79 | 0.81 | | | | |
| V2 | % Aquatic | 5 | 0.15 | | | | |
| V3 | Interspersion | % | | % | | % | |
| | Class 1 | 80 | 0.84 | | | | |
| | Class 2 | | | | | | |
| | Class 3 | | | | | | |
| | Class 4 | 20 | | | | | |
| V4 | %OW <= 1.5ft | 5 | 0.16 | | | | |
| V5 | Salinity (ppt) | 6 | 1.00 | | | | |
| V6 | Access Value | 1.00 | 1.00 | | | | |
| | EM HSI | = | 0.87 | EM HSI = | | EM HSI = | |
| | OW HSI | = | 0.39 | OW HSI = | | OW HSI = | |

AAHU CALCULATION - EMERGENT MARSH

Project: PTV-20 Lake Portage Landbridge
Area 2

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|-----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 1197 | 0.87 | 1043.91 | |
| 1 | 1196 | 0.87 | 1043.04 | 1043.48 |
| 14 | 1187 | 0.87 | 1028.49 | 13464.88 |
| 15 | 1181 | 0.87 | 1023.30 | 1025.89 |
| 20 | 1164 | 0.84 | 982.58 | 5014.37 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 1027.43 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|-----------------|
| TY | Marsh Acres | x HSI | | |
| 0 | 1197 | 0.87 | 1043.91 | |
| 1 | 1197 | 0.87 | 1043.91 | 1043.91 |
| 3 | 1200 | 0.87 | 1046.53 | 2090.45 |
| 20 | 1188 | 0.87 | 1029.36 | 17644.89 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 1038.96 |

| NET CHANGE IN AAHUs DUE TO PROJECT | | | | |
|--|---|--|--|---------|
| A. Future With Project Emergent Marsh AAHUs | = | | | 1038.96 |
| B. Future Without Project Emergent Marsh AAHUs | = | | | 1027.43 |
| Net Change (FWP - FWOP) | = | | | 11.53 |

AAHU CALCULATION - OPEN WATER

Project: PTV-20 Lake Portage Landbridge
Area 2

| Future Without Project | | | Total HUs | Cummulative HUs |
|------------------------|-------------|-------|----------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 299 | 0.39 | 117.40 | |
| 1 | 300 | 0.39 | 117.79 | 117.59 |
| 14 | 309 | 0.39 | 121.32 | 1554.22 |
| 15 | 315 | 0.34 | 108.31 | 114.86 |
| 20 | 332 | 0.33 | 110.46 | 547.09 |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs = | 116.69 |

| Future With Project | | | Total HUs | Cummulative HUs |
|---------------------|-------------|-------|--------------|-----------------|
| TY | Water Acres | x HSI | | |
| 0 | 299 | 0.39 | 117.40 | |
| 1 | 295 | 0.39 | 115.83 | 116.61 |
| 3 | 296 | 0.39 | 116.22 | 232.04 |
| 20 | 308 | 0.39 | 120.93 | 2015.75 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | AAHUs | 118.22 |

| NET CHANGE IN AAHUs DUE TO PROJECT | |
|--|-------------|
| A. Future With Project Open Water AAHUs = | 118.22 |
| B. Future Without Project Open Water AAHUs = | 116.69 |
| Net Change (FWP - FWOP) = | 1.53 |

| TOTAL BENEFITS IN AAHUs DUE TO PROJECT | |
|---|-------------|
| A. Emergent Marsh Habitat Net AAHUs = | 11.53 |
| B. Open Water Habitat Net AAHUs = | 1.53 |
| Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6 | 8.75 |

Wetland Value Assessment
Average Annual Acres of Emergent Marsh

Project: PTV-20 Lake Portage Landbridge - Area 1

Marsh Type: Brackish

Project Area: 56

| Project Year | Emergent Marsh | | | | Net Acres |
|-----------------------|-----------------|----|--------------|-----|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 44 | 79 | 44 | 79 | - |
| 1 | 42 | 75 | 56 | 100 | 14 |
| 2 | 40 | 71 | 56 | 100 | 16 |
| 3 | 38 | 67 | 56 | 100 | 18 |
| 4 | 35 | 63 | 56 | 100 | 21 |
| 5 | 33 | 59 | 56 | 100 | 23 |
| 6 | 31 | 55 | 56 | 100 | 25 |
| 7 | 29 | 51 | 56 | 100 | 27 |
| 8 | 27 | 47 | 56 | 100 | 29 |
| 9 | 24 | 43 | 56 | 100 | 32 |
| 10 | 22 | 39 | 56 | 100 | 34 |
| 11 | 20 | 36 | 56 | 100 | 36 |
| 12 | 18 | 32 | 56 | 100 | 38 |
| 13 | 15 | 28 | 56 | 100 | 41 |
| 14 | 13 | 24 | 56 | 100 | 43 |
| 15 | 11 | 20 | 56 | 100 | 45 |
| 16 | 9 | 16 | 56 | 100 | 47 |
| 17 | 7 | 12 | 56 | 100 | 49 |
| 18 | 4 | 8 | 56 | 100 | 52 |
| 19 | 2 | 4 | 56 | 100 | 54 |
| 20 | 0 | 0 | 56 | 100 | 56 |
| Total | 420 | | 1,120 | | |
| Average Annual | 21 | | 56 | | 35 |

12/09/98

Wetland Value Assessment

Average Annual Acres of Emergent Marsh

Project: PTV-20 Lake Portage Landbridge - Area 2

Marsh Type: Brackish

Project Area: 1,496

| Project Year | Emergent Marsh | | | | Net Acres |
|-----------------------|-----------------|----|---------------|----|-----------|
| | Without Project | | With Project | | |
| | Acres | % | Acres | % | |
| 0 | 1,197 | 80 | 1,197 | 80 | - |
| 1 | 1,196 | 80 | 1,197 | 80 | 1 |
| 2 | 1,196 | 80 | 1,197 | 80 | 1 |
| 3 | 1,195 | 80 | 1,200 | 80 | 5 |
| 4 | 1,194 | 80 | 1,199 | 80 | 5 |
| 5 | 1,193 | 80 | 1,198 | 80 | 5 |
| 6 | 1,193 | 80 | 1,198 | 80 | 5 |
| 7 | 1,192 | 80 | 1,197 | 80 | 5 |
| 8 | 1,191 | 80 | 1,196 | 80 | 5 |
| 9 | 1,191 | 80 | 1,196 | 80 | 5 |
| 10 | 1,190 | 80 | 1,195 | 80 | 5 |
| 11 | 1,189 | 79 | 1,194 | 80 | 5 |
| 12 | 1,188 | 79 | 1,193 | 80 | 5 |
| 13 | 1,188 | 79 | 1,193 | 80 | 5 |
| 14 | 1,187 | 79 | 1,192 | 80 | 5 |
| 15 | 1,181 | 79 | 1,191 | 80 | 11 |
| 16 | 1,178 | 79 | 1,191 | 80 | 12 |
| 17 | 1,176 | 79 | 1,190 | 80 | 14 |
| 18 | 1,174 | 78 | 1,189 | 79 | 16 |
| 19 | 1,171 | 78 | 1,188 | 79 | 17 |
| 20 | 1,164 | 78 | 1,188 | 79 | 24 |
| Total | 23,726 | | 23,881 | | |
| Average Annual | 1,186 | | 1,194 | | 8 |

12/09/98

**WETLAND VALUE ASSESSMENT
SUMMARY SHEET**

Project: TE-8 Bayou Pelton Wetland Protection

The WVA analysis for project TE-8 consists of one area of cypress swamp. Total WVA benefits (AAHUs) for this project are:

| | |
|-------------------------|-----------------|
| TOTAL BENEFITS = | 24 AAHUS |
|-------------------------|-----------------|

COMMUNITY HABITAT SUITABILITY MODEL

Fresh Swamp

Project..... TE-8 Bayou Pelton Wetland Protection

Acres:

475

Condition: Future Without Project

| Variable | | TY 0 | | TY 1 | | TY 20 | |
|----------|--|---|------|---|------|--|------|
| | | Class/Value | SI | Class/Value | SI | Class/Value | SI |
| V1 | Stand Structure | % Cover 50 | 0.70 | % Cover 50 | 0.70 | % Cover 50 | 0.49 |
| | Overstory Scrub shrub Herbaceous | | | | | | |
| V2 | Maturity (input age or species composition and dbh) | Age Cypress % 92 Cypress dbh 9 Tupelo et al. % 8 Tupelo et al dbh 4.5 | 0.29 | Age Cypress % 92 Cypress dbh 9 Tupelo et al. % 8 Tupelo et al dbh 4.5 | 0.29 | Age Cypress % 87 Cypress dbh 8.2 Tupelo et al. % 13 Tupelo et al dbh 8.9 | 0.28 |
| V3 | Hyrology | Class | 0.40 | Class | 0.40 | Class | 0.30 |
| V4 | Forest Size | Class | 1.00 | Class | 1.00 | Class | 1.00 |
| V5 | Surrounding Land Use | Values % | 0.81 | Values % | 0.81 | Values % | 0.81 |
| | Forest / marsh Abandoned Ag Pasture / Hay Active Ag Development Disturbance | | | | | | |
| V6 | Type Distance | Class Class | 0.97 | Class Class | 0.97 | Class Class | 0.97 |
| | | HSI = | 0.52 | HSI = | 0.52 | HSI = | 0.44 |

COMMUNITY HABITAT SUITABILITY MODEL

Fresh Swamp

Project..... TE-8 Bayou Pelton Wetland Protection

Acres:

475

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 | 0.70 | 50 | 0.70 | 50 | 0.73 |
| | Scrub shrub | | | | | | |
| | Herbaceous | | | | | | |
| V2 | Maturity | Age | | Age | | Age | |
| | (input age or | Cypress % | | Cypress % | | Cypress % | |
| | species composition and dbh) | 92 | | 92 | | 87 | |
| | | Cypress dbh | | Cypress dbh | | Cypress dbh | |
| | | 9 | | 9 | | 12.6 | |
| | | Tupelo et al. % | | Tupelo et al. % | | Tupelo et al. % | |
| | | 8 | | 8 | | 13 | |
| | | Tupelo et al dbh | | Tupelo et al dbh | | Tupelo et al dbh | |
| | | 4.5 | 0.29 | 4.5 | 0.29 | 8.9 | 0.66 |
| V3 | Hyrology | Class | 0.40 | Class | 0.40 | Class | 0.50 |
| V4 | Forest Size | Class | 5 | Class | 5 | Class | 5 |
| | Surrounding Land Use | Values % | 1.00 | Values % | 1.00 | Values % | 1.00 |
| V5 | Forest / marsh | | 0.81 | | 0.81 | | 0.81 |
| | Abandoned Ag | | | | | | |
| | Pasture / Hay | | | | | | |
| | Active Ag | | | | | | |
| | Development | | | | | | |
| V6 | Disturbance | Class | | Class | | Class | |
| | Type | Class | 0.97 | Class | 0.97 | Class | 0.97 |
| | Distance | Class | | Class | | Class | |
| | | HSI = | 0.52 | HSI = | 0.52 | HSI = | 0.70 |

Coastal Wetlands Planning, Protection and
Restoration Act

8th Priority Project List Report

Appendix F

Public Support for Candidate Projects



Public Support for Candidate Projects¹
for the
8th Priority Project List

XBA-63ii A

Barataria Land Bridge Shoreline Protection Project (Phase 2, Increment 1)

Honorable John A. Alario, Jr. (House of Representatives, District 83))

8 December 98

Honorable Francis C. Heitmeier (State Senator, District 7) 7 December 98

PTV-20

Lake Portage Land Bridge

Michael J. Bertrand (Vermilion Parish Police Jury Secretary-Treasurer)

19 November 98

Honorable John Breaux (United States Senate) 12 November 98

Honorable Troy Hebert (State Representative, District 49) 9 November 98

Honorable Gerald J. Theunissen (State Senator, District 25) 2 November 98

Ernest V. Shields (Vice President Operations Sea Robin Pipeline Company)
8 December 98

Honorable Chris John (Congress of the United States) 3 December 98

Honorable Mickey Frith (House of Representatives, District 47)

16 November 98

TE-8

Bayou Pelton Wetland Protection

Mathew B. Sevier (Coastal Zone Manager Terrebonne Parish) 10 November 98

PTE-68

Bank Protection Demonstration Project on the Gulf Intracoastal Waterway
(GIWW) at Mandalay, Louisiana

Mathew B. Sevier (Coastal Zone Manager Terrebonne Parish) 10 November 98

PPO-74a

Bayou Bienvenue Pumping Station Terracing

Honorable Thomas R. Warner (House of Representatives, District 104)

9 November 98

Honorable Kenneth L. Odinet, Sr. (House of Representatives, District 103)

30 October 98

PPO-38

Hopedale Hydrologic Restoration

Myra M. Kattengell (Clerk of the Council, St. Bernard Parish

Government, Resolution SBPC #1111-07-97) 1 July 97

Honorable Kenneth L. Odinet, Sr. (House of Representatives, District 103)

30 October 98

¹ Date Listed is date of letter of support

Public Support for Candidate Projects¹
for the
8th Priority Project List
(Continued)

PBS-1

Upper Oak River Siphon

Hosea M. Ned, Jr. (Plaquemines Parish Government, Councilman, District 1)
15 December 97

Arthur Lee Lafrance (Resident and Landowner Braithwaite, La.)
2 December 97

CS-1d

Constance-Holly Beach Sand Management Plan

Honorable Daliel T. "Dan" Flavin (House of Representatives, District 36)
21 April 98

Honorable Gerald J. Theunissen (State Senator, District 25) 22 April 98

Honorable Dan W. Morrish (State Representative, District 37) 22 April 98

Honorable Herman Ray Hill (State Representative, District 32) 22 April 98

Honorable Kay Lles (House of Representatives, District 31) 22 April 98

Honorable Ronnie Johns (House of Representatives, District 33) 22 April 98

Honorable Elcie Guillory (House of Representatives, District 34) 22 April 98

Honorable Vic Stelly (House of Representatives, District 35) 22 April 98

Honorable James J. Cox (State Senator, District 27) 22 April 98

Honorable Thomas H. Cassnova, III, M.D. (State Senator, District 26)
22 April 98

Honorable Chris John (Congress of the United States) 22 April 98

Honorable Chris John (Congress of the United States) 3 November 98

Honorable Gerald J. Theunissen (State Senator, District 25) 2 November 98

Honorable Dan Flavin (House of Representatives, District 36) 2 November 98

Craig P. Leach (Resident and Landowner, Cameron, La.) 29 October 98

Magnus McGee (President, Cameron Parish Gravity Drainage District #7)
19 December 98

Lawrence P. Roger (Dickinson, Texas) 11 November 98

Elizabeth Anne Nostrand (Resident of Johnson Bayou, La. and Student of
Johnson Bayou High School) 27 October 98

Kevin Cormier (Resident of Cameron Parish, La. and Student of Johnson Bayou
High School) 28 October

Mikey Merritt (Resident of Johnson Bayou, La. and Student of Johnson Bayou
High School) 27 October 98

Misty Badon (Resident of Johnson Bayou, La. and Student of Johnson Bayou
High School) 27 October 98

¹ Date Listed is date of letter of support

Public Support for Candidate Projects¹
for the
8th Priority Project List
(Continued)

CS-1d

Constance-Holly Beach Sand Management Plan

Jeremy Trahan (Resident of Cameron Parish, La. and Student of Johnson Bayou High School) 27 October 98
Amber Romero (Resident of Johnson Bayou, La. and Student of Johnson Bayou High School) 27 October 98
Skyler Richard (Resident of Cameron Parish, La. and Student of Johnson Bayou High School) 27 October 98
Charles Meaux (Resident of Holly Beach and Student of Johnson Bayou High School) 27 October 98
Andrea Brown (Resident of Cameron Parish, La. and Student of Johnson Bayou High School) 27 October 98
Ashley Erbeling (Resident of Johnson Bayou, La. and Student of Johnson Bayou High School) 27 October 98
Natasha Rae Trahan (Resident of Johnson Bayou, La. and Student of Johnson Bayou High School) 27 October 98
Rhonda Morrison (Secretary Cameron Parish Waterworks, JB/HB/Waterworks #10) 22 October 98
George Leboeuf, (Vice President, Cameron Parish Police Jury) Resolution 3 November 98

PME-48

Shoreline Protection Demonstration Project on Grand Lake, Louisiana

Honorable Chris John (Congress of the United States) 4 November 98
Honorable Gerald J. Theunissen (State Senator, District 25) 4 November 98
Honorable Dan Flavin (House of Representatives, District 36) 4 November 98
Claude "Buddy" Leach (President, The Sweet Lake Land and Oil Company, Inc., 21 April 98

PME-15

Humble Canal Hydrologic Restoration

Honorable Chris John (Congress of the United States) 3 November 98
Honorable Gerald J. Theunissen (State Senator, District 25) 2 November 98
Honorable Dan Flavin (House of Representatives, District 36) 2 November 98
Douaine Conner (President Cameron Parishwide Water Management Board) 27 October 98
George Leboeuf (Vice President, Cameron Parish Police Jury) Resolution 3 November 98

¹ Date Listed is date of letter of support

UPPER OAKS RIVER FRESHWATER SIPHON
PETITION

We the undersigned as land owners on the east bank of Plaquemines Parish fully support the "Coastal Wetlands Planning, Protection and Restoration Act" project PBS-1 Upper Oaks River Freshwater Siphon.

