BIVONA

ſ



2ND PRIORITY PROJECT LIST REPORT (APPENDICES)

PREPARED BY:

LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION TASK FORCE

October 30, 1992

Coastal Wetlands Planning, Protection and Restoration Act

2nd Priority Project List Report

Table of Contents

Appendix A	The Act
Appendix B	Wetland Value Assessment Appendix
Appendix C	Engineering Appendix
Appendix D	Economics Appendix
Appendix E	Project Data Base
Appendix F	Project Monitoring Program
Appendix G	Status of Projects from Previous Priority Project List

 \sim

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

2ND PRIORITY PROJECT' LIST

APPENDIX A

THE ACT

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 the Army (Secretary) will convene a Task Force. •Secretary, Interior •Secretary •Secretary, Agriculture •Administrator, EPA •Secretary, Commerce •Governor, Louisiana • 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 s and report the 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 \$5 million annually to fund Task Force preparation of Priority List and Restoration Plan -- Secretary disburses 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 • Section 307b. Secretary authorized and directed to study feasibility of modifying the

MR&T to increase flows and sediment to the Atchafalaya River for land building and wetland nourishment. 25% if the state has dedicated trust fund from which principal is not spent.

* * 15% when Louisiana's Conservation Plan is approved.

activities, where appropriate, that would contribute to the restoration or improvement of one or more fish stocks of the Great Lakes Basin: and

"(2) activities undertaken to accomplish the goals stated in section 2006.

16 USC 9416. "SEC. 2009. AUTHORIZATION OF APPROPRIATIONS.

"(a) There are authorized to be appropriated to the Director— "(1) for conducting a study under section 2005 not more than \$4,000,000 for each of fiscal years 1991 through 1994; "(2) to establish and operate the Great Lakes Coordination

Office under section 2008(a) and Upper Great Lakes Fishery Resources Offices under section 2008(c), not more than \$4,000,000 for each of fiscal years 1991 through 1995; and

"(3) to establish and operate the Lower Great Lakes Fishery Resources Offices under section 2008(b), not more than \$2,000,000 for each of fiscal years 1991 through 1995.

"(b) There are authorized to be appropriated to the Secretary to carry out this Act, not more than \$1,500,000 for each of fiscal years 1991 through 1995.".

TITLE III-WETLANDS

Coestal Wetlands Planning. Protection and Restoration Act. 16 USC 3951 note.

SEC. 301. SHORT TITLE.

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

16 USC 3951.

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 Environ-

mental 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, maintanence 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 of 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;

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 16 USC 3952. 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 costeffectiveness 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) TASE 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

Reports.

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:

(Č) 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 Reports. 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 determine o 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.

16 USC 3953

(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,

(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 Wetland ' 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 EXPENDI-TURES.—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—

Texas

16 USC 3955

(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 wetland 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 I01-233, 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 Irrigation. secretary shall give such projects equal consideration with projects. Flood control. 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

16 USC 3956.

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 coastel 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.

16 USC 3954.

(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— D consistent with the National Wetlands Priority Conserva-

tion 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. 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 assurances 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

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.".

Great Lakes Oil Pollution Research and Development Act. 33 USC 2701 note.

"TITLE IV-GREAT LAKES OIL POLLU-TION RESEARCH AND DEVELOPMENT

"SEC. 4001. SHORT TITLE.

"This title may be cited as the "Great Lakes Oil Pollution Research and Development Act"

"SEC. 4002. GREAT LAKES OIL POLLUTION RESEARCH AND DEVELOP. MENT.

"Section 7001 of the Oil Pollution Act of 1990 (Public Law 101-380) is amended as follows:

Ante, p. 559.

"(1) GREAT LAKES DEMONSTRATION PROJECT .- In subsection (c)(6), strike "3" and insert "4", strike "and" after "California,", and insert "and (D) ports on the Great Lakes," after 'Louisiana,''

"(2) FUNDING -In subsection (f) strike "21,250,000" and insert "22,000,000" and in subsection (f)(2) strike "2,250,000" and insert "3,000,000"."

Approved November 29, 1990.

Nov 29 Presidential statement.

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

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

CONGRESSIONAL RECORD. Vol 136 (1990): Oct 1 considered and passed House.

Oct 26, considered and passed Senate, amended, in lieu of S. 2244. Oct 27 House concurred in Senate amendment. WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 26 (1990):

Today I am signing H.R. 5390, "An Act to prevent and control infestation of the coastal inland waters of the United States by the zebra mussel and other nonindigenous aquatic nuisance species, to reauthorize the National Sea Grant College Program, and for other purposes." This Act is designed to minimize, monitor, and control nonindigenous species that become established in the United States, particularly the zebra mussel; establish wetlands protection and restoration programs in Louisiana and nationally; and promote fish and wildlife conservation in the Great Lakes.

Title III of this Act designates a State official not subject to executive control as a member of the Louisiana Coastal Wetlands Conservation and Restoration Task Force. This official would be the only member of the Task Force whose appointment would not conform to the Appointments Clause of the Constitution.

The Task Force will set priorities for wetlands restoration and formulate Federal conservation and restoration plans. Certain of its duties, which ultimately determine funding levels for particular restoration projects, are an exercise of significant authority that must be undertaken by an officer of the United States, appointed in accordance with the Appointments Clause, Article II, sec. 2, cl. 2, of the Constitution.

In order to constitutionally enforce this program, I instruct the Task Force to promulgate its priorities list under section 303(a)(2) "by a majority vote of those Task Force members who are present and voting," and to consider the State official to be a nonvoting member of the Task Force for this purpose. Moreover, the Secretary of the Army should construe "lead Task Force member" to include only those members appointed in conformity with the Appointments Clause.

George Bush

The White House, November 29, 1990.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

2ND PRIORITY PROJECT LIST

APPENDIX B

WETLAND VALUE ASSESSMENT APPENDIX

APPENDIX B WETLAND VALUE ASSESSMENT APPENDIX

TABLE OF CONTENTS

	PAGE
Re-Establishment of Natural Sediment Delivery System, Atchafalaya Delta (PAT-2)	B-1
Freshwater Bayou Wetlands and Shore Protection (ME-4/XME-21)	B-3
Bayou Sauvage National Wildlife Refuge Hydrologic Restoration (PPO-52a)	B-7
Clear Marais Shoreline Protection (PCS-27/28)	B-9
Caernarvon Diversion Outfall Management (BS-3a)	B-13
Mud Lake Management (PCS-24)	B-23
Jonathan Davis Wetland (PBA-35)	B-25
Point Au Fer Island Plugs (PTB-22/24)	B-29
Big Island Mining, Atchafalaya Delta, Increment 1 (XAT-7)	B-39
Highway 384 Hydrologic Restoration (PCS-25)	B-41
Fritchie Marsh Restoration (PO-6)	B-45
Vermilion Bay/Boston Canal Shore Protection (TV-9/PTV-18)	B-49
Brown Lake Hydrologic Restoration (CS-9)	B-51
West Belle Pass Headland Restoration (PTE-27)	B-55
Barrier Island Restoration, Isle Dernieres Phase 1 (XTE-41)	B-57

APPENDIX B WETLAND VALUE ASSESSMENT APPENDIX

TABLE OF CONTENTS (Cont'd)

	PAGE
Humble Canal Structure (PME-15)	B-6 1
Highway 90 to GIWW Hydrologic Restoration(BA-6)	B-65
Sawmill Canal/Little Pecan Bayou Water Control Structures (PME-14)	B-67
Pass-a-Loutre Sediment Mining (PME-8)	B-75

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Atchafalaya Sediment Delivery (PAT-2)

Marsh type acres:

Fresh...... 4248

Condition: Future With Project

Interme	diate
---------	-------

	ר ד	TY 0	γ	TY 1		TY 20		
Variable		Value	SI	Value	81	Value	SI	
V1	% Emergent	6	0.15	13	0.22	58	0.6	
V2	% Aquatic	1.5	0.11	1.6	0.11	26	0.3	
V3	Interspersion Class 1 Class 2	%	0.20	%	0.40	%	0.4	
	Class 3 Class 4 Class 5	100		100		100	<u></u>	
V4	Hydrology Class 1	%	0.50	%	0.50	%	0.5	
	Class 2 Class 3 Class 4	100		100	100		100	
V5	%OW < = 1.5ft	50	0.60	60	0.70	80	0.9	
V6	Salinity (ppt) fresh intermediate	1	1.00	0.5	1.00	0.5	1.0	
V7	Access Value	1.00	1.00	1.00	1.00	1.00	1.(
		HSI #	0.28	HSI =	0.34	HSI	0.	

Condition: Future Without Project

	ז ו	TY 0		TY 1		TY 20	
Variable	 	Value	SI	Value	S	Value	SI
V1	% Emergent	6	0.15	6	0.15	5	0.15
V2	% Aquatic	1.5	0.11	1.5	0.11	1.5	0.11
٧3	Interspersion Class 1 Class 2	%	0.20	%	0.20	%	0.20
	Class 3 Class 4 Class 5	100		100		100	
V4	Hydrology Class 1 Class 2	% 100	0.50	% 100	0.50	% 100	0.50
	Class 3 Class 4						
V5	%OW <= 1.5ft	50	0.60	50	0.60	30	0.40
V 6	Salinity (ppt) fresh intermediate	- 1	1.00	1	1.00	2	1.00
٧7	Access Value	1.00	1.00	1.00		1.00	1.00
		HSI =	0.28	HSI	0.28	HSI *	0.2

14-Aug-92

AAHU CALCULATION

Project: Atchafalaya Sediment Delivery (PAT-2)

Future With F	Project			1	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	4248		0.28	1183.74	
1	4248		0.34	1430.28	
20	4248		0.59	2492.29	37264.37
				AAHU's	= 1928.57

Future Witho	ut Project				Cummulative
TY	Acres	X	HSI	<u>HU's</u>	<u>HU's</u>
0	4248		0.28	1183.74	
1	4248		0.28	1183.74	1183.74
20	4248		0.26	1116.35	21850.81
				AAHU's	s <u>1151.73</u>

28.57
51.73
6.84

ļ.

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Freshwater Bayou Stabilization / Restoration (ME-4 / XME-21) Marsh type acres:

Condition: Future With Project

Fresh..... Intermediate.. 14381

	TY 0		TY 1		TY 10	
	Value	SI	Value	<u>- 81</u>	Value	81
% Emergent	79	0.81	79	0.81	78	0.80
% Aquatic	70	0.73	70	0.73	70	0.73
Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	% 50 50	0.50	% 50 50	0.50
Hydrology Class 1 Class 2 Class 3 Class 4	% 100	0.50	% 100	0.50	% 100	1.0
%OW <= 1.5ft	80	0.90	80	0.90	85	0.9
Salinity (ppt) fresh intermediate	4	1.00	4	1.00	3	1.0
Access Value	0.10 HSI =	0.37	0.30 HSI =	0.51	0.30 HSI -	0.5 0.7
	% Aquatic Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 Hydrology Class 1 Class 2 Class 3 Class 3 Class 3 Class 4 %OW <= 1.5ft Salinity (ppt) fresh intermediate	Value% Emergent79% Aquatic70Interspersion%Class 150Class 250Class 350Class 4Class 5Hydrology%Class 1100Class 2100Class 3Class 4%OW <= 1.5ft	Value SI % Emergent 79 0.81 % Aquatic 70 0.73 Interspersion % 0.50 Class 1 0.50 0.50 Class 2 50 0.50 Class 3 50 0.50 Class 4 0.50 0.50 Class 5 0.50 0.50 Hydrology % 0.50 Class 2 100 0.50 Class 3 0.50 0.50 Class 4 0.50 0.50 Salinity (ppt) 1.00 1.00 intermediate 4 1.00	Value Si Value Value % Emergent 79 0.81 79 % Aquatic 70 0.73 70 Interspersion % 9% 9% Class 1 0.50 50 Class 2 50 50 Class 3 50 50 Class 4 0.50 50 Class 5 0.50 50 Hydrology % 0.50 Class 1 0.50 100 Class 2 100 100 Class 3 0.50 100 Class 4 0.50 100 Salinity (ppt) 1.00 4 Access Value 0.10 0.37 0.30	Value SI Value SI % Emergent 79 0.81 79 0.81 % Aquatic 70 0.73 70 0.73 Interspersion % 9% 0.50 0.50 Class 1 0.50 50 0.50 0.50 Class 2 50 50 0.50 0.50 Class 3 50 50 0.50 0.50 Class 4 0.50 50 0.50 0.50 Class 5 0.50 100 0.50 0.50 Class 1 0.50 100 0.50 0.50 Class 2 100 100 100 0.50 Class 3 100 100 100 0.50 Class 4 4 4 4 1.00 Salinity (ppt) 1.00 4 4 1.00 intermediate 4 0.10 0.30 0.51	Value Si Si

] [TY 20					
Variable		Value	<u> </u>	Value	<u>SI</u>	Value	<u> 81</u>
V1	% Emergent	78	0.80				
V2	% Aquatic	70	0.73				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	%		*	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	%		%	
V5	%OW <= 1.5ft	90	1.00				<u> </u>
V6	Salinity (ppt) fresh intermediate	3	1.00		,,		
٧7	Access Value	0.30	0.51 0.77	HSI -		HSI	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Freshwater Bayou Stablilzation / Restoration (ME-4 / XME-21) Marsh type acres:

(ME-4/XME-21) Condition: Future Without Project Fresh..... Intermediate.. 14381

		TY 0		TY 1		TY 10	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	79	0.81	79	0.81	77	0.79
V2	% Aquatic	70	0.73	70	0.73	40	0.46
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	% 50 50	0.50	% 25 50 25	0.40
∨4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	0.50	% 100	0.50	% 100	0.50
V5	%OW <= 1.5ft	80	0.90	80	0.90	80	0.9
V6	Salinity (ppt) fresh intermediate	4	1.00	4	1.00	6	0.6
V7	Access Value	0.10	0.37	0.10 HSI =	0.37	1.00 HSI =	<u>1.0</u>

	ן ר	TY 20					
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	67	0.70				
V2	% Aquatic	30	0.37				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.30	%		%	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	0.50	%		%	
V5	%OW <= 1.5ft	83	0.93				
V6	Salinity (ppt) fresh intermediate	6	0.60				
٧7	Access Value	1.00	1.00			HSI	
		HSI ±	0.58	HSI			-

AAHU CALCULATION

Project: Freshwater Bayou Stablilzation / Restoration (ME-4 / XME-21)

Future With			Total	Cummulative	
TY	Acres	X	HSI	HU's	HU's
0	14381		0.69	9890.05	
1	14381		0.71	10212.57	10051.31
10	14381		0.76	10968.12	95313.14
20	14381		0.77	11024.53	109963.26
l				AAHU's :	10766.39

Future Without Project Cummulative Total Acres x HSI TY HU's HU's 0 14381 0.69 9890.05 9890.05 9890.05 1 14381 0.69 10 14381 9193.16 0.64 85874.45 0.58 20 14381 8275.39 87342.78 AAHU's 9155.36

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	10766.39
B. Future Without Project AAHU's =	9155.36
Net Change (FWP - FWOP) =	1611.02

--

FWBAYOU.WK3

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Bayou Sauvage Hydrologic Restoration (PPO-52A) Marsh type acres:

Fresh..... 5475 Intermediate..

Condition: Future With Project

	ז ה	TY O		ΤΥ 1		TY 20	
Variable		Value	SI	Value	SI	Value	SI
<u>V1</u>	% Emergent	51	0.56	58	0.62	64	0.68
V2	% Aquatic	10	0.19	10	0.19	20	0.2
V3	Interspersion Class 1	%	0.30	*	0.30	%	0.2
	Class 2 Class 3 Class 4 Class 5	50 50		50 50		30 70	<u></u>
V4	Hydrology Class 1 Class 2	% 100	0.30	%	1.00	%	1.0
	Class 3 Class 4			100		100	
V5	%OW <= 1.5ft	75	0.85	85	0.95	85	0.9
V6	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.0
V7	Access Value	0.00	0.30	0.00	0.30	0.00	0.3
		HSI +	0.41	HSI I	0.49	HSI -	0.5

Condition: Future Without Project

	ר ר	TY 0		TY 1		TY 20	
Variable		Value	<u>SI</u>	Value	SI	Value	81
V1	% Emergent	51	0.56	50	0.55	41	0.47
V2	% Aquatic	10	0.19	10	0.19	10	0.19
V3	Interspersion Class 1 Class 2	%	0.30	%	0.30	%	0.2
	Class 3 Class 4 Class 5	50 50		50 50		25 75	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	0.30	% 100	0.30	% 100	0.3
V5	%OW <= 1.5ft	75	0.85	75	0.85	78	0.8
V6	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.0
٧7	Access Value	0.00	0.30	0.00	0.30	0.00	0.3
		HSI -	0.41	HSI ±	0.41	H\$I =	0.3

AAHU CALCULATION

Project: Bayou Sauvage Hydrologic Restoration

(PPO-52A)

Future With	Project			1	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	5475		0.41	2261.71	
1	5475		0.49	2663.60	2462.65
20	5475		0.53	2909.25	52942.08
				AAHU's	= <u>2770.24</u>

Future Witho	ut Project			Total	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	5475		0.41	2261.71	
1	5475		0.41	2250.72	2256.22
20	5475		0.39	2114.23	41467.09
		. <u></u>			
				AAHU's	s 2186.17

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	2770.24
B. Future Without Project AAHU's =	2186.17
Net Change (FWP – FWOP) =	584.07

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

ProjectClear Marais/GIWW Shoreline Protection	
(PCS-27)	

Marsh type acres: Fresh..... Intermediate..

4637

Condition:	Future With	Project	
	5	-	

.

	ר ר	TY 0		TY 1		TY 10	
Variable		Value	SI	Value	<u>SI</u>	Value	SI
V1	% Emergent	44	0.50	44	0.50	45	0.51
V2	% Aquatic	100	1.00	100	1.00	100	1.00
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.60	% 100	0.60	% 100	0.60
∨4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	% 100	1.00	% 100	1.00
V5	%OW <= 1.5ft	75	0.85	75	0.85	75	0.85
V6	Salinity (ppt) fresh intermediate	o	1.00	o	1.00	٥	1.00
٧7	Access Value	0.00	0.30	0.00	0.30	0.00	0.30
		HSI =	0.67	HSI -	0.67	HSI =	0.68

	TY 20			}		
	Value	SI	Value	81	Velue	<u>SI</u>
% Emergent	45	0.51				
% Aquatic	100	1.00				
Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.60	%		%	
Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	%		%	
%OW <= 1.5ft	75	0.85				
Salinity (ppt) fresh intermediate	o	1.00				
Access Value	0.00	0.30	HSI =			
	% Aquatic Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 Hydrology Class 1 Class 2 Class 1 Class 2 Class 3 Class 3 Class 4 %OW <= 1.5ft Salinity (ppt) fresh intermediate	Value% Emergent45% Aquatic100Interspersion Class 1 Class 2 Class 3 Class 5%Hydrology Class 1 Class 2 Class 3 Class 3 Class 3 Class 3 Class 4 Class 4 Class 4 Class 4 Class 5Hydrology Class 1 Class 2 Class 3 Class 3 Class 4 Class 4 Class 4 Class 4 Class 5Hydrology Class 1 Class 2 Class 3 Class 3 Class 4 Class 4%OW <= 1.5ft	Value SI % Emergent 45 0.51 % Aquatic 100 1.00 Interspersion % 0.60 Class 1 0.60 0.60 Class 2 100 0.60 Class 3 100 1.00 Class 4 1.00 1.00 Class 5 1.00 1.00 Class 3 100 1.00 Class 4 1.00 1.00 Salinity (ppt) 0 1.00 resh 0 1.00	Value Si Value % Emergent 45 0.51 % Aquatic 100 1.00 Interspersion % % Class 1 0.60 % Class 2 100 % Class 3 100 % Class 4 1.00 % Class 5 1.00 % Hydrology % % Class 1 1.00 % Class 2 100 % Class 3 100 % Class 4 1.00 % %OW <= 1.5ft	Value Si Value Si % Emergent 45 0.51	Value Si Si

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Clear Marais/GIWW Shoreline Protection (PCS-27)

Marsh type acres:

Condition: Future Without Project

Fresh.....

4637

	1	TY 0		TY 1	1	TY 10	
/ariable		Value	SI	Value	SI	Value	SI
V1	% Emergent	44	0.50	44	0.50	28	0.35
V2	% Aquatic	100	1.00	100	1.00	10	0.19
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.60	% 100	0.60	% 50 50	0.3
V4	Hydrology Class 1 Class 2 Class 3 Class 4	%	1.00	% 100	1.00	% 100	1.0
V5	%OW <= 1.5ft	75	0.85	75	0.85	50	0.6
V6	Salinity (ppt) fresh intermediate	o	1.00	o	1.00	6	0.6
٧7	Access Value	0.00	0.30	0.00	0.30	1.00	1.0
		HSI =	0.67	HSI =	0.67	HSI =	

	ן ר	TY 20			-	L	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	22	0.30				
V2	% Aquatic	10	0.19				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 25 75	0.25	%		%	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	%		%	
V5	%OW <= 1.5ft	30	0.40				
V6	Salinity (ppt) fresh intermediate	6	0.60				
7	Access Value	1.00 HSI =	1.00 0.38	HSI		HSI	-

AAHU CALCULATION Project: Clear Marais/GIWW Shoreline Protection

(PCS-27)

Future With F	Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	4637		0.67	3114.23	
1	4637		0.67	3114.23	3114.23
10	4637		0.68	3131.08	28103.88
20	4637		0.68	3131.08	31310.76
				AAHU's	= 3126.44

Future With	out Project				Cummulative
TY	Acres	X	HSI	<u>HU's</u>	HU's
0	4637		0.67	3114.23	
1	4637		0.67	3114.23	3114.23
10	4637		0.42	1946.67	22774.07
20	4637		0.38	1746.09	18463.84
	,			AAHU's	s <u>2217.61</u>

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	3126.44
B. Future Without Project AAHU's =	2217.61
Net Change (FWP - FWOP) =	908.84

MARAIS.WK3

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Caemarvon Outfall Management (BS-3a) Marsh ty Sub-area 1 (Intermediate to remain intermediate, FWP and FWOP) Condition: Future With Project

Marsh type acres:

Fresh..... 3270

	TVO		TY 1		TY 20	
		SI	Value	SI	Value	<u></u>
% Emergent	43	0.49	44	0.50	73	0.76
% Aquatic	20	0.28	20	0.28	16	0.24
Interspersion Class 1 Class 2	% 50	0.40	% 50	0.40	% 100	0.60
Class 3 Class 4 Class 5	50		50			
Hydrology Class 1 Class 2 Class 3 Class 4	% 100	0.50	% 100	0.50	% 100	1.0
%OW <= 1.5ft	54	0.64	56	0.66	95	0.7
Salinity (ppt) fresh intermediate	4	1.00	3	1.00	1	0.8
Access Value	1.00 HSI =	1.00	1.00 HSI =	1.00 0.51	1.00 HSI =	<u> </u>
	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 Hydrology Class 1 Class 2 Class 3 Class 3 Class 4 %OW <= 1.5ft Salinity (ppt) fresh intermediate	% Aquatic 20 Interspersion % Class 1 50 Class 2 50 Class 3 50 Class 4 50 Class 5 50 Hydrology % Class 2 100 Class 3 100 Class 4 50 Salinity (ppt) 54 Salinity (ppt) 54 Access Value 1.00	Value SI % Emergent 43 0.49 % Aquatic 20 0.28 Interspersion % 0.40 Class 1 0.40 Class 2 50 Class 3 0.40 Class 4 50 Class 5 0.50 Class 2 100 Class 3 0.50 Class 4 50 Class 5 0.50 Class 4 50 Class 5 0.50 Class 4 0.50 Class 4 1.00 %OW <= 1.5ft	Value SI Value % Emergent 43 0.49 44 % Aquatic 20 0.28 20 Interspersion % 0.40 % Class 1 0.40 50 50 Class 2 50 50 50 Class 3 50 50 50 Class 4 50 50 50 Class 5 0.50 100 100 Class 1 0.50 100 100 Class 3 100 100 100 Class 4 54 0.64 56 Salinity (ppt) 1.00 3 3 fresh 4 3 3 Access Value 1.00 1.00 1.00	Value SI Value SI % Emergent 43 0.49 44 0.50 % Aquatic 20 0.28 20 0.28 Interspersion % 0.40 % 0.40 Class 1 0.40 50 0.40 0.40 Class 2 50 50 0.40 0.40 Class 3 50 50 0.40 0.40 Class 4 50 50 0.50 0.40 Class 5 0.50 50 0.50 0.50 Hydrology % 0.50 0.50 0.50 Class 1 100 100 0.50 0.50 Class 3 100 100 0.50 0.50 Class 4 100 1.00 1.00 1.00 %OW <= 1.5ft	Value Si Si

Condition: Future Without Project

	n (*****	TY 0	γ	TY 1	ſ	TY 20	
Variable	-	Value	SI	Value	SI	Value	ŞI
V1	% Emergent	43	0.49	43	0.49	67	0.70
 V2	% Aquatic	20	0.28	20	0.28	23	0.31
V3	Interspersion	%	0.40	%	0.40	%	0.50
	Class 1 Class 2	50		50		50 50	
	Class 3 Class 4 Class 5	50		50			
V4	Hydrology	%	0.50	%	0.50	*	0.50
	Class 1 Class 2 Class 3 Class 4	100	0.00	100		100	
V5	%OW <= 1.5ft	54	0.64	56	0.66	90	1.00
V6	Salinity (ppt) fresh intermediate	4	1.00	4	1.00	2	1.0
	Access Value	1.00	1.00	1.00	1.00	1.00 HSI =	<u>1.0</u> 0.6
		HSI	0.51	HSI	0.51		0.0

AAHU CALCULATION

Project: Caernarvon Outfall Management (BS-3a) Sub-area 1 (intermediate to remain intermediate, FWP and FWOP)

Future With	Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	3270		0.51	1663.26	
1	3270		0.51	1677.57	1670.41
20	3270		0.63	2058.28	35490.56
		· · · · · · · · · · · · · · · · · · ·			
<u> </u>				AAHU's	= 1858.05

Future Witho	ut Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	3270		0.51	1663.26	
1	3270		0.51	1668.38	1665.82
20	3270		0.62	2022.35	35061.94
				AAHU's	1836.39

NET CHANGE IN AAHU'S DUE TO PROJECT A. Future With Project AAHU's =	1050 05
	1858.05
B. Future Without Project AAHU's =	1836.39
Net Change (FWP - FWOP) =	21.66

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Condition: Future With Project

	ן וה	TY 0		TY 1		TY 20	
Variable		Value	S	Value	<u>SI</u>	Value	SI
V1	% Emergent	84	0.86	84	0.86	88	0.89
V2	% Aquatic	40	0.58	41	0.59	60	0.72
∨3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	% 50 50	0.50	% 75 25	0.55
V4	Hydrology Class 1 Class 2 Class 3	% 50 50	0.75	% 100	1.00	% 100	1.00
V5	%OW <= 1.5ft	65	0.83	66	0.84	85	0.90
V6	Salinity (ppt)	5	0.77	5	0.77	4	0.53
	Access Value	1.00 HSI	1.00 = 0.76		1.00		

Condition: Future Without Project

		TY 0		TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	SI
 V1	% Emergent	84	0.86	84	0.86	84	0.86
V2	% Aquatic	40	0.58	40	0.58	40	0.58
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	% 50 50	0.50	% 50 50	0.50
∨4	Hydrology Class 1 Class 2 Class 3	% 50 50	0.75	% 50 50	0.75	% 50 50	0.75
V5	%OW <= 1.5ft	65	0.83	65	0.83	70	0.8
V6	Salinity (ppt)	5	0.77	5	0.77	5	0.77
V7	Access Value	1.00 HSI =	1.00 0.76	1.00 HSI =	1.00 0.76	1.00 HSI =	1.00 0.7

AAHU CALCULATION

Project: Caernarvon Outfall Management (BS-3a) Sub-area 2 (brackish to remain brackish, FWP and FWOP)

Future With	Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	7778		0.76	5927.08	
1	7778		0.78	6104.88	
20	7778		0.81	6290.88	117759.67
				AAHU's	= 6188.78

Future Witho	ut Project		[Cummulative
TY	Acres	X	HSI	HU's	<u>HU's</u>
0	7778		0.76	5927.08	
1	7778		0.76	5927.08	
20	7778		0.77	5962.47	112950.70
			<u></u>		
				AAHU's	5943.89

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	6188.78
B. Future Without Project AAHU's =	5943.89
Net Change (FWP – FWOP) =	244.89

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Condition:	Future W	/ith Project
------------	----------	--------------

	ת ו	TY 0		TY 1		(from intermedi	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	84	0.86	84	0.86		
V2	% Aquatic	40	0.58	41	0.59		
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	% 50 50	0.50	%	
∨4	Hydrology Class 1 Class 2 Class 3	% 50 50	0.75	% 100	1.00	%	
V5	%OW <= 1.5ft	65	0.83	66	0.84	k	
V6	Salinity (ppt)	5	0.77	5	0.77	/	
 V7	Access Value	1.00 HSI 1	1.00 0.76		<u> </u>		

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project	.Caernarvon Outfall Management (BS-3a)	Marsh	iype
F10j001	Sub-area 3 (brackish to convert to intermediate, FWP and	FWOP)	F
	Future With Project		Ir

sh type acres:

Fresh..... Intermediate.. 1397

	n F	(from brackish model)		(from brackish model)		TY 20	
Variable		Value	SI	Value	S	Value	<u> </u>
	a. 5					90	0.91
<u>V1</u>	% Emergent		<u>,</u> ,			80	0.84
V2	% Aquatic						
٧3	interspersion Class 1	%		%		% 100	0.60
	Class 2 Class 3 Class 4 Class 5						
V4	Hydrology Class 1	%		%		%	1.0
	Class 2 Class 3 Class 4					100	
V5	%OW <= 1.5ft					95	0.7
V6	Salinity (ppt) fresh intermediate					1	0.9
V7	Access Value					1,00	1.0
<u> </u>		HSI	Σ	HSI	:	HSI_1	0.0

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Condition: Future Without Project

% Emergent	TY 0 Value		Value	SI	Value	S
% Emergent						
	84	0.86	84	0.86		
% Aquatic	40	0.58	40	0.58		
Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	% 50 50	0.50	%	
Hydrology Class 1 Class 2 Class 3	% 50 50	0.75	% 50 50		%	
960W <= 1.5ft	65	0.83	65	0.83	3	
Salinity (ppt)	5	0.77	5	0.7	/	<u> </u>
Access Value	1.00	1.00				<u></u>
	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 Hydrology Class 1 Class 2 Class 3 %OW <= 1.5ft Salinity (ppt)	Appendix Interspersion % Class 1 50 Class 2 50 Class 3 50 Class 4 50 Class 5 50 Hydrology % Class 1 50 Class 1 50 Class 2 50 Class 3 50 Class 3 50 Class 3 50 Class 3 50 Salinity (ppt) 5 Access Value 1.00	Interspersion % 0.50 Class 1 0.50 0.50 Class 2 50 0.50 Class 3 50 0.50 Class 4 0.50 0.50 Class 5 0.50 0.50 Hydrology % 0.50 Class 1 50 0.75 Class 2 50 0.75 Class 3 50 0.75 Selinity (ppt) 5 0.77 Access Value 1.00 1.00	% Aquanc 40 100	% Aquanc 40 0.00 Interspersion % 0.50 0.50 Class 1 0.50 50 0.50 Class 2 50 50 0.50 Class 3 50 50 0.50 Class 4 0 0.75 50 Class 5 0.75 50 0.75 Hydrology % 0.75 50 0.75 Class 1 50 0.75 50 0.75 Class 2 50 50 0.75 50 Class 3 65 0.83 65 0.83 %OW <= 1.5ft	% Aquanc 40 0.00 % <t< td=""></t<>

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Caernarvon Outfall Management (BS-3a) Marsh type acres: Sub-area 3 (brackish to convert to intermediate, FWP and FWOP) Fresh...... Condition: Future Without Project Intermediate.. 1397

	n F	(from brackish model) (from brackish model)			timm brackish mode		headkish model) (from brackish model) TY		(mm brackish model) (from brackish model)		(from brackish model) (from brackish mode		TY 20	
Variable		Value	SI	Value	SI	Value	SI							
						84	0.86							
<u>V1</u>	% Emergent			+		60	0.64							
V2	% Aquatic					60	0.04							
٧3	Interspersion Class 1	%		%		% 50	0.50							
	Class 2 Class 3 Class 4 Class 5					50								
∨4	Hydrology Class 1 Class 2 Class 3	%		%		% 100	0.50							
	Class 4					90	1.00							
V5	%OW <= 1.5ft													
V6	Salinity (ppt) fresh intermediate					2	1.0							
						1.00	<u>1.0</u> 0.7							
7	Access Value			HSI		HSI :	0.7							

AAHU CALCULATION

Project: Caernarvon Outfall Management (BS-3a) Sub-area 3 (brackish to convert to intermediate, FWP and FWOP)

			_		
Future With	Project			• • • • • •	Cummulative
TY	Acres	X	HSI	HU's	HU's
	1397		0.76	1064.56	
1	1397		0.78	1096.49	1080.52
20	1397		0.85	1184.19	21666.46
					4407.25
				AAHU's	<u>= 1137.35</u>

Future Witho	ut Project			Cummulative
TY	Acres	x HSI	<u>HU's</u>	<u>HU's</u>
0	1397	0.76	1064.56	
1	1397	0.76	1064.56	1064.56
20	1397	0.76	1061.62	20198.68
			AAHU'	s 1063.16

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	1137.35
B. Future With Project AAHU's =	1063.16
B. Future Without Project Aking C	74.19
Net Change (FWP – FWOP) =	
* HSI calculated from Intermediate model	

CAERNAR3.WK3

±

(from intermediate model) Value SI **TY 1** TY 0 Value SI Value 51 Variable 84 0.86 0.86 % Emergent 84 V1 0.59 40 0.58 41 % Aquatic ٧2 % % % VЗ Interspersion 0.50 Class 1 0.50 50 Class 2 50 50 50 Class 3 Class 4 Class 5 % % Hydrology % **V4** 1.00 50 0.75 Class 1 100 50 Class 2 Class 3 66 0.84 %OW <= 1.5ft 65 0.83 ۷5 0.77 5 5 0.77 V6 Salinity (ppt) 1.00 1.00 1.00 ٧7 Access Value 1.00 HSI HSI 0.76 HSI 0.78 Ξ

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Caernarvon Outfall Management (BS-3a) Marsh type acres: Sub-area 4 (brackish to convert to intermediate, FWP only) Fresh...... Condition: Future With Project Intermediate.. 3111

<u> </u>	ז ו	(from brackish r	nodel)	(from brackish	model)	TY 20	
Variable		Value	SI	Value	SI	Value	<u></u>
V1	% Emergent				· · · · · · · · · · · · · · · · · · ·	92	0.93
٧2	% Aquatic					80	0.82
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	%		%		%	0.60
٧4	Hydrology Class 1 Class 2 Class 3 Class 4	%		*		% 100	1.00
V5	%OW <= 1.5ft					95	0.70
V6	Salinity (ppt) fresh intermediate					1	0.90
V7	Access Value	HSI :	<u></u>	HSI	<u> </u>	1.00 HSI =	<u>1.0</u> 0.8

	ר ד	TY 0		TY 1		TY 20		
Variable		Value	81	Value	81	Value	81	
V1	% Emergent	84	0.86		0.86		0.8	
V2	% Aquatic	40	0.58	40	0.58	40	0.5	
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	% 50 50	0.50	% 50 50	0.54	
∨4	Hydrology Class 1 Class 2 Class 3	% 50 50	0.75	% 50 50	0.75	% 50 50	0.7	
V5	%OW <= 1.5ft	65	0.83	65	0.83	70	0.8	
V6	Salinity (ppt)	5	0.77	5	0.77	5	0.7	
V7	Access Value	1.00	1.00	1.00	1.00	1.00	1.0	
		HSI :	0.76	HSI 1	0.76	HSI :	0.7	

AAHU CALCULATION

Project: Caernarvon Outfall Management (BS-3a) Sub-area 4 (brackish to convert to intermediate, FWP only)

Future With I	Project		Total	Cummulative
TY	Acres	X HSI	HU's	HU's
0	3111	0.76	2370.68	
1	3111	0.78	2441.79	2406.24
20	3111	0.85	2652.63	48397.01

AAHU's : 2540.16

uture Witho	ut Project		Total	Cummulative
TY	Acres	X HSI	HU's	HU's
0	3111	0.76	2370.68	
1	3111	0.76	2370.68	2370.68
20	3111	0.77	2384.83	45177.37
			AAHU's	2377.40

2540.16
2377.40
162.76

Project......East Mud Lake Wetland Restoration (PCS-24) Marsh type acres....... 8054

Condition: Future With Project

	ת ה	TY 0		TY 1		TY 20			
Variable_		Value	SI	Value	SI	Value	SI		
V1	% Emergent	40	0.46	40	0.46	40	0.46		
V2	% Aquatic	10	0.37	15	0.41	50	0.6		
V3	Interspersion Class 1 Class 2	% 60	0.44	% 60	0.44	% 60	0.4		
	Class 3 Class 4 Class 5	40		40		40			
V4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	% 100	1.00	% 100	1.0		
V5	%OW <= 1.5ft	80	1.00	80	1.00	80	1.0		
V6	Salinity (ppt)	12	0.70	12	0.70	10	1.(
V7	Access Value	0.58	0.62	0.44	0.50	0.44	0.(0 .(
		HSI =	0.56	HSI =	0.54	HSI =	U		

Condition: Future Without Project

	1 -	TY 0		TY 1		TY 20		
Variable		Value	SI	Value	SI	Value	SI	
V1	% Emergent	40	0.46	39	0.45	21	0.29	
V2	% Aquatic	10	0.37	10	0.37	10	0.37	
V3	Interspersion Class 1	%	0.44	%	0.44	*	0.32	
	Class 2 Class 3 Class 4	60 40		60 40		60 40		
	Ciass 5					%		
V4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	% 100	1.00	× 100	1.00	
V5	%OW <= 1.5ft	80	. 1.00	80	1.00	84	0.92	
V6	Salinity (ppt)	12	0.70	12	0.70	12	0.70	
V7	Access Value	0.58	0.62	0.58	0.62	0.58	0.6	
		HSI =	0.56	HSI =	0.55	HSI =	0.4	

EMUDLAKE.WK3

12-Aug-92

AAHU CALCULATION Project: East Mud Lake Wetland Restoration (PCS-24)

Future With	Project			Total	Cummulative
TY	Acres	X	HSI	HU's	<u>HU's</u>
0	8054		0.56	4482.70	
1	8054		0.54	4373.23	4427.96
20	8054		0.61	4923.12	88315.32
			, p		
<u> </u>	· · · · · · · · · · · · · · · · · · ·			AAHU's	= 4637.16

Future Witho	out Project		[Cummulative
TY	Acres	X	HSI	HU's	HU's
0	8054		0.56	4482.70	
1	8054		0.55	4458.61	4470.65
20	8054		0.47	3807.34	78526.53
<u> </u>				AAHU's	s 4149.86

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	4637.16
B. Future Without Project AAHU's =	4149.86
Net Change (FWP - FWOP) =	487.30

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Jonathan Davis Wetland Restoration (PBA-35) Marsh type acres:

Condition: Future With Project

.

Fresh.....

Intermediate.. 7199

ר ר	TY 0		TY 1		TY 10	
	Value	SI	Value	<u>SI</u>	Value	81
% Emergent	66	0.69	66	0.69	65	0.69
% Aquatic	5	0.15	5	0.15	20	0.28
Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	% 50 50	0.50	% 50 50	0.50
Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	% 100	1.00	% 100	1.00
%OW <= 1.5ft	65	0.75	65	0.75	65	0.75
Sannity (ppt) fresh intermediate	5	0.80	5	0.80	3	1.0
Access Value	1.00	1.00	0.80	0.86	0.80 HSI =	0.8
	% Aquatic Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 Hydrology Class 1 Class 2 Class 1 Class 2 Class 3 Class 4 %OW <= 1.5ft Saunity (ppt) fresh intermediate	% Emergent 66 % Aquatic 5 Interspersion % Class 1 50 Class 2 50 Class 3 50 Class 4 50 Class 5 50 Hydrology % Class 1 50 Class 2 50 Class 3 100 Class 4 5 %OW <= 1.5ft	Value St % Emergent 66 0.69 % Aquatic 5 0.15 Interspersion % 0.50 Class 1 0.50 0.50 Class 2 50 0.50 Class 3 50 0.50 Class 4 0.50 0.50 Class 5 0.50 0.50 Hydrology % 1.00 Class 1 1.00 1.00 Class 2 100 0.50 Class 3 100 0.65 Saunity (ppt) 65 0.75 Saunity (ppt) 0.80 0.80 intermediate 5 0.80	Value SI Value Value % Emergent 66 0.69 66 % Aquatic 5 0.15 5 Interspersion % 0.50 50 Class 1 0.50 50 50 Class 2 50 50 50 Class 3 50 50 50 Class 4 0.50 50 50 Class 5 1.00 % 7 Hydrology % 1.00 7 Class 2 100 100 100 Class 3 100 100 65 Saunity (ppt) 65 0.75 65 Saunity (ppt) 0.80 5 5	Value SI Value SI % Emergent 66 0.69 66 0.69 % Aquatic 5 0.15 5 0.15 Interspersion % 0.50 % 0.50 Class 1 0.50 50 0.50 0.50 Class 2 50 50 0.50 0.50 Class 3 50 50 0.50 0.50 Class 4 1.00 1.00 1.00 1.00 Class 2 100 100 1.00 0.80 0.80 Class 3 100 0.80 5 0.80 0.80 Class 4 0.80 5 0.80 5 0.80 %OW <= 1.5ft	Value SI SI Value SI Value SI Value SI Si

	1 –	TY 20					
Variable		Value	SI	Value	<u> </u>	Value	<u> 81</u>
V1	% Emergent	64	0.68				
V2	% Aquatic	20	0.28				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	%		%	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	%		%	
V5	%OW <= 1.5ft	65	0.75				
V6	Salinity (ppt) fresh intermediate	3	1.00				
7	Access Value	0.80 HSI *	0.86	HSI		HSI	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Jonathan Davis Wetland Restoration (PBA-35) Marsh type acres:

Fresh...... Intermediate.. 7199

	7 F	TY O		TY 1		TY 10	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	66	0.69	66	0.69	62	0.66
V2	% Aquatic	5	0.15	5	0.15	55	0.15
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	% 50 50	0.50	% 35 65	0.47
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	% 100	1.00	% 100	1.0
V5	%OW <= 1.5ft	65	0.75	65	0.75	52	0.6
V6	Salinity (ppt) fresh intermediate	5	0.80	5	0.80	3	1.0
V7	Access Value	1.00 HSI =	1.00 0.54	1.00 HSI =	1.00 0.54	1.00 HSI =	1.0 0.5

	ן 🗂	TY 20					
Variable		Value	SI	Value	SI	Value	Si
V1	% Emergent	57	0.61				
V2	% Aquatic	5	0.15				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 25 75	0.45	%		%	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	%		%	
V5	%OW <= 1.5ft	40	0.50				•
V6	Salinity (ppt) fresh intermediate	3	1.00				
٧7	Access Value	1.00 HSI =	1.00 0.51	HSI =	·····	HSI	

Project: Jonathan Davis Wetland Restoration (PBA-35)

Future With	Project			-	Cummulative
TY	TY Acres		HSI	HU's	HU's
0	7199		0.54	3887.46	
1	7199		0.53	3829.27	3858.36
10	7199		0.62	4449.02	37252.27
20	7199		0.62	4431.40	44402.07
				AAHU's	= 4275.63

Future Witho	Future Without Project			Total	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	7199		0.54	3887.46	
1	7199		0.54	3887.46	3887.46
10	7199		0.53	3814.72	34659.80
20	7199		0.51	3639.17	37269.44
			······································		
				AAHU's	3790.83

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	4275.63
B. Future Without Project AAHU's =	3790.83
Net Change (FWP - FWOP) =	484.80

JONDAVIS.WK3

Project......Point Au Fer Protection/Restoration (PTE-22/24) Marsh type acres...... 1505 Area 1a (brackish)

Condition: Future With Project

	. <u> </u>	TY 0	<u> </u>	TY 1		TY 20	
Variabla	-	Value	SI	Value	SI	Value	SI
Variable V1	% Emergent	82	0.84	82	0.84	82	0.84
 V2	% Aquatic	17	0.42	20	0.44	27	0.49
 V3	Interspersion Class 1	%	0.40	%	0.40	%	0.40
	Class 2 Class 3 Class 4 Class 5	100		100		100	
∨4	Hydrology Class 1 Class 2	% 100	1.00	% 100	1.00	% 100	1.0
	Class 3 %OW <= 1.5ft	20	0.33	20	0.33	40	0.5
	Salinity (ppt)	10			1.00	7	1.0
V0 V7	Access Value	1.00	1.00		1.00		
	<u>, </u>	HSI	= 0.68	B HSI	= 0.68		

	TY 0		TY 1		TY 20	
	Value	<u>SI</u>	Value	SI	Value	<u>SI</u>
Emergent	82	0.84	82	0.84	78	0.80
% Aquatic	17	0.42	17	0.42	17	0.42
terspersion Class 1	%	0.40	%	0.40	%	0.40
Class 2 Class 3 Class 4 Class 5	100		100		100	-
Hydrology Class 1 Class 2 Class 3	% 100	_1. 00	% 100	1.00	% 100.	1.00
OW <= 1.5ft	20	0.33	20	0.33	10	0.2
Salinity (ppt)	10		10	1.00	9	1.0
Access Value	1.00	1.00	1.00	1.00	1.00	1.0 0.6
		ss Value 1.00	s Value 1.00 1.00	s Value 1.00 1.00 1.00	s Value 1.00 1.00 1.00 1.00	s Value 1.00 1.00 1.00 1.00 1.00

Project: Point Au Fer Protection/Restoration (PTE-22/24) Area 1a (brackish)

Future With	Future With Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
	1505		0.68	1017.10	
1	1505		0.68	1026.18	1021.64
20	1505		0.73	1097.32	20173.31
L				AAHU's	= 1059.75