A. Larance Jr
Anthony C. Palzo
Arthur Palzo
J. Art B. Palzo
Faster P. Dartus
Jacqueline Dartus
R. H. Schenk
Guy Gallura
Gloria Meyer
Walter Vega
L. J. Ganga
Leland J. Ganga
Bertrand S. Foch
Manuel Guerrero
J. J. [unclear]
Robert [unclear]
Eugene [unclear]
Jerry [unclear]
Charles [unclear]

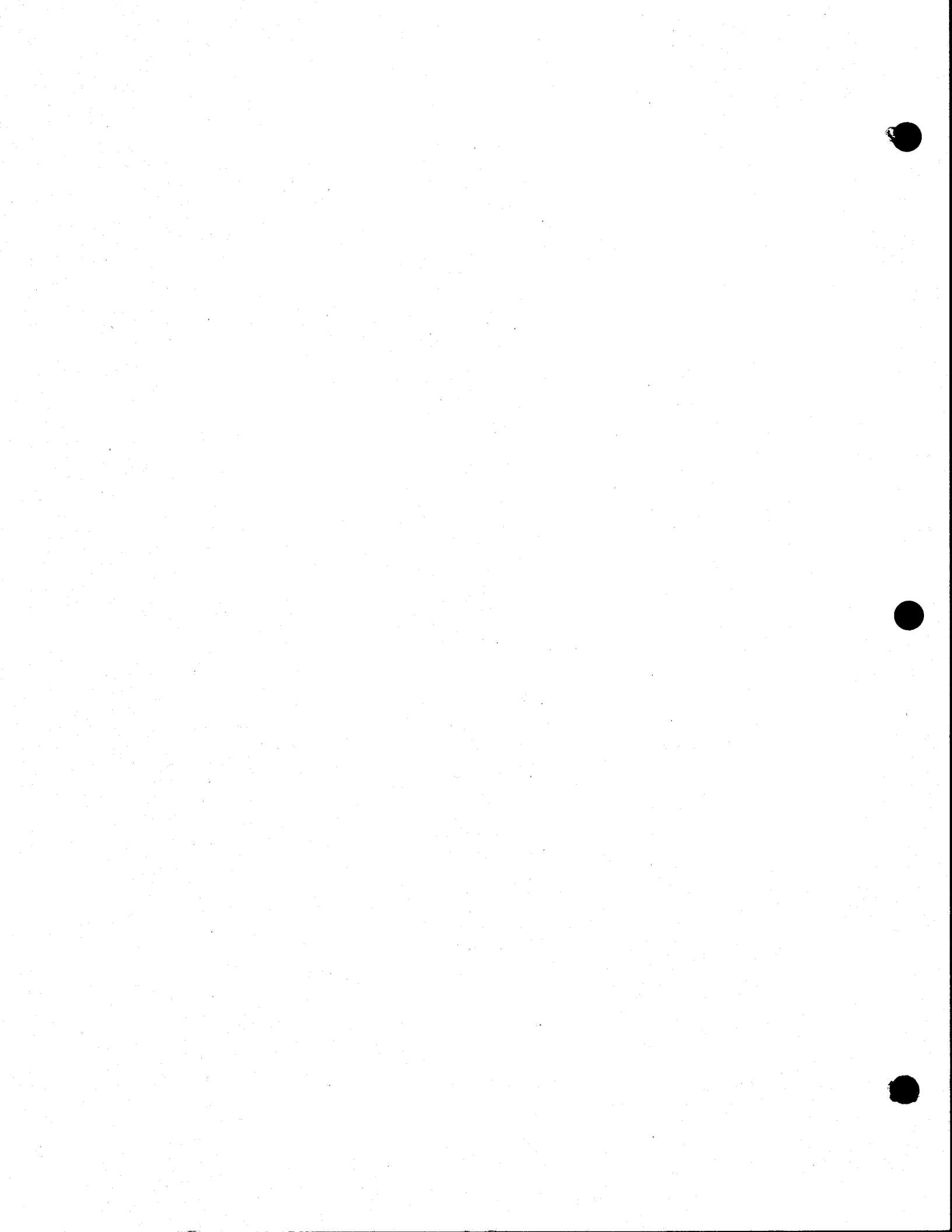
Kenneth Williams
Maddie Williams
Russell Davis
C. J. M. [unclear]
Cyrus Olds
Lucille Olds
C. S. [unclear]
Howard [unclear]
J. E. [unclear]
C. [unclear]
W. [unclear]
C. [unclear]

Coastal Wetlands Planning, Protection and
Restoration Act

8th Priority Project List Report

Appendix G

Status of Projects from Previous Priority Project
Lists



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

PROJECT STATUS SUMMARY REPORT

11 February 1999

Summary report on the status of CWPPRA projects prepared for the Louisiana Coastal Wetlands Conservation and Restoration Task Force.

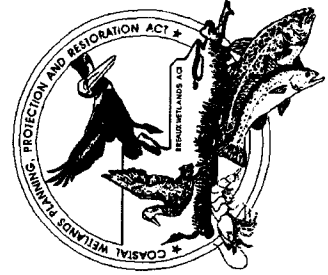
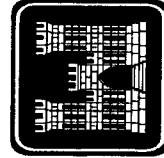
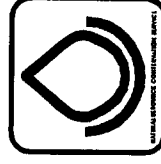
Reports enclosed:

- Project Details by Lead Agency
- Project Summary by Basin
- Project Summary by Parish
- 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 Divisi
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 |
|---------|-------|--------|-------|-----|-----------------------|-----------|-----------------------|---------|------------------------------|
| | | | | | Const Start | Const End | Baseline | Current | Obligations/ Expenditures |

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-99 | \$1,759,257 | \$1,676,424 | 95.3 | \$1,208,171 \$1,085,634 |
|---------------------------------|------|------|-----|-------------|-------------|-----------|-------------|-------------|------|----------------------------|

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 purchase oyster leases for O&M beneficial disposal.

| | | | | | | | | | | |
|---|------|-------|-----|-------------|-------------|-------------|-------------|-------------|------|----------------------------|
| Bayou LaBranche Wetlands Restoration | PONT | STCHA | 203 | 17-Apr-93 A | 06-Jan-94 A | 07-Apr-94 A | \$4,461,301 | \$3,713,083 | 83.2 | \$3,499,243 \$3,493,868 |
|---|------|-------|-----|-------------|-------------|-------------|-------------|-------------|------|----------------------------|

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. The area was seeded by LA DNR on June 25, 1994.

Status: 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.

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 | % | |
| 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 | \$58,378 \$58,984 |

Remarks This project was added to Priority List 1 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 | 63 | 17-Apr-93 A | 10-Jan-96 A | 11-Feb-96 A | \$1,526,000 | \$2,065,599 | 135.41 | \$1,704,915 \$1,723,064 |
|-------|-------|----|-------------|-------------|-------------|-------------|-------------|--------|----------------------------|

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 | Const Start | Const End | ***** ESTIMATES ***** | ***** ESTIMATES ***** | Actual Obligations/ Expenditures |
|-----------------------------|-------|--------|-------|-----|-------------|-----------|-----------------------|-----------------------|----------------------------------|
| | | | | | | | Baseline | Current | % |
| West Bay Sediment Diversion | DELTA | PLAQ | 9,831 | | | | \$8,517,066 | \$16,673,000 | 195.8! |
| | | | | | | | | | \$482,345 |
| | | | | | | | | | \$499,428 |

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: Unscheduled. At the April 14, 1998 Task Force meeting, approval was granted to proceed with the project at the current price of \$16.7 million. Cost sharing agreement being negotiated as of December 22, 1998.

Total Priority List 1 10,542

\$16,323,624 \$24,188,105 148.2
\$6,953,053
\$6,860,978

- 5 Project(s)
- 4 Cost Sharing Agreements Executed
- 4 Construction Started
- 3 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

| PROJECT | BASIN | PARISH | ACRES | CSA | SCHEDULES ***** | Const Start | Const End | ***** ESTIMATES ***** | ***** | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|-----------------|-------------|-----------|-----------------------|---------|----------------------------------|
| | | | | | | | | Baseline | Current | % |

Priority List 2

| | | | | | | | | | | | |
|------------------------------|------|-------|-------|-------------|-------------|-------------|--|-------------|-------------|--------|----------------------------|
| Clear Marais Bank Protection | CALC | CALCA | 1,066 | 29-Apr-96 A | 29-Aug-96 A | 03-Mar-97 A | | \$1,741,310 | \$3,833,898 | 220.21 | \$2,890,565 \$2,809,223 |
|------------------------------|------|-------|-------|-------------|-------------|-------------|--|-------------|-------------|--------|----------------------------|

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 | \$6,735,969 | 138.81 | \$5,630,832 \$5,175,510 |
|-------|-------|-----|-------------|-------------|-------------|--|--|-------------|-------------|--------|----------------------------|

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.

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

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| PROJECT | BASIN | PARISH | ACRES | CSA | SCHEDULES Const Start | Const End | ESTIMATES Baseline | Current | % | Actual Obligations/ Expenditures |
|-----------------------|-------|--------|-------|-----|--------------------------|-----------|-----------------------|--------------|-------|--|
| Total Priority List 2 | | | | | | | | | | |
| | | | 1,540 | | | | \$6,595,412 | \$10,569,867 | 160.3 | \$8,521,397 \$7,984,733 |

- 2 Project(s)
- 2 Cost Sharing Agreements Executed
- 2 Construction Started
- 2 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**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 | Baseline | |
| | | | | | Const End | Current | % |

Priority List 3

| | | | | | | | | | | |
|-------------------------------|-------|------|-----|-------------|-------------|-------------|-----------|-----------|-------|------------------------|
| Channel Armor Gap Crevasse | DELTA | PLAQ | 936 | 13-Jan-97 A | 22-Sep-97 A | 02-Nov-97 A | \$808,397 | \$949,027 | 117.4 | \$528,809 \$519,114 |
|-------------------------------|-------|------|-----|-------------|-------------|-------------|-----------|-----------|-------|------------------------|

Remarks The Cost Sharing Agreement is being reviewed by LA 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 | 28-Feb-99 | \$512,198 | \$329,338 | 64.3 | \$291,702 \$240,600 |
|------------------------------------|------|-------|-----|-------------|-------------|-----------|-----------|-----------|------|------------------------|

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 to begin construction in January 1999.

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)**

| PROJECT | BASIN | PARISH | ACRES | CSA | SCHEDULES ***** Const Start | Const End | Baseline | ESTIMATES ***** Current | % | Actual Obligations/ Expenditures |
|-------------------------|-------|--------|-------|-----|--------------------------------|-----------|-------------|----------------------------|-----|--|
| Pass-a-Loutrre Crevasse | DELTA | PLAQ | 0 | | | | \$2,857,790 | \$108,926 | 3.8 | \$115,873 \$115,873 |

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 | \$1,387,291 | 33.2 | \$936,385 \$875,587 |
|-----------------------|-------|-------------|-------------|------|------------------------|

- 3 Project(s)
- 2 Cost Sharing Agreements Executed
- 2 Construction Started
- 1 Construction Completed
- 1 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
 Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

| PROJECT | BASIN | PARISH | ACRES | CSA | Const Start | Const End | Baseline | ESTIMATES Current | % | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|-------------|-----------|----------|-------------------|---|----------------------------------|
|---------|-------|--------|-------|-----|-------------|-----------|----------|-------------------|---|----------------------------------|

Priority List 4

| | | | | | | | | | | |
|--------------------|------|------|---|--|--|--|-------------|----------|-----|----------------------|
| Grand Bay Crevasse | BRET | PLAQ | 0 | | | | \$2,468,908 | \$52,919 | 2.1 | \$53,920 \$53,920 |
|--------------------|------|------|---|--|--|--|-------------|----------|-----|----------------------|

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.

| | | | | | | | | | | |
|--------------------|-------|------|---|-------------|--|--|-----------|-----------|-------|----------------------|
| Hopper Dredge Demo | DELTA | PLAQ | 0 | 30-Jun-97 A | | | \$300,000 | \$372,454 | 124.2 | \$30,061 \$30,061 |
|--------------------|-------|------|---|-------------|--|--|-----------|-----------|-------|----------------------|

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. Project under review.

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | ***** ESTIMATES ***** | ***** ESTIMATES ***** | ***** ESTIMATES ***** | Actual Obligations/ Expenditures |
|---------------------|-------|--------|-------|-----|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|
| | | | | | Const Start | Const End | Baseline | Current | % |
| Total Priority List | | | | | | | | | |
| 4 | | | 0 | | | | \$2,768,908 | \$425,373 | 15.4 |

2 Project(s)

- 1 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 1 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**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 | Baseline | |
| | | | | | Const End | Current | % |

Priority List 5

| | | | | | | | | | | |
|--------------------------------------|------|-----|----|-----------|-----------|-----------|-------------|-------------|------|------------------------|
| Bayou Chevee Shoreline Protection | PONT | ORL | 75 | 01-Mar-99 | 01-May-99 | 15-Sep-99 | \$2,890,821 | \$2,416,559 | 83.6 | \$278,970 \$271,557 |
|--------------------------------------|------|-----|----|-----------|-----------|-----------|-------------|-------------|------|------------------------|

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: Awaiting DNR review and concurrence of model CSA for PPL 5 and PPL 6, which was submitted November 1998.

| | | | | | |
|-----------------------|----|-------------|-------------|------|------------------------|
| Total Priority List 5 | 75 | \$2,890,821 | \$2,416,559 | 83.6 | \$278,970 \$271,557 |
|-----------------------|----|-------------|-------------|------|------------------------|

- 1 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**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 | |

Priority List 6

| | | | | | | | | | | | | |
|-----------------------|-------|-------|---|--|--|--|--|-------------|----------|-----|----------|----------|
| Avoca Island (Incr 1) | TERRE | STMRY | 0 | | | | | \$6,438,400 | \$54,621 | 0.8 | \$54,666 | \$54,666 |
|-----------------------|-------|-------|---|--|--|--|--|-------------|----------|-----|----------|----------|

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.

Dusipan/Cutterhead
Dredge Demo

| | | | | | | | | | | | | |
|-------|------|---|--|-------------|-----------|-----------|--|-------------|-------------|-------|----------|----------|
| DELTA | PLAQ | 0 | | 20-Dec-98 * | 01-May-99 | 30-Aug-99 | | \$1,600,000 | \$1,640,000 | 102.5 | \$70,912 | \$70,912 |
|-------|------|---|--|-------------|-----------|-----------|--|-------------|-------------|-------|----------|----------|

Remarks

Status: Awaiting DNR's review/concurrence with model cost sharing agreement for PPL's 5 and 6. CSA submitted to DNR November 30, 1998.

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COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | | | ***** ESTIMATES ***** | | | Actual Obligations/ Expenditures |
|--|-------|--------|-------|-----------|-----------------------|-----------|-------------|-----------------------|--------|------------------------|--|
| | | | | | Const Start | Const End | Baseline | Current | % | | |
| Marsh Island Hydrologic Restoration | TECHE | IBERI | 408 | 01-Mar-99 | 01-Jun-99 | 30-Oct-99 | \$4,094,900 | \$5,118,626 | 125.01 | \$258,607 \$258,778 | |

Remarks

Status: Revised design of closures from earthen to rock because soil borings indicate highly organic material in borrow area. Awaiting LADNR review and concurrence of model CSA for PPL 5 and 6 projects. Submitted to LADNR November 30, 1998.

| | | | | | |
|-----------------------|-----|--------------|-------------|------|------------------------|
| Total Priority List 6 | 408 | \$12,133,300 | \$6,813,247 | 56.2 | \$384,185 \$384,356 |
|-----------------------|-----|--------------|-------------|------|------------------------|

- 3 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 1 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

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COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | ***** ESTIMATES ***** | Actual Obligations/ Expenditures | |
|---------|-------|--------|-------|-------------|-----------------------|-----------------------|----------------------------------|---|
| | | | | Const Start | Const End | Baseline | Current | % |

Priority List 7

| | | | | | | | | |
|---------------------------------|------|-----|---|--|--|-------------|-------------|-------|
| Cut Off Bayou Marsh Restoration | PONT | ORL | 0 | | | \$6,510,200 | \$6,510,200 | 100.0 |
| | | | | | | | \$0 | \$0 |

Remarks This project was approved as an unfunded project on Priority List 7.

Status: Unfunded.

| | | | | | | | | |
|---|------|-------|---|--|--|--------------|--------------|-------|
| Lake Borgne Shore Protection East & West of Shell Beach | PONT | STBER | 0 | | | \$15,133,400 | \$15,133,400 | 100.0 |
| | | | | | | | \$0 | \$0 |

Remarks This project was approved as an unfunded project on Priority List 7.

Status: Unfunded.

**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 | % | |
| Sabine Refuge Marsh Creation, Ph 1 | CALC | CAMER | 0 | | | | \$9,391,600 | \$9,391,600 | 100.0 | \$0 \$0 |

Remarks

Status:

Wine Island Eastward
Expansion

TERRE TERRE 0

\$1,276,100

\$1,276,100

\$0
\$0

Remarks This project was approved as an unfunded project on Priority List 7.

Status: Unfunded.

Total Priority List 7 0

\$32,311,300

\$0
\$0

- 4 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 4 Unfunded Project(s)

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | *****SCHEDULES***** | | *****ESTIMATES***** | | Actual |
|---------|-------|--------|-------|-----|---------------------|-----------|---------------------|---------|------------------------------|
| | | | | | Const Start | Const End | Baseline | Current | Obligations/ Expenditures |

Priority List 8

| | | | | | | | | | | |
|---------------------------------------|------|-------|-----|--|--|--|-------------|-------------|-------|------------|
| Sabine Refuge Marsh Creation, Ph 1 | CALC | CAMER | 953 | | | | \$5,313,000 | \$5,313,000 | 100.0 | \$0 \$0 |
|---------------------------------------|------|-------|-----|--|--|--|-------------|-------------|-------|------------|

Remarks

Status:

Total Priority List 8 953

| | | | | |
|-------------|-------------|-------|-----|-----|
| \$5,313,000 | \$5,313,000 | 100.0 | \$0 | \$0 |
|-------------|-------------|-------|-----|-----|

- 1 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

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COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | | | ***** ESTIMATES ***** | | Actual Obligations/ Expenditures |
|---|-------|--------|-------|-----|-----------------------|-----------|--------------|-----------------------|-------|--|
| | | | | | Const Start | Const End | Baseline | Current | % | |
| Total DEPT. OF THE ARMY, CORPS OF ENGINEERS | | | | | 15,209 | | \$82,514,750 | \$83,424,742 | 101.1 | \$17,157,971 \$16,461,191 |

21 Project(s)

9 Cost Sharing Agreements Executed

8 Construction Started

6 Construction Completed

3 Project(s) Deferred/Deauthorized

4 Unfunded Project(s)

Notes:

- Expenditures based on Corps of Engineers financial data.
- Date codes: A = Actual date * = Behind schedule
- Percent codes: ! = 125% of baseline estimate exceeded

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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| PROJECT | BASIN | PARISH | ACRES | CSA | Const Start | Const End | ***** ESTIMATES ***** Baseline | Current | % | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|-------------|-----------|-----------------------------------|---------|---|--|
|---------|-------|--------|-------|-----|-------------|-----------|-----------------------------------|---------|---|--|

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 | \$238,871 | 100.0 | \$179,153 \$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 | \$238,871 | 100.0 | \$179,153 \$143,855 |
|---------------------|-----------|---|-----------|-----------|-------|------------------------|

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 1 Construction Started
- 1 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)**

| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | | Const End | ***** ESTIMATES ***** | | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|-----------------------|-----------|-----------|-----------------------|---------|-------------------------------------|
| | | | | | Const Start | Const End | | Baseline | Current | |

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 | \$8,914,320 | 140.51 | \$6,531,458 \$5,606,662 |
|---|-------|-------|---|-------------|-------------|-------------|-------------|-------------|--------|----------------------------|

Remarks This phase of the Isles Dernieres restoration project is being combined with Isles Dernieres, Phase I (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. Potential completion of dredging activities on East Island is end of July 1998. Contractor is to provide revised schedule as soon as possible. Containment dikes have been constructed by bucket dredge. Hydraulic dredging was completed September 1998. Vegetation plans will be implemented in spring 1999.

| | | | | | | | | | | | | | | |
|------------------------------|--|--|--|--|--|--|--|--|--|---|-------------|-------------|-------|----------------------------|
| Total Priority List 1 | | | | | | | | | | 9 | \$6,345,468 | \$8,914,320 | 140.5 | \$6,531,458 \$5,606,662 |
|------------------------------|--|--|--|--|--|--|--|--|--|---|-------------|-------------|-------|----------------------------|

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 1 Construction Started
- 1 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | ***** ESTIMATES ***** | Actual Obligations/Expenditures | | |
|---------|-------|--------|-------|-----|-----------------------|-----------------------|---------------------------------|---------|---|
| | | | | | Const Start | Const End | Baseline | Current | % |

Priority List 2

| | | | | | | | | | | |
|--|-------|-------|-----|-------------|-------------|-------------|-------------|--------------|--------|----------------------------|
| Isles Dernieres (Phase 1) (Trinity Island) | TERRE | TERRE | 110 | 17-Apr-93 A | 27-Jan-98 A | 22-Oct-98 A | \$6,907,897 | \$11,781,252 | 170.51 | \$9,063,410 \$7,650,728 |
|--|-------|-------|-----|-------------|-------------|-------------|-------------|--------------|--------|----------------------------|

Remarks: Costs have increased due to construction bids significantly greater than projected in plans and specifications. Additional funds to cover the increased project cost were approved at the January 16, 1998 Task Force meeting.

Status: The 30' hydraulic dredge, the Tom Jones, mobilized at East Island on about January 27, 1998. Dredging was completed in September 1998. Vegetation plans will be implemented in spring 1999.

Total Priority List 2 110

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 1 Construction Started
- 1 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

\$6,907,897 \$11,781,252 170.5 \$9,063,410 \$7,650,728

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)**

Actual
Obligations/
Expenditures

***** ESTIMATES *****
Current %

***** SCHEDULES *****
Const Start Const End

CSA ACRES

PROJECT BASIN PARISH

Priority List 3

| | | | | | | | | | | |
|--------------|------|-------|---|-------------|-------------|-----------|-----------|--------|-----------|-----------|
| Red Mud Demo | PONT | STJON | 0 | 03-Nov-94 A | 08-Jul-96 A | \$350,000 | \$480,500 | 137.31 | \$367,493 | \$360,139 |
|--------------|------|-------|---|-------------|-------------|-----------|-----------|--------|-----------|-----------|

Remarks Bids for construction were opened on January 31, 1996. Project construction started July 8, 1996.

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 winter 1998.

**Whiskey Island
Restoration (Phase 2)**

| | | | | | | | | | | | |
|---|-------|-------|-------|-------------|-------------|-------------|-------------|-------------|--------|-------------|-------------|
| 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 | 159.41 | \$5,956,953 | \$5,048,295 |
|---|-------|-------|-------|-------------|-------------|-------------|-------------|-------------|--------|-------------|-------------|

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 plans to be implemented in spring 1999.

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** Const Start | Const End | ***** ESTIMATES ***** Baseline | Current | % | Actual Obligations/ Expenditures |
|-----------------------|-------|--------|-------|-----|--------------------------------------|-----------|-----------------------------------|-------------|-------|--|
| Total Priority List 3 | | | | | | | | | | |
| | | | 1,239 | | | | \$5,194,274 | \$8,201,686 | 157.9 | \$6,324,446 \$5,408,434 |

- 2 Project(s)
- 2 Cost Sharing Agreements Executed
- 2 Construction Started
- 1 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)**

| | | | | | | | | | | | |
|----------------|--------------|---------------|--------------|------------|------------------------|--------------------|------------------|------------------------------|----------------|----------|---|
| PROJECT | BASIN | PARISH | ACRES | CSA | SCHEDULES ***** | CONST START | CONST END | ***** ESTIMATES ***** | ***** | % | Actual Obligations/ Expenditures |
| | | | | | | | | Baseline | Current | | |

Priority List 4

| | | | | | | | | | | | |
|--------------|------|-------|---|-------------|-----------|--|--|-----------|-----------|-------|-----------------------|
| Compost Demo | CALC | CAMER | 0 | 22-Jul-96 A | 01-Apr-99 | | | \$370,594 | \$425,333 | 114.8 | \$286,199 \$15,588 |
|--------------|------|-------|---|-------------|-----------|--|--|-----------|-----------|-------|-----------------------|

Remarks Plans and specifications are being finalized. All permits have been obtained.

Status: Construction is proposed for April 1999.

| | | | | | | | | | | | |
|-----------------------|---|--|--|--|--|--|--|-----------|-----------|-------|-----------------------|
| Total Priority List 4 | 0 | | | | | | | \$370,594 | \$425,333 | 114.8 | \$286,199 \$15,588 |
|-----------------------|---|--|--|--|--|--|--|-----------|-----------|-------|-----------------------|

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)**

| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | | Const End | Baseline | ***** ESTIMATES ***** | | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|-----------------------|-----|-----------|----------|-----------------------|---|----------------------------------|
| | | | | | Const Start | CSA | | | Current | % | |

Priority List 5

| | | | | | | | | | | | |
|------------------------|-------|-------|-----|------------|--|--|--|--------------|-------------|------|--------------------------|
| Bayou Lafourche Siphon | TERRE | ASCEN | 428 | 19-Feb-97A | | | | \$24,487,337 | \$8,391,454 | 34.3 | \$1,007,500 \$856,106 |
|------------------------|-------|-------|-----|------------|--|--|--|--------------|-------------|------|--------------------------|

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 transfer \$16,095,883 from project funds to the budget for the 8th Priority List. 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 1999.

Status: The Cost Sharing Agreement (CSA) was executed February 19, 1997. Preliminary draft report was distributed to Technical Committee members in October 1998.

| | | | | | | | | | | | |
|------------------------------|--|--|-----|--|--|--|--|--------------|-------------|------|--------------------------|
| Total Priority List 5 | | | 428 | | | | | \$24,487,337 | \$8,391,454 | 34.3 | \$1,007,500 \$856,106 |
|------------------------------|--|--|-----|--|--|--|--|--------------|-------------|------|--------------------------|

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**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 | Baseline | Current % |

Priority List 6

| | | | | | | | | | |
|----------------------------------|-------|-------|---|--|--|-----------|-----------|------|-----------|
| Bayou Boeuf/Verret Basin, Incr 1 | TERRE | STMAR | 0 | | | \$150,000 | \$112,500 | 75.0 | \$112,500 |
|----------------------------------|-------|-------|---|--|--|-----------|-----------|------|-----------|

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: EPA requested deauthorization at the January 16, 1998 Task Force meeting.

| | | | | | | | | | |
|-----------------------|---|--|--|--|--|-----------|-----------|------|-----------|
| Total Priority List 6 | 0 | | | | | \$150,000 | \$112,500 | 75.0 | \$112,500 |
|-----------------------|---|--|--|--|--|-----------|-----------|------|-----------|

- 1 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 1 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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Actual
Obligations/
Expenditures

***** ESTIMATES *****
Current %

***** SCHEDULES *****
Const Start Const End

CSA ACRES

BASIN PARISH

PROJECT

Priority List 7

| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** Const Start Const End | ***** ESTIMATES ***** Baseline Current % | Actual Obligations/ Expenditures |
|--|-------|--------|-------|-----|--|---|--|
| Lake Pelto Dedicated Dredging at New Cut Closure | TERRE | TERRE | 0 | | | \$6,314,700 \$6,314,700 100.0 | \$0 \$0 |

Remarks This project was approved as an unfunded project on Priority List 7.

Status: Unfunded.

Total Priority List 7 0

\$6,314,700 \$6,314,700 100.0
\$0 \$0

- 1 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 1 Unfunded Project(s)

**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 ENVIRONMENTAL PROTECTION AGENCY, REGION 6 | | | | | | | | | | |
| | | | 1,786 | | | | \$50,009,141 | \$44,380,116 | 88.7 | \$23,504,666 \$19,681,372 |

- 9 Project(s)
- 7 Cost Sharing Agreements Executed
- 5 Construction Started
- 4 Construction Completed
- 1 Project(s) Deferred/Deauthorized
- 1 Unfunded Project(s)

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

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

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Actual
Obligations/
Expenditures

***** ESTIMATES *****
Baseline Current %

***** SCHEDULES *****
Const Start Const End

BASIN PARISH ACRES

PROJECT

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 | \$1,608,203 | 97.0 | \$1,090,907 | \$1,009,441 |
|------------------|------|-----|-------|-------------|-------------|-------------|-------------|-------------|------|-------------|-------------|

Remarks Project completed May 30, 1996. A dedication ceremony was held in mid-summer 1996.

Status: Complete.

Cameron Creole
Watershed Hydrologic
Restoration

| | | | | | | | | | | |
|------|-------|-----|-------------|-------------|-------------|-----------|-----------|--------|-----------|-----------|
| CALC | CAMER | 863 | 17-Apr-93 A | 01-Oct-96 A | 28-Jan-97 A | \$660,460 | \$887,001 | 134.3! | \$433,848 | \$407,426 |
|------|-------|-----|-------------|-------------|-------------|-----------|-----------|--------|-----------|-----------|

Remarks

Status: Complete.

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | | ***** ESTIMATES ***** | | Actual Obligations/ Expenditures |
|---|-------|--------|-------|-------------|-----------------------|-------------|-----------------------|-------------|-------------------------------------|
| | | | | | Const Start | Const End | Baseline | Current | |
| Cameron Prairie Refuge Shoreline Protection | MERM | CAMER | 247 | 17-Apr-93 A | 09-Aug-94 A | 19-May-94 A | \$1,177,668 | \$1,495,517 | \$910,054 \$904,250 |

Remarks

Status: Complete.

Sabine Wildlife Refuge
Erosion Protection

| | | | | | | | | | |
|------|-------|-------|-------------|-------------|-------------|-------------|-------------|------|----------------------------|
| CALC | CAMER | 5,542 | 17-Apr-93 A | 24-Oct-94 A | 01-Mar-95 A | \$4,895,780 | \$1,866,342 | 38.1 | \$1,198,324 \$1,196,368 |
|------|-------|-------|-------------|-------------|-------------|-------------|-------------|------|----------------------------|

Remarks

Status: Complete.

| | | | | | |
|-----------------------|-------|-------------|-------------|------|----------------------------|
| Total Priority List 1 | 8,202 | \$8,391,616 | \$5,857,063 | 69.8 | \$3,633,132 \$3,517,485 |
|-----------------------|-------|-------------|-------------|------|----------------------------|

- 4 Project(s)
- 4 Cost Sharing Agreements Executed
- 4 Construction Started
- 4 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)**

| | | | | | | | | | |
|----------------|--------------|---------------|--------------|------------|--------------------|------------------|------------------------------|------------------------------|--|
| PROJECT | BASIN | PARISH | ACRES | CSA | Const Start | Const End | ***** ESTIMATES ***** | ***** SCHEDULES ***** | Actual Obligations/Expenditures |
| | | | | | | | Baseline | Current | % |

Priority List 2

| | | | | | | | | | | | |
|------------------|------|-----|-------|-------------|-------------|-------------|-------------|-------------|-------|-------------|-------------|
| Bayou Sauvage #2 | PONT | ORL | 1,281 | 30-Jun-94 A | 15-Apr-96 A | 28-May-97 A | \$1,452,035 | \$1,569,127 | 108.1 | \$1,058,495 | \$1,018,645 |
|------------------|------|-----|-------|-------------|-------------|-------------|-------------|-------------|-------|-------------|-------------|

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.