Future With	out Project			Total	Cummulative
TY	Acres	X	HSI	HU's	<u> </u>
	1505		0.68	1017.10	
	1505		0.68	1017.10	1017.10
20	1505		0.64	966.92	18848.15
				AAHU'	s 993.26

NET CHANGE IN AAHU'S DUE TO PROJECT	
NET CHANGE IN AANO O DOL TO TO TO T	1059.75
A. Future With Project AAHU's =	993.26
B. Future Without Project AAHU's =	66.49
Net Change (FWP – FWOP) =	

Project...... Point Au Fer Protection/Restoration (PTE-22/24) Marsh type acres....... 2259 Area 1b (saline)

Condition: Future With Project

		TY 0		TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	ŞI
V1	% Emergent	82	0.84	82	0.84	82	0.84
 V2	% Aquatic	17	0.67	20	0.68	27	0.71
V3	Interspersion Class 1 Class 2	%	0.40	%	0.40	%	0.40
	Class 2 Class 3 Class 4 Class 5	100		100		100	
∨4	Hydrology Class 1 Class 2	% 100	1.00	% 100	1.00	% 100	1.00
	Class 3 Class 4						
V5	%OW <= 1.5ft	20	0.36	20	0.36	40	0.6
V6	Salinity (ppt)	12	0.76	11	0.64	9	0.4
V7	Access Value	1.00	1.00	1.00	1.00		1.0 0.7
	<u> </u>	HSI =	0.73	HSI =	0.72	HSI =	<u>v./</u>

	ז ר	TY 0		TY 1		TY 20	
Variable		Value	S	Value	SI	Value	SI
	% Emergent	82	0.84	82	0.84	78	0.80
V2	% Aquatic	17	0.67	17	0.67	17	0.67
∨3	Interspersion Class 1	%	0.40	*	0.40	*	0.40
	Ciass 2 Ciass 3 Ciass 4 Ciass 5	100		100		100	
V4	Hydrology	%	1.00	%	1.00	%	1.00
	Class 1 Class 2 Class 3 Class 4	100	1.00	100		100	
V5	%OW <= 1.5ft	20	0.36	20	0.36	10	0.23
V6	Salinity (ppt)	12	0.76	12	0.76	10	0.52
٧7	Access Value	1.00	1.00		1.00		1.00
		HSI	= 0.73	HSI	= 0.73	HSI	0.66

Project: Point Au Fer Protection/Restoration (PTE-22/24)

Area 1b (saline)

Future With F	Future With Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	2259		0.73	1647.96	
1	2259		0.72	1622.76	
20	2259		0.73	1641.16	31007.24
				AAHU's	= 1632.13

Future Witho	uture Without Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	2259		0.73	1647.96	
1	2259		0.73	1647.96	
20	2259		0.66	1497.48	29881.61
				AAHU's	s <u>1576.48</u>

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	1632.13
B. Future Without Project AAHU's =	1576.48
Net Change (FWP - FWOP) =	55.65

Project......Point Au Fer Protection/Restoration (PTE-22/24) Marsh type acres....... 880 Area 2a (brackish)

Condition: Future With Project

		TY 0	r	TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	68	0.71	68	0.71	63	0.67
V2	% Aquatic	6	0.34	6	0.34	6	0.34
V3	Interspersion Class 1	%	0.40	%	0.40	%	0.40
	Class 2 Class 3 Class 4 Class 5	100		100		100	
∨4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	% 100	1.00	% 100	1.0
V5	%OW <= 1.5ft	60	0.78	60	0.78	66	0.8
V6	Salinity (ppt)	9	1.00	9	1.00	7	1.0
V7	Access Value	1.00			A 47		1.(0. €
		HSI =	0.67	HSI	= 0.67		

	1 6	TY 0	Y	TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	SI
Vanabio V1	% Emergent	68	0.71	67	0.70	51	0.56
V2	% Aquatic	6	0.34	0	0.30	0	0.30
V3	Interspersion Class 1 Class 2 Class 3 Class 4	% 100	0.40	% 100	0.40	% 100	0.60
∨4	Class 5 Hydrology Class 1 Class 2 Class 3	% 100	1.00	% 100	1.00	% -100	1.00
V5	%OW <= 1.5ft	60	0.78	60	0.78	50	0.66
V6	Salinity (ppt)	9	1.00	9	1.00	12	0.70
	Access Value	1.00 HSI :	1.00 - 0.67		1.00 = 0.66		1.00 0.6

Project: Point Au Fer Protection/Restoration (PTE-22/24) Area 2a (brackish)

Future With Project				•	Cummulative
TY	Acres	X	HSI	<u>HU's</u>	<u>HU's</u>
0	880		0.67	593.32	
	880		0.67	593.32	593.32
20	880		0.67	587.29	11215.77
				AAHU's	= 590.45

Future With	out Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	880		0.67	593.32	
1	880		0.66	577.34	585.33
20	880		0.61	537.06	10586.81
			· · · · ·		
				AAHU's	558.61
				AAHU	5 558.01

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	590.45
B. Future Without Project AAHU's =	558.61
Net Change (FWP - FWOP) =	31.85

Project...... Point Au Fer Protection/Restoration (PTE-22/24) Marsh type acres...... Area 2b (brackish)

586 (Brackish to convert to saline after TY1, FWOP)

		TV 0	<u>_</u>	TY 1		TY 20	
		TY 0 Value	SI	Value	SI	Value	SI
Variable_	<u></u>	Value					
V1	% Emergent	68	0.71	68	0.71	63	0.67
V2	% Aquatic	6	0.34	6	0.34	6	0.34
V3	Interspersion Class 1	%	0.40	%	0.40	%	0.4
	Class 2 Class 3 Class 4 Class 5	100		100		100	
V4	Hydrology	%		%	1.00	%	1.0
• •	Class 1 Class 2 Class 3	100	1.00	100		100	
V5	%OW <= 1.5ft	60	0.78	60	0.78	66	0.8
	Salinity (ppt)	9		9	1.00	7	1.
V6		1.00			1.00	1.00	1.
7	Access Value		= 0.67	the second s	= 0.67	HSI =	. 0.

Project......Point Au Fer Protection/Restoration (PTE-22/24) Marsh type acres...... Area 2b (brackish) Condition: Future Without Project

586 (Brackish to convert to saline after TY1, FWOP)

	ז ר	TY 0		TY 1		(from saline n	
Variable		Value	SI	Value	<u>SI</u>	Value	SI
V1	% Emergent	68	0.71	67	0.70		
V2	% Aquatic	6	0.34	O	0.30		
V3	Interspersion Class 1	%	0.40	%	0.40	%	
	Class 2 Class 3 Class 4 Class 5	100		100			
∨4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	% 100	1.00	%	
V5	%OW <= 1.5ft	60	0.78	60	0.78		
V6	Salinity (ppt)	9	1.00	10	1.00		<u> </u>
V7	Access Value	1.00	1.00	1.00	1.00	the second s	
		HSI =	0.67	<u>HSI =</u>	0,66	HSI	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project......Point Au Fer Protection/Restoration (PTE-22/24) Marsh type acres...... Area 2b (brackish) Condition: Future Without Project

586 (Brackish area to convert to saline after TY1, FWOP)

	ן ה	from brackish	(lebom	(from brackish	model)	TY 20	
Variable		Value	SI	Value	SI	Value	SI
 V1	% Emergent					38	0.44
V2	% Aquatic					0	0.6
V3	Interspersion Class 1 Class 2 Class 3 Class 4	%		%		% 100	0.6
∨4	Class 5 Hydrology Class 1 Class 2 Class 3 Class 4	%		%		% 100	1.0
V5	%OW < = 1.5ft				-	40	0.6
V6	Salinity (ppt)					14	1.0
٧7	Access Value	HSI =		HSI =		1.00 HSI =	1.0 0.6

Project: Point Au Fer Protection/Restoration (PTE-22/24) Area 2b (brackish)

Future With Project					Cummulative
TY	Acres	X	HSI	HU's	<u>HU's</u>
0	586		0.67	395.10	
1	586		0.67	395.10	395.10
20	586		0.67	391.08	7468.68
		<u> </u>			
				AAHU's	= <u>393.19</u>

Future With	out Project				Cummulative
TY	Acres	X	HSI	<u>HU's</u>	HU's
0	586		0.67	395.10	
1	586		0.66	384.46	389.78
20	586		0.67	394.46	7399.70
<u> </u>				AAHU's	389.47

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	393.19
B. Future Without Project AAHU's =	389.47
Net Change (FWP - FWOP) =	3.72
* HSI calculated from Saline model	

AUFERSBS.WK3

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Increment Analysis

Marsh type acres:

Fresh..... Intermediate..

3400

Project......Big Island Mining (XAT-7) Increment 1 (500-foot-wide channel) Condition: Foure With Project

	n r	TY 0		TY 1		TY 20	
		Value	SI	Value	S	Value	SI
<u>eriable</u>		Value					
V1	% Emergent	26	0.33	36	0.42	62	0.66
V2	% Aquatic	36	0.42	36	0.42	40	0.46
V3	Interspersion Class 1	%	0.20	%	0.40	%	0.40
	Class 2 Class 3 Class 4 Class 5	100		100		100	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	0.50	% 100	0.50	% 100	0.5
V5	%OW <= 1.5ft	55	0.65	60	0.70	65	0.7
V6	Salinity (ppt) fresh intermediate	2	1.00	1	1.00	1	1.0
 V7	Access Value	1.00	1.00	1.00	1.00	1.00 HSI	
		HSI	0.46	HSI	0.53	1131	

		TY 0	1	TY 1	1.	TY 20	
(Value	SI	Value	<u>SI</u>	Value	SI
/ariable	% Emergent	26	0.33	26	0.33	16	0.24
V1	% Aquatic	36	0.42	36	0.42	36	0.4
V2 V3	Interspersion Class 1 Class 2	%	0.20	%	0.20	%	0.2
	Class 3 Class 4 Class 5	100		100		100	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	0.50	% 100	0.50	% 100	0.5
 V5	%OW <= 1.5ft	55	0.65	55	0.65	45	0.9
V6	Salinity (ppt) fresh intermediate	2	1.00	2	1.00	2	1.
	Access Value	1.00	1.00 0.46	1.00 HSI	1.00 0.46	1.00 HSI =	1 0.

Increment Analysis

AAHU CALCULATION

Project:

Big Island Mining (XAT-7) Increment 1 (500-foot-wide channel)

Future With	Project			-	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	3400		0.46	1568.08	
1	3400		0.53	1818.76	1693.42
20	3400		0.62	2123.77	37454.00
			<u></u>		
		<u></u>			
	<u></u>			AAHU's	= 1957.37

Future Witho	out Project				Cummulative
TY	Acres	X	HSI	<u>HU's</u>	<u>HU's</u>
0	3400		0.46	1568.08	
1	3400		0.46	1568.08	
20	3400		0.41	1403.48	28229.76
				AAHU's	<u>s 1489.89</u>

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	1957.37
B. Future Without Project AAHU's =	1489.89
Net Change (FWP – FWOP) =	467.48

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Hwy. 384 Hydrologic Restoration (PCS-25) Area 1 (fresh)

Marsh type acres:

Fresh..... Intermediate.. 322

Condition: Future With Project

% Emergent % Aquatic	TY 0 Velue 45 70	<u>SI</u> 0.51 0.73	TY 1 Value 45	SI 0.51	TY 20 Value 45	8I 0.51
% Aquatic	45		45	0.51	45	0.51
% Aquatic	70	0.73				
			70	0.73	70	0.7
Class 1	%	0.20	%	0.20	%	0.2
Class 3 Class 4 Class 5	100		100		100	
Hydrology Class 1 Class 2 Class 3 Class 4	% 100	0.50	% 100	0.50	% 100	0.9
%OW <= 1.5ft	80	0.90	80	0.90	80	0.
Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.
Access Value	0.00	0.30	0.00	0.30	0.00	0. 0 .
	Class 1 Class 2 Class 3 Class 4 Class 5 Hydrology Class 1 Class 2 Class 3 Class 3 Class 4 %OW <= 1.5ft Salinity (ppt) fresh intermediate	Class 1 Class 2 Class 3 Class 4 100 Class 5 Hydrology % Class 5 Hydrology % Class 1 Class 2 100 Class 3 Class 4 % Salinity (ppt) fresh intermediate	Class 1 0.20 Class 2 0.20 Class 3 0.20 Class 4 100 Class 5 0.50 Hydrology % Class 5 0.50 Class 2 100 Class 3 0.50 Class 4 0.50 Sclass 4 100 %OW <= 1.5ft	Class 1 0.20 Class 2 0.20 Class 2 0.20 Class 3 100 Class 4 100 Class 5 0.50 Hydrology % Class 1 0.50 Class 2 100 Class 3 100 Class 4 0.50 Solution 1 100 Class 4 100 Class 4 100 Solution 1 100 Salinity (ppt) 1 fresh 1 intermediate 0.00 Access Value 0.00	Class 1 0.20 0.20 Class 2 0.20 0.20 Class 3 100 100 Class 4 100 100 Class 5 0.50 0.50 Hydrology % 0.50 Class 1 100 100 Class 2 100 100 Class 3 100 100 Class 4 0.90 80 %OW <= 1.5ft	Class 1 0.20 0.20 Class 2 0.20 100 Class 3 100 100 Class 4 100 100 Class 5 9% 0.50 Hydrology % 0.50 Class 1 0.50 100 Class 2 100 100 Class 3 100 100 Class 4 0.50 100 Class 4 100 100 Salinity (ppt) 1 1.00 1 intermediate 0.00 0.30 0.00 0.30

	n 	TY 0	ļ	TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	S
Vanabio	% Emergent	45	0.51	43	0.49	11	0.20
V2	% Aquatic	70	0.73	40	0.46	20	0.28
V3	Interspersion Class 1 Class 2	%	0.20	%	0.20	%	0.20
	Class 3 Class 4 Class 5	100		100		100	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	0.50	% 100	0.50	% 100	0.50
V5	%OW <= 1.5ft	80	0.90	80	0.90	70	0.80
V6	Salinity (ppt) fresh intermediate	1	1.00	2	1.00	5	0.10
v7	Access Value	0.00	0.30	0.00		1.00	<u>1.0</u>
		HSI -	0.53	HSI	= 0.48		

Project: Hwy. 384 Hydrologic Restoration (PCS-25)

Area 1 (fresh)

Future With Project				Cummulative
TY	Acres	x HSI	HU's	HU's
0	322	0.53	171.65	
1	322	0.53	171.65	171.65
20	322	0.53	171.65	3261.35
			AAHU's	= 171.65

Future With	out Project				Cummulative	
TY	Acres	X	HSI	<u> HU's </u>	HU's	
0	322		0.53	171.65		
1	322		0.48	154.81	163.23	
20	322		0.29	94.90	2372.23	
				AAHU's 126		

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	171.65
B. Future Without Project AAHU's =	126.77
Net Change (FWP - FWOP) =	44.88

Project......Hwy. 384 Hydrologic Restoration (PCS-25) Area 2 (brackish) Condition: Future With Project Marsh type acres...... 328

		TY 0		TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	39	0.45	39	0.45	39	0.45
V2	% Aquatic	0	0.30	5	0.34	33	0.53
V3	interspersion Class 1 Class 2	%	0.20	%	0.20	*	0.2
	Class 3 Class 4 Class 5	100		100		100	
V4	Hydrology Class 1 Class 2	% 100	1.00	% 100	1.00	% 100	1.0
	Class 3 %OW <= 1.5ft	90	0.80	90	0.80	90	0.6
V5 V6	Salinity (ppt)	10	1.00	9	1.00	7	1.
 V7	Access Value	1.00 HSI =	1.00 0.55	0.60 HSI =	0.64	0.60 HSI =	0. 0.

Condition: Future Without Project

	ם ה	TY 0		TY 1		TY 20	
Variable		Value	SI	Value	<u>SI</u>	Value	SI
V1	% Emergent	39	0.45	39	0.45	27	0.34
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion Class 1 Class 2	%	0.20	%	0.20	*	0.20
	Class 3 Class 4 Class 5	100		100		100	
V4	Hydrology Class 1	%	1.00	% 100	1.00	% 100	1.00
	Class 2 Class 3	100		100			
V 5	‰OW <= 1.5ft	. 90	0.80	90	0.80	92	0.7
 V6	Salinity (ppt)	10	1.00	10	1.00	12	0.7
 V7	Access Value	1.00			1.00		1.0 0.4
		HSI	= 0.55	HSI	= 0.55	HSI =	<u>U.</u>

HWY384B.WK3

Project: Hwy. 384 Hydrologic Restoration (PCS-25) Area 2 (brackish)

Future With	Project			• - • •	Cummulative
TY	Acres	X	HSI	<u>HU's</u>	HU's
0	328		0.55	179.53	
1	328		0.51	168.89	174.21
20	328		0.56	183.65	3349.12
				AAHU's	= 176.17

Future Witho	ut Project			-	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	328		0.55	179.53	
1	328		0.55	179.53	179.53
20	328		0.49	160.55	3230.75
				AAHU's	s 170.51

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	176.17
B. Future Without Project AAHU's =	170.51
Net Change (FWP – FWOP) =	5.65
Net Change (FWF = FWOI) =	

Project......Fritchie Marsh Restoration (PO-6) Area 1 (brackish to remain brackish, FWP and FWOP) Condition: Future With Project

	TY 0	<u> </u>	TY 1		TY 20	
	Value	SI	Value	SI	Value	SI
% Emergent	58	0.62	58	0.62	52	0.57
% Aquatic	75	0.83	75	0.83	75	0.83
Interspersion Class 1 Class 2 Class 3 Class 4	% 100	0.60	% 100	0.60	% 100	0.60
Class 5 Hydrology Class 1 Class 2 Class 3	% 100	1.00	% 100	1.00	% 100	1.00
%OW <= 1.5ft	90	0.80	90	0.80	93	0.74
	5	0.77	4	0.53	4	0.53
Access Value						1.00 0.73
	 % Aquatic Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 Hydrology Class 1 Class 2 Class 3 %OW <= 1.5ft Salinity (ppt) 	% Emergent 58 % Aquatic 75 Interspersion % Class 1 100 Class 2 100 Class 3 100 Class 4 100 Class 5 100 Hydrology % Class 2 100 Class 3 100 Class 4 100 Class 5 100 Salinity (ppt) 5 Access Value 1.00	Value SI % Emergent 58 0.62 % Aquatic 75 0.83 Interspersion % 0.60 Class 1 0.60 0.60 Class 2 100 0.60 Class 3 0.60 0.60 Class 4 0.60 0.60 Class 5 100 0.60 Class 5 100 1.00 Class 1 100 1.00 Class 2 100 0.80 %OW <= 1.5ft	Value SI Value % Emergent 58 0.62 58 % Aquatic 75 0.83 75 Interspersion % 0.60 % Class 1 0.60 100 100 Class 2 100 100 100 Class 4 1.00 100 100 Class 5 1.00 100 100 Class 2 100 1.00 100 Class 3 0.80 90 30 %OW <= 1.5ft	Value SI Value SI % Emergent 58 0.62 58 0.62 % Aquatic 75 0.83 75 0.83 Interspersion % 0.60 % 0.60 Class 1 0.60 100 0.60 0.60 Class 2 100 100 100 0.60 Class 4 1.00 100 100 100 Class 5 100 1.00 100 1.00 KOW <= 1.5ft	Value SI Value SI Value Valu

Condition: Future Without Project

		TY 0		TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	58	0.62	57	0.61	35	0.42
V2	% Aquatic	75	0.83	75	0.83	55	0.69
V3	Interspersion	%		%		%	0.40
	Class 1 Class 2 Class 3 Class 4 Class 5	100	0.60	100	0.60	100	0.40
V4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	% 100	1.00	% 100	1.00
V5	%OW <= 1.5ft	90	0.80	90	0.80	93	0.74
V6	Salinity (ppt)	5	0.77	5	0.77	5	0.77
V7	Access Value	1.00				1.00	1.00 0.64
		HSI	= 0.77	HSI	= 0.77	<u>HSI =</u>	0.04

FRITCHB.WK3

Revised 25 Jg-92

2962

Marsh type acres.....

Project: Fritchie Marsh Restoration (PO-6) Area 1 (brackish to remain brackish, FWP and FWOP)

Future With	Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	2962		0.77	2294.04	
1	2962		0.75	2219.53	2256.79
20	2962		0.73	2149.94	41509.92
	1			AAHU's	= 2188.34

Future Witho	out Project			Total	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	2962		0.77	2294.04	
1	2962		0.77	2284.94	2289.49
20	2962		0.64	1900.65	39763.09
				AAHU's	s 2102.63

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	2188.34
B. Future Without Project AAHU's =	2102.63
Net Change (FWP – FWOP) =	85.71

Project...... Fritchie Marsh Restoration (PO-6) Area 2 (brackish to convert to intermediate after TY1, FWP) Marsh type acres...... (

Condition:	Future W	lith Project
------------	----------	--------------

	ז ר	TY 0	r	TY 1		(from intermedia	
Variable		Value	SI	Value	SI	Value	<u>SI</u>
V1	% Emergent	58	0.62	58	0.62		
V2	% Aquatic	75	0.83	75	0.83		
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.60	% 100	0.60	%	
∨4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	% 100	1.00	%	
V5	%OW <= 1.5ft	90	0.80	90	0.80		ļ
V6	Salinity (ppt)	5	0.77	4	0.53		
٧7	Access Value	1.00	1.00	1.00	1.00		<u> </u>
		HSI +		HSI	0.75		

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project	Fritchie Marsh Restoration (PO-6)	Marsh typ
	Area 2 (brackish converting to intermediate after TY1, FWP)
Condition:	Future With Project	

be acres:

Fresh..... 2962 Intermediate..

2962

	ז ר	(from brackish r	nodel)	(from brackish model)		TY 20	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent					52	0.57
V2	% Aquatic					75	0.78
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	%		%		% 100	0.60
∨4	Hydrology Class 1 Class 2 Class 3 Class 4	%		%		%	1.00
V5	%OW <= 1.5ft					93	0.82
V6	Salinity (ppt) fresh intermediate					2	1.00
77	Access Value	HSI		HSI	<u> </u>	1.00	1.0 0.7

<u></u>	ו ר	TY 0		TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	<u>si</u>
V1	% Emergent	58	0.62	57	0.61	35	0.42
V2	% Aquatic	75	0.83	75	0.83	55	0.69
V3	Interspersion Class 1	%	0.60	% 100	0.60	%	0.4
	Class 2 Class 3 Class 4 Class 5	100				100	
V4	Hydrology Class 1	%	1.00	%	1.00	%	1.0
	Class 2 Class 3	100		100		100	
V5	%OW <= 1.5ft	90	0.80	90	0.80	93	0.7
V6	Salinity (ppt)	5	0.77	5	0.77	5	0.7
٧7	Access Value	1.00	1.00	1.00	1.00	1.00	<u>1.0</u> 0.6
	Access Value	<u>1.00</u> HSI =	1.00	1.00 HSI =	1.00 0.77	<u>1.00</u> HSI =	

AAHU CALCULATION

Project: Fritchie Marsh Restoration (PO-6) Area 2 (brackish to convert to intermediate after TY1, FWP)

Acres	X HSI	HU's	HU's
			108
2962	0.77	2294.04	
2962	0.75	2219.53	2256.79
2962	0.75	2212.82	42107.32
			2218.21
	2962	2962 0.75	2962 0.75 2219.53

uture Withou	ut Project			Cummulative
	Acres	x HSI	HU's	<u>HU's</u>
0	2962	0.77	2294.04	
1	2962	0.77	2284.94	2289.49
20	2962	0.64	1900.65	39763.09
			AAHU'	2102.65

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	2218.21
B. Future Without Project AAHU's =	2102.63
Net Change (FWP - FWOP) =	115.58
* HSI calculated with Fresh/Intermediate model	

Project......Vermilion Bay / Boston Canal Shore Protection

Marsh type acres.....