Total Priority List 2 1,281

| | | | | | |
|------------------------------------|-------------|-------------|-------|-------------|-------------|
| 1 Project(s) | \$1,452,035 | \$1,569,127 | 108.1 | \$1,058,495 | \$1,018,645 |
| 1 Cost Sharing Agreements Executed | | | | | |
| 1 Construction Started | | | | | |
| 1 Construction Completed | | | | | |
| 0 Project(s) Deferred/Deauthorized | | | | | |
| 0 Unfunded Project(s) | | | | | |

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)**

| PROJECT | BASIN | PARISH | ACRES | CSA | Const Start | Const End | Baseline | ESTIMATES Current | % | Actual Obligations/Expenditures |
|---------|-------|--------|-------|-----|-------------|-----------|----------|-------------------|---|---------------------------------|
|---------|-------|--------|-------|-----|-------------|-----------|----------|-------------------|---|---------------------------------|

Priority List 3

| | | | | | | | | | | |
|---------------------------------------|------|-------|-----|-------------|-----------|-----------|-------------|-------------|------|-----------------------|
| Sabine Refuge Structures (Hog Island) | CALC | CAMER | 953 | 26-Oct-96 A | 01-Jul-99 | 01-Apr-00 | \$4,581,454 | \$4,466,354 | 97.5 | \$220,318 \$84,594 |
|---------------------------------------|------|-------|-----|-------------|-----------|-----------|-------------|-------------|------|-----------------------|

Remarks

A meeting attended by agency representatives, landowners and a local drainage district member was held June 17, 1998 to discuss permitting requirements, the proposed structure operational plan, and water control structure design. As a result, needed refinements in the operational plan and structure design were made. The water control structure Operational Plan was revised in October 1998 by the USFWS and was sent to the COE for permitting, along with revised structure diagrams to continue the permit review process. The project was scheduled to be placed on public notice by the Corps in December 1998. A meeting to discuss the final water control structure design was held on September 29, 1998, and involved LADNR, NRCS and the USFWS. The revised draft Environmental Assessment was submitted to review agencies and interested parties on October 26, 1998, and comments are presently being addressed.

Status:

The LADNR Coastal Management Division determined that the project was consistent with the Coastal Resources Program on November 23, 1998. Design completion is tentatively scheduled for January 1999. Construction approval, on condition that permitting and NEPA requirements were met, was received from the CWPRA Planning and Evaluation Subcommittee on December 7, 1998, and the Technical Committee on December 8, 1998. The CWPRA Task Force will be requested to approve the request to begin construction in January 1999. NEPA compliance is expected to be completed by December 1998, CWPRA Section 303(e) approval is expected in January 1999, and receipt of the Corps permit is expected in February 1999. Construction is not expected to begin before July 1, 1999, and is projected to be completed by April 2000.

Total Priority List 3 953

\$4,581,454 \$4,466,354 97.5
\$220,318
\$84,594

- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**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 |
|---------|-------|--------|-------|-----|-----------------|-------------|-----------|----------|-----------------|---------|---|-------------------------------------|
|---------|-------|--------|-------|-----|-----------------|-------------|-----------|----------|-----------------|---------|---|-------------------------------------|

Priority List 5

| | | | | | | | | | | | | |
|---|-------|-------|-------|-----------|-----------|-----------|--|-------------|-------------|--|--------|----------------------|
| Grand Bayou / GIWW Freshwater Introduction | TERRE | LAFOU | 1,609 | 01-May-99 | 01-Aug-00 | 31-Mar-01 | | \$5,135,468 | \$8,264,676 | | 160.9! | \$94,500 \$87,017 |
|---|-------|-------|-------|-----------|-----------|-----------|--|-------------|-------------|--|--------|----------------------|

Remarks Through consultation with local residents and elected officials, the FWS established a revised location for the Cutoff Canal Structure. Several other project features have been made. The FWS will finalize details regarding those revisions and will soon submit them to the appropriate Task Force agencies for review and comment. It is anticipated that the revisions will reduce project costs compared to the current project; project benefits may also drop slightly.

Status: Surveying of project feature sites is nearly complete. Work on the Environmental Assessment (EA) is underway. Once the EA and permitting have progressed sufficiently, engineering and design will begin. A revised implementation schedule has been developed in conjunction with the Natural Resources Conservation Service. A cost share agreement, modified to reflect the latest changes, is being prepared. Disagreement between a local resident and LDWF regarding property ownership has delayed surveying work, but resolution of that problem is anticipated soon.

Total Priority List 5 1,609

\$5,135,468 \$8,264,676 160.9

\$94,500
\$87,017

- 1 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

Actual
 Obligations/
 Expenditures

***** SCHEDULES *****
 Const Start Const End

CSA

ACRES

PARISH

BASIN

PROJECT

***** ESTIMATES *****
 Baseline Current %

Priority List 6

| | | | | | | | | | | | |
|---------------------------------------|-------|-------|-----|-------------|-----------|-----------|-------------|-------------|-------|----------|----------|
| Lake Boudreaux FW Introduction, Alt B | TERRE | TERRE | 619 | 22-Oct-98 A | 01-Aug-02 | 01-Aug-03 | \$9,831,306 | \$9,831,306 | 100.0 | \$30,874 | \$18,882 |
|---------------------------------------|-------|-------|-----|-------------|-----------|-----------|-------------|-------------|-------|----------|----------|

Remarks: In FY 97, Priority List 6 authorized funding of \$4,915,650. An additional \$4,915,650 is scheduled to be authorized on Priority List 8; for a total project estimate of \$9,831,300.

Status: The cost share agreement was executed in November 1998. A scope of work is being developed for engineering and design work. That work should begin in January 1999. DNR has established benchmarks and begun collecting data on project area conditions to aid in the preparation of the environmental assessment.

| | | | | | | | | | | | |
|---|-------|-------|--|-------------|-------------|-----------|-------------|-------------|-------|-----------|-----------|
| Nutria Harvest for Wetland Restoration Demo | TERRE | COAST | | 27-Oct-98 A | 01-Oct-97 A | 30-Sep-02 | \$2,140,000 | \$2,140,000 | 100.0 | \$150,000 | \$111,673 |
|---|-------|-------|--|-------------|-------------|-----------|-------------|-------------|-------|-----------|-----------|

Remarks: This is a phased project. Priority List 6 authorized \$400,000 for Phase 1; Priority List 7 authorized \$640,000. An additional \$1,100,000 is earmarked for Priority List 8. The total project will cost \$2,140,000.

Status: The LA Department of Wildlife and Fisheries completed baseline surveys of nutria damage to the coastal marshes in May 1998. Preliminary work has been done in the promotion of nutria meat both overseas and within the state of Louisiana. Nutria meat promotion will consist of nutria cook-offs and the preparation of recipes in Louisiana beginning in October 1998, and proceeding throughout the project life. The cost share agreement was signed by LADNR and the USFWS on October 21, 1998. The CWPPRA Task Force approved the implementation of the total \$2,140,000 project at the October 21, 1998 Task Force meeting, on condition that the state consistency determination be received. The state coastal zone consistency determination was received on October 29, 1998. An interagency agreement is presently being completed between the LA Department of Wildlife and Fisheries and the LADNR to implement the project.

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 6 | | | | | | | | | | |
| | | | 619 | | | | \$11,971,306 | \$11,971,306 | 100.0 | \$180,874 |
| 2 | | | | | | | | | | \$130,555 |
| Project(s) | | | | | | | | | | |
| 2 | | | | | | | | | | |
| Cost Sharing Agreements Executed | | | | | | | | | | |
| 1 | | | | | | | | | | |
| Construction Started | | | | | | | | | | |
| 0 | | | | | | | | | | |
| Construction Completed | | | | | | | | | | |
| 0 | | | | | | | | | | |
| Project(s) Deferred/Deauthorized | | | | | | | | | | |
| 0 | | | | | | | | | | |
| Unfunded Project(s) | | | | | | | | | | |
| Total DEPT. OF THE INTERIOR, FISH & WILDLIFE SERVICE | | | | | | | | | | |
| | | | 12,664 | | | | \$31,531,879 | \$32,128,526 | 101.9 | \$5,187,319 |
| | | | | | | | | | | \$4,838,296 |
| 9 | | | | | | | | | | |
| Project(s) | | | | | | | | | | |
| 8 | | | | | | | | | | |
| Cost Sharing Agreements Executed | | | | | | | | | | |
| 6 | | | | | | | | | | |
| Construction Started | | | | | | | | | | |
| 5 | | | | | | | | | | |
| Construction Completed | | | | | | | | | | |
| 0 | | | | | | | | | | |
| Project(s) Deferred/Deauthorized | | | | | | | | | | |
| 0 | | | | | | | | | | |
| Unfunded Project(s) | | | | | | | | | | |

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 COMMERCE (NMFS)

| PROJECT | BASIN | PARISH | ACRES | CSA | SCHEDULES ***** Const Start | Const End | ***** ESTIMATES Baseline | Current | % | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|--------------------------------|-----------|-----------------------------|---------|---|--|
|---------|-------|--------|-------|-----|--------------------------------|-----------|-----------------------------|---------|---|--|

Lead Agency: DEPT. OF COMMERCE, NATIONAL MARINE FISHERIES SERVICE

Priority List 1

| | | | | | | | | | | |
|---------------------------------|-------|-------|---|--|--|--|-----------|---------|-----|--------------------|
| Fourchon Hydrologic Restoration | TERRE | LAFOU | 0 | | | | \$252,036 | \$6,999 | 2.8 | \$6,999 \$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

| | | | | | | | | | | |
|-------|-------|---|-------------|--|--|--|-------------|----------|-----|----------------------|
| TERRE | TERRE | 0 | 17-Apr-93 A | | | | \$1,694,739 | \$99,625 | 5.9 | \$99,625 \$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 Cailou 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 | |
| Total Priority List 1 | | | | | | | | |
| | | | 0 | | | | \$1,946,775 | \$106,625 |
| | | | | | | | \$106,625 | \$106,625 |
| | | | | | | | | 5.5 |

2 Project(s)

1 Cost Sharing Agreements Executed

0 Construction Started

0 Construction Completed

2 Project(s) Deferred/Deauthorized

0 Unfunded Project(s)

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)**

Actual
Obligations/
Expenditures

***** SCHEDULES ***** ESTIMATES *****
***** CSA Const Start Const End Baseline Current %

Priority List 2

| | | | | | | | | | | | |
|----------------------------------|------|-------|-------|-------------|-------------|-------------|-----------|-------------|--------|-------------|-------------|
| Atchafalaya Sediment Delivery | ATCH | STMRY | 2,232 | 01-Aug-94 A | 25-Jan-98 A | 21-Mar-98 A | \$907,810 | \$2,106,571 | 232.0% | \$1,540,129 | \$1,514,046 |
|----------------------------------|------|-------|-------|-------------|-------------|-------------|-----------|-------------|--------|-------------|-------------|

Remarks Project cost increase was approved by the Task Force at the January 16, 1998 meeting.

Status: Complete.

Big Island Mining
(Increment 1)

| | | | | | | | | | | |
|------|-------|-------|-------------|-------------|-------------|-------------|-------------|--------|-------------|-------------|
| ATCH | STMRY | 1,560 | 01-Aug-94 A | 25-Jan-98 A | 08-Oct-98 A | \$4,136,057 | \$7,141,130 | 172.7% | \$5,327,988 | \$5,294,064 |
|------|-------|-------|-------------|-------------|-------------|-------------|-------------|--------|-------------|-------------|

Remarks Project cost increase was approved by the Task Force at the January 16, 1998 meeting.

Status: Construction complete.

**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 |
|--------------|-------|--------|-------|-------------|--------------------------|-------------|-----------------------|-------------|--------|--|
| Point Au Fer | TERRE | TERRE | 375 | 01-Jan-94 A | 01-Oct-95 A | 08-May-97 A | \$1,069,589 | \$1,660,234 | 155.21 | \$1,225,811 \$1,158,205 |

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 | \$10,907,935 | 178.4 | \$8,093,928 | \$7,966,314 |
|-----------------------|-------|-------------|--------------|-------|-------------|-------------|

- 3 Project(s)
- 3 Cost Sharing Agreements Executed
- 3 Construction Started
- 3 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

Actual
 Obligations/
 Expenditures

***** SCHEDULES ***** ESTIMATES *****
 Const Start Const End Baseline Current %

PROJECT

BASIN PARISH ACRES

CSA

Const Start

Const End

Baseline

Current

%

Priority List 3

Bayou Perot / Bayou Rigolettes Marsh Restoration
 BARA JEFF 0 01-Mar-95 A \$1,835,047 \$17,146 0.9 \$1,389,483 \$1,293,621

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.

East Timbalier Island Sediment Restoration #1

TERRE LAFOU 1,913 01-Feb-95 A 01-Mar-99 31-Oct-99 \$2,046,971 \$2,576,789 125.9! \$2,175,667 \$1,529,387

Remarks

Status: Design complete. Construction bid package advertised and bid opening scheduled for July 13, 1998.

**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 | % | |
| Lake Chapeau Sediment & Hydrologic Restoration | TERRE | TERRE | 509 | 01-Mar-95 A | 14-Sep-98 A | 31-Mar-99 | \$4,149,182 | \$5,214,602 | 125.71 | \$3,940,911 \$3,101,530 |

Remarks Field surveying and geotechnical data collection completed in May 1996.

Status: Construction bid package completed and in processing. Bid opening scheduled for late July 1998.

| | | | | | | | | | | |
|--|------|-------|-----|-------------|-------------|-------------|-------------|-------------|--------|----------------------------|
| Lake Salvador Shore Protection Demo | BARA | STCHA | 176 | 01-Mar-95 A | 02-Jul-97 A | 30-Jun-98 A | \$1,444,628 | \$2,436,776 | 168.71 | \$1,968,969 \$1,905,231 |
|--|------|-------|-----|-------------|-------------|-------------|-------------|-------------|--------|----------------------------|

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 | 2,598 | \$9,475,828 | \$10,245,313 | 108.1 | \$9,475,030 \$7,829,769 |
|-----------------------|-------|-------------|--------------|-------|----------------------------|

- 4 Project(s)
- 4 Cost Sharing Agreements Executed
- 2 Construction Started
- 1 Construction Completed
- 1 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

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 | % |

Priority List 4

| | | | | | | | | | | |
|---|-------|-------|-----|------------|-----------|-----------|-------------|-------------|-------|--------------------------|
| East Timbalier Island Sediment Restoration #2 | TERRE | LAFOU | 215 | 08-Jun-95A | 01-Mar-99 | 30-Sep-99 | \$5,752,404 | \$7,112,150 | 123.6 | \$6,099,820 \$267,349 |
|---|-------|-------|-----|------------|-----------|-----------|-------------|-------------|-------|--------------------------|

Remarks

Status: Design complete March 1998. EA and permitting underway. Construction bid package has been advertised and bid opening is scheduled for July 1998.

Eden Isles East Marsh Restoration

| | | | | | | | | | | |
|--|------|--------|---|--|--|--|-------------|----------|-----|----------------------|
| | PONT | S TTAM | 0 | | | | \$5,018,968 | \$31,973 | 0.6 | \$41,347 \$31,973 |
|--|------|--------|---|--|--|--|-------------|----------|-----|----------------------|

Remarks

NMFS letter of September 8, 1997 requests the CWPRA 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.

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 | Baseline | % |
| | | | | | Const End | Current | |
| Total Priority List 4 | | | | | | | |
| | | | 215 | | | \$10,771,372 | 66.3 |
| | | | | | | \$7,144,123 | |
| | | | | | | | \$6,141,167 |
| | | | | | | | \$299,321 |

- 2 Project(s)
- 1 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 1 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)**

Actual
Obligations/
Expenditures

***** ESTIMATES *****
Baseline Current %

***** SCHEDULES *****
Const Start Const End

BASIN PARISH ACRES
CSA

Priority List 5

| PROJECT | BASIN | PARISH | ACRES | CSA | Const Start | Const End | Baseline | Current | % | Actual Obligations/Expenditures |
|--|-------|--------|-------|-------------|-------------|-----------|-----------|-------------|--------|---------------------------------|
| Little Vermilion Bay Sediment Trapping | TECHE | VERMI | 441 | 22-May-97 A | 30-Jan-99 * | 30-Apr-99 | \$940,065 | \$1,266,389 | 134.71 | \$702,576 \$94,372 |

Remarks

Status: Construction slip from April 1998 to January 1999. Final design, EA preparation and permit application in preparation. Construction anticipated in winter 1998.

| | | | | | | | | | | |
|---------------------|------|------|-------|-------------|-----------|-----------|--------------|--------------|-------|--------------------------|
| Myrtle Grove Siphon | BARA | PLAQ | 1,119 | 20-Mar-97 A | 01-May-99 | 01-May-00 | \$15,525,950 | \$15,525,950 | 100.0 | \$3,372,500 \$144,399 |
|---------------------|------|------|-------|-------------|-----------|-----------|--------------|--------------|-------|--------------------------|

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:

Early site investigations have been initiated. Preliminary landowner negotiations initiated for easements for rights-of-way for project corridor.

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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11-Feb-99
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | ***** ESTIMATES ***** | Actual Obligations/ Expenditures | | | |
|-----------------------|-------|--------|-------|-----|-----------------------|-----------------------|----------------------------------|-------|-------------|-----------|
| | | | | | Const Start | Baseline | | | | |
| | | | | | Const End | Current | % | | | |
| Total Priority List 5 | | | 1,560 | | | \$16,466,015 | \$16,792,339 | 102.0 | \$4,075,076 | \$238,771 |

- 2 Project(s)
- 2 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | ***** ESTIMATES ***** | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|-----------------------|-----------------------|----------------------------------|
| | | | | | Const Start | Baseline | Current % |

Priority List 6

Black Bayou Hydrologic Restoration

| | | | | | | | | | | |
|------|-------|-------|-------------|-----------|-----------|-------------|-------------|------|-------------|---------|
| CALC | CAMER | 3,594 | 28-May-98 A | 30-Aug-99 | 31-Dec-99 | \$6,316,800 | \$6,198,990 | 98.1 | \$5,681,403 | \$9,669 |
|------|-------|-------|-------------|-----------|-----------|-------------|-------------|------|-------------|---------|

Remarks

Status: Cooperative Agreement awarded May 1998. Preliminary site investigations conducted.

Delta-Wide Crevasses

| | | | | | | | | | | |
|-------|------|-------|-------------|-------------|-----------|-------------|-------------|-------|-------------|----------|
| DELTA | PLAQ | 2,386 | 28-May-98 A | 31-Jan-99 * | 30-Apr-99 | \$5,473,934 | \$5,473,934 | 100.0 | \$2,456,638 | \$28,113 |
|-------|------|-------|-------------|-------------|-----------|-------------|-------------|-------|-------------|----------|

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:

Cooperative Agreement awarded May 1998. Field surveying and analysis underway.

CEMVN-PM-C

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | | | ***** ESTIMATES ***** | | Actual Obligations/ Expenditures |
|---------------------------|-------|--------|-------|-------------|-----------------------|-----------|-------------|-----------------------|------|--|
| | | | | | Const Start | Const End | Baseline | Current | % | |
| Jaws Sediment Trapping | TECHE | STMAR | 1,999 | 28-May-98 A | 01-Jun-99 | 30-Aug-99 | \$3,167,400 | \$3,149,805 | 99.4 | \$2,847,036 \$1,353 |

Remarks

Status: Cooperative Agreement awarded May 1998. Early site investigation initiated.

| | | | | | | |
|---------------------|---|-------|--------------|--------------|------|--------------------------|
| Total Priority List | 6 | 7,979 | \$14,958,134 | \$14,822,729 | 99.1 | \$10,985,077 \$39,136 |
|---------------------|---|-------|--------------|--------------|------|--------------------------|

- 3 Project(s)
- 3 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | | | ***** ESTIMATES ***** | | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|-----------------------|-----------|----------|-----------------------|---|-------------------------------------|
| | | | | | Const Start | Const End | Baseline | Current | % | |

Priority List 7

| | | | | | | | | | | |
|----------------------------------|------|------|-----|------------|-----------|-----------|-----------|-----------|-------|------------------|
| Grand Terre Vegetative Plantings | BARA | JEFF | 127 | 01-Feb-99* | 28-Feb-99 | 31-Mar-99 | \$928,900 | \$946,953 | 101.9 | \$787,178 \$0 |
|----------------------------------|------|------|-----|------------|-----------|-----------|-----------|-----------|-------|------------------|

Remarks

Status: Draft cooperative agreement being developed.

| | | | | | | | | | | |
|------------------------|------|-------|-----|-----------|-----------|-----------|-------------|-------------|------|--------------------|
| Pecan Island Terracing | MERM | VERMI | 344 | 01-Mar-99 | 30-Sep-99 | 30-Jun-00 | \$2,185,900 | \$2,023,347 | 92.6 | \$1,855,574 \$0 |
|------------------------|------|-------|-----|-----------|-----------|-----------|-------------|-------------|------|--------------------|

Remarks

Status: Draft cooperative agreement being developed by LA DNR.

CEMVN-PM-C

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | Const Start | Const End | Baseline | ESTIMATES Current | % | Actual Obligations/Expenditures |
|-----------------------|-------|--------|-------|-----|-------------|-----------|-------------|-------------------|------|---------------------------------|
| Total Priority List 7 | | | | | | | | | | |
| | | | 471 | | | | \$3,114,800 | \$2,970,300 | 95.4 | \$2,642,752 |
| | | | | | | | | | | \$0 |

2 Project(s)

0 Cost Sharing Agreements Executed

0 Construction Started

0 Construction Completed

0 Project(s) Deferred/Deauthorized

0 Unfunded Project(s)

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
 Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

Actual
 Obligations/
 Expenditures

***** SCHEDULES ***** *
 ***** ESTIMATES *****
 Current %

PROJECT BASIN PARISH ACRES CSA Const Start Const End Baseline Current % Obligations/ Expenditures

Priority List 8

Bayou Bienvenue Pumping Station/Terracing PONT STBER 442 \$3,202,184 \$3,202,184 100.0 \$0 \$0

Remarks

Status:

Hopedale Hydrologic Restoration PONT STBER 134 \$2,134,413 \$2,134,413 100.0 \$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 ***** Const Start | Const End | ***** ESTIMATES ***** Baseline | Current | % | Actual Obligations/ Expenditures |
|---|-------|--------|-------|-----|--------------------------------|-----------|-----------------------------------|---------|---|--|
| Total Priority List 8 576 \$5,336,597 \$5,336,597 100.0 \$0 \$0 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| Project(s) | | | | | | | | | | |
| 0 | | | | | | | | | | |
| Cost Sharing Agreements Executed | | | | | | | | | | |
| 0 | | | | | | | | | | |
| Construction Started | | | | | | | | | | |
| 0 | | | | | | | | | | |
| Construction Completed | | | | | | | | | | |
| 0 | | | | | | | | | | |
| Project(s) Deferred/Deauthorized | | | | | | | | | | |
| 0 | | | | | | | | | | |
| Unfunded Project(s) | | | | | | | | | | |
| Total DEPT. OF COMMERCE, NATIONAL MARINE FISHERIES SERVICE 17,566 \$68,182,977 \$68,325,961 100.2 \$41,519,655 \$16,479,936 | | | | | | | | | | |
| 20 | | | | | | | | | | |
| Project(s) | | | | | | | | | | |
| 14 | | | | | | | | | | |
| Cost Sharing Agreements Executed | | | | | | | | | | |
| 5 | | | | | | | | | | |
| Construction Started | | | | | | | | | | |
| 4 | | | | | | | | | | |
| Construction Completed | | | | | | | | | | |
| 4 | | | | | | | | | | |
| Project(s) Deferred/Deauthorized | | | | | | | | | | |
| 0 | | | | | | | | | | |
| Unfunded Project(s) | | | | | | | | | | |

Notes:

- Expenditures based on Corps of Engineers financial data.
- Date codes: A = Actual date * = Behind schedule
- Percent codes: 1 = 125% of baseline estimate exceeded

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | | ***** ESTIMATES ***** | | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|-----------------------|-----------|-----------------------|---------|-------------------------------------|
| | | | | | Const Start | Const End | Baseline | Current | |

Lead Agency: DEPT. OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE

Priority List 1

| | | | | | | | | | | |
|---|------|-------|-----|-------------|-------------|-----------|-------------|-------------|-------|----------------------------|
| BA-2 GIWW to Clovelly Wetland Restoration | BARA | LAFOU | 175 | 17-Apr-93 A | 21-Apr-97 A | 31-Jul-99 | \$8,141,512 | \$8,197,198 | 100.7 | \$1,243,940 \$1,714,223 |
|---|------|-------|-----|-------------|-------------|-----------|-------------|-------------|-------|----------------------------|

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 Dec 98 Complete: 31 Jul 99 \$3,400,000

Status: The first construction contract is complete. The second construction contract was advertised in December 1998. Construction completion of the second constrct slipped from February 1998 to July 1999 because of general project planning and some land rights issues.

| | | | | | | | | | | |
|---|------|-------|-----|-------------|-------------|-------------|-----------|----------|------|----------------------|
| Vegetative Plantings Demo - Dewitt-Rollover | MERM | VERMI | 312 | 17-Apr-93 A | 11-Jul-94 A | 26-Aug-94 A | \$191,003 | \$79,448 | 41.6 | \$79,448 \$79,448 |
|---|------|-------|-----|-------------|-------------|-------------|-----------|----------|------|----------------------|

Remarks Sub-project of the Vegetative Plantings project.

Status: Complete and deauthorized.

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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Actual
Obligations/
Expenditures

| PROJECT | BASIN | PARISH | ACRES | CSA | SCHEDULES ***** Const Start | ***** Const End | ESTIMATES ***** Baseline | ***** Current | % | Actual Obligations/ Expenditures |
|--|-------|--------|-------|-------------|--------------------------------|--------------------|-----------------------------|------------------|-------|--|
| Vegetative Plantings Demo - Falgout Canal | TERRE | TERRE | 54 | 17-Apr-93 A | 30-Aug-96 A | 30-Dec-96 A | \$144,561 | \$201,469 | 139.4 | \$119,950 \$110,563 |

Remarks Sub-project of the Vegetative Plantings project. Wave-stilling devices are in place. Vegetative plantings are in place.

Status: Complete.

| | | | | | | | | | | |
|--|-------|-------|-----|-------------|-------------|-------------|-----------|-----------|-------|------------------------|
| Vegetative Plantings Demo - Timballer Island | TERRE | TERRE | 169 | 17-Apr-93 A | 15-Mar-95 A | 30-Jul-96 A | \$372,589 | \$429,348 | 115.2 | \$333,982 \$188,976 |
|--|-------|-------|-----|-------------|-------------|-------------|-----------|-----------|-------|------------------------|

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 | 98 | 17-Apr-93 A | 15-Apr-93 A | 30-Mar-94 A | \$213,947 | \$240,131 | 112.2 | \$168,730 \$156,888 |
|---|------|-------|----|-------------|-------------|-------------|-----------|-----------|-------|------------------------|

Remarks Sub-project of the Vegetative Plantings project.

Status: Complete.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | | ***** ESTIMATES ***** | Actual Obligations/ Expenditures |
|---------------------|-------|--------|-------|-----|-----------------------|-----------|-----------------------|----------------------------------|
| | | | | | Const Start | Const End | Current | % |
| Total Priority List | | | 808 | | | | \$9,147,594 | 100.9 |
| 5 | | | | | | | \$9,063,612 | |
| 5 | | | | | | | | \$1,946,050 |
| 5 | | | | | | | | \$2,250,099 |
| 4 | | | | | | | | |
| 1 | | | | | | | | |
| 0 | | | | | | | | |

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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Actual
Obligations/
Expenditures

***** ESTIMATES *****
Baseline Current %

***** SCHEDULES *****
Const Start Const End

CSA

BASIN PARISH ACRES

PROJECT

Priority List 2

| | | | | | | | | | | | |
|------------|------|-------|-----|-------------|-----------|-----------|-------------|-------------|------|-----------|-----------|
| Brown Lake | CALC | CAMER | 282 | 28-Mar-94 A | 15-Apr-99 | 01-Oct-99 | \$3,222,800 | \$3,214,664 | 99.7 | \$260,176 | \$188,436 |
|------------|------|-------|-----|-------------|-----------|-----------|-------------|-------------|------|-----------|-----------|

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 March 1999.

Caernarvon Outfall
Management

| | | | | | | | | | | |
|------|------|-----|-------------|-----------|-----------|-------------|-------------|-------|-----------|-----------|
| BRET | PLAQ | 802 | 13-Oct-94 A | 01-Jun-00 | 01-Jan-01 | \$2,522,199 | \$2,658,816 | 105.4 | \$268,687 | \$150,073 |
|------|------|-----|-------------|-----------|-----------|-------------|-------------|-------|-----------|-----------|

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 construction schedule will slip and the cost may change.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | | ***** ESTIMATES ***** | | Actual |
|---------|-------|--------|-------|-----|-----------------------|-----------|-----------------------|---------|------------------------------|
| | | | | | Const Start | Const End | Baseline | Current | Obligations/ Expenditures |

| | | | | | | | | | | |
|------------------|------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------|----------------------------|
| Freshwater Bayou | MERM | VERMI | 1,593 | 17-Aug-94 A | 29-Aug-94 A | 15-Aug-98 A | \$2,770,093 | \$2,956,758 | 106.7 | \$1,300,005 \$1,226,861 |
|------------------|------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------|----------------------------|

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.

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.

Status: Construction completion slipped from December 1997 to August 1998. Construction is being done by landowner. Project complete.

| | | | | | | | | | | |
|----------------|------|--------|-------|-------------|-----------|-----------|-------------|-------------|-------|------------------------|
| Fritchie Marsh | PONT | S TTAM | 1,040 | 21-Feb-95 A | 01-Apr-99 | 01-Sep-99 | \$3,048,389 | \$3,108,547 | 102.0 | \$278,252 \$218,278 |
|----------------|------|--------|-------|-------------|-----------|-----------|-------------|-------------|-------|------------------------|

Remarks Delays in project construction start occurred as a landowner had changed his position regarding prompting design changes, and local officials expressed concerns about drainage that required additional investigations.

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 1999.

| | | | | | | | | | | |
|---------|------|-------|-----|-------------|-----------|-----------|-----------|-----------|-------|-----------------------|
| Hwy 384 | CALC | CAMER | 150 | 13-Oct-94 A | 01-Apr-99 | 31-Aug-99 | \$700,717 | \$872,051 | 124.5 | \$95,106 \$198,843 |
|---------|------|-------|-----|-------------|-----------|-----------|-----------|-----------|-------|-----------------------|

Remarks Difference of opinion between agencies concerning impacts and benefits resulted in delays, and multiple, complex landowner title issues are not yet resolved.

Status: Construction start slipped from November 1997 to April 1999 because of landright issues. All landright agreements signed. Contract is expected to be advertised in March 1999..

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)**

| PROJECT | BASIN | PARISH | ACRES | CSA | Const Start | Const End | ***** ESTIMATES ***** | ***** SCHEDULES ***** | ***** ESTIMATES ***** | ***** SCHEDULES ***** | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|-------------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|
| | | | | | | | Baseline | Current | % | | |

| | | | | | | | | | | | |
|------------------------|------|------|-----|-------------|-------------|-----------|-------------|-------------|-------|--|----------------------------|
| Jonathan Davis Wetland | BARA | JEFF | 510 | 05-Jan-95 A | 22-Jun-98 A | 15-Nov-99 | \$3,398,867 | \$4,200,065 | 123.6 | | \$2,198,370 \$1,646,140 |
|------------------------|------|------|-----|-------------|-------------|-----------|-------------|-------------|-------|--|----------------------------|

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 1999.

| | | | | | | | | | | | |
|----------|------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------|--|----------------------------|
| Mud Lake | CALC | CAMER | 1,520 | 24-Mar-94 A | 01-Oct-95 A | 15-Jun-96 A | \$2,903,635 | \$3,127,312 | 107.7 | | \$1,479,305 \$1,382,980 |
|----------|------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------|--|----------------------------|

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 | TECHE | VERMI | 378 | 24-Mar-94 A | 13-Sep-94 A | 30-Nov-95 A | \$1,008,634 | \$1,009,135 | 100.0 | | \$696,888 \$677,106 |
|----------------------------|-------|-------|-----|-------------|-------------|-------------|-------------|-------------|-------|--|------------------------|

Remarks The structural portion of the project - shoreline protection - is complete.

The vegetative portion of the project is complete.

Status: Complete.

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 2 | | | | | | | | | | |
| | | | 6,275 | | | | \$19,575,334 | \$21,147,348 | 108.0 | \$6,576,790 |
| 8 | | | | | | | | | | \$5,688,717 |
| 8 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 0 | | | | | | | | | | |
| 0 | | | | | | | | | | |

8 Project(s)

8 Cost Sharing Agreements Executed

4 Construction Started

3 Construction Completed

0 Project(s) Deferred/Deauthorized

0 Unfunded Project(s)

**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 | % | |

Priority List 3

| | | | | | | | | | | |
|-------------|-------|-------|-----|-------------|-----------|-----------|-------------|-------------|--------|------------------------|
| Brady Canal | TERRE | TERRE | 297 | 15-May-98 A | 15-May-99 | 15-Jul-99 | \$4,717,928 | \$5,902,738 | 125.11 | \$202,031 \$324,810 |
|-------------|-------|-------|-----|-------------|-----------|-----------|-------------|-------------|--------|------------------------|

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. The construction schedule slipped from May 1998 to March 1999.

| | | | | | | | | | | |
|----------------------------|------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------|--------------------------|
| Cameron Creole Maintenance | CALC | CAMER | 2,602 | 09-Jan-97 A | 30-Sep-97 A | 15-Jul-98 A | \$3,719,926 | \$3,724,994 | 100.1 | \$1,078,000 \$777,814 |
|----------------------------|------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------|--------------------------|

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 and second contracts for maintenance work are complete. The project provides for maintenance on an as-needed basis.