466

(PTV-18/TV-9)

Condition: Future With Project

	ז ר	TY 0		TY 1		TY 20	
Variable		Value	SI	Value	<u>SI</u>	Value	SI
 V1	% Emergent	81	0.83	81	0.83	81	0.83
V2	% Aquatic	5	0.34	5	0.34	5	0.34
∨3	Interspersion Class 1 Class 2	%	0.20	%	0.20	*	0.20
	Class 3 Class 4 Class 5	100		100		100	
√4	Hydrology Class 1	%	1.00	%	1.00	%	1.0
	Class 2 Class 3	100	1.00	100		100	
V5	%OW <= 1.5ft	100	0.60	100	0.60	100	0.6
V6	Salinity (ppt)	4	0.53	4	0.53	4	0.5
	Access Value	1.00	1.00	1.00	1.00	1.00	1.0
		HSI =	0.61	HSI =	0.61	HSI =	0.6

	ז (ד	TY 0		TY 1		TY 20		
Variable		Value	SI	Value	SI	Value	SI	
V1	% Emergent	81	0.83	77	0.7 9	0	0.10	
V2	% Aquatic	5	0.34	5	0.34	0	0.30	
∨3	Interspersion Class 1 Class 2	%	0.20	%	0.20	%	0.10	
	Class 3 Class 4 Class 5	100		100		100		
V4	Hydrology Class 1	%	1.00	%	1.00	%	0.10	
	Class 2 Class 3	100		100		100	<u></u>	
V5	%OW <= 1.5ft	100	0.60	100	- 0.60	68	0.87	
V6	Salinity (ppt)	- 4	0.53	4	0.53	4	0.53	
V7	Access Value	1.00	1.00	1.00		1.00	1.00	
		HSI =	0.61	HSI =	: 0.60	HSI =	0.2	

Project: Vermilion Bay / Boston Canal Shore Protection (PTV-18 / TV-9)

Future With	Project			Total	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	466		0.61	282.61	
1	466		0.61	282.61	282.61
20	466		0.61	282.61	5369.62
<u>L</u>				AAHU's	= 282.61

Future Without Project					Cummulative
TY	Acres	X	HSI	HU's	HU's
0	466		0.61	282.61	
1	466		0.60	279.21	280.91
20	466		0.26	122.50	3816.23
L			AAHU's	204.86	

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	282.61
B. Future Without Project AAHU's =	204.86
Net Change (FWP – FWOP) =	77.75

Project......Brown's Lake Hydrologic Restoration (CS-9) Marsh type acres...... 2794

_

٦

Condition: Future With Project

	·		<u>r</u>	TY 1		TY 5		
		TY 0	SI	Value	SI	Value	SI	
Variable		Value						
V1	% Emergent	15	0.24	15	0.24	17	0.25	
V2	% Aquatic	9	0.36	15	0.41	40	0.58	
V2 V3	Interspersion Class 1	% 20	0.31	% 20	0.35	% 30	0.37	
	Class 2 Class 3 Class 4 Class 5	15 65		35 45		25 45		
∨4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	% 100	1.00	% 100	1.00	
V5	%OW <= 1.5ft	25	0.38	25	0.38	30	0.44	
V5 V6	Salinity (ppt)	10	1.00	9	1.00	8	1.00	
	Access Value		1.00	0.60			0.6	
	ACC033 14100	HSI	= 0.40	B HSI	= 0.44			

		TY 20				Value	SI
Variable		Value	SI	Value	SI	¥aloo	
V1	% Emergent	22	0.30				
√2	% Aquatic	46	0.62				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 40 20 40	0.40	%		%	
∨4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	%		%	
V5	%OW <= 1.5ft	30	0.44		·		
V6	Salinity (ppt)	8	1.00				
 V7	Access Value	0.60 HSI =	0.64 0.52			HSI	

Revised 02-Sep-92

Project......Brown's Lake Hydrologic Restoration (CS-9) Marsh type acres....... 2794

Condition: Future Without Project

	n 1	TY 0		TY 1		TY 5	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	15	0.24	15	0.24	14	0.23
V2	% Aquatic	9	0.36	9	0.36	9	0.36
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 20 15 65	0.31	% 20 15 65	0.31	% 15 20 65	0.30
∨4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	% 100	1.00	% 100	1.00
V5	%OW <= 1.5ft	25	0.38	25	0.38	25	0.3
V6	Salinity (ppt)	10	1.00	10	1.00	10	1.0
V7	Access Value	1.00 HSI =	0.40	1.00 HSI =	1.00 0.46	1.00 HSI =	1.0 0.4

-	1 -	TY 20					
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	12	0.21				
V2	% Aquatic	9	0.36				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 10 20 70	0.28	%		%	
∨4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	%		%	-
V5	%OW <= 1.5ft	20	0.33				
V6	Salinity (ppt)	10	1.00		 		
V7	Access Value	1.00 HSI =	1.00 0.44	HSI		HSI	

.

Project: Brown's Lake Hydrologic Restoration (CS-9)

Future With F	Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	2794		0.46	1289.35	
1	2794		0.44	1226.22	1257.78
5	2794		0.49	1359.24	5170.91
20	2794		0.52	1449.72	21067.16
				AAHU's	= 1374.79

Future Witho	ut Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	2794		0.46	1289.35	
1	2794		0.46	1289.35	1289.35
5	2794		0.46	1271.89	5122.49
20	2794		0.44	1217.85	18673.09
		<u> </u>		AAHU's	s 1254.25

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	1374.79
B. Future Without Project AAHU's =	1254.25
Net Change (FWP – FWOP) =	120.55

BROWNLAK.WK3

Project...... West Belle Pass Headland Restoration (PTE-27) Marsh type acres...... 2459

Condition: Future With Project

	ז ר	TY 0		TY 1		TY 20	
Variable		Value	SI	Value	S	Value	SI
V1	% Emergent	65	0.69	72	0.75	65	0.69
V2	% Aquatic	0	0.60	0	0.60	0	0.60
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 70 30	0.76	% 70 30	0.76	% 100	1.00
∨4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	% 100	1.00	% 100	1.00
V5	%OW <= 1.5ft	40	0.61	80	0.74	80	0.74
V6	Salinity (ppt)	22	0.70	22	0.70	22	0.70
Л	Access Value	1.00	1.00			1.00	1.00
		HSI ≠	0.76	HSI	. 0.79	HSI	0.79

	ר ר	TY 0		TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	65	0.69	64	0.68	46	0.51
V2	% Aquatic	0	0.60	0	0.60	0	0.60
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 70 30	0.76	% 70 30	0.76	% 30 30 40	0.38
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	% 100	1.00	% 100	1.00
V5	%OW <= 1.5ft	40	0.61	40	0.61	40	0.61
V6	Salinity (ppt)	22	0.70	22	0.70	22	0.70
V7	Access Value	1.00 HSI =	1.00 0.76	1.00 HSI =	1.00 0.76	1.00 HSI =	<u>1.00</u>

Project: West Belle Pass Headland Restoration (PTE-27)

Future With F	Project			Total	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	2459		0.76	1865.16	
1	2459		0.79	1951.01	1908.08
20	2459		0.79	1953.05	37088.54
				AAHU's :	1949.83

Future With	out Project			Total	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	2459		0.76	1865.16	
1	2459		0.76	1857.78	1861.47
20	2459		0.65	1596.60	32816.59
				AAHU's	1733.90

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	1949.83
B. Future Without Project AAHU's =	1733.90
Net Change (FWP – FWOP) =	215.93

Project......Isle Dernieres Restoration (PTE-15) Phase 1 Only

Marsh type acres..... 776

	ר ר	TY 0	l l	TY 1		TY 11	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	25	0.33	31	0.38	27	0.34
V2	% Aquatic	0	0.60	0	0.60	0	0.60
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.50	% 44 56	0.38	% 72 28	0.54
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	% 44 56	0.50	% 100	1.0
V5	%OW <= 1.5ft	80	0.74	80	0.74	80	0.7
V6	Salinity (ppt)	22	0.70	22	0.70	22	0.7
V7	Access Value	1.00	1.00	1.00	1.00	1.00	1.0
		HSI =	0.59	HSI =	0.56	HSI =	0.6

		TY 14		TY 20			
Variable		Value	SI	Value	SI	Value	SI
	% Emergent	23	0.31	14	0.23		
V2	Aquatic	0	0.60	0	0.60		
∨3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 72 28	0.54	% 72 28	0.54	%	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	% 100	1.00	*	
V5	%OW <= 1.5ft	80	0.74	70	1.01		
V6	Salinity (ppt)	22	0.70	22	0.70		
7	Access Value	1.00 HSI =	A 84	1.00 HSI =			

Project......Isle Dernieres Restoration (PTE-15) Phase 1 Only Marsh type acres...... 776

% Emergent % Aquatic Interspersion Class 1 Class 2	TY 0 Value 25 0 % 50	SI 0.33 0.60 0.50	Value 23 23 0 %	SI 0.31 0.60	Value 5 0 %	<u>SI</u> 0.15 0.60
% Aquatic Interspersion Class 1 Class 2	0 %	0.60	0		0	
Interspersion Class 1 Class 2	%			0.60		0.60
Class 1 Class 2		0.50	%		•	
Class 3 Class 4 Class 5	50 50	0.00	50 50	0.50	∞ 50 50	0.50
Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	% 100	1.00	% 100	1.0
%OW <= 1.5ft	80	0.74	80	0.74	70	1.0
Salinity (ppt)	22	0.70	22	0.70	22	0.7
Access Value	1.00	1.00	1.00	1.00	1.00	1.0 0.4
	Class 5 Hydrology Class 1 Class 2 Class 3 Class 4 &OW <= 1.5ft Salinity (ppt)	Class 5 Hydrology % Class 1 100 Class 2 100 Class 3 100 Class 4 4 %OW <= 1.5ft	Class 5	Class 5	Class 5	Class 5

		TY 14		TY 20			
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	0	0.10		
V2	% Aquatic	0	0.60	0	0.60		
V 3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	%	0.10	%	0.10	%	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	%	0.10	%	0.10	%	
V5	%OW <= 1.5ft	20	0.36	10	0.23		
V6	Salinity (ppt)	22	0.70	22	0.70		
V7	Access Value	1.00	1.00	1.00	1.00		
		HSI =	0.26	HSI =	0.25	HSI	

Project: Isle Dernieres Restoration (PTE-15)

Phase 1 Only

Future With I	Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	776		0.59	459.80	
1	776		0.56	436.28	448.04
11	776		0.61	471.26	4537.70
14	776		0.59	455.84	1390.64
20	776		0.55	428.95	2654.38
				AAHU's	451.54

Future Withou	ut Project		[Total	Cummulative
TY	Acres	Х	HSI	HU's	HU's
0	776		0.59	459.80	
1	776		0.58	452.01	455.91
11	776	t.	0.48	372.33	4121.69
14	776		0.26	202.99	862.98
20	776		0.25	194.13	1191.37
Later and the second se				AAHU's	<u>331.60</u>

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	451.54
B. Future Without Project AAHU's =	331.60
Net Change (FWP - FWOP) =	119.94

DERPH1PI.WK3

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Humble Canal Structure Restoration (PME-15) Marsh type acres:

5500 Fresh..... Intermediate..

	ר ר	TY 0		TY 1		TY 10		
ariable		Value	<u>sı</u>	Value	SI	Value	SI	
V1	% Emergent	75	0.78	75	0.78	74	0.77	
V2	% Aquatic	85	0.87	85	0.87	85	0.87	
V3	Interspersion Class 1	%	0.30	%	0.30	%	0.34	
	Class 2 Class 3 Class 4 Class 5	50 50		50 50		50 50		
V4	Hydrology Class 1	%	1.00	%	1.00	%	1.0	
	Class 2 Class 3 Class 4	100		100		100		
V5	%OW <= 1.5ft	75	0.85	75	0.85	75	0.8	
V6	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.0	
V7	Access Value	0.00	0.30	0.35 HSI =	0.55	0.35 HSI -	<u>0.</u>	

	1	TY 20					
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	74	0.77				
V2	% Aquatic	85	0.87				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.30	%		%	
٧4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	%		%	
V5	%OW <= 1.5ft	75	0.85				
V6	Salinity (ppt) fresh intermediate	1	1.00				
٧7	Access Value	0.35	0.55			HSI	<u></u>
		HŚI =	0.74	HSI	z		-

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Humble Canal Structure Restoration (PME-15) Marsh type acres:

Fresh.....

Condition: Future Without Project

Intermediate..

5500

	TY O		TY 1			
	Value	SI	Value	<u>SI</u>	Value	<u> </u>
% Emergent	75	0.78	75	0.78	74	0.77
	85	0.87	85	0.87	85	0.87
Interspersion Class 1	%	0.30	%	0.30	%	0.30
Class 2 Class 3 Class 4 Class 5	50 50		50 50		50 50	
Hydrology	%	1.00	%	1.00	%	1.00
Class 2 Class 3	100		100		100	
	75	0.85	75	0.85	75	0.8
S ⊴nity (ppt) ∵esh	1	1.00	1	1.00	1	1.0
	0.00			0.30		0.3
	Class 1 Class 2 Class 3 Class 4 Class 5 Hydrology Class 1 Class 2 Class 3 Class 3 Class 4 %OW <= 1.5ft	% Aquatic 85 Interspersion % Class 1 7 Class 2 50 Class 3 50 Class 4 50 Class 5 75 Class 4 75 % OW <= 1.5ft	% Aquatic 85 0.87 Interspersion % 0.30 Class 1 0.30 Class 2 50 Class 3 50 Class 4 50 Class 5 1.00 Class 1 1.00 Class 2 100 Class 3 100 Class 4 50 %OW <= 1.5ft	% Emergent 70 010 % Aquatic 85 0.87 85 Interspersion % 0.30 % Class 1 0.30 % % Class 2 50 50 50 Class 3 50 50 50 Class 4 50 50 50 Class 5 1.00 % % Class 1 1.00 100 100 Class 3 100 100 100 Class 4 100 100 100 Class 4 100 100 100 %OW <= 1.5ft	% Emergent 75 0.10 12 % Aquatic 85 0.87 85 0.87 Interspersion % 0.30 0.30 0.30 Class 1 0.30 50 0.30 0.30 Class 2 50 50 0.30 0.30 Class 3 50 50 0.30 0.30 Class 4 50 50 50 0.30 Class 5 1.00 100 1.00 1.00 Class 1 1.00 100 1.00 1.00 Class 3 100 100 100 1.00 Class 4 100 1.00 1.00 1.00 %OW <= 1.5ft	% Emergent 75 0.78 73 0.10 % Aquatic 85 0.87 85 0.87 85 Interspersion % 0.30 % 0.30 % Class 1 0.30 50 50 50 50 Class 3 50 50 50 50 50 Class 4 50 50 50 50 50 Class 5 9% 1.00 100 100 100 100 Class 1 0.85 75 0.85 75 0.85 75 %OW <= 1.5ft

	TY 20 Value	01				
		SI	Value	SI	Value	<u>si</u>
% Emergent	48	0.53				
% Aquatic	5	0.15				
Interspersion Class 1	%	0.25	%		%	
Class 2 Class 3 Class 4 Class 5	25 75					
Hydrology Class 1	%	1.00	%		%	
Class 2 Class 3 Class 4	100					
%OW <= 1.5ft	50	0.60		<u> </u>		
Salinity (ppt) fresh intermediate	5	0.10				
		1.00		<u></u>		<u> </u>
	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 Hydrology Class 1 Class 2 Class 3 Class 3 Class 4 %OW <= 1.5ft Salinity (ppt)	Interspersion % Class 1 Class 2 Class 2 25 Class 3 25 Class 4 75 Class 5 75 Hydrology % Class 1 Class 2 Class 2 100 Class 3 100 Class 4 50 Salinity (ppt) 5 intermediate 1.00	% Aquate % 0.25 Interspersion % 0.25 Class 1 0.25 0.25 Class 2 25 0.25 Class 3 25 0.25 Class 4 75 0.25 Class 5 0.25 0.25 Hydrology % 1.00 Class 1 0.00 1.00 Class 2 100 0.60 Class 3 100 0.60 Salinity (ppt) 5 0.10 Intermediate 1.00 1.00	% Aquatic %	% Aquate % % Interspersion % 0.25 % Class 1 0.25 % 0.25 Class 2 25 0.25 % Class 3 25 0.25 % Class 4 75 0.25 % Class 5 1.00 % % Hydrology % 1.00 % Class 1 1.00 % 1.00 Class 2 100 1.00 1.00 Class 3 100 0.60 1.00 Salinity (ppt) 5 0.10 1.00 Intermediate 1.00 1.00 1.00	% Aquait %<

AAHU CALCULATION

Project: Humble Canal Structure Restoration (PME-15)

Future With	Project			Total	Cummulative
TY	Acres	X	HŜI	HU's	HU's
0	5500		0.70	3827.56	
1	5500		0.74	4063.03	3945.30
10	5500		0.74	4048.82	36503.32
20	5500		0.74	4048.82	40488.18
				AAHU's	= 4046.84

Future Witho	ut Project			Total	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	5500		0.70	3827.56	
1	5500		0.70	3827.56	3827.56
10	5500		0.69	3814.18	
20	5500		0.37	2032.45	29233.11
		<u> </u>			
				AAHU's	3372.43

4046.84
3372.43
674.41

HUMBLE.WK3

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Highway 90 to GIWW (BA-6)

Marsh type acres:

Fresh..... 56974 Intermediate..

Condition: Future With Project

	ק ר	TY 0	<u> </u>	TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	<u>SI</u>
V1	% Emergent	94	0.95	94	0.95	93	0.94
V2	% Aquatic	85	0.87	85	0.87	85	0.87
V3	Interspersion Class 1 Class 2	%	0.40	%	0.40	%	0.40
	Class 2 Class 3 Class 4 Class 5	100		100		100	· · ·
∨4	Hydrology Class 1	%	1.00	%	1.00	%	1.0
	Class 2 Class 3 Class 4	100		100		100	
V5	%OW <= 1.5ft	90	1.00	90	1.00	90	1.0
V6	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.0
V7	Access Value	1.00		0.80	0.86	0.80	0.8 0.8
		HSI	0.87	HSI	0.86	HSI	0.0

Condition: Future Without Project

	۹ (-	TY O		TY 1		TY 20	
Variable	-	Value	SI	Value	SI	Value	SI
V1	% Emergent	94	0.95	94	0.95	88	0.89
V2	% Aquatic	85	0.87	84	0.86	70	0.73
V3	Interspersion Class 1	%	0.40	%	0.40	%	0.40
	Class 2 Class 3 Class 4 Class 5	100		100		100	
V4	Hydrology Class 1	%	1.00	%	1.00	%	1.00
	Class 2 Class 3 Class 4	100		100		100	
V5	%OW <= 1.5ft	90	1.00	90	1.00	90	1.0
V6	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	3	0.6
٧7	Access Value	1.00	1.00	1.00	1.00	1.00	1.0
		HSI ±	0.87	HSI =	0.87	HSI =	0,7

AAHU CALCULATION Project: Highway 90 to GIWW (BA-6)

uture With F	Project			Total	Cummulative
TY	Acres	X	HSI	HU's	<u> </u>
0	56974		0.87	49665.32	
1	56974		0.86	48921.88	49293.60
20	56974		0.86	48781.78	928184.76
				AAHU's	- 48873.92

Future Witho	Future Without Project				Cummulative
TY	Acres	X	HSI	HU's	<u>HU's</u>
0	56974		0.87	49665.32	
1	56974		0.87	49561.54	49613.43
20	56974		0.79	44820.00	896624.65
				AAHU's	47311.90

]
48873.92
47311.90
1562.01

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Sawmill Canal Structures (PME-14) Area 1 (intermediate) Marsh type acres:

Condition: Future With Project

Fresh..... 1908

	ך ר	TY 0		TY 1		TY 10	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	92	0.93	92	0.93	90	0.91
V2	% Aquatic	85	0.87	85	0.87	85	0.87
V3	Interspersion Class 1 Class 2	%	0.40	%	0.40	*	0.40
	Class 2 Class 3 Class 4 Class 5	100		100		100	
V4	Hydrology Class 1	%	1.00	%	1.00	%	1.0
	Class 2 Class 3 Class 4	100		100		100	
V5	%oW <= 1.5ft	95	0.70	95	0.70	95	0.7
V6	Salinity (ppt) fresh intermediate	2	1.00	1	0.90	1	0.9
V7	Access Value	0.10	0.37	0.35	_0.55	0.35	0.5
		HSI =	0.76	HSI =	0.78	HSI <u>*</u>	0.7

	ן ה	TY 20					
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	88	0.89				<u>. </u>
V2	% Aquatic	85	0.87				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.40	%		%	
∨4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	%		%	
V5	%OW <= 1.5ft	95	0.70				
V6	Salinity (ppt) fresh intermediate	1	0.90				
٧7	Access Value	0.35	0.55				
		HSI -	0.77	HSI		H\$I	=

SAWMILLF.WK3

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Sawmill Canal Structures (PME-14) Area 1 (intermediate)

Marsh type acres:

Fresh..... Intermediate..

1908

Condition: Future Without Project

		TY 0		TY 1	·····	TY 10	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	92	0.93	91	0.92	84	0.86
V2	% Aquatic	85	0.87	85	0.87	85	0.87
V3	Interspersion Class 1 Class 2	%	0.40	%	0.40	%	0.40
	Class 3 Class 4 Class 5	100		100		100	
V4	Hydrology Class 1 Class 2	%	1.00	%	1.00	%	1.0
	Class 2 Class 3 Class 4	100		100		100	
V5	%OW <= 1.5ft	95	0.70	95	0.70	95	0.7
V6	Salinity (ppt) fresh intermediate	2	1.00	2	1.00	2	1.0
٧7	Access Value	0.10	0.37	0.10	0.37	0.10	0.3
		HSI +	0.76	HSI =	0.75	HSI =	0.7

[<u>ן</u>	TY 20					
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	76	0.78				. <u> </u>
V2	% Aquatic	25	0.33				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.60	%		%	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	1.00	%		%	
V5	%OW <= 1.5ft	90	1.00				
V6	Salinity (ppt) fresh intermediate	4	1.00				
7	Access Value	1.00	1.00				
		HSI =	0.71	HSI <u>*</u>		HSI_=	

AAHU CALCULATION

Project: Sawmill Canal Structures (PME-14) Area 1 (intermediate)

Future With	Project			Total	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	1908		0.76	1444.71	
1	1908		0.78	1486.02	1465.37
10	1908		0.77	1477.32	13335.03
20	1908		0.77	1468.49	14729.03
······	. <u></u>			AAHU's	1476.47

Future Witho	out Project		Total	Cummulative
TY	Acres	x HSI	HU's	HU's
0	1908	0.76	1444.71	
1	1908	0.75	1440.50	1442.61
10	1908	0.74	1410.13	12827.83
20	1908	0.71	1346.06	13780.97
·			AAHU's	1402.57

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	1476.47
B. Future Without Project AAHU's =	1402.57
Net Change (FWP – FWOP) =	73.90

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project......Sawmill Canal Structures (PME-14) Area 2 (brackish) Condition: Future With Project

TY 10 TY₁ TY 0 SI Value SI Value Value S Variable 73 0.76 78 0.80 79 0.81 % Emergent **V1** 0.90 85 0.90 85 0.90 85 V2 % Aquatic % % % V3 Interspersion 0.40 0.40 Class 1 0.40 Class 2 100 100 Class 3 100 Class 4 Class 5 % % % **V4** Hydrology 1.00 1.00 1.00 Class 1 100 100 Class 2 100 Class 3 95 0.70 0.70 95 95 0.70 %OW <= 1.5ft V5 1.00 6 1.00 6 1.00 8 **V6** Salinity (ppt) <u>0.42</u> 0.69 0.35 0.16 0.35 0.42 0.07 **V7** Access Value HSI 0.70 HSI HSI 0.59 = = =

	٦ ٦	TY 20					
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	68	0.71				
V2	% Aquatic	85	0.90				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.40	%		%	
∨4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	%		%	
V5	%OW <= 1.5ft	95	0.70				
V6	Salinity (ppt)	6	1.00				
V7	Access Value	0.35 HSI =	0.42	HSI =		HSI =	

743

Marsh type acres.....