**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 | % | | |
| Cote Blanche | TECHE | STMRY | 2,223 | 01-Jul-96 A | 25-Mar-98 A | 15-Dec-98 A | \$5,173,062 | \$5,846,581 | 113.0 | \$4,579,298 \$3,713,289 | |

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.

SW Shore White Lake
Demo

| | | | | | | | | | |
|------|-------|---|-------------|-------------|-------------|-----------|----------|------|----------------------|
| MERM | VERMI | 0 | 11-Jan-95 A | 30-Apr-96 A | 31-Jul-96 A | \$126,062 | \$45,894 | 36.4 | \$58,286 \$45,894 |
|------|-------|---|-------------|-------------|-------------|-----------|----------|------|----------------------|

Remarks

Status: Complete. Deauthorization requested.

Violet Freshwater
Distribution

| | | | | | | | | | |
|------|-------|-----|-------------|-----------|-----------|-------------|-------------|-------|-----------------------|
| PONT | STBER | 247 | 13-Oct-94 A | 15-Feb-00 | 15-Dec-00 | \$1,821,438 | \$1,844,040 | 101.2 | \$143,011 \$58,608 |
|------|-------|-----|-------------|-----------|-----------|-------------|-------------|-------|-----------------------|

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: Access problems have been resolved and design is currently proceeding; the construction schedule slipped from September 1998 to February 2000 as design is finalized.

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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Actual
Obligations/
Expenditures

***** ESTIMATES *****
Baseline Current %

***** SCHEDULES *****
Const Start Const End

CSA

| PROJECT | BASIN | PARISH | ACRES | CSA | Const Start | Const End | Baseline | Current | % | Actual Obligations/Expenditures |
|---|-------|--------|-------|-------------|-------------|-----------|-----------|-------------|--------|---------------------------------|
| West Pointe-a-la-Hache Outfall Management | BARA | PLAQ | 1,087 | 05-Jan-95 A | 15-Nov-99 | 15-Dec-00 | \$881,148 | \$4,052,090 | 459.9! | \$98,923 \$8,393 |

Remarks Initial cost estimate is too low. Additional \$3.2 million requested and approved at the January 16, 1998 Task Force meeting.

Status: Project put on hold while waiting for estimate increase. Construction start slipped from August 1998 to November 1999.

| | | | | | | | | | | |
|----------------------------------|------|------|---|-------------|--|--|-----------|----------|-----|-----------------------|
| White's Ditch Outfall Management | BRET | PLAQ | 0 | 13-Oct-94 A | | | \$756,134 | \$23,075 | 3.1 | \$102,335 \$23,793 |
|----------------------------------|------|------|---|-------------|--|--|-----------|----------|-----|-----------------------|

Remarks LA DNR concurred with NRCS to deauthorize the project. Project deauthorized at the January 16, 1998 Task Force meeting.

Status: Deauthorized.

| | | | | | | |
|---------------------|---|-------|--------------|--------------|-------|----------------------------|
| Total Priority List | 3 | 6,456 | \$17,195,698 | \$21,439,412 | 124.7 | \$6,261,884 \$4,952,600 |
|---------------------|---|-------|--------------|--------------|-------|----------------------------|

- 7 Project(s)
- 7 Cost Sharing Agreements Executed
- 3 Construction Started
- 3 Construction Completed
- 2 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**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 | ***** ESTIMATES ***** | | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|-----------------------|-----------|-----------|-----------------------|---------|-------------------------------------|
| | | | | | Const Start | Const End | | Baseline | Current | |

Priority List 4

| | | | | | | | | | | |
|--|------|-------|-----|-------------|-----------|-----------|-------------|-------------|-------|----------------------|
| Bayou L'Ours Ridge Hydrologic Restoration | BARA | LAFOU | 737 | 23-Jun-97 A | 15-Jul-00 | 01-Jan-01 | \$2,418,676 | \$2,452,487 | 101.4 | \$288,018 \$1,219 |
|--|------|-------|-----|-------------|-----------|-----------|-------------|-------------|-------|----------------------|

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-97 A | 01-Aug-99 | 15-Feb-00 | \$2,192,418 | \$2,275,892 | 103.8 | \$196,561 \$22,889 |
|--|------|------|-----|-------------|-----------|-----------|-------------|-------------|-------|-----------------------|

Remarks

Status: The project is being coordinated with the COE dredging program.

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | SCHEDULES ***** Const Start | Const End | ***** ESTIMATES ***** Baseline | Current | % | Actual Obligations/ Expenditures |
|-------------------------------|-------|--------|-------|-----------|--------------------------------|-----------|-----------------------------------|-----------|--------|--|
| Flotant Marsh Fencing Demo | TERRE | TERRE | 0 | 28-Feb-99 | 30-Oct-99 | 24-Feb-00 | \$367,066 | \$558,364 | 152.11 | \$80,861 \$1,301 |

Remarks Difficulty in locating an appropriate site for demonstration and difficulty in addressing engineering constraints.

Status: CSA execution slipped from September 1997 to February 1999. Construction schedule will be affected. Difficulty in locating an appropriate site for demonstration and difficulty in addressing engineering constraints. Project location selected.

G - 01

Perry Ridge Bank
Protection

| | | | | | | | | | |
|------|-------|-------|------------|------------|-----------|-------------|-------------|-------|--------------------------|
| CALC | CALCA | 1,203 | 23-Jun-97A | 15-Dec-98A | 15-Apr-99 | \$2,223,518 | \$2,309,404 | 103.9 | \$2,048,528 \$187,206 |
|------|-------|-------|------------|------------|-----------|-------------|-------------|-------|--------------------------|

Remarks

Status: Acquisition of land rights are complete; project on schedule.

Plowed Terraces Demo

| | | | | | | | | | |
|------|-------|---|------------|-----------|-----------|-----------|-----------|-------|----------------------|
| CALC | CAMER | 0 | 22-Oct-98A | 30-Apr-99 | 30-Jul-99 | \$299,690 | \$317,967 | 106.1 | \$52,054 \$42,909 |
|------|-------|---|------------|-----------|-----------|-----------|-----------|-------|----------------------|

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:

CSA execution slipped from November 1997 to January 1999. Construction start slipped from April 1998 to April 1999. 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.

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 | | | 4 | | | \$7,501,368 | \$7,914,114 | 105.5 |
| | | | 2,172 | | | | \$2,666,021 | \$255,524 |

- 5 Project(s)
- 4 Cost Sharing Agreements Executed
- 1 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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Actual
Obligations/
Expenditures

***** ESTIMATES *****
Baseline Current %

***** SCHEDULES *****
Const Start Const End

CSA

BASIN PARISH ACRES

MERM VERMI 511

PROJECT

Priority List 5

Freshwater Bayou
Bank Stabilization

01-Jul-97A 15-Feb-98A 15-Jun-98A \$3,998,919 \$3,986,648 99.7

\$3,511,939
\$1,911,701

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 15-Dec-98* 01-Oct-99 30-Mar-00 \$1,686,865 \$1,778,927 105.5

\$185,808
\$31,369

Remarks

Status: CSA at DNR for several months; execution slipped from December 1997 to December 1998 based on LA DNR's O&M program and monitoring program reviews. This should not affect the project construction schedule. This project will be combined with BBWW "Dupre Cut" East project for planning, design, and construction.

**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 % |
| Raccoon Island Breakwaters Demo | TERRE | TERRE | | 03-Sep-96A | 21-Apr-97A | 31-Jul-97A | \$1,497,538 \$2,052,384 137.1% |
| | | | | | | | \$1,779,706 \$1,561,581 |

Remarks

Status: Complete.

Sweet Lake/Willow Lake

| | | | | | | | | | | |
|------|-------|-----|------------|-----------|-----------|-------------|-------------|------|-----------|-----------|
| CALC | CAMER | 247 | 23-Jun-97A | 15-Apr-99 | 01-Oct-99 | \$4,800,000 | \$4,766,201 | 99.3 | \$329,010 | \$322,663 |
|------|-------|-----|------------|-----------|-----------|-------------|-------------|------|-----------|-----------|

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: Construction start slipped from June 1998 to January 1999 due to landright issues. The issues have been resolved.

Total Priority List 5 1,391

\$11,983,322 \$12,584,160 105.0 \$5,806,464 \$3,827,314

- 4 Project(s)
- 3 Cost Sharing Agreements Executed
- 2 Construction Started
- 2 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

CEMVN-PM-C

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| | | | | | | | | | |
|----------------|--------------|---------------|--------------|------------|--------------------|------------------|------------------------------|----------------|---|
| PROJECT | BASIN | PARISH | ACRES | CSA | Const Start | Const End | ***** ESTIMATES ***** | % | Actual Obligations/ Expenditures |
| | | | | | | | Baseline | Current | |

Priority List 6

| | | | | | | | | | | |
|----------------------------|------|------|-----|------------|-----------|-----------|-------------|-------------|-------|-------------------|
| BBWW "Dupre Cut" - East | BARA | JEFF | 217 | 15-Dec-98* | 01-Oct-99 | 30-Mar-00 | \$5,019,900 | \$5,027,621 | 100.2 | \$325,600 \$92 |
|----------------------------|------|------|-----|------------|-----------|-----------|-------------|-------------|-------|-------------------|

Remarks This project will be combined with the Naomi Outfall Management project for planning, design and construction.

Status: CSA at DNR for several months; execution slipped from December 1997 to December 1998 because of LA DNR's O&M program and monitoring program review. This should not affect the project construction schedule. This project will be combined with Naomi Outfall Management project for planning, design, and construction.

| | | | | | | | | | | |
|---|-------|-------|---|------------|-----------|-----------|-----------|-----------|--------|----------------|
| Cheniere au Tigre Sediment Trapping Device Demo | TECHE | VERMI | 0 | 01-Feb-99* | 01-Jul-99 | 30-Oct-99 | \$500,000 | \$634,000 | 126.8! | \$7,500 \$0 |
|---|-------|-------|---|------------|-----------|-----------|-----------|-----------|--------|----------------|

Remarks

Status:

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | SCHEDULES ***** Const Start | Const End | ***** ESTIMATES ***** Baseline | Current | % | Actual Obligations/ Expenditures |
|--|-------|--------|-------|-------------|--------------------------------|-----------|-----------------------------------|-------------|-------|--|
| Oaks/Avery Canals Hydrologic Restoration- Incr 1 (B.S. only) | TECHE | VERMI | 160 | 22-Oct-98 A | 15-Apr-99 | 30-Sep-99 | \$2,367,700 | \$2,375,200 | 100.3 | \$83,288 \$92 |

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 will be installed in summer 1999.

Penchant Basin Plan
w/o Shoreline
Stabilization

| | | | | | | | | | |
|-------|-------|-------|-----------|-----------|-----------|--------------|--------------|-------|---------------------|
| TERRE | TERRE | 1,155 | 01-May-99 | 01-Oct-00 | 30-Oct-01 | \$14,103,051 | \$14,103,051 | 100.0 | \$1,053,500 \$92 |
|-------|-------|-------|-----------|-----------|-----------|--------------|--------------|-------|---------------------|

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: CSA slipped from February 1998 to May 1999. Data gathering on-going. Project on schedule.

| | | | | | |
|-----------------------|-------|--------------|--------------|-------|----------------------|
| Total Priority List 6 | 1,532 | \$21,990,651 | \$22,139,872 | 100.7 | \$1,469,888 \$275 |
|-----------------------|-------|--------------|--------------|-------|----------------------|

- 4 Project(s)
- 1 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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Actual
Obligations/
Expenditures

***** ESTIMATES *****
Current %

***** SCHEDULES *****
Const Start Const End

CSA

Baseline

Current %

Actual
Obligations/
Expenditures

Actual
Obligations/
Expenditures

Actual
Obligations/
Expenditures

Actual
Obligations/
Expenditures

Actual
Obligations/
Expenditures

Actual
Obligations/
Expenditures

Actual
Obligations/
Expenditures

Priority List 7

| PROJECT | BASIN | PARISH | ACRES | CSA | Const Start | Const End | ***** Baseline | ***** Current % | Actual Obligations/ Expenditures |
|-------------------------------------|-------|--------|-------|-----------|-------------|-----------|-------------------|--------------------|--|
| Barataria Basin Landbridge, Ph 1 | BARA | JEFF | 967 | 15-Mar-99 | 01-Apr-00 | 15-Sep-00 | \$10,342,700 | \$10,352,348 100.1 | \$682,500 \$0 |

Remarks

Status:

| | | | | | | | | | |
|-------------------------------------|------|------|---|--|--|--|--------------|--------------------|------------|
| Barataria Basin Landbridge, Ph 2 | BARA | JEFF | 0 | | | | \$21,263,700 | \$21,263,700 100.0 | \$0 \$0 |
|-------------------------------------|------|------|---|--|--|--|--------------|--------------------|------------|

Remarks

This project was approved as an unfunded project on Priority List 7, estimated total cost of \$21,263,700. Priority List 8 refined the cost estimate to \$20,830,246, funded \$7,161,749, with a remaining balance of \$13,668,497 as the unfunded baseline estimate.

Status: Unfunded.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | SCHEDULES ***** Const Start | Const End | ***** ESTIMATES ***** Baseline | Current | % | Actual Obligations/ Expenditures |
|---|-------|--------|-------|-----|--------------------------------|-----------|-----------------------------------|-------------|-------|--|
| South Grand Cheniere Freshwater Introduction | MERM | CAMER | 0 | | | | \$5,130,500 | \$5,130,500 | 100.0 | \$0 \$0 |

Remarks This project was approved as an unfunded project on Priority List 7.

Status: Unfunded.

Thin Mat Floatant
Marsh Enhancement
Demo

| | | | | | | | | | |
|-----|-------|---|-------------|-----------|-----------|-----------|-----------|-------|------------|
| PEN | TERRE | 0 | 16-Oct-98 A | 15-Apr-99 | 15-May-99 | \$460,222 | \$542,570 | 117.9 | \$0 \$0 |
|-----|-------|---|-------------|-----------|-----------|-----------|-----------|-------|------------|

Remarks

Status:

Upper Oak River
Freshwater
Introduction Siphon

| | | | | | | | | | |
|------|------|---|--|--|--|--------------|--------------|-------|------------|
| BRET | PLAQ | 0 | | | | \$12,471,800 | \$12,471,800 | 100.0 | \$0 \$0 |
|------|------|---|--|--|--|--------------|--------------|-------|------------|

Remarks This project was approved as an unfunded project on Priority List 7. Priority List 8 refined the cost estimate to \$12,982,088, funded \$2,500,000, with a remaining balance of \$10,482,088 as the unfunded baseline estimate.

Status: Unfunded.