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project......Sawmill Canal Structures (PME-14) Area 2 (brackish) Marsh type acres...... 743

Condition: Future Without Project

		TY 0		TY 1		TY 10		
Variable		Value	SI	Value	SI	Value	S	
V1	% Emergent	79	0.81	78	0.80	70	0.73	
V2	% Aquatic	85	0.90	85	0.90	85	0.90	
V3	Interspersion Class 1 Class 2	%	0.40	%	0.40	%	0.40	
	Class 3 Class 4 Class 5	100		100		, ,		
V4	Hydrology	%		%	1 00	%	1.00	
	Class 1 Class 2 Class 3	100	1.00	100	1.00	100		
V5	%OW <= 1.5ft	95	0.70	95	0.70	95	0.70	
V6	Salinity (ppt)	8	1.00	8	1.00	8	1.0	
V7	Access Value	0.07	0.16	0.07	0.16	0.07	0.1	
		HSI =	0.59	HSI =	0.59	HSI =	0.5	

		TY 20					
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	61	0.65				
V2	% Aquatic	25	0.48				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.60	%		%	
V4	Hydrology Class 1 Class 2 Class 3	% 100	1.00	%		%	
V5	%OW <= 1.5ft	75	0.94				
V6	Salinity (ppt)	10	1.00				
7	Access Value	1.00	1.00				
		HSI =	0.74	HSI =		HSI =	

AAHU CALCULATION

Project: Sawmill Canal Structures (PME-14)

Area 2 (brackish)

Future With	Project			1	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	743		0.59	440.47	
1	743		0.70	520.46	480.47
10	743		0.69	512.33	4647.58
20	743		0.68	503.84	5080.86
il				AAHU's	= 510.45

Future With	out Project				Cummulative
TY	Acres	X	HSI	HU's	HU's
0	743		0.59	440.47	
1	743		0.59	439.14	439.80
10	743		0.58	428.01	3902.17
20	743		0.74	547.70	4878.59
<u></u>				AAHU's	461.03

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	510.45
B. Future Without Project AAHU's =	461.03
Net Change (FWP – FWOP) =	49.42

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Cypress-Tupelo Swamp

Project...... Sawmill Canal Structures (PME-14) Area 3 (cypress swamp) Condition: Future With Project

		TY 0	<u> </u>	TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	SI
V1	Hydrology Class 1	%	1.00	%	1.00	%	1.00
	Class 2 Class 3 Class 4	100		100		100	
V2	Water exchange Class 1	%	0.50	%	0.50	%	0.50
	Class 2 Class 3 Class 4	100		100		100	
V3	Salinity (ppt)	2	0.50	1	1.00	1	1.00
		HSI =	0.63	HSI =	= 0.79	HSI =	= 0.79

 \sim

Condition: Future Without Project

		TY 0		TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	SI
V1	Hydrology Class 1	%	1.00	%	1.00	%	1.00
	Class 2 Class 3 Class 4	100		100		100	
V2	Water exchange Class 1	%	0.50	%	0.70	%	0.70
	Class 2 Class 3 Class 4	100		100		100	
V3	Salinity (ppt)	2	0.50	2			A
		HSI =	0.63	HSI =	= 0.70	HSI =	= 0.41

AAHU CALCULATION

Project: Sawmill Canal Structures (PME-14)

Area 3 (cypress swamp)

Future With	Future With Project			4)	Cummulative
TY	Acres	X	HSI	HU's	HU's
0	91		0.63	57.33	
1	91		0.79	72.23	64.78
20	91		0.7 9	72.23	1372.31
				AAHU's	- 71.85

Future Witho	Future Without Project		[Cummulative
TY	Acres	X	HSI	HU's	<u>HU's</u>
0	91		0.63	57.33	
1	91		0.70	64.13	60.73
20	0		0.41	0.00	524.92
			_		
				AAHU's	29.28

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHU's =	71.85
B. Future Without Project AAHU's =	29.28
Net Change (FWP - FWOP) =	42.57

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Sediment Mining, Pass-A-Loutre (PMR-8)

Marsh type acres: Fresh.....

Condition: Future With Project

Intermediate..

650

	n (*****	TY 0	H	TY 1		TY 2	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	5	0.15	36	0.42	35	0.42
V2	% Aquatic	50	0.55	25	0.33	70	0.73
V3	Interspersion Class 1 Class 2	%	0.20	%	0.20	%	0.20
	Class 3 Class 4 Class 5	100		100		100	
∨4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	0.50	% 30 70	0.85	% 35 65	0.8
V5	%OW <= 1.5ft	50	0.60	80	0.90	80	0.9
V6	Salinity (ppt) fresh intermediate	2	1.00	2	1.00	2	1.0
V7	Access Value	1.00	1.00	1.00	1.00	1.00	<u>1.0</u>
	1	HŚI =	0.38	HSI =	0.51	HSI ±	

1	TY 20					-
	Value	SI	Value	SI	Value	SI
% Emergent	22	0.30				
% Aquatic	65	0.69				
Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 50 50	0.30	%		%	
Hydrology Class 1 Class 2 Class 3 Class 4	% 75 25	0.63	%		%	
%OW <= 1.5ft	70	0.80				
Salinity (ppt) fresh intermediate	2	1.00				
Access Value	1.00 HSI =	1.00 0.53	HSI		HSI	3
	% Aquatic Interspersion Class 1 Class 2 Class 3 Class 4 Class 5 Hydrology Class 1 Class 2 Class 1 Class 2 Class 3 Class 3 Class 4 %OW <= 1.5ft Salinity (ppt) fresh intermediate	Value % Emergent 22 % Aquatic 65 interspersion % Class 1 Class 2 Class 3 50 Class 4 50 Class 5 75 Class 3 25 Class 4 70 Salinity (ppt) fresh intermediate 2	Value SI % Emergent 22 0.30 % Aquatic 65 0.69 Interspersion % 0.30 Class 1 0.30 0.30 Class 2 0.30 0.30 Class 3 50 0.30 Class 4 50 0.63 Class 5 0.63 0.63 Hydrology % 0.63 Class 2 75 0.63 Class 4 25 0.63 Class 4 25 1.00 %OW <= 1.5ft	Value SI Value % Emergent 22 0.30 % Aquatic 65 0.69 Interspersion % 0.30 Class 1 0.30 % Class 2 0.30 % Class 3 50 50 Class 4 50 50 Class 5 0.63 % Hydrology % 0.63 Class 2 75 0.63 Class 3 25 50 Class 4 50 50 Salinity (ppt) 70 0.80 Salinity (ppt) 2 1.00 intermediate 1.00 1.00	Value SI Value SI % Emergent 22 0.30	Value SI Value SI Value Value

WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project......Sediment Mining, Pass-A-Loutre (PMR-8)

Marsh type acres:

Condition: Future Without Project

Fresh..... Intermediate.. 650

		TY 0		TY 1		TY 2	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	5	0.15	5	0.15	5	0.1
V2	% Aquatic	50	0.55	50	0.55	49	0.5
V3	Interspersion Class 1 Class 2 Class 3	%	0.20	%	0.20	%	0.2
	Class 4 Class 5	100		100		100	
V4	Hydrology Class 1	%	0.50	%	0.50	%	0.5
	Class 2 Class 3 Class 4	100		100		100	
V5	%OW <= 1.5ft	50	0.60	50	0.60	49	0.5
V6	Salinity (ppt) fresh intermediate	2	1.00	2	1.00	2	1.0
٧7	Access Value	1.00	1.00	1.00	1.00	1.00	1.0
		HSI ±	0.38	HSI =	0.38	HSI =	0.3

		TY 20		_			
Variable		Value	SI	Value	<u>SI</u>	Value	SI
V1	% Emergent	4	0.14				
V2	% Aquatic	40	0.46				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	%	0.20	%		%	
V4	Hydrology Class 1 Class 2 Class 3 Class 4	% 100	0.50	%		%	
₩5	%O₩ <= 1.5ft	40	0.50				
V6	Salinity (ppt) fresh intermediate	2	1.00				
V7	Access Value	1.00	1.00				
		HSI =	0.35	HSI =		HSI =	

AAHU CALCULATION

Project: Sediment Mining, Pass-A-Loutre (PMR-8)

Future With I	Future With Project		Future With Project			Total	Cummulative
TY	Acres	X	HSI	HU's	HU's		
0	650		0.38	243.90			
1	650		0.51	332.64	288.27		
2	650		0.60	387.40	360.02		
20	650		0.53	346.68	6606.74		
L <u></u>				AAHU's	- 362.75		

Future With	out Project			Cummulative
TY	Acres	x HSI	HU's	HU's
0	650	0.38	243.90	
1	650	0.38	243.90	243.90
2	650	0.37	242.69	243.29
20	650	0.35	226.69	4224.36
	· · · · · · · · · · · · · · · · · · ·			
				005.50
			AAHU's	<u>s 235.58</u>

362.75
235.58
127.17

-

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

2ND PRIORITY PROJECX LIST

APPENDIX C

ENGINEERING APPENDIX

APPENDIX C

ENGINEERING APPENDIX

TABLE OF CONTENTS

TABLE

.

NUMBER		PAGE
C-l	Re-Establishment of Natural Sediment Delivery System, Atchafalaya Delta (PAT-21)	C-l
C-2	Freshwater Bayou Wetlands and Shore Protection (ME-4/xME-21)	C-l
C-3	Bayou Sauvage National Wildlife Refuge Hydrologic Restoration (PPO-52a)	C-l
C-4	Clear Marais Shoreline Protection (PCS-27/28)	C-2
C-5	Caemarvon Diversion Outfall Management (BS-3a)	C-2
C-6	Mud Lake Management (PCS-24)	
C-7	Jonathan Davis Wetland (PBA-35)	C-3
C-8	Point Au Fer Island Plugs PTE-22/24)	C-4
C-9	Big Island Mining, Atchafalaya Delta, Increment 1 (XAT-7)	C-4
C-10	Highway 384 Hydrologic Restoration (PCS-251	C-4
C-11	Fritchie Marsh Restoration (PO-6)	C-5
C-12	Vermilion Bay/Boston Canal Shore Protection (TV-9/PTV-18)	C-5
C-13	Brown Lake Hydrologic Restoration (CS-9)	C-6
C-14	West Belle Pass Headland Restoration (PTE-27)	C-6

APPENDIX C

ENGINEERING APPENDIX

TABLE OF CONTENTS (Cont' d)

TABLE <u>NUMBER</u>		<u>PAGE</u>
C-15	Barrier Island Restoration, Isle Demieres Phase 1 (XTE-41)	C-7
C-16	Humble Canal Structure (PME-15)	C-7
C-17	Highway 90 to GIWW Hydrologic Restoration(BA-6)	C-8
C-18	Sawmill Canal/Little Pecan Bayou Water Control structures (PME-14)	C-8
C-19	Pass-a-Loutre Sediment Mining (PME-8)	C-8

 \sim

v

Table C-1 **Estimated Construction Cost** Re-Establishment of Natural Sediment Delivery Systems, Atchafalaya Delta PAT-2

TTEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (S)
1 2	Mob & Demob Excavation (Marsh Creation)	Lump Sum 253,000	L.S. C.Y.	40,000 1.80	40,000 455,400
Total Co	onstruction Cost				\$495,400

Table C-2 **Estimated Construction Cost** Freshwater Bayou Wetlands and Shore Protection XME-21/ME-4

	ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (\$)
-	1 2 3 4 5	Mob & Demob 48" Diam C.M. Pipe 14 ga 48" Aluminum Flap Gate 8' V/C Weir Header Rock Breakwater	Lump Sum 1,2000 20 20 10,000	L.S. Ft. Ea. Ea. Ft.	100,000 55 4,000 4,500 42	100,000 66,000 80,000 90,000 420,000
	Total C	onstruction Cost				\$756,000

Total Construction Cost

Table C-3 Estimated Construction Cost Bayou Sauvage National Wildlife Refuge Hydrologic Restoration PPO-52a

ПЕМ	DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (\$)
1 2 3 4	Mob & Demob 36" Low Lift Pump 48" Low Lift Pump Pump Facility	Lump Sum 1 1 1	L.S. Ea. Ea. Ea.	38,500 69,000 300,000	38,500 69,000 300,000

Total Construction Cost

\$407,500

Table C-4 Estimated Construction Cost Clear Marais Shore Protection PCS-27/PCS-28

TTEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (\$)
1 2 3 Total C	Mob & Demob Rock (Breakwater) Geotextile onstruction Cost	Lump Sum 38,548 46,933	L.S. Tons S.Y.	20,000 16 6	20,000 616,768 281,598 \$918,366

Table C-5 Estimated Construction Cost Caernarvon Diversion Outfall Management BS-3a

TTEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (S)
1	Mob & Demob	Lump Sum	L.S.	50,0 00	50,000
2	Oil Field Channel	1,200	Ft.	40	48,000
3	Spoil Bank Repair	254,000	Ft.	1.50	381,000
3	Plugs	11	Ea.	20,000	220,000
5	Retention Levee Removal		Ft.	200	20,000
-	Remoavable Plugs	2	Ea.	50,000	100,000
6		200	Ft.	6	1,200
/	Discharge Channel	50,000	C.Y.	2	100,000
8	Excavation (Dredge)	5,000	Ft.	1.32	6,600
9	Vegetative Planting	5,000		2,000	2,000
10	Existing Plug Removal	1	Ea.	2,000	2,000

Total Construction Cost

\$928,800

Table C-6 Estimated Construction Cost Mud Lake Management PCS-24

TTEM	DESCRIPTION (DUANTITY	UNIT	UNIT COST (S)	AMOUNT (\$)
1	Mob & Demob	Lump Sum	L.S.	150,000	150,000
2	Vegetative Planting	150,000	Ft.	3	450,000
3	66" x51" Arch Alum Culvert	200	Ft.	65	13,000
4	12' Var Crest Weir Header	1	Ea.	6,500	6,500
5	66"x51" Flap Gate	1	Ea.	6,000	6,000
6	36" Aluminum Culvert	500	Ft.	38	19,000
7	10' Var Crest Weir Header	10	Ea.	5,500	55,000
8	48" Aluminum Culvert	1	Ea.	4,000	4,000
9	24" Aluminum Culvert	150	Ea.	29	4,350
10	24" Aluminum Flap Gate	4	Ea.	750	3,000
10	36" Aluminum Flap Gate	3	Ea.	1,2000	3,600
12	Remove 30" Pipe	6	Ea.	5,000	30,000
12	Remove Hwy Bridge	1	Ea.	20,000	20,000
13	Hwy By-Pass	1	Ea.	150,000	150,000
15	Earth Plugs (3)	200	C.Y.	5	1,000
15	Overflow Bank	780	C.Y.	5	3,900
17	Repair Existing Levee	4850	C.Y.	5	24,250
17	Repair Existing Levee	1000			

Total Construction Cost

\$943,600

Table C-7 Estimated Construction Cost Jonathan Davis Wetlands PBA-35

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (S)
				40.000	40.000
1	Mob & Demob	Lump Sum	L.S.	40,000	40,000
2	Shore Protection	24,795	Ft.	19	471,105
3	Bank Maintenance	26,594	Ft.	9	239,346
		•	Ft.	220	192,060
4	Shell Plugs (5)	873	- •		•
5	Rock Weirs (11)	952	Ft.	340	323,680
Tatal	onstruction Cost				\$1,266,191

Total Construction Cost

C-3

Table C-8 Estimated Construction Cost Point Au Fer Island Plugs PTE-22/24

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (\$)
1	Mob & Demob	Lump Sum	L.S.	50,000	50,000
2	Plugs (7) 900 C.Y. Ea.	7	Ea.	5,000	35,000
3	w/ Wood Retain Fence Shell Plugs	1,000	C.Y.	20	20,000
4	Backfill	200	Ft.	205 16	41,000 128,000
5	Shell (Shore Protection)	8,000 200,000	C.Y. C.Y.	1.82	364,000
6	Backfill	200,000	C		A (AA) 000
Total C	onstruction Cost				\$638,000

Total Construction Cost

Table C-9 Estimated Construction Cost Big Island Mining, Atchafalaya Delta, Increment 1 XAT-7

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (S)
1 2	Mob & Demob Excavation (Marsh Creation)	Lump Sum 1,920,000	L.S. C.Y.	40,000 1.40	40,000 2,688,000
Total C	onstruction Cost				\$2,728,000

Total Construction Cost

Table C-10 Estimated Construction Cost Hwy 384 Hydrologic Restoration PCS-16

ITEM	DESCRIPTION	OUANTITY	UNIT	UNIT COST (\$)	AMOUNT (S)
1	Mob & Demob	Lump Sum	L.S.	50,000	50,000
2	48" Dia C M Pipe 14 gage	300	Ft.	55	16,500
3	24" Dia C M Pipe 14 gage	120	Ft.	30	3,600
4	48" Alum Flap Gate	5	Ea.	4,000	20,000
5	24" Alum Flap Gate	3	Ea.	1,000	3,000
	24" Alum Fluice Gate	3	Ea.	1,500	4,500
6		-	Ea.	4,500	22,500
7	8' Var Crest Weir Header	-	C.Y.	16	33,600
8	Shell Plugs	2,100	C. I.	10	00,000

Total Construction Cost

\$153,700

Table C-11 Estimated Construction Cost Fritchie Marsh Restoration PO-6

IEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (\$)	AMOUNT (\$)
1	Mob & Demob	Lump Sum	L.S.	50,000	50,000
2	Excavation	105,000	C.Y.	2.50	262,500
3	8'x12' R C Box Culvert	520	Ft.	700	364,000
4	Fixed Crest Weir	200	Ea.	600	120,000
5	Hwy By-Pass	4	Ea.	40,000	160,000
Total C	onstruction Cost				\$956,500

Table C-12 Estimated Construction Cost Vermilion Bay/Boston Canal Shore Protection PTV-18/TV-9

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (\$)	AMOUNT (S)
1	Mob & Demob	Lump Sum	L.S.	40,000	40,000
2	Rock (Breakwater)	6,000	Ft.	18	108,000
3	Sediment Fence	1,200	Ft.	15	18,000
4	Vegetative Planting	79,200	Ft.	3	237,600
Tatal	an almostian Cool				¢102 600

Total Construction Cost

\$403,600

Table C-13 Estimated Construction Cost Brown Lake Hydrologic Restoration CS-9

ITEM	DESCRIPTION	<u>DUANTITY</u>	UNIT	UNIT COST (\$)	AMOUNT (\$)
1 2 3 4 5 6 7	Mob & Demob 48" Aluminum Pipe 12x12 Alum v/c Weir Head 48" Alum Flap Gate 48" Alum Sluice Gate Fill (Levee) Terraces	Lump Sum 400 er 5 8 1 173,785 34,444	L.S. Ft. Ea. Ea. C.Y. C.Y.	40,000 55 5,500 4,000 4,600 5 3	40,000 22,000 27,500 32,000 4,600 868,925 103,332
Total C	onstruction Cost				\$1,098,357

Total Construction Cost

Table C-14 Estimated Construction Cost West Belle Pass Headland Restoration **PTE-27**

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (S)
1 2	Mob & Demob Excavation (Marsh	Lump Sum 2,750,000	L.S. C.Y.	105,000 0.70	105,000 1,925,000
3 4 5	Creation) Shell (Closures) Stone Paving Rock (Weir)	6,000 40,000 2,500	C.Y. Tons Tons	20 15 15	120,000 600,000 37,500
Total C	onstruction Cost				\$2,787,500

Table C-15 Estimated Construction Cost Barrier Island Restoration, Isle Dernieres, Pase 1 XTE-41

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (\$)
1 2 3 4 5	Mob & Demob Levee Fill Cell Dredge Vegetative Planting Control Structures	Lump Sum 962,134 2,409,482 206 6	L.S. C.Y. C.Y. Ac. Ea.	400,000 2.40 1 700 10,710	400,000 2,309,121 2,409,482 144,410 64,260
-	onstruction Cost				\$5,327,273

Table C-16 Estimated Construction Cost Humbel Canal Structure **PME-15**

		DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (\$)
-	1	Mob & Demob	Lump Sum	L.S.	25,000	25,000
	2	48" Dia C M Pipe 14 gage	1	Ft.	55	16,500
	3	48" Alum Flap Gate	5	Ea.	4,000	20,000
	4	8' v/c Weir Header	5	Ea.	4,500	22,500
	5	Fill	2,000	C.Y.	8	16,000
	6	Remove Existing Structur	re 1	Ea.	50,000	50,000
						\$150,000

Total Construction Cost

\$150,000

.

Table C-17 **Estimated** Construction Cost Hwy 90 to GIWW Hydrologic Restoration **BA-6**

ITEM	DESCRIPTION	OUANTITY	UNIT	UNIT COST (S)	AMOUNT (S)
1 2 3 4 5 6	Mob & Demob Vegetative Planting Rock Weir (5) Earth Plug (5) Overflow Banks Outfall Management (Redirect Pump Discha	Lump Sum 19 685 573 20 10	L.S. Miles Ft. Ft. Miles Ea.	100,000 15,840 600 400 17,160 1,000	100,000 300,960 411,000 229,200 343,200 10,000

Total Construction Cost

\$1,394,360

Table C-18 **Estimated Construction Cost** Sawmill Canal/Little Pecan Bayou Water Control Structures **PME-14**

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST (S)	AMOUNT (S)
1 2	Mob & Demob 48" Dia. C M Pipe 14 ga.	Lump Sum 280	L.S. Ft.	75,000 55	75,000 15,400 16,000
3 4	48" Alum Flap Gate 8' v/c Weir Header	4 4	Ea. Ea.	4,000 4,500	18,000
5 6	Fill (Levee) Fill (Structure)	10,560 1,200	C.Y. C.Y.	8 8	84,480 9,600
7	Remove Existing Structur	•	Ea.	50,000	50,000
Total Co	onstruction Cost				\$268,480

Total Construction Cost

Table C-19 Estimated Construction Cost Pass a Loutre Sediment Mining PMR-8

	DESCRIPTION	QUANTITY	UNIT	UNIT COST (\$)	AMOUNT (\$)
1 2	Mob & Demob Excavation (Marsh Creation)	Lump Sum 800,000	L.S. C.Y.	70,000 0.75	70,000 600,000

Total Construction Cost

\$670,000

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

2ND PRIORITY PROJECT LIST

APPENDIX D

ECONOMIC APPENDIX

•

APPENDIX D ECONOMIC APPENDIX

TABLE OF CONTENTS

	PAGE
Re-Establishment of Natural Sediment Delivery System, Atchafalaya Delta (PAT-2)	D-l
Freshwater Bayou Wetlands and Shore Protection (ME-4/XME-2 1)	D-7
Bayou Sauvage National Wildlife Refuge Hydrologic Restoration (PPO-52a)	D-13
Clear Marais Shoreline Protection (PCS-27/28)	D-19
Caemarvon Diversion Outfall Management (BS-3a)	D-25
Mud Lake Management (PCS-24)	D-35
Jonathan Davis Wetland (PBA-35)	D-47
Point Au Fer Island Plugs (PTE-22/24)	D-41
Big Island Mining, Atchafalaya Delta, Increment 1 (XAT-7)	D-57
Highway 384 Hydrologic Restoration (PCS-25)	D-63
Marsh Restoration (PO-6)	D-7 1
Vermilion Bay/Boston Canal Shore Protection (TV-9/PTV-18)	D-79
Brown Lake Hydrologic Restoration (CS-9)	D-85
West Belle Pass Headland Restoration (PTE-27)	D-91
Barrier Island Restoration, Isle Demieres Phase 1 (XTE-41)	D-97

APPENDIX D ECONOMIC APPENDIX

t.

_ . ~ _

TABLE OF CONTENTS (Cont'd)

	PAGE
Humble Canal Structure (PME-15)	D-107
Highway 90 to GIWW Hydrologic Restoration(BA-6)	D-109
Sawmill Canal/Little Pecan Bayou Water Control Structures (PME-14)	D-115
Pass-a-Loutre Sediment Mining (PME-8)	D-123

Coastal Wetlands Planning, Protection and Restoration Act 2nd Priority Project List

Re-Establishment of Natural Sediment Delivery Systems, Atchafalaya Delta, (PAT-2)

Total First Cost	\$722,900
Total Fully Funded Cost	\$907,800

Annual Charges	Present \Vorth	Average <u>Annual*</u>
Interest & Amortization	\$787,400	\$83,200
Monitoring	40,900	4,300
O&M Cost	0	0
Other Costs		
Total	\$828,300	\$87,500
Average Annual Habitat Units		777
Cost per Habitat Unit		\$113
Average Annual Acres of Eme	ergent Marsh	1,267

*Interest rate of 8.5 percent over a 20-year project life

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

Atchafalya Sediment Delivery (PAT-2)

-

First Costs and Annual Charges

Total First Cost	. \$0 \$0 \$33,793 \$689,056	\$122,643
First Cost Construction	\$0 \$0 \$495,400	\$495,400
Contingency	\$0 \$0 \$123,850	\$123,850
Supervision & Inspection	\$0 \$0 \$61,925	\$ 61,925
Engineering Easements Supervision & Supervision & Design & Land Rights Administration & Inspection Contingency C	\$0 \$0 \$13,793 \$7,881	\$21,674
Easements & Land Rights	8 8 8 8 8	\$ 0
Engineering & Design	\$0 \$20,000 \$0	\$20,000
Fiscal Year	1993 1 9 94	OTAL
Хваг	s Compound t Compound 3 Compound 2 Compound 1 Compound Base Year	

	Fiscal	Monitoring	O&M	Other
	Үөаг	Costs	Costs	
Discount	1995	\$4,325	0\$	\$ 0
Discount	1996	\$4 ,325	9 5	~
Discount	1997	\$4,325	\$ 0	0\$
Discount	1998	\$4,325	\$ 0	3
Discount	1999	\$4,325	\$	9
Discount	2000	\$4,325	\$0	*7
Discount	2001	\$4,325	\$ 0	**
Discount	2002	\$4,325	9 0	•7
Discount	2003	\$4,325	\$ 0	•7
Discount	2004	\$4,325	\$ 0	9
Discount	2005	\$4,325	\$ 0	••
Discount	2006	\$4,325	\$0	•7
Discount	2007	\$4,325	\$0	••
Discount	2008	\$4,325	\$ 0	
Discount	2009	\$4,325	\$ 0	
Discount	2010	\$4,325	\$ 0	•,
Discount	2011	\$4,325	\$ 0	•.
Discount	2012	\$4,325	9	•
Discount	2013	\$4,325	\$	•••
Discount	2014	\$4,325	0\$	•••
	Total	5 86 500	50	

Costs amortized over 20 year operation life

21--Oct-92

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II
--

Atchafalya Sediment Delivery (PAT-2)

. .

Amortized Costs \$83,205	First Cost To	Contingency Constructio	· · · · · · · · · · · · · · · · · · ·	\$ 0, \$0		5 0 6 0 5 397		\$134,377 \$537,509																										
\$787,408	Supervision & Supervision		S 0 S 0	50 S0			\$ 16,237 \$ 0	\$8.551 \$67.189		\$54'180 \$01'10¢	Other	Costs	2 0	\$ 0	\$0	\$ 0	05	D						0.4	04		0.0		0.0	0.0	Die C	2	9	
l Costs	ients	s	50		2	°\$	\$0	5		9	0&M	Costs	9	3	0 \$	\$ 0	\$ 0	9	2 0	9	3	3	3	3					3	3		9	3	
Total Discounted Costs	Encineering		5	?	50	\$	C2 545		2	\$23,545	Monitoring	Costs	\$3,986	\$3,674	\$3,386	\$3,121	\$2,876	\$2,651	\$2,443	\$2,252	\$2,075	51,913	\$1,763	\$1,625	\$1,498	\$1,380			\$1,081	966\$	\$918	\$846	\$40,929	
	lecal			5	•	0		CRR I	1994	Total	Fiscal	Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total	
Present Valued Costs		Compound	nales	1.504	1.386	1 277		1.177	1.085	1,	Discount	Bates	0.922	0.849	0.783	0.722																	2	
Present			rear	5	4		S -	~	-			Voar	· · _		4 C 1	; 	r (c) 	9 (9 	2	. cc i	1	-10	2 =	- 12	11		- 15	- 16	- 17	- 18	1 1		V I	

Costs amortized over 20 year operation life

21-0ct-92

•

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

ant Dalivery (PAT-2) Codi Aich

lly Fu	Fully Funded Costs		Total Fully Funded Costs	fed Costs	\$907,810		Amortized Costs	sts	\$95,928
_	Inflation	Fiscal	Engineering	Easements	Supervision &	Supervision		First Cost	Total First
Year	Factor	Year		& Land Rights	Administration	& Inspection	Contingency	Construction	Cost
		C	30	\$0	\$0			2 0	0.4
, -	•		05	50	2 0	•	\$ 0	\$ 0	\$ 0
• •						\$0	\$ 0	3	0\$
, ,		0001	620 B40		S14 3	05		\$ 0	\$35,212
N 7	1.042	1991	0502	05		\$66,591		\$532,725	\$740,972
-	10	TOTAL	\$20,840	9		\$66,591	1 \$133,181	\$532,725	\$776,185
	Inflation	Fiscal	Monitoring	O&M	Other				
Үөаг	Factor	Үөаг	Costs	Costs	Costs				
- -	1 110	1995	\$4,800	3	\$ 0				
· ~	1.145	1996	\$4 ,953	\$					
1	1.182	1997	\$5,112	3					
4	1.220	1998	\$5,275	8 0					
ي ا	1.259	1999	\$5,444	\$0	\$ 0				
9	1.299	2000		\$ 0					
	1.341	2001	\$5,798	3					
. 60 	1.384	2002		0 \$					
6	1.428	2003		9					
- 10	1.473	2004							
-11	1.521	2005	\$6,577	3					
- 12	1.569	2006	\$6,787	3					
- 13	1.620	2007	\$7,004	9					
- 14	1.671	2008	\$7,229						
- 15	1.725	2009		\$					
91-1	1.780	2010				_			
- 17	1.837	2011		3					
- 18	1.896	2012		\$0		-			
- 1	1.956	2013		\$ 0		-			
- 20	2.019	2014		\$		_			
1									

Costs amortized over 20 year operation life

21-Oct-92

21-Oct-92

ł

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

Atchafalya Sediment Delivery (PAT-2)

Marsh Type: Fresh/Intermediate

		With Project	•	0/ Accordio	Venetated	Net
Voars	Acres	% Acreage Vegetated	Vegetated Acres	% Acreage Vegetated	Acres	ACres
0	4,248	5.84%	248	5.84%	248	
, .	070 7	10 000	548	5.79%	246	
-	4,248	12.30.2	648	5.75%	244	
2	4,248	407°C		5 79%	243	
e	4,248	17.61%	140			
-	4 24R	19.96%	848	5.68%	241	
r 1	1040	20.32%	948	5.64%	240	
n			1 048	561%	238	
9	4,248	K 10.42		5.57%	237	
2	4,248	K20.12		5.624	235	-
80	4,248	29.38%	1,240		500	
σ	4.248	31.73%	1,348	5.49%	CC2	
,	1 248	34 09%	1.448	5.46%	232	-
2:		36 A A 4	1 548	5.42%		-
Ξ	4,240		1 648	5.38%	229	-
12	4,248	KE100	910,1			-
13	4,248	41.15%	0+/'I			
A L	4 248	43.50%	1,848			
	A 248	45 86%	1.948	5.27%	224	
<u>e</u> :		40.014	2 048	5.23%		-
16	942'4		2 14R		221	1,927
17	4,248					2,029
18	4,248		019 ¹ 7			2 130
19	4.248	55.27%	2,348		-	
20	4,248	57.63%	2,448	5.08%	216	
	Total Years 1-20	50	29,960	_	4,620	
			1 400	_	231	

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

Atchafalya Sediment Delivery (PAT-2)

Summation of Emergent Marsh Acreages

•••

		<u>With Project</u>	Venetated	% Acreage	Vegetated	Net
Years	Acres	Vegetated	ACIES	Vegetated	ACIES.	Acres
0	4,248	5.84%	248	5.84%	248	0
÷	4 248	12.90%	548	5.79%	246	302
- ~	4 248	15.25%	648	5.75%	244	404
1 6	4 248	17.61%	748	5.72%	243	505
•	4 248	19.96%	848	5.68%	241	607
r ur	4 248	22.32%	948		240	708
b (4	4 248	24.67%	1.048		238	810
• •	4 248	27.02%	1,148		237	911
	4 248	29.38%	1,248		235	1,013
) (4 248	31.73%	1,348	5.49%	233	1,115
, t	4 248	34.09%	1.448		232	1,216
2 7	4 248	36.44%	1.548		230	1,318
: 2	4.248	38.79%	1,648	5.38%	229	1,419
1	4 248	41.15%	1.748		227	1,521
5 F	4 248	43.50%	1.848	5.31%	225	1,623
5	4 248	45.86%	1.948	5.27%	224	1,724
91	4 248	48.21%	2,048		222	1,826
1	4 248	50.56%	2,148		221	1,927
18	4.248	52.92%	2,248	5.16%	219	2,029
61	4 248	55.27%	2,348	5.12%	218	2,130
28	4,248	57.63%	2,448	5.08%	216	2,232
T	Total Years 1–20	20	29,960	_	4,620	
		Acree	1 498		231	1.267
ζ	Average Anilual Actes					

•

21-Oct-92

.

Freshwater Bayou Wetlands and Shore Protection (ME-4/XME-21)

Total First Cost	\$1240,000
Total Fully Funded Cost	\$2,770,100

Annual Charges	Present <u>Worth</u>	Average <u>Annual*</u>
Interest & Amortization	\$1,577,400	\$166,700
Monitoring	195,900	20,700
O&M cost	178,900	18,900
Other Costs	0	0
Total		\$206,300
Average Annual Habitat Uni	ts	1,611
Cost per Habitat Unit		\$128
Average Annual Acres of En	nergent Marsh	523

*Interest rate of 8.5 percent over a 20-year project life

Freshwater Bayou Bank Stabilization and Hydrologic Restoration (ME-4/XME-21)

First Costs and Annual Charges

· .

Total First	Cost	0 \$	\$51,243	\$84,971	\$231,974	\$871,813		\$1,240,000																							
First Cost	Construction	\$ 0	\$ 0	0 \$	\$141,750	\$614,250		\$756,000																							
	Contingency	\$0	\$0	\$0	\$35,438	\$153,563		\$189,000																							
Supervision	& Inspection Contingency	9 5	\$0	\$ 0	\$16,875	\$73,125		000'06\$																							
Supervision &	Administration	\$ 0	\$7,125	\$28,500	\$28,500	\$30,875		\$95,000	Other	Costs	\$ 0	\$ 0	\$0	\$ 0	0\$	9	9	9	\$0	\$ 0	%	\$ 0	\$ 0	\$ 0	9	\$	\$				
Easements	& Land Rights	0 \$.	\$30,000	\$0	\$	\$ 0		\$30,000	O&M	Costs	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$18,900	\$378,000
6	& Design	20	\$14,118	\$56,471	\$9,412	\$ 0		\$80,000	Monitoring	Costs	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$20,700	\$414,000
Fiscal	Year	1993	1994	1995	1996	1997		TOTAL	Fiscal	Үөаг	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
		Compound	4 Compound	3 Compound	2 Compound	1 Compound	Base Year				Discount	2 Discount	3 Discount	4 Discount	5 Discount	6 Discount	7 Discount	8 Discount	9 Discount	10 Discount	1 Discount	12 Discount	3 Discount	4 Discount	15 Discount	6 Discount	17 Discount	18 Discount	19 Discount	20 Discount	

Costs amortized over 20 year operation life

.

Freshwater Bayou Bank Stabilization and Hydrologic Restoration (ME-4/XME-21)

.

• •

Amortized Costs \$166,685	First Cost Total First	50	6 0 6 710	•	50 \$0 \$108 ,532	€41 718 \$166.872 \$273,086		*033 333 S																								
Amor	Supervision		D¢	\$ 0	\$0				\$33'206 \$																			~	~	•		
\$1,577,407		1		\$9.874	C 36 403		100'55\$	\$33,499	\$113,327	Other	Costs	\$ 0	\$ 0	9				-						-								
d Costs	ents		\$	\$41.576		2	2	\$ 0	\$41,576	O&M	Costs	\$17,419	\$16,055	\$14,797	\$13,638	\$12,569	\$11,585	\$10,677	\$9,841	\$9,070					\$ 6,032			\$4,722				
Total Discounted Costs	Engineering	& Design	· 2 0	e 10 555	000'81#	\$72,129	\$11,080	9	\$102,774	Monitorina	Costs	\$19.078	\$17,584	\$16,206	\$14,937	\$13,766	\$12,688	\$11,694	\$10,778	\$9,934					\$6,606	\$6,089						
	iscal	Year	1993	2001	1994	1995	1996	1997	Total	Fieral	Vear	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014				: > 4
Present Valued Costs	Compound	Bates	1 604	+00°-1	1.386	1.277	-				Discourt	Hales																			17 0.10E	201.00
Presen		Vear		n	4	3	~	1 -	-			Year	1	1	י א ו	r 4	שי כ ו		- 0			2 7				4					- 19	

Costs amortized over 20 year operation life

8

\$18,900

\$20,700

Average Annual

Freshwater Bayou Bank Stabilization and Hydrologic Restoration (ME-4/XME-21)

\$292,716	Total First	Cost	\$ 0	\$55,103	\$94,297	\$265,673	\$1,030,409	\$1,445,481																							
sts	First Cost	Construction			9 0	\$162,342	\$725,992	\$ 888,333																							
Amortized Costs			\$ 0	\$ 0	\$ 0	\$40,585	\$181,498	\$222,083																							
4	Supervision	& Inspection Contingency	\$ 0	9	0\$	\$19,326	\$86,428	\$105,754																							
\$2,770,093	Supervision &	Administration	\$0	\$ 7.662	\$31,628	\$32,640	\$36,492	\$108,422	Other	Costs	0	\$	\$	\$ 0	\$ 0	9	\$ 0	\$ 0	\$ 0	9	\$ 0	3	3	\$ 0	3	9	\$	3	9	8	\$0
ed Costs	Easements	& Land Rights	1 _	5 32 260	\$0	50	3	\$32,260	O&M	Costs	\$23,053	\$23,791	\$24,552	\$25,338	\$26,149	\$26,985	\$27,849	\$28,740	\$29,660	\$30,609	\$31,588	\$32,599	\$33,642	\$34,719	\$35,830	\$36,976	\$38,160	\$39,381	\$40,641	\$41,941	\$632,201
Total Fully Funded Costs	Engineering		3	S 15 181	562 669	2 10 779	0\$	\$88,629	Monitoring	Costs	\$25,249	\$26,057	\$26,890	\$27,751	\$28,639	\$29,555	\$30,501	\$31,477	\$32,484	\$33,524	\$34,597	\$35,704	\$36,846	\$38,025	\$39,242	\$40,498	\$41,794	\$ 43,131	\$44,511	\$45,936	\$692,411
	Fiscal	Үөаг	1993	1994	1995	1996	1997	TOTAL	Fiscal	Үөаг	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Fully Funded Costs	Inflation	Factor	1 042	1 075	1 110	1 145	1,182		Inflation	Factor	1.220	1.259	1.299	1.341	1.384	1.428	1.473	1.521	1.569	1.620	1.671	1.725	1.780	1.837	1.896	1.956	2.019	2.084	2.150	2.219	Ĩ
Fully Fi		Year) 4	r (*		4 -			Year	1	-2	ຕ ເ	4	1	9	- 7	8	1	- 10	=	- 12	- 13	- 14	- 15	- 16	- 17	- 18	- 19	-20	

Costs amortized over 20 year operation life

18-Sept-92

. .