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** Const Start | Const End | ***** ESTIMATES ***** Baseline | Current | % | Actual Obligations/ Expenditures |
|-----------------------|-------|--------|-------|-----|--------------------------------------|-----------|-----------------------------------|--------------|-------|--|
| Total Priority List 7 | | | | | | | | | | |
| | | | 967 | | | | \$49,668,922 | \$49,760,918 | 100.2 | \$682,500 |

5 Project(s)

1 Cost Sharing Agreements Executed

0 Construction Started

0 Construction Completed

0 Project(s) Deferred/Deauthorized

3 Unfunded Project(s)

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | | | ***** ESTIMATES ***** | | | Actual Obligations/ Expenditures |
|---------|-------|--------|-------|-----|-----------------------|-----------|----------|-----------------------|---|--|--|
| | | | | | Const Start | Const End | Baseline | Current | % | | |

Priority List 8

| | | | | | | | | | | | |
|-------------------------------------|------|------|-----|--|--|--|--|-------------|-------------|-------|------------|
| Barataria Basin Landbridge, Ph 2 | BARA | JEFF | 417 | | | | | \$7,161,749 | \$7,161,749 | 100.0 | \$0 \$0 |
|-------------------------------------|------|------|-----|--|--|--|--|-------------|-------------|-------|------------|

Remarks

Status:

| | | | | | | | | | | | |
|--|------|-------|-----|--|--|--|--|-------------|-------------|-------|------------|
| Humble Canal Hydrologic Restoration | MERM | CAMER | 378 | | | | | \$1,497,598 | \$1,497,598 | 100.0 | \$0 \$0 |
|--|------|-------|-----|--|--|--|--|-------------|-------------|-------|------------|

Remarks

Status:

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

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| PROJECT | BASIN | PARISH | ACRES | CSA | ***** SCHEDULES ***** | ***** ESTIMATES ***** | Actual Obligations/ Expenditures |
|-------------------------------|-------|--------|-------|-----|-----------------------|-----------------------|----------------------------------|
| | | | | | Const Start | Baseline | % Current |
| Lake Portage Landbridge, Ph I | TECHE | VERMI | 80 | | | \$1,000,000 | 100.0 |
| | | | | | | \$1,000,000 | \$0 |
| | | | | | | | \$0 |

Remarks

Status:

Upper Oaks River, Freshwater Introduction Siphon

BRET PLAQ 337

\$2,500,000 \$2,500,000 100.0

Remarks

Status:

Total Priority List 8

1,212

\$12,159,347 \$12,159,347 100.0

\$0 \$0

- 4 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized
- 0 Unfunded Project(s)

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
 Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

| PROJECT | BASIN | PARISH | ACRES | CSA | Const Start | Const End | ***** ESTIMATES ***** | ***** ESTIMATES ***** | ***** ESTIMATES ***** | Actual Obligations/ Expenditures |
|--------------|---|--------|---------------|-----|-------------|-----------|-----------------------|-----------------------|-----------------------|--|
| | | | | | | | Baseline | Current | % | |
| Total | DEPT. OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE | | 20,813 | | | | \$149,138,254 | \$156,292,764 | 104.8 | \$25,409,597 \$16,974,530 |
| 42 | Project(s) | | | | | | | | | |
| 29 | Cost Sharing Agreements Executed | | | | | | | | | |
| 15 | Construction Started | | | | | | | | | |
| 12 | Construction Completed | | | | | | | | | |
| 3 | Project(s) Deferred/Deauthorized | | | | | | | | | |
| 3 | Unfunded Project(s) | | | | | | | | | |

Notes:

1. Expenditures based on Corps of Engineers financial data.
2. Date codes: A = Actual date * = Behind schedule
3. Percent codes: 1 = 125% of baseline estimate exceeded

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Total All Priority Lists

| PROJECT | ACRES | ***** ESTIMATES ***** | ***** ESTIMATES ***** | Actual Obligations/ Expenditures | | | |
|----------------|---------------------------|-----------------------|-----------------------|----------------------------------|--------------|----------------------|---------------------|
| | | Baseline | Current | % | | | |
| SUMMARY | Total All Projects | 68,038 | \$381,377,001 | \$384,552,110 | 100.8 | \$112,779,209 | \$74,435,325 |

101 Project(s)

- 67 Cost Sharing Agreements Executed
- 39 Construction Started
- 31 Construction Completed
- 11 Project(s) Deferred/Deauthorized
- 8 Unfunded Project(s)

Total Available Funds

| | |
|--------------------|----------------------|
| Federal Funds | \$273,065,062 |
| Non/Federal Funds | \$50,835,216 |
| Total Funds | \$323,900,278 |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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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 | \$238,871 | \$143,855 |
| Basin Total | 1 | 0 | 1 | 1 | 1 | 0 | \$238,871 | \$238,871 | \$143,855 |
| Basin: Atchafalaya | | | | | | | | | |
| Priority List: | 2 | 3,792 | 2 | 2 | 2 | 0 | \$5,043,867 | \$9,247,701 | \$6,808,109 |
| Basin Total | 2 | 3,792 | 2 | 2 | 2 | 0 | \$5,043,867 | \$9,247,701 | \$6,808,109 |
| Basin: Barataria | | | | | | | | | |
| Priority List: | 1 | 620 | 3 | 3 | 1 | 0 | \$9,960,769 | \$9,933,622 | \$2,858,842 |
| Priority List: | 2 | 510 | 1 | 1 | 0 | 0 | \$3,398,867 | \$4,200,065 | \$1,646,140 |
| Priority List: | 3 | 1,263 | 3 | 1 | 1 | 1 | \$4,160,823 | \$6,506,012 | \$3,207,244 |
| Priority List: | 4 | 969 | 2 | 0 | 0 | 0 | \$4,611,094 | \$4,728,379 | \$24,108 |
| Priority List: | 5 | 1,752 | 1 | 0 | 0 | 0 | \$17,212,815 | \$17,304,877 | \$175,768 |
| Priority List: | 6 | 217 | 0 | 0 | 0 | 0 | \$5,019,900 | \$5,027,621 | \$92 |
| Priority List: | 7 | 1,094 | 0 | 0 | 0 | 0 | \$32,535,300 | \$32,563,001 | \$0 |
| Priority List: | 8 | 417 | 0 | 0 | 0 | 0 | \$7,161,749 | \$7,161,749 | \$0 |
| Basin Total | 16 | 6,842 | 10 | 5 | 2 | 1 | \$84,061,317 | \$87,425,326 | \$7,912,194 |

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 | \$2,522,199 | \$2,658,816 | \$150,073 |
| Priority List: | 3 | 1 | 0 | 1 | 0 | 1 | \$756,134 | \$23,075 | \$23,793 |
| Priority List: | 4 | 1 | 0 | 0 | 0 | 1 | \$2,468,908 | \$52,919 | \$53,920 |
| Priority List: | 7 | 1 | 0 | 0 | 0 | 0 | \$12,471,800 | \$12,471,800 | \$0 |
| Priority List: | 8 | 1 | 337 | 0 | 0 | 0 | \$2,500,000 | \$2,500,000 | \$0 |
| Basin Total | 5 | 1,139 | 2 | 0 | 0 | 2 | \$20,719,041 | \$17,706,610 | \$227,785 |
| Basin: Calcasieu | | | | | | | | | |
| Priority List: | 1 | 3 | 6,503 | 3 | 3 | 0 | \$5,770,187 | \$2,993,474 | \$1,760,682 |
| Priority List: | 2 | 4 | 3,018 | 4 | 2 | 0 | \$8,568,462 | \$11,047,925 | \$4,579,482 |
| Priority List: | 3 | 2 | 3,555 | 2 | 1 | 0 | \$8,301,380 | \$8,191,348 | \$862,408 |
| Priority List: | 4 | 3 | 1,203 | 3 | 1 | 0 | \$2,893,802 | \$3,052,704 | \$245,703 |
| Priority List: | 5 | 1 | 247 | 1 | 0 | 0 | \$4,800,000 | \$4,766,201 | \$322,663 |
| Priority List: | 6 | 1 | 3,594 | 1 | 0 | 0 | \$6,316,800 | \$6,198,990 | \$9,669 |
| Priority List: | 7 | 1 | 0 | 0 | 0 | 0 | \$9,391,600 | \$9,391,600 | \$0 |
| Priority List: | 8 | 1 | 953 | 0 | 0 | 0 | \$5,313,000 | \$5,313,000 | \$0 |
| Basin Total | 16 | 19,073 | 14 | 7 | 6 | 0 | \$51,355,231 | \$50,955,242 | \$7,780,609 |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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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: Miss. River Delta | | | | | | | | | |
| Priority List: | 1 | 9,831 | 0 | 0 | 0 | 0 | \$8,517,066 | \$16,673,000 | \$499,428 |
| Priority List: | 3 | 936 | 1 | 1 | 1 | 1 | \$3,666,187 | \$1,057,953 | \$634,987 |
| Priority List: | 4 | 0 | 1 | 0 | 0 | 0 | \$300,000 | \$372,454 | \$30,061 |
| Priority List: | 6 | 2,386 | 1 | 0 | 0 | 0 | \$7,073,934 | \$7,113,934 | \$99,025 |
| Basin Total | 6 | 13,153 | 3 | 1 | 1 | 1 | \$19,557,187 | \$25,217,341 | \$1,263,501 |

Basin: Mermentau

| | | | | | | | | | |
|--------------------|----------|--------------|----------|----------|----------|----------|---------------------|---------------------|--------------------|
| Priority List: | 1 | 2 | 559 | 2 | 2 | 1 | \$1,368,671 | \$1,574,965 | \$983,698 |
| Priority List: | 2 | 1 | 1,593 | 1 | 1 | 0 | \$2,770,093 | \$2,956,758 | \$1,226,861 |
| Priority List: | 3 | 1 | 0 | 1 | 1 | 1 | \$126,062 | \$45,894 | \$45,894 |
| Priority List: | 5 | 1 | 511 | 1 | 1 | 0 | \$3,998,919 | \$3,986,648 | \$1,911,701 |
| Priority List: | 7 | 2 | 344 | 0 | 0 | 0 | \$7,316,400 | \$7,153,847 | \$0 |
| Priority List: | 8 | 1 | 378 | 0 | 0 | 0 | \$1,497,598 | \$1,497,598 | \$0 |
| Basin Total | 8 | 3,385 | 5 | 5 | 5 | 2 | \$17,077,743 | \$17,215,710 | \$4,168,153 |

Basin: Bayou Penchant

| | | | | | | | | | |
|--------------------|----------|----------|----------|----------|----------|----------|------------------|------------------|------------|
| Priority List: | 7 | 1 | 0 | 1 | 0 | 0 | \$460,222 | \$542,570 | \$0 |
| Basin Total | 1 | 0 | 1 | 0 | 0 | 0 | \$460,222 | \$542,570 | \$0 |

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 | 2 | 0 | \$6,119,009 | \$5,321,286 | \$4,503,309 |
| Priority List: 2 | 2 | 2,321 | 2 | 1 | 1 | 0 | \$4,500,424 | \$4,677,674 | \$1,236,923 |
| Priority List: 3 | 3 | 1,002 | 3 | 2 | 0 | 0 | \$2,683,636 | \$2,653,878 | \$659,347 |
| Priority List: 4 | 1 | 0 | 0 | 0 | 0 | 1 | \$5,018,968 | \$31,973 | \$31,973 |
| Priority List: 5 | 1 | 75 | 0 | 0 | 0 | 0 | \$2,890,821 | \$2,416,559 | \$271,557 |
| Priority List: 7 | 2 | 0 | 0 | 0 | 0 | 0 | \$21,643,600 | \$21,643,600 | \$0 |
| Priority List: 8 | 2 | 576 | 0 | 0 | 0 | 0 | \$5,336,597 | \$5,336,597 | \$0 |
| Basin Total | 13 | 5,727 | 7 | 5 | 3 | 1 | \$48,193,055 | \$42,081,566 | \$6,703,108 |

Basin: Teche / Vermilion

| | | | | | | | | | |
|--------------------|----------|--------------|----------|----------|----------|----------|---------------------|---------------------|--------------------|
| Priority List: 1 | 1 | 63 | 1 | 1 | 1 | 0 | \$1,526,000 | \$2,065,599 | \$1,723,064 |
| Priority List: 2 | 1 | 378 | 1 | 1 | 1 | 0 | \$1,008,634 | \$1,009,135 | \$677,106 |
| Priority List: 3 | 1 | 2,223 | 1 | 1 | 1 | 0 | \$5,173,062 | \$5,846,581 | \$3,713,289 |
| Priority List: 5 | 1 | 441 | 1 | 0 | 0 | 0 | \$940,065 | \$1,266,389 | \$94,372 |
| Priority List: 6 | 4 | 2,567 | 2 | 0 | 0 | 0 | \$10,130,000 | \$11,277,631 | \$260,223 |
| Priority List: 8 | 1 | 80 | 0 | 0 | 0 | 0 | \$1,000,000 | \$1,000,000 | \$0 |
| Basin Total | 9 | 5,752 | 6 | 3 | 3 | 0 | \$19,777,761 | \$22,465,335 | \$6,468,054 |

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 | 232 | 4 | 3 | 3 | \$8,809,393 | \$9,651,762 | \$6,012,826 |
| Priority List: | 2 | 3 | 959 | 3 | 3 | 0 | \$12,831,588 | \$20,177,455 | \$13,984,442 |
| Priority List: | 3 | 4 | 3,958 | 4 | 2 | 1 | \$15,758,355 | \$21,415,315 | \$10,004,022 |
| Priority List: | 4 | 2 | 215 | 1 | 0 | 0 | \$6,119,470 | \$7,670,514 | \$268,650 |
| Priority List: | 5 | 3 | 2,037 | 2 | 1 | 1 | \$31,120,343 | \$18,708,514 | \$2,504,704 |
| Priority List: | 6 | 5 | 1,774 | 2 | 1 | 0 | \$32,662,757 | \$26,241,478 | \$183,313 |
| Priority List: | 7 | 2 | 0 | 0 | 0 | 0 | \$7,590,800 | \$7,590,800 | \$0 |
| Basin Total | 24 | 9,175 | 16 | 10 | 8 | 4 | \$114,892,706 | \$111,455,838 | \$32,959,956 |

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 |
|-------------------------|--------------------|--------|-----------------|-----------------|-----------|---------------------|----------------------|---------------------|-------------------------|
| Total All Basins | + | 68,038 | 67 | 39 | 31 | 11 | \$381,377,001 | \$384,552,110 | \$74,435,325 |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Parish

| | | No. of Projects | Acres | CSA Executed | Under Const. | Completed | Projects Deauth. | Baseline Estimate | Current Estimate | Expenditures To Date |
|--------------------------|----------|--------------------|--------------|-----------------|-----------------|-----------|---------------------|----------------------|---------------------|-------------------------|
| Parish: ASCENSION | | | | | | | | | | |
| Priority List: | 5 | 1 | 428 | 1 | 0 | 0 | 0 | \$24,487,337 | \$8,391,454 | \$856,106 |
| Parish Total | 1 | 1 | 428 | 1 | 0 | 0 | 0 | \$24,487,337 | \$8,391,454 | \$856,106 |
| Parish: CALCASIEU | | | | | | | | | | |
| Priority List: | 2 | 1 | 1,066 | 1 | 1 | 1 | 0 | \$1,741,310 | \$3,833,898 | \$2,809,223 |
| Priority List: | 4 | 1 | 1,203 | 1 | 1 | 0 | 0 | \$2,223,518 | \$2,309,404 | \$187,206 |
| Parish Total | 2 | 2 | 2,269 | 2 | 2 | 1 | 0 | \$3,964,828 | \$6,143,302 | \$2,996,430 |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Parish

| | No. of Projects | Acres | CSA Executed | Under Const. | Completed | Projects Deauth. | Baseline Estimate | Current Estimate | Expenditures To Date |
|------------------------|--------------------|---------------|-----------------|-----------------|-----------|---------------------|----------------------|---------------------|-------------------------|
| Parish: CAMERON | | | | | | | | | |
| Priority List: 1 | 4 | 6,750 | 4 | 4 | 4 | 0 | \$6,947,855 | \$4,488,991 | \$2,664,932 |
| Priority List: 2 | 3 | 1,952 | 3 | 1 | 1 | 0 | \$6,827,152 | \$7,214,027 | \$1,770,259 |
| Priority List: 3 | 2 | 3,555 | 2 | 1 | 1 | 0 | \$8,301,380 | \$8,191,348 | \$862,408 |
| Priority List: 4 | 2 | 0 | 2 | 0 | 0 | 0 | \$670,284 | \$743,300 | \$58,497 |
| Priority List: 5 | 1 | 247 | 1 | 0 | 0 | 0 | \$4,800,000 | \$4,766,201 | \$322,663 |
| Priority List: 6 | 1 | 3,594 | 1 | 0 | 0 | 0 | \$6,316,800 | \$6,198,990 | \$9,669 |
| Priority List: 7 | 2 | 0 | 0 | 0 | 0 | 0 | \$14,522,100 | \$14,522,100 | \$0 |
| Priority List: 8 | 2 | 1,331 | 0 | 0 | 0 | 0 | \$6,810,598 | \$6,810,598 | \$0 |
| Parish Total | 17 | 17,429 | 13 | 6 | 6 | 0 | \$55,196,169 | \$52,935,555 | \$5,688,429 |