Costs amortized over 20 year operation life

18- Sept- 92

•

With Project % Acreage With Project % Acreage With Project % Acreage Vegetated % Acreage Net %							
Adds 11,342 78.67% 11,342 78.71% 11,342 1 14,381 78.83% 11,337 78.71% 11,320 2 14,381 78.83% 11,337 78.71% 11,320 3 14,381 78.86% 11,327 78.71% 11,320 4 14,381 78.76% 11,327 78.66% 11,226 5 14,381 78.66% 11,327 78.10% 11,226 6 14,381 78.66% 11,312 77.95% 11,226 7 14,381 78.66% 11,307 77.95% 11,232 11 312 77.95% 11,232 77.49% 11,122 11 14,381 78.66% 11,292 77.49% 11,122 11 14 11,202 77.49% 11,122 11,144 11 14,381 78.46% 11,202 77.49% 11,122 11 14,381 78.46% 11,202 77.49% 11,122		2000	With Project % Acreage Venetated		Vithout Project % Acreage Vegetated	Vegetated Acres	Net Acres
14,381 78.83% 11,337 78.71% 11,320 14,381 78.80% 11,327 78.56% 11,226 14,381 78.80% 11,327 78.56% 11,226 14,381 78.66% 11,322 78.56% 11,225 14,381 78.66% 11,322 78.56% 11,225 14,381 78.66% 11,312 77.95% 11,225 14,381 78.66% 11,312 77.95% 11,210 14,381 78.66% 11,307 77.49% 11,122 14,381 78.65% 11,202 77.49% 11,144 14,381 78.56% 11,202 77.49% 11,122 14,381 78.46% 11,202 77.34% 10,974 14,381 78.46% 11,202 77.34% 10,974 14,381 78.44% 11,263 72.19% 10,974 14,381 78.46% 11,263 72.19% 10,533 14,381 78.26% 11,263 71.16% 10,233 14,381 78.26% 11,263 71.16%	1 -	14,381	78.87%	11,342	78.87%	11,342	-
14,381 76.65 11,332 78.56 11,298 14,381 78.65 11,322 78.56 11,298 14,381 78.65 11,322 78.56 11,298 14,381 78.65 11,317 78.105 11,212 14,381 78.65 11,312 77.955 11,222 14,381 78.65 11,307 77.955 11,210 14,381 78.65 11,307 77.64 11,122 14,381 78.55 11,302 77.64 11,122 14,381 78.55 11,202 77.64 11,122 14,381 78.55 11,202 77.64 11,122 14,381 78.55 11,202 77.64 11,122 14,381 78.45 11,202 77.64 11,122 14,381 78.46 11,202 77.64 11,122 14,381 78.46 11,202 77.34 10,974 14,381 78.65 11,202 77.34 10,974 14,381 78.36 11,203 77.166 77.369 <t< td=""><td></td><td></td><td>70 030</td><td>11 337</td><td>78.71%</td><td>11,320</td><td>-</td></t<>			70 030	11 337	78.71%	11,320	-
14,381 78.41% 11,276 14,381 78.73% 11,327 78.41% 11,254 14,381 78.73% 11,327 78.10% 11,254 14,381 78.65% 11,327 78.10% 11,210 14,381 78.65% 11,312 77.80% 11,210 14,381 78.65% 11,307 77.64% 11,186 14,381 78.55% 11,307 77.49% 11,144 14,381 78.55% 11,292 77.49% 11,144 14,381 78.56% 11,292 77.49% 11,122 14,381 78.56% 11,292 77.49% 11,122 14,381 78.48% 11,296 75.28% 10,678 14,381 78.48% 11,263 71.749% 10,974 14,381 78.48% 11,266 73.22% 10,678 14,381 78.36% 11,263 71.25% 10,678 14,381 78.36% 11,263 71.16% 10,530 14,381 78.26% 11,263 71.16% 10,678	-	14,381		11 332	78.56%	11,298	Ċ
14,381 70.00 11,322 78.26% 11,254 14,381 78.69% 11,312 78.10% 11,210 14,381 78.65% 11,312 78.10% 11,210 14,381 78.65% 11,312 78.0% 11,212 14,381 78.65% 11,307 77.64% 11,166 14,381 78.59% 11,302 77.49% 11,144 14,381 78.56% 11,292 77.49% 11,144 14,381 78.56% 11,292 76.31% 10,974 14,381 78.56% 11,292 76.31% 10,974 14,381 78.46% 11,292 76.31% 10,974 14,381 78.46% 11,263 71.25% 10,678 14,381 78.46% 11,263 71.16% 10,530 14,381 78.36% 11,263 71.16% 10,678 14,381 78.36% 11,263 71.16% 10,530 14,381 78.26% 11,263 71.16% 10,678 14,381 78.28% 11,261 70.13%	0	14,381	400.0/	11 327	78.41%	11,276	5
14,381 76.05% 11,317 78.10% 11,232 14,381 78.65% 11,312 77.95% 11,210 14,381 78.65% 11,312 77.80% 11,166 14,381 78.55% 11,302 77.64% 11,166 14,381 78.55% 11,302 77.49% 11,144 14,381 78.56% 11,292 77.49% 11,142 14,381 78.56% 11,292 77.34% 11,122 14,381 78.56% 11,292 77.34% 11,122 14,381 78.48% 11,292 76.31% 10,974 14,381 78.48% 11,206 75.28% 10,678 14,381 78.46% 11,263 71.16% 10,678 14,381 78.36% 11,263 71.16% 10,530 14,381 78.26% 11,263 71.16% 10,530 14,381 78.28% 11,263 71.16% 10,530 14,381 78.28% 11,261 70.13% 10,085 14,381 78.28% 11,261 70.13%	e	185'*1	10.10X	11 322	78.26%	11,254	9
14,381 76.65% 11,312 77.95% 11,210 14,381 78.66% 11,307 77.64% 11,166 14,381 78.56% 11,302 77.64% 11,166 14,381 78.56% 11,302 77.49% 11,144 14,381 78.56% 11,292 77.49% 11,144 14,381 78.56% 11,292 77.34% 11,122 14,381 78.48% 11,292 76.31% 10,974 14,381 78.48% 11,206 75.28% 10,678 14,381 78.48% 11,263 74.25% 10,678 14,381 78.36% 11,263 71.16% 10,678 14,381 78.36% 11,263 71.16% 10,530 14,381 78.36% 11,263 71.16% 10,530 14,381 78.28% 11,263 71.16% 10,530 14,381 78.28% 11,263 71.16% 10,530 14,381 78.28% 11,263 71.16% 9,937 14,381 78.28% 11,264 69.10%	4	14,381	NC1.01	11 317	78.10%	11,232	80
14,381 78.65% 11,307 77.80% 11,188 14,381 78.65% 11,302 77.49% 11,144 14,381 78.56% 11,297 77.49% 11,144 14,381 78.56% 11,292 77.34% 11,122 14,381 78.56% 11,292 77.34% 11,122 14,381 78.48% 11,292 77.34% 10,974 14,381 78.48% 11,292 76.31% 10,974 14,381 78.46% 11,215 74.25% 10,678 14,381 78.46% 11,263 72.19% 10,678 14,381 78.36% 11,263 72.19% 10,530 14,381 78.26% 11,263 71.16% 10,530 14,381 78.26% 11,263 71.16% 10,530 14,381 78.26% 11,263 71.16% 10,530 14,381 78.26% 11,263 71.16% 9,37 14,381 78.26% 11,246 69.10% 9,37 14,381 78.16% 11,246 69.10%	5	14,381	10.037		77 95%	11.210	10
14,381 78.65% 11,302 77.49% 11,166 14,381 78.55% 11,297 77.49% 11,144 14,381 78.55% 11,292 77.49% 11,122 14,381 78.56% 11,292 77.34% 11,122 14,381 78.48% 11,292 76.31% 10,974 14,381 78.48% 11,286 76.31% 10,974 14,381 78.44% 11,286 76.31% 10,974 14,381 78.46% 11,215 74.25% 10,678 14,381 78.36% 11,263 72.19% 10,530 14,381 78.26% 11,263 71.16% 10,530 14,381 78.26% 11,263 71.16% 10,530 14,381 78.26% 11,263 71.16% 9,37 14,381 78.26% 11,263 70.13% 9,33 1,1 14,381 78.26% 11,263 70.13% 9,33 1,1 14,381 78.26% 11,246 69.10% 9,33 1,1 14,381 78.26% <td>9</td> <td>14,381</td> <td>78.66%</td> <td>210,11</td> <td>77 80%</td> <td>11,188</td> <td>11</td>	9	14,381	78.66%	210,11	77 80%	11,188	11
14,381 78,55% 11,297 77,49% 11,144 14,381 78,55% 11,292 77,34% 11,122 14,381 78,55% 11,292 76,31% 10,974 14,381 78,48% 11,286 75,34% 10,974 14,381 78,48% 11,286 75,28% 10,678 14,381 78,40% 11,275 74,25% 10,678 14,381 78,40% 11,275 73,22% 10,678 14,381 78,36% 11,263 72,19% 10,530 14,381 78,36% 11,263 72,19% 10,530 14,381 78,38% 11,263 72,19% 10,530 14,381 78,26% 11,261 70,13% 10,035 14,381 78,28% 11,261 70,13% 10,035 14,381 78,26% 11,261 70,13% 9,789 14,381 78,16% 11,246 69,10% 9,937 14,381 78,16% 11,246 69,07% 9,789 14,381 78,16% 11,246 69,07% 9,641 14,381 78,16% 11,234 67,04% 9,641 14,381 78,16% 215,285 10,764 <td>7</td> <td>14,381</td> <td>18.62%</td> <td></td> <td>77 64%</td> <td>11,166</td> <td>13</td>	7	14,381	18.62%		77 64%	11,166	13
14,381 78,56% 11,292 77,34% 11,122 14,381 78,52% 11,292 77,34% 11,122 14,381 78,48% 11,286 75,28% 10,678 14,381 78,46% 11,215 74,25% 10,678 14,381 78,40% 11,215 74,25% 10,678 14,381 78,40% 11,215 74,25% 10,678 14,381 78,36% 11,215 72,19% 10,530 14,381 78,36% 11,263 72,19% 10,530 14,381 78,36% 11,265 71,16% 10,233 14,381 78,26% 11,265 70,13% 10,035 14,381 78,28% 11,261 70,13% 10,035 14,381 78,26% 11,261 70,13% 9,789 14,381 78,16% 11,246 69,10% 9,937 14,381 78,16% 11,246 69,07% 9,789 14,381 78,16% 11,234 67,04% 9,789 14,381 78,16% 11,234 67,04% 9,641 14,381 78,12% 11,234 67,04% 9,641 14,381 78,12% 11,234 67,04%	80	14,381	78.59%	200'11	207 206	11 144	15
14,381 78.52% 11,522 73.1% 10,974 14,381 78.48% 11,286 75.28% 10,678 14,381 78.48% 11,280 75.28% 10,678 14,381 78.40% 11,275 74.25% 10,678 14,381 78.40% 11,275 74.25% 10,678 14,381 78.36% 11,263 72.19% 10,530 14,381 78.36% 11,263 72.19% 10,332 14,381 78.28% 11,263 72.19% 10,332 14,381 78.28% 11,263 72.19% 10,233 14,381 78.28% 11,261 70.13% 9,372 14,381 78.26% 11,261 70.13% 9,373 14,381 78.26% 11,246 69.10% 9,937 14,381 78.16% 11,246 69.07% 9,789 14,381 78.16% 11,234 67.04% 9,789 14,381 78.16% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,6	6	14,381	78.56%	162'11	345.74	11 122	11
14,381 78.48% 11,280 75.28% 10,826 14,381 78.44% 11,215 73.25% 10,678 14,381 78.40% 11,275 73.25% 10,630 14,381 78.36% 11,253 73.25% 10,630 14,381 78.36% 11,255 71.16% 10,332 14,381 78.26% 11,251 70.13% 10,332 14,381 78.28% 11,251 70.13% 10,332 14,381 78.28% 11,251 70.13% 10,085 14,381 78.26% 11,251 70.13% 9,937 14,381 78.26% 11,246 69.10% 9,937 14,381 78.16% 11,246 69.10% 9,937 14,381 78.16% 11,246 69.07% 9,789 14,381 78.16% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 72.25,746 215,285 10,764	10	14,381	78.52%	262'11		10 074	.6
14,381 78.44% 11,280 73.25% 10,678 14,381 78.40% 11,275 74.25% 10,678 14,381 78.36% 11,263 73.22% 10,532 14,381 78.36% 11,263 72.19% 10,532 14,381 78.28% 11,251 71.16% 10,332 14,381 78.28% 11,251 70.13% 10,085 14,381 78.26% 11,251 70.13% 10,085 14,381 78.26% 11,251 70.13% 10,085 14,381 78.16% 11,246 69.10% 9,937 14,381 78.16% 11,246 68.07% 9,789 14,381 78.16% 11,234 67.04% 9,641 14,381 78.16% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641	=	14,381	78.48%	092'11			4
14,381 78.40% 11,275 74.25% 10,530 14,381 78.36% 11,269 73.22% 10,530 14,381 78.38% 11,263 72.19% 10,382 14,381 78.28% 11,251 71.16% 10,382 14,381 78.28% 11,251 70.13% 10,085 14,381 78.26% 11,251 70.13% 10,085 14,381 78.26% 11,246 69.10% 9,337 14,381 78.16% 11,246 69.10% 9,789 14,381 78.16% 11,234 67.04% 9,641 14,381 78.16% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641	12	14,381	78.44%	092'11			ŭ
14,381 78.36% 11,269 7.2.2% 10,382 14,381 78.32% 11,257 71.16% 10,382 14,381 78.28% 11,251 70.13% 10,382 14,381 78.24% 11,251 70.13% 10,035 14,381 78.20% 11,246 69.10% 9,337 14,381 78.16% 11,246 69.10% 9,789 14,381 78.16% 11,246 68.10% 9,789 14,381 78.16% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641 14,381 78.12% 11,234 67.04% 9,641	13	14,381	78.40%	11,2/5	AC2.41		5 17
14,381 78.32% 11,253 72.15% 10,233 11,151 14,381 78.28% 11,251 70.13% 10,035 1,11,21 14,381 78.20% 11,246 69.10% 9,937 1,11,246 14,381 78.16% 11,240 68.07% 9,789 1,11,246 14,381 78.16% 11,240 68.07% 9,789 1,11,246 14,381 78.16% 11,234 67.04% 9,641 1,11,246 14,381 78.12% 11,234 67.04% 9,641 1,11,246 14,381 78.12% 11,234 67.04% 9,641 1,11,246 14,381 78.12% 11,234 67.04% 9,641 1,11,246 14,381 78.12% 11,234 67.04% 9,641 1,1266 10,764 11,234 67.04% 215,285 1,1266 215,285	14	14,381		11,269			Ğ
14.381 78.28% 11.257 71.16% 10.233 14.381 78.24% 11.251 70.13% 10.085 1. 14.381 78.20% 11.246 69.10% 9.937 1. 14.381 78.20% 11.240 68.07% 9.789 1. 14.381 78.16% 11.234 67.04% 9.789 1. 14.381 78.16% 11.234 67.04% 9.641 1. 14.381 78.12% 11.234 67.04% 9.641 1. 14.381 78.12% 11.234 67.04% 9.641 1. 14.381 78.12% 11.234 67.04% 9.641 1. 14.381 78.12% 11.234 67.04% 9.641 1.	15	14.381	•	11,263			5 č
14,381 78.24% 11,251 70.13% 10,085 1 14,381 78.20% 11,246 69.10% 9,937 1 14,381 78.16% 11,240 68.07% 9,789 1 14,381 78.16% 11,240 68.07% 9,789 1 14,381 78.12% 11,234 67.04% 9,641 1 14,381 78.12% 11,234 67.04% 9,641 1 14,381 78.12% 11,234 67.04% 9,641 1 14,381 78.12% 11,234 67.04% 9,641 1 14,381 72.5,746 215,285 1 1 1	16	14.381		11,257	71.16%		- -
14,381 78.20% 11,246 69.10% 9,347 1, 14,381 78.16% 11,240 68.07% 9,789 1, 1,34 1, 14,381 78.12% 11,234 67.04% 9,641 1, 1,34 1, 1,34 1, 1,34 1,234 67.04% 9,641 1, 1,34 1, 1,34 1, 1,34 1,234 67.04% 9,641 1, 1,34 1, 1,34 1, 1,34 1,364 <th1,364< th=""> <th1,364< th=""> <th1,364< t<="" td=""><td>5 5</td><td>14 381</td><td></td><td>11,251</td><td></td><td>C80'01</td><td></td></th1,364<></th1,364<></th1,364<>	5 5	14 381		11,251		C80'01	
14,381 78.16% 11,240 68.07% 9,789 1,1381 14,381 78.12% 11,234 67.04% 9,641 1,134 14,381 78.12% 11,234 67.04% 9,641 1,134 14,381 78.12% 11,234 67.04% 9,641 1,134 Total Years 1-20 225,746 225,746 215,285 10,764	ä	14 381		11,246	•	9,937	
Total Years 1–20 225,746 67.04% 9,641 1, Total Years 1–20 225,746 215,285	2 \$	181 281	•	11,240	-	9,789	¥ .
Total Years 1–20 225,746 215,285	500	14,381	78.12%	11,234		9,641	1.5
11 287 10,764		Total Years 1-	-20	225,746		215,285	
			al Arras	11.287		10,764	ŝ

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

Freshwater Bayou Bank Stabilization and Hydrologic Restoration (ME-4/XME-21)

•••

Freshwater Bayou Bank Stabilization and Hydrologic Restoration (ME-4/XME-21)

Summation of Emergent Marsh Acreages

1, 381 1, 4, 581 1, 4, 5811, 581 1, 581 1, 581 1,	78.83% 78.83% 78.80% 78.78% 78.69% 78.69% 78.65% 78.65%	11,342 11,337 11,327 11,327 11,327 11,317 11,317 11,307 11,302	78.87% 78.71% 78.56% 78.56% 78.41% 78.26% 78.10% 77.95% 77.95%	11,342 11,320 11,298 11,254 11,254	0 7 8 2 8 8
	78.83% 78.80% 78.76% 78.73% 78.69% 78.66% 78.65% 78.62%	11,337 11,327 11,327 11,322 11,312 11,312 11,302	78.71% 78.56% 78.41% 78.26% 78.10% 77.95% 77.80%	11,320 11,298 11,276 11,254 11,232	34 17 85 85 85
	78.80% 78.76% 78.76% 78.69% 78.66% 78.66% 78.59%	11,332 11,327 11,327 11,317 11,317 11,312 11,302	78.56% 78.41% 78.26% 78.10% 77.95% 77.80% 77.64%	11,298 11,276 11,254 11,232	34 51 85
	78.76% 78.73% 78.69% 78.66% 78.66% 78.62%	11,327 11,322 11,317 11,312 11,312 11,302	78.41% 78.26% 78.10% 77.95% 77.80% 77.64%	11,276 11,254 11,232	51 68 85
	78.73% 78.69% 78.66% 78.62% 78.52%	11,322 11,317 11,312 11,307 11,302	78.26% 78.10% 77.95% 77.80%	11,254	68 85
	78.69% 78.66% 78.62% 78.59%	11,317 11,312 11,307 11,302	78.10% 77.95% 77.80% 77.64%	11,232	85
	78.66% 78.62% 78.59%	11,312 11,307 11,302	77.95% 77.80% 77.64%))
	78.62% 78.59%	11,307	77 80% 77 64%	11,210	102
	78.59%	11.302	77.64%	11,188	119
				11,166	136
	78.56%	11,297	77.49%	11,144	153
	78.52%	11,292	77.34%	11,122	170
	78.48%	11,286	76.31%	10,974	312
·	78.44%	11,280	75.28%	10,826	455
	78.40%	11.275	74.25%	10,678	597
•	78.36%	11,269	73.22%	10,530	739
	78.32%	11,263	72.19%	10,382	881
•	78.28%	11,257	71.16%	10,233	1,024
-	78.24%	11,251	70.13%	10,085	1,166
·	78.20%	11,246	69.10%	9,937	1,308
•	78.16%	11,240	68.07%	9,789	1,451
·	78.12%	11,234	67.04%	9,641	1,593
Totai Years 1–20		225,746		215,285	
Averane Annual Acres	a	11 287		10.764	523

-

Bayou Sauvage National Wildlife Refuge Hydrologic Restoration (PPO-52a)

Total First Cost	\$627,400
Total Fully Funded Cost	\$1,452,000

Annual Charges	Present Worth	Average <u>Annual+</u>
Interest & Amortization	\$795,400	
Monitoring	145,800	15,400
O&M Cost	82,100	8,700
Other Costs	0	0
Total	S1,023,300	\$108,200
Average Annual Habitat Uni	ts	584
Cost per Habitat		\$185
Average Annual Acres of Em	nergent Marsh,	841

*Interest rate of 8.5 percent over a 20-year project life

Bayou Sauvage Hydrologic Restoration (PPO-52a)

First Costs and Annual Charges

	Fiscal	Engineering	Easements	Engineering Easements Supervision & Supervision First Cost	Supervision		First Cost	Total First
Year	Year	& Design	& Land Rights	Administration	& Inspection C	Contingency	Construction	Cost
5 Compound		· \$0	\$ 0	\$ 0	\$0	9	\$ 0	\$ 0
4 Compound			\$0	\$0	\$ 0	\$ 0	9	\$
3 Compound	1993	\$31,667	\$ 0	\$17,241	\$0	0\$	\$ 0	\$48,908
2 Compound	1994	\$6,333	\$ 0	\$20,690	\$12,500	\$42,448		\$251,763
1 Compound	1995	\$0	\$ 0	\$12,069	\$17,500	\$59,427	\$237,708	\$326,704
Base Year								
	IOTAL	\$38,000	\$0	\$50,000	\$30,000	\$101,875	\$407,500	\$627,375
	[cool]	Montoria	MaO	Other				

. .

	Fiscal	Monitoring	O&M	Other	
Year	Year	Costs	Costs	Costs	
1 Discount	1996	\$15,411	\$7,000		8
2 Discount	1997	\$15,411	\$7,000		3
3 Discount	1998	\$15,411	\$7,000		8
4 Discount	1999	\$15,411	\$7,000		8
5 Discount	2000	\$15,411	\$7,000		8
6 Discount	2001	\$15,411	\$20,000		\$
7 Discount	2002	\$15,411	\$7,000		3
8 Discount	2003	\$15,411	\$7,000		8
9 Discount	2004	\$15,411	\$7,000		8
10 Discount	2005	\$15,411	\$7,000		8
11 Discount	2006	\$15,411	\$7,000		3
12 Discount	2007	\$15,411	\$20,000		8
13 Discount	2008	\$15,411	\$7,000		8
14 Discount	2009	\$15,411	\$7,000		Ş
15 Discount	2010	\$15,411	\$7,000		3
16 Discount	2011	\$15,411	\$7,000		8
17 Discount	2012	\$15,411	\$7,000		3
18 Discount	2013	\$15,411	\$20,000		8
19 Discount	2014	\$15,411	\$7,000		\$
20 Discount	2015	\$15,411	\$7,000		8
	Total	\$308,214	\$179.000		3

Costs amortized over 20 year operation life

18-Sept-92

ou Sauvage Hydrologic Restoration (PPO-52a)

	\$ 84,051	Total First Cost						7 \$713,325																								
	ts	First Cost Construction	9	\$ 0	\$ 0	\$199,883	\$257,914	\$457,797																								
(1	Amortized Costs	Continoency		.0 \$	9	\$49,971	\$64,478	\$114 449																								
on (PPO-528	4	Supervision		3	9 . 9	\$14,715	\$18,988	613 703																								
Bayou Sauvage Hydrologic Restoration (PPO – 52a)	\$795,415		Administration	, 5	600 CC3	\$24.356	¢13 095	000 010		Other	Costs		-												-	-					9	
auvage Hydr	Costs	Easements	& Land Rights				8			O&M	Costs	\$6,452	\$5,946	\$5,480	\$5,051	\$4,655	\$12,259	\$3,954	\$ 3,645	\$3,359	\$3,096	\$2,853	\$7,514	52,424	\$2,234	\$2,059	\$1,898	\$1,749	\$4,606	\$1,486	\$1,369	\$82,089
Bayou S	Total Discounted Costs	Engineering	1	9		\$40,447	\$7,450	3	\$ 47,903	Monitoring	Costs	\$14,203	\$13,091	\$12,065	\$11,120	\$10,249	\$9,446	\$8,706	\$8,024	\$7,395	\$6,816	\$6,282	\$5,790	\$ 5,336	\$4,918	\$4,533	\$4,178	\$3,850	\$3,549	53.271	\$3,015	\$145,837
		iscal	Year	0	•	1993	1994	1995	Total	Fiscal	Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
	Present Valued Costs	Compound	Rates	1.504	1.386	1.277	1.177	1.085	10		Dates	0 000	0.944		0.799	0.665	0.613	0.565	0.521	0.480	0.442	0.408	0.376	0.346	0.319						0.212	0.130
	Present	Ŭ	Year	5	4	e	2	-		C			- c 1	N C ł	7 •	e u 1	ים ו ו		- 6			2 7	1	-13	1		2 4		2 9		- 19	02-

Costs amortized over 20 year operation life

3

\$8,674

\$15,411

۰.

Average Annual

18-Sept-92

١

Bayou Sauvage Hydrologic Restoration (PPO-52a)

J Easements Supervision & & Land Rights Administration 0 \$0 \$0 0 \$0 \$0 17 \$0 \$17,966	Engineering & Design	
2 2 2 3 2		& Design
333	-	9 \$ 0
\$0 \$	\sim	. 0\$
ŧ	~	\$32,997
	_	\$6,811
9	_	9
\$	~	\$39,807
0&M		Monitoring
Costs		Costs
\$8,017		\$17,649
\$6 ,273	-	\$18,214
\$ 8,538	~	\$18,797
\$8,811	•	\$19,399
\$9,093	•	\$20,019
\$26,812	~	\$20,660
\$9,685	_	\$21,321
\$9,995	_	\$22,003
\$10,314	~	\$22,707
\$10,644	-	\$23,434
\$10,985	-	\$24,184
\$32,390	-	\$24,958
\$11,699	6	\$25,756
\$12,074	_	\$26,581
\$12,460	_	\$27,431
\$12,859	•	\$28,309
\$13,270	5	\$29,215
\$39,128	~	\$30,150
\$14,133		\$31,115
\$14,585	_	\$32,110
\$283,768	~	\$484,012

Costs amortized over 20 year operation life

18-Sept-92

•

Bayou Sauvage Hydrologic Restoration (PPO-52a)

Marsh Type: Fresh/Intermediate

Net Acres	0	402	448	464	541	587		220	6/9	725	772	818	864	010		108	1,003	1,049	1,095	1,141	1,188	1 234	1000 1	1,280		841
Vegetated Acres	2,775	2,748	2.722	2,695	2 669	2 6 4 3	210/2	2,616	2,589	2,563	2,536	2,510	2 483		104'7	2,430	2,404	2,377	2,351	2.324				2,245	49,930	2,497
Without Project % Acreage Vegetated	50.68%	50.19%	49 71%	40.224	40.74C		40.20%	47.77%	47.29%	46.81%	46.32%	45.84%	2000 JA		44.87%	44.39%	43.91%	43.42%	42 94%	22 A64	A01-31		41.49%	41.00%		
Vegetated Acres	2,775	3 150	3 170		501 'S	507'S	3,229	3,249	3.268	3 288	3 208			しまわら	3,367	3,387	3 407	3.426	3 446	337 C	00+'0	00110	3,505	3,525	66,750	3,338
With Project % Acreage Vegetated	50.68%	67 63e		A.60.10	28.20%	58.62%	58.98%	59.34%	59 70%	So nek	800.00 704.00	60.42.40 20 T 00	KD/ .00	61.14%	61.50%	61.86%	2000	50 E D 04	R DC 70	246.70	50.3UV	63.66%	64.02%	64.38%	20	al Acres
Acres	5,475	964 0	0/4/0	5,4/5	5,475	5,475	5.475	5 475	5 475		0/4/0	5,475	5,475	5,475	5 475	5 475	0110		0,4/0	5,4/5	5,475	5,475	5.475	5,475	Total Years 1-20	Average Annual Acres
Years	0	·	-	7	e	4	ŝ		9 7	- •	80	σ	9	11	÷ £	1 5	2 :	*	15	16	11	13	9	20		<

Bayou Sauvage Hydrologic Restoration (PPO-52a)

Summation of Emergent Marsh Acreages

. .

Years	Acres	With Project % Acreage Vegetated	Vegetated Acres	Without Project % Acreage Vegetated	Vegetated Acres	Net Acres
0	5,475	50.68%	2,775	50.68%	2,775	0
-	5.475	57.53%	3,150	50.19%	2,748	402
. 2	5.475	57.89%	3,170	49.71%	2,722	448
1 ന	5.475	58.26%	3,189	49.22%	2,695	494
*	5,475	58.62%	3,209	48.74%	2,669	541
5	5,475	58.98%	3,229	48.26%	2,642	587
9	5,475	59.34%	3,249	47.77%	2,616	633
7	5,475	59.70%	3,268	47.29%	2,589	619
80	5,475	60.06%	3,288	46.81%	2,563	725
6	5,475	60.42%	3,308	46.32%	2,536	772
10	5,475	60.78%	3,328	45.84%	2,510	818
11	5,475	61.14%	3,347	45.36%	2,483	864
12	5,475	61.50%	3,367	44.87%	2,457	910
13	5,475	61.86%	3,387	44.39%	2,430	957
14	5,475	62.22%	3,407	43.91%	2,404	1,003
15	5,475	62.58%	3,426	43.42%	2,377	1,049
16	5,475	62.94%	3,446	42.94%	2,351	1,095
17	5,475	63.30%	3,466	42.46%	2,324	1,141
18	5,475	63.66%	3,486	41.97%	2,298	1,188
19	5,475	64.02%	3,505	41.49%	2,271	1,234
20	5,475	64.38%	3,525	41.00%	2,245	1,280
To	Total Years 1–20	20	66,750		49,930	
Ň	Average Annual Acres	d Acres	3,338		2,497	841
2					•	

18-Sept-92

Costs amortized over 20 year operation life

Clear Marais/Shore Protection (PCS-27/28)

Total First Cbst	\$1,363,000
Total Fully Funded Cost	\$1,741,300

Annual Charges	Present Worth	Average <u>Annual*</u>
Interest & Amortization	\$1,584,900	\$167,500
Monitoring	20,400	2,200
O&M cost	54,300	5,700
Other Costs		
Total	\$1,659,600	\$175,400
Average Annual Habitat U	nits	909
Cost per Habitat Unit		\$193
Average Annual Acres of E	Emergent Marsh	677

*Interest rate of 8.5 percent over a 20-year project life

Clear Marais/GIWW Shoreline Protection (PCS-27/28)

First Costs and Annual Charges

۰.

First Cost To	Construction Cost	\$0 · \$0 80	S0 50 S0	50 468 7			\$158,348 \$635,793 \$875,595	\$229,592 \$918,367 \$1,362,959																						
Supervision & Instaction Conjugation	a Hispacillari Contin	2 0	\$ 0	50			te fze'ice	\$75,000 \$2																						
Supervision & Administration	1		\$0	\$22,500	5 38 571	C08 000	670'074	000'06\$	Other	Costs	50	9	5	9 9	2 0 5	9 5	2 0	2 0 3	2 0	9	9	. .	205	05	9	9 0	99	9	05	
Easements & Land Rights	÷.		\$ 0	\$20,000	2 0	95	•	\$20,000	O&M	Costs	\$5.740	\$5.740	\$5.740	\$5.740	\$5,740	\$5,740	\$5,740	\$5,740	\$5,740	\$5.740	\$5,740	\$5,740	\$5,740	\$5,740	\$5,740	\$5,740	\$5.740	\$5,740	\$5,740	
Engineering & Design	2		20	\$25,714	\$4,286	20	•	\$30,000	Monitorina	Costs	\$ 2,150	\$2,150	\$2,150	\$2,150	\$2,150	\$ 2,150	\$2,150	\$2,150	\$2,150	\$2,150	\$2,150	\$2,150	\$2,150	\$2,150	\$2,150	\$2,150	\$2,150	\$2,150	\$2,150	01100
Fiscal Year				1993	1994	1995		TOTAL	Fiscal	Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2100
Year	5 Compound			a Compound	2 Compound	1 Compound	Base Year	L		Year	1 Discount	2 Discount	3 Discount	4 Discount	5 Discount	6 Discount	7 Discount	8 Discount	9 Discount	10 Discount	11 Discount	12 Discount	13 Discount	14 Discount	15 Discount	16 Discount	17 Discount	18 Discount	19 Discount	20 Discourse

Costs amortized over 20 year operation life

.

18-- Sept-92

Clear Marais/GIWW Shoreline Protection (PCS-27/28)

\$167,477	Total First Cost \$0	\$0 \$87,129 \$493,436 \$950,018	\$1,530,583		
sls	First Cost Construction \$0	\$0 \$0 \$332,654	\$		
Amortized Costs	Contingency 50		\$255,622		
	Supervision & Inspection	\$0 \$0 \$27,167	\$56,337 \$83,503		
\$1,584,903	Supervision & Supervision Administration & Inspection	\$0 \$0 \$28,739 \$45,407	\$31,388 \$105,534	Other Costs	2 2 2 2
d Costs	agineering Easements Supervision & Supervision First Cost & Land Rights Administration & Inspection Contingency Construction 50	. \$0 . \$0 \$25,546 \$0	\$0 \$25,546	0&M Costs	\$5,290 \$4,876 \$4,494
Total Discounted Costs	Engineering & Design	\$0 \$0 \$32,845 \$5,045	\$37,890	Monitoring Costs	\$1,982 \$1,826 \$1,683
	Fiscal Year	0 0 1993 1994	1995 Total	Fiscal Year	1996 1997
Present Valued Costs	Compound Rates		1.	Discount Vear Rates	0.922
Prese	Year	N 4 0 C		Voar	

. .

			;	Ş	0\$	0 \$	9	\$ 0	0\$	\$ 0	3	\$ 0	0\$	9	9	\$	%	3	%	3	0\$	\$ 0	9
Costs	2000																						
O&M Coste	CUSIS	\$5,290	\$4,876	\$4,494	\$4,142	\$3,817	\$3,518	\$3,243	\$2,989	\$2,755	\$2,539	\$2,340	\$2,157	\$1,988	\$1,832	\$1,688	\$1,556	\$1,434	\$1,322	\$1.218	\$ 1,123	\$54,320	\$5,740
Monitoring	Costs	\$1,982	\$1,826	\$1,683	5 1.551	S 1,430	51.318	\$1.215	51,119	\$1,032	\$ 951	\$876	\$808	\$744	5686	\$632	\$583	5 537	\$495	\$ 456	\$421	\$20,346	\$ 2,150
Fiscal	Үөаг	1996	1997	1998	1000	0000	2001	2002	2003	2004	2005	2006	2007	2008	2000	2010	2011	2012	2013	100	2014	Total	ual
Discount	65	0.922	0.840	640.0		771.D	0.000	0.665	0.000	120.0	0.400		0.100	345.0		0.013	122.0	0.271	00200	0.230	0.212	0.1.0	Average Annual
Dis	Year Rates	· · · · ·	- c	v i c I	י ה ו	₽ 1	ი (1	0 r 1		ю с I	ה כ ו	2:	- 5	29	2:		<u>.</u>	<u>e</u> :	2 9	2	- 19	- 20	Á

Costs amortized over 20 year operation life

18 - Sept - 92

Clear Marals/GIWW Shoreline Protection (PCS-27/28)

\$184,004	Total First	Cost	\$ 0	9	5 71,079	\$450,733	\$971,693	\$1,493,505																							
sts	First Cost	Construction	9	.0\$	\$ 0	\$303,865	\$705,574	\$1,009,439																							
Amortized Costs		Contingency	\$ 0	0\$	\$0	\$75,966	\$176,393	\$252,360																							
	Supervision	& Inspection Contingency	\$ 0	\$ 0	\$0	\$24,816	\$57,622	\$82,438																							
\$1,741,310	Supervision &	Administration	\$0	\$0	\$23,445	\$41,478	\$32,104	\$97,026	Other	Costs	\$ 0	\$0	\$ 0	\$ 0	9	\$ 0	\$	3	9	\$ 0	\$ 0	\$	3	\$ 0	3	\$ 0	\$ 0	3	\$ 0	0 \$	95
ed Costs	Easements	& Land Rights	• •		\$20,840	\$ 0	3 0	\$20,840	O&M	Costs	\$6,574	\$6,784	\$7,001	\$7,225	\$7,457	\$7,695	\$7,941	\$ 8,196	\$8,458	\$8,728	800'6\$	\$9,296	\$9,593	006'6\$	\$10,217	\$10,544	\$10,882	\$11,230	\$11,589	\$11,960	\$180.279
Total Fully Funded Costs	Engineering		9 0	\$	\$26,794	\$4,609	\$	\$31,403	Monitoring	Costs	\$2,462	\$2,541	\$2,622	\$2,706	\$2,793	\$2,882	\$2,975	\$3,070	\$3,168	\$ 3,269	\$3,374	\$3,482	\$ 3,593	\$3,708	\$3,827	\$3,949	\$4,076	\$4,206	\$4 ,341	\$4,480	\$67.526
	Fiscal	Year	0	•	1993	1994	1995	TOTAL	Fiscal	Үөаг	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Fully Funded Costs	Inflation	Factor			1.042	1.075	1.110	Ц	Inflation	Factor	1.145	1.182	1.220	1.259	1.299	1.341	1.384	1.428	1.473	1.521	1.569	1.620	1.671	1.725	1.780	1.837	1.896	1.956	2.019	2.084	1
ully F		Үеаг	S	4	e	2	-			Year	-	21	. –	4	-5	9	- 7	8 	6-	- 10	=-	- 12	- 13	- 14	- 15	- 16	- 17	- 18	- 19	-20	

Costs amortized over 20 year operation life

Clear Marais/GIWW Shoreline Protection (PCS-27/28)

Marsh Type: Fresh/Intermediate

۰.

Voare	Acres	% Acreage Vegetated	Vegetated Acres	% Acreage Vegetated	Vegetated Acres	Net Acres
0	4,637		2,057	44.36%	2,057	0
	7637	795 11	2 057	44.36%	2,057	0
-	100.4	900.00	2061	42.52%	1,971	8
~	4,63/		10013	40.67%	1 886	180
e	4,637	\$ TO. T			NON 1	269
•	4.637	44.63%	2,0/0	20.00%		950
• •	4 637	44.72%	2,074	36.98%	CI/'I	600 011
, ,	4 637	44.82%	2,078	35.14%	1,629	かすす
	2031	44 91%	2,082	33.29%	1,544	539
	100'		2 0.87	31.45%	1,458	628
80	4,037		001	29.60%	•	718
6	4,637	8460.04	100,2		1.287	808
2	4,637	43.18%	300 0			834
=	4,637	45.18%	CEN'7		• •	860
12	4,637	45.18%	2,095			900
: 4	4 637	45.18%	2,095		-	000
2 \$	1634	45 18%	2,095	25.52%		212
<u>*</u> .	1001	45 18%	2,095	24.96%	-	938
<u></u>		46.10%	2005		-	963
16	100'4		2005		•	686
17	4,03/		2,005		•	1,015
18	4,637				•	1.041
19	4.637	45.18%	CEN'7			1 00 1
202	4,637	45.18%	2,095	22.17%	1,028	8
	Total Years 1-20	-20	41,710	_	28,166	
		•	900 0		1.408	677

•

-

Clear Marais/GIWW Shoreline Protection (PCS-27/28)

Summation of Emergent Marsh Acreages

Ialad Acres Vegetated Acres Acres	% Acreage	% Acreage	Vegetated	% Acreage	Vegetated	Net
4,637 44.36% 2,057 44.36% 2,057 44.36% 2,057 4,637 44.45% 2,057 44.36% 2,057 44.36% 2,057 4,637 44.45% 2,065 40.67% 1,971 971 4,637 44.45% 2,065 40.67% 1,971 4,637 44.45% 2,065 40.67% 1,900 4,637 44.54% 2,070 38.83% 1,500 4,637 44.91% 2,087 35.14% 1,629 4,637 45.00% 2,087 31.45% 1,715 4,637 45.08% 2,095 23.29% 1,715 4,637 45.18% 2,095 27.76% 1,287 4,637 45.18% 2,095 27.70% 1,295 4,637 45.18% 2,095 27.20% 1,132 4,637 45.18% 2,095 27.20% 1,132 4,637 45.18% 2,095 27.20% 1,132 4,637 45.18% 2,095 27.20% 1,132 4,637 <td< th=""><th>Vegeta</th><th>ated</th><th>Acres</th><th>Vegetated</th><th>Acres</th><th>ACIES</th></td<>	Vegeta	ated	Acres	Vegetated	Acres	ACIES
4,637 44.36% 2,057 44.36% 2,057 44.36% 2,057 4,637 44.45% 2,066 40.67% 1,886 4,637 44.54% 2,065 40.67% 1,886 4,637 44.54% 2,070 38.83% 1,800 4,637 44.54% 2,070 38.83% 1,800 4,637 44.87% 2,074 36.98% 1,715 4,637 44.91% 2,074 36.98% 1,715 4,637 44.91% 2,072 38.83% 1,458 4,637 45.18% 2,095 33.29% 1,544 4,637 45.18% 2,095 27.76% 1,287 4,637 45.18% 2,095 27.20% 1,261 4,637 45.18% 2,095 26.64% 1,235 4,637 45.18% 2,095 26.64% 1,132 4,637 45.18% 2,095 26.64% 1,132 4,637 45.18% 2,095 27.76% 1,132 4,637 45.18% 2,095 27.36%		14.36%	2,057	44.36%	2,057	0
4,637 44,45% 2,061 42,52% 1,971 4,637 44,54% 2,065 40,67% 1,806 4,637 44,54% 2,070 38,83% 1,800 4,637 44,54% 2,070 38,83% 1,715 4,637 44,172% 2,078 35,14% 1,629 4,637 44,91% 2,018 35,14% 1,629 4,637 44,91% 2,087 31,45% 1,715 4,637 45,00% 2,087 31,45% 1,458 4,637 45,18% 2,095 27,70% 1,287 4,637 45,18% 2,095 27,20% 1,183 4,637 45,18% 2,095 26.08% 1,132 4,637 45,18% 2,095 26.08% 1,132 4,637 45,18% 2,095 26.08% 1,132 4,637 45,18% 2,095 26.08% 1,132 4,637 45,18% 2,095 26.08% 1,132 4,637 45,18% 2,095 23.40% 1,132 <t< td=""><td></td><td>14.36%</td><td>2,057</td><td>44.36%</td><td>2,057</td><td>0</td></t<>		14.36%	2,057	44.36%	2,057	0
4,637 44,54% 2,065 40,67% 1,886 4,637 44,53% 2,070 38,83% 1,800 4,637 44,172% 2,070 38,83% 1,715 4,637 44,172% 2,070 38,83% 1,715 4,637 44,91% 2,014 36,98% 1,715 4,637 44,91% 2,087 31,45% 1,629 4,637 45,00% 2,087 31,45% 1,629 4,637 45,18% 2,095 27.76% 1,373 4,637 45,18% 2,095 27.70% 1,281 4,637 45,18% 2,095 26.64% 1,261 4,637 45,18% 2,095 26.64% 1,132 4,637 45,18% 2,095 26.64% 1,133 4,637 45,18% 2,095 26.64% 1,133 4,637 45,18% 2,095 26.08% 1,132 4,637 45,18% 2,095 26.16% 1,132 4,637 45,18% 2,095 23.40% 1,106 <		14.45%	2,061	42.52%	1,971	6
4,637 44,63% 2,070 38,83% 1,800 4,637 44,72% 2,074 36,98% 1,715 4,637 44,17% 2,078 35,14% 1,629 4,637 44,91% 2,087 35,14% 1,629 4,637 45,00% 2,087 31,45% 1,458 4,637 45,00% 2,091 29,60% 1,373 4,637 45,18% 2,095 27,76% 1,287 4,637 45,18% 2,095 27,70% 1,287 4,637 45,18% 2,095 26.64% 1,235 4,637 45,18% 2,095 26.64% 1,261 4,637 45,18% 2,095 26.08% 1,132 4,637 45,18% 2,095 26.08% 1,132 4,637 45,18% 2,095 23.40% 1,132 4,637 45,18% 2,095 23.40% 1,132 4,637 45,18% 2,095 23.40% 1,132 4,637 45,18% 2,095 23.40% 1,060 <td< td=""><td>•</td><td>14.54%</td><td>2,065</td><td>40.67%</td><td>1,886</td><td>180</td></td<>	•	14.54%	2,065	40.67%	1,886	180
4,637 44.72% 2,074 36.98% 1,715 4,637 44.91% 2,078 35.14% 1,629 4,637 44.91% 2,082 33.29% 1,544 4,637 45.00% 2,087 31.45% 1,629 4,637 45.18% 2,095 27.76% 1,373 4,637 45.18% 2,095 27.76% 1,287 4,637 45.18% 2,095 27.76% 1,287 4,637 45.18% 2,095 27.20% 1,261 4,637 45.18% 2,095 26.64% 1,235 4,637 45.18% 2,095 26.08% 1,132 4,637 45.18% 2,095 26.08% 1,132 4,637 45.18% 2,095 26.08% 1,132 4,637 45.18% 2,095 23.45% 1,166 4,637 45.18% 2,095 23.29% 1,060 4,637 45.18% 2,095 23.29% 1,060 4,637 45.18% 2,095 23.29% 1,060 <td< td=""><td>•</td><td>14.63%</td><td>2,070</td><td>38.83%</td><td>1,800</td><td>269</td></td<>	•	14.63%	2,070	38.83%	1,800	269
4,637 44,82% 2,078 35,14% 1,629 4,637 45,00% 2,087 31,45% 1,629 4,637 45,00% 2,087 31,45% 1,458 4,637 45,09% 2,091 29,60% 1,373 4,637 45,18% 2,095 27,76% 1,287 4,637 45,18% 2,095 27,76% 1,287 4,637 45,18% 2,095 27,70% 1,281 4,637 45,18% 2,095 26.64% 1,235 4,637 45,18% 2,095 26.64% 1,236 4,637 45,18% 2,095 26.08% 1,132 4,637 45,18% 2,095 23.45% 1,136 4,637 45,18% 2,095 23.45% 1,136 4,637 45,18% 2,095 23.29% 1,060 4,637 45,18% 2,095 23.29% 1,060 4,637 45,18% 2,095 23.17% 1,054 1 4,637 45,18% 2,095 23.17% 1,026 1	•	14.72%	2,074	36.98%	1,715	359
4,637 44,91% 2,082 33.29% 1,544 4,637 45.00% 2,087 31.45% 1,456 4,637 45.09% 2,091 29.60% 1,373 4,637 45.18% 2,095 27.76% 1,287 4,637 45.18% 2,095 27.20% 1,261 4,637 45.18% 2,095 26.64% 1,261 4,637 45.18% 2,095 26.64% 1,261 4,637 45.18% 2,095 26.64% 1,235 4,637 45.18% 2,095 26.64% 1,209 4,637 45.18% 2,095 26.08% 1,132 4,637 45.18% 2,095 23.45% 1,106 4,637 45.18% 2,095 23.29% 1,060 4,637 45.18% 2,095 22.17% 1,054 1 4,637 45.18% 2,095 22.17% 1,054 1 4,637 45.18% 2,095 22.17% 1,054 1 4,637 45.18% 2,095 22.17% <td>•</td> <td>14.82%</td> <td>2,078</td> <td></td> <td>1,629</td> <td>449</td>	•	14.82%	2,078		1,629	449
4,637 45,00% 2,087 31,45% 1,456 4,637 45,09% 2,091 29,60% 1,373 4,637 45,18% 2,095 27.76% 1,287 4,637 45,18% 2,095 27.76% 1,287 4,637 45,18% 2,095 26.64% 1,281 4,637 45,18% 2,095 26.64% 1,261 4,637 45,18% 2,095 26.64% 1,235 4,637 45,18% 2,095 26.08% 1,183 4,637 45,18% 2,095 24.40% 1,132 4,637 45,18% 2,095 23.85% 1,106 4,637 45,18% 2,095 23.29% 1,060 4,637 45,18% 2,095 22.17% 1,054 1 4,637 45,18% 2,095 22.17% 1,054 1 4,637 45,18% 2,095 22.17% 1,054 1 4,637 45,18% 2,095 22.17% 1,054 1 4,637 45,18% 2,095		14.91%	2,082		1,544	539
4,637 45.09% 2,091 29.60% 1,373 4,637 45.18% 2,095 27.76% 1,287 4,637 45.18% 2,095 27.76% 1,287 4,637 45.18% 2,095 27.20% 1,261 4,637 45.18% 2,095 26.64% 1,235 4,637 45.18% 2,095 26.64% 1,235 4,637 45.18% 2,095 26.08% 1,183 4,637 45.18% 2,095 24.40% 1,132 4,637 45.18% 2,095 23.85% 1,106 4,637 45.18% 2,095 23.29% 1,060 1 4,637 45.18% 2,095 22.17% 1,054 1 4,637 45.18% 2,095 22.17% 1,054 1 4,637 45.18% 2,095 22.17% 1,054 1 4,637 45.18% 2,095 22.17% 1,054 1 4,637 45.18% 2,095 22.17% 1,054 1 4,637 45	-	15.00%	2,087	31.45%	1,458	628
4,637 45.18% 2,095 27.76% 1,287 4,637 45.18% 2,095 26.64% 1,287 4,637 45.18% 2,095 26.64% 1,261 4,637 45.18% 2,095 26.64% 1,235 4,637 45.18% 2,095 26.08% 1,209 4,637 45.18% 2,095 25.52% 1,183 4,637 45.18% 2,095 24.96% 1,132 4,637 45.18% 2,095 23.85% 1,106 4,637 45.18% 2,095 23.29% 1,060 1 4,637 45.18% 2,095 23.23% 1,060 1 4,637 45.18% 2,095 22.17% 1,054 1 4,637 45.18% 2,095 22.17% 1,026 1 4,637 45.18% 2,095 22.17% 1,026 1 4,637 45.18% 2,095 22.17% 1,026 1 4,637 45.18% 2,095 22.17% 1,026 1 4,637<	•	15.09%	2,091	29.60%	1,373	718
4,637 45.18% 2,095 27.20% 1,261 4,637 45.18% 2,095 26.64% 1,261 4,637 45.18% 2,095 26.64% 1,235 4,637 45.18% 2,095 26.64% 1,235 4,637 45.18% 2,095 25.52% 1,183 4,637 45.18% 2,095 24.96% 1,132 4,637 45.18% 2,095 24.40% 1,132 4,637 45.18% 2,095 23.85% 1,106 4,637 45.18% 2,095 23.29% 1,060 1 4,637 45.18% 2,095 22.17% 1,024 1 4,637 45.18% 2,095 22.17% 1,024 1 4,637 45.18% 2,095 22.17% 1,024 1 4,637 45.18% 2,095 22.17% 1,024 1 4,637 45.18% 2,095 22.17% 1,024 1 4,637 45.18% 2,095 22.17% 1,024 1 4,637<		45.18%	2,095		1,287	808
4,637 45.18% 2,095 26.64% 1,235 4,637 45.18% 2,095 26.08% 1,235 4,637 45.18% 2,095 25.52% 1,183 4,637 45.18% 2,095 24.96% 1,158 4,637 45.18% 2,095 24.40% 1,132 4,637 45.18% 2,095 24.40% 1,132 4,637 45.18% 2,095 23.85% 1,106 4,637 45.18% 2,095 23.29% 