Parish: Coastal Parishes

| | | | | | | | | | |
|----------------------------|----------|----------|----------|----------|----------|----------|--------------------|--------------------|------------------|
| Priority List: Cons Plan 1 | 1 | 0 | 1 | 1 | 1 | 0 | \$238,871 | \$238,871 | \$143,855 |
| Priority List: 6 | 1 | | 1 | 1 | 0 | 0 | \$2,140,000 | \$2,140,000 | \$111,673 |
| Parish Total | 2 | 0 | 2 | 2 | 1 | 0 | \$2,378,871 | \$2,378,871 | \$255,528 |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
 Project Status Summary Report by Parish

| | No. of Projects | Acres | CSA Executed | Under Const. | Completed | Projects Deauth. | Baseline Estimate | Current Estimate | Expenditures To Date |
|-----------------------|--------------------|------------|-----------------|-----------------|-----------|---------------------|----------------------|---------------------|-------------------------|
| Parish: IBERIA | | | | | | | | | |
| Priority List: 6 | 1 | 408 | 0 | 0 | 0 | 0 | \$4,094,900 | \$5,118,626 | \$258,778 |
| Parish Total | 1 | 408 | 0 | 0 | 0 | 0 | \$4,094,900 | \$5,118,626 | \$258,778 |

| | | | | | | | | | |
|--------------------------|-----------|--------------|----------|----------|----------|----------|---------------------|---------------------|--------------------|
| Parish: JEFFERSON | | | | | | | | | |
| Priority List: 1 | 2 | 445 | 2 | 2 | 1 | 0 | \$1,819,257 | \$1,736,424 | \$1,144,618 |
| Priority List: 2 | 1 | 510 | 1 | 1 | 0 | 0 | \$3,398,867 | \$4,200,065 | \$1,646,140 |
| Priority List: 3 | 1 | 0 | 1 | 0 | 0 | 1 | \$1,835,047 | \$17,146 | \$1,293,621 |
| Priority List: 4 | 1 | 232 | 1 | 0 | 0 | 0 | \$2,192,418 | \$2,275,892 | \$22,889 |
| Priority List: 5 | 1 | 633 | 0 | 0 | 0 | 0 | \$1,686,865 | \$1,778,927 | \$31,369 |
| Priority List: 6 | 1 | 217 | 0 | 0 | 0 | 0 | \$5,019,900 | \$5,027,621 | \$92 |
| Priority List: 7 | 3 | 1,094 | 0 | 0 | 0 | 0 | \$32,535,300 | \$32,563,001 | \$0 |
| Priority List: 8 | 1 | 417 | 0 | 0 | 0 | 0 | \$7,161,749 | \$7,161,749 | \$0 |
| Parish Total | 11 | 3,548 | 5 | 3 | 1 | 1 | \$55,649,403 | \$54,760,825 | \$4,138,729 |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Parish

| | No. of Projects | Acres | CSA Executed | Under Const. | Completed | Projects Deauth. | Baseline Estimate | Current Estimate | Expenditures To Date |
|--------------------------|--------------------|--------------|-----------------|-----------------|-----------|---------------------|----------------------|---------------------|-------------------------|
| Parish: LAFOURCHE | | | | | | | | | |
| Priority List: 1 | 2 | 175 | 1 | 1 | 0 | 1 | \$8,393,548 | \$8,204,197 | \$1,721,223 |
| Priority List: 2 | 1 | 474 | 1 | 1 | 1 | 0 | \$4,854,102 | \$6,735,969 | \$5,175,510 |
| Priority List: 3 | 1 | 1,913 | 1 | 0 | 0 | 0 | \$2,046,971 | \$2,576,789 | \$1,529,387 |
| Priority List: 4 | 2 | 952 | 2 | 0 | 0 | 0 | \$8,171,080 | \$9,564,637 | \$268,567 |
| Priority List: 5 | 1 | 1,609 | 0 | 0 | 0 | 0 | \$5,135,468 | \$8,264,676 | \$87,017 |
| Parish Total | 7 | 5,123 | 5 | 2 | 1 | 1 | \$28,601,169 | \$35,346,268 | \$8,781,704 |
| Parish: ORLEANS | | | | | | | | | |
| Priority List: 1 | 1 | 1,550 | 1 | 1 | 1 | 0 | \$1,657,708 | \$1,608,203 | \$1,009,441 |
| Priority List: 2 | 1 | 1,281 | 1 | 1 | 1 | 0 | \$1,452,035 | \$1,569,127 | \$1,018,645 |
| Priority List: 5 | 1 | 75 | 0 | 0 | 0 | 0 | \$2,890,821 | \$2,416,559 | \$271,557 |
| Priority List: 7 | 1 | 0 | 0 | 0 | 0 | 0 | \$6,510,200 | \$6,510,200 | \$0 |
| Parish Total | 4 | 2,906 | 2 | 2 | 2 | 0 | \$12,510,764 | \$12,104,089 | \$2,299,643 |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Parish

| | No. of Projects | Acres | CSA Executed | Under Const. | Completed | Projects Deauth. | Baseline Estimate | Current Estimate | Expenditures To Date |
|----------------------------|--------------------|---------------|-----------------|-----------------|-----------|---------------------|----------------------|---------------------|-------------------------|
| Parish: PLAQUEMINES | | | | | | | | | |
| Priority List: | 1 | 9,831 | 0 | 0 | 0 | 0 | \$8,517,066 | \$16,673,000 | \$499,428 |
| Priority List: | 2 | 802 | 1 | 0 | 0 | 0 | \$2,522,199 | \$2,658,816 | \$150,073 |
| Priority List: | 3 | 2,023 | 3 | 1 | 1 | 2 | \$5,303,469 | \$5,133,117 | \$667,173 |
| Priority List: | 4 | 0 | 1 | 0 | 0 | 1 | \$2,768,908 | \$425,373 | \$83,980 |
| Priority List: | 5 | 1,119 | 1 | 0 | 0 | 0 | \$15,525,950 | \$15,525,950 | \$144,399 |
| Priority List: | 6 | 2,386 | 1 | 0 | 0 | 0 | \$7,073,934 | \$7,113,934 | \$99,025 |
| Priority List: | 7 | 0 | 0 | 0 | 0 | 0 | \$12,471,800 | \$12,471,800 | \$0 |
| Priority List: | 8 | 337 | 0 | 0 | 0 | 0 | \$2,500,000 | \$2,500,000 | \$0 |
| Parish Total | 13 | 16,498 | 7 | 1 | 1 | 3 | \$56,683,326 | \$62,501,991 | \$1,644,078 |

Parish: ST. BERNARD

| | | | | | | | | | |
|---------------------|----------|--------------|----------|----------|----------|----------|---------------------|---------------------|------------------|
| Priority List: | 3 | 1,002 | 2 | 1 | 0 | 0 | \$2,333,636 | \$2,173,378 | \$299,207 |
| Priority List: | 7 | 0 | 0 | 0 | 0 | 0 | \$15,133,400 | \$15,133,400 | \$0 |
| Priority List: | 8 | 576 | 0 | 0 | 0 | 0 | \$5,336,597 | \$5,336,597 | \$0 |
| Parish Total | 5 | 1,578 | 2 | 1 | 0 | 0 | \$22,803,633 | \$22,643,375 | \$299,207 |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Parish

| | No. of Projects | Acres | CSA Executed | Under Const. | Completed | Projects Deauth. | Baseline Estimate | Current Estimate | Expenditures To Date |
|-------------------------------------|--------------------|--------------|-----------------|-----------------|-----------|---------------------|----------------------|---------------------|-------------------------|
| Parish: ST. CHARLES | | | | | | | | | |
| Priority List: | 1 | 203 | 1 | 1 | 1 | 0 | \$4,461,301 | \$3,713,083 | \$3,493,868 |
| Priority List: | 3 | 176 | 1 | 1 | 1 | 0 | \$1,444,628 | \$2,436,776 | \$1,905,231 |
| Parish Total | 2 | 379 | 2 | 2 | 2 | 0 | \$5,905,929 | \$6,149,859 | \$5,399,098 |
| Parish: ST. JOHN THE BAPTIST | | | | | | | | | |
| Priority List: | 3 | 0 | 1 | 1 | 0 | 0 | \$350,000 | \$480,500 | \$360,139 |
| Parish Total | 1 | 0 | 1 | 1 | 0 | 0 | \$350,000 | \$480,500 | \$360,139 |
| Parish: ST. MARTIN | | | | | | | | | |
| Priority List: | 6 | 1,999 | 1 | 0 | 0 | 1 | \$3,317,400 | \$3,262,305 | \$1,353 |
| Parish Total | 2 | 1,999 | 1 | 0 | 0 | 1 | \$3,317,400 | \$3,262,305 | \$1,353 |
| Parish: ST. MARY | | | | | | | | | |
| Priority List: | 2 | 3,792 | 2 | 2 | 2 | 0 | \$5,043,867 | \$9,247,701 | \$6,808,109 |
| Priority List: | 3 | 2,223 | 1 | 1 | 1 | 0 | \$5,173,062 | \$5,846,581 | \$3,713,289 |
| Priority List: | 6 | 0 | 0 | 0 | 0 | 1 | \$6,438,400 | \$54,621 | \$54,666 |
| Parish Total | 4 | 6,015 | 3 | 3 | 3 | 1 | \$16,655,329 | \$15,148,903 | \$10,576,064 |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report by Parish

| | No. of Projects | Acres | CSA Executed | Under Const. | Completed | Projects Deauth. | Baseline Estimate | Current Estimate | Expenditures To Date |
|----------------------------|--------------------|--------------|-----------------|-----------------|-----------|---------------------|----------------------|---------------------|-------------------------|
| Parish: ST. TAMMANY | | | | | | | | | |
| Priority List: | 2 | 1,040 | 1 | 0 | 0 | 0 | \$3,048,389 | \$3,108,547 | \$218,278 |
| Priority List: | 4 | 0 | 0 | 0 | 0 | 1 | \$5,018,968 | \$31,973 | \$31,973 |
| Parish Total | 2 | 1,040 | 1 | 0 | 0 | 1 | \$8,067,357 | \$3,140,520 | \$250,251 |
| Parish: TERREBONNE | | | | | | | | | |
| Priority List: | 1 | 4 | 232 | 3 | 3 | 1 | \$8,557,357 | \$9,644,762 | \$6,005,826 |
| Priority List: | 2 | 2 | 485 | 2 | 2 | 0 | \$7,977,486 | \$13,441,486 | \$8,808,932 |
| Priority List: | 3 | 3 | 2,045 | 2 | 1 | 0 | \$13,711,384 | \$18,838,526 | \$8,474,635 |
| Priority List: | 4 | 1 | 0 | 0 | 0 | 0 | \$367,066 | \$558,364 | \$1,301 |
| Priority List: | 5 | 1 | 1 | 1 | 1 | 0 | \$1,497,538 | \$2,052,384 | \$1,561,581 |
| Priority List: | 6 | 2 | 1,774 | 0 | 0 | 0 | \$23,934,357 | \$23,934,357 | \$18,973 |
| Priority List: | 7 | 3 | 0 | 0 | 0 | 0 | \$8,051,022 | \$8,133,370 | \$0 |
| Parish Total | 16 | 4,536 | 12 | 8 | 7 | 1 | \$64,096,210 | \$76,603,250 | \$24,871,249 |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
 Project Status Summary Report by Parish

| | No. of Projects | Acres | CSA Executed | Under Const. | Completed | Projects Desauth. | Baseline Estimate | Current Estimate | Expenditures To Date |
|--------------------------|--------------------|-------|-----------------|-----------------|-----------|----------------------|----------------------|---------------------|-------------------------|
| Parish: VERMILION | | | | | | | | | |
| Priority List: | 1 | 2 | 375 | 2 | 2 | 1 | \$1,717,003 | \$2,145,047 | \$1,802,512 |
| Priority List: | 2 | 2 | 1,971 | 2 | 2 | 0 | \$3,778,727 | \$3,965,893 | \$1,903,968 |
| Priority List: | 3 | 1 | 0 | 1 | 1 | 1 | \$126,062 | \$45,894 | \$45,894 |
| Priority List: | 5 | 2 | 952 | 1 | 1 | 0 | \$4,938,984 | \$5,253,037 | \$2,006,073 |
| Priority List: | 6 | 2 | 160 | 0 | 0 | 0 | \$2,867,700 | \$3,009,200 | \$92 |
| Priority List: | 7 | 1 | 344 | 0 | 0 | 0 | \$2,185,900 | \$2,023,347 | \$0 |
| Priority List: | 8 | 1 | 80 | 0 | 0 | 0 | \$1,000,000 | \$1,000,000 | \$0 |
| Parish Total | 11 | | 3,882 | 6 | 6 | 2 | \$16,614,376 | \$17,442,418 | \$5,758,538 |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Parish

| No. of Projects | Acres | CSA Executed | Under Const. | Completed | Projects Deauth. | Baseline Estimate | Current Estimate | Expenditures To Date |
|---------------------------|--------|-----------------|-----------------|-----------|---------------------|----------------------|---------------------|-------------------------|
| + | 68,038 | 67 | 39 | 31 | 11 | \$381,377,001 | \$384,552,110 | \$74,435,325 |
| Total All Parishes | | | | | | | | |

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Summary Report by Priority List

| P/L | No. of Projects | Acres | CSA Executed | Under Const. | Const. Completed | Federal Const. Funds Available | Non/Fed Const. Funds Available | Baseline Estimate | Current Estimate | Obligations To Date | Expenditures To Date |
|----------------------------------|--------------------|--------|-----------------|-----------------|---------------------|--------------------------------------|--------------------------------------|----------------------|---------------------|------------------------|-------------------------|
| 1 | 14 | 19,249 | 13 | 2 | 11 | \$28,084,900 | \$10,517,773 | \$39,933,317 | \$48,027,634 | \$18,984,245 | \$18,155,776 |
| 2 | 15 | 13,373 | 15 | 1 | 10 | \$28,173,110 | \$10,161,033 | \$40,644,134 | \$55,975,530 | \$33,314,020 | \$30,309,137 |
| 3 | 13 | 12,937 | 13 | 3 | 5 | \$29,939,100 | \$10,156,410 | \$35,050,606 | \$45,545,015 | \$21,552,085 | \$17,671,802 |
| 4 | 8 | 2,387 | 7 | 1 | 0 | \$29,957,533 | \$5,000,000 | \$13,924,366 | \$15,824,051 | \$9,082,102 | \$568,521 |
| 5 | 9 | 5,063 | 6 | 0 | 2 | \$33,371,625 | \$5,000,000 | \$60,962,963 | \$48,449,188 | \$11,262,510 | \$5,280,766 |
| 6 | 11 | 10,538 | 6 | 1 | 0 | \$39,134,000 | \$10,000,000 | \$54,614,991 | \$55,692,533 | \$12,965,358 | \$499,656 |
| 7 | 4 | 1,438 | 1 | 0 | 0 | \$42,540,715 | \$0 | \$13,917,722 | \$13,865,218 | \$3,325,252 | \$0 |
| 8 | 7 | 2,741 | 0 | 0 | 0 | \$41,864,079 | \$0 | \$22,808,944 | \$22,808,944 | \$0 | \$0 |
| Active Projects | 81 | 67,726 | 61 | 8 | 28 | \$273,065,062 | \$50,835,216 | \$281,857,043 | \$306,188,113 | \$110,485,572 | \$72,485,658 |
| Unfunded Projects | 8 | 0 | 0 | 0 | 0 | | | \$77,492,000 | \$77,492,000 | \$0 | \$0 |
| Subtotal | 89 | 67,726 | 61 | 8 | 28 | \$273,065,062 | \$50,835,216 | \$359,349,043 | \$383,680,113 | \$110,485,572 | \$72,485,658 |
| Deauthorized Projects | 11 | 312 | 5 | 0 | 2 | | | \$21,789,087 | \$633,126 | \$2,114,483 | \$1,805,812 |
| Total Projects | 100 | 68,038 | 66 | 8 | 30 | \$273,065,062 | \$50,835,216 | \$381,138,130 | \$384,313,239 | \$112,600,056 | \$74,291,470 |
| Conservation Plan | 1 | 0 | 1 | 0 | 1 | | | \$238,871 | \$238,871 | \$179,153 | \$143,855 |
| Total Construction Program | 101 | 68,038 | 67 | 8 | 31 | \$273,065,062 | \$50,835,216 | \$381,377,001 | \$384,552,110 | \$112,779,209 | \$74,435,325 |
| | | | | | | \$323,900,278 | | | | | |

**COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Summary Report by Priority List**

11-Feb-99

- NOTES: 1. Total of 100 projects includes 81 active construction projects, 11 deauthorized projects, and the State of Louisiana's Wetlands Conservation Plan, and 7 unfunded projects approved on Priority List 7.
2. Total construction program funds available is \$323,900,278 . FY 1999 Federal construction program funds is estimated to be \$41,864,079.
3. The current estimate for deauthorized projects is equal to expenditures to date.
4. Current Estimate for the 5th priority list includes authorized funds for FY 96, FY 97 and FY 98 for phased projects with multi-year funding. These projects, if implemented, will require an additional \$12.5 million from Priority List 8 funds.
5. Current Estimate for the 6th priority list includes authorized funds for FY 97, and FY 98 for phased projects with multi-year funding. These projects, if implemented, will require an additional \$15.8 million from Priority List 8 funds.
6. The Task Force approved 8 unfunded projects, totalling \$77,492,000 on Priority List 7.
7. Obligations include expenditures and remaining obligations to date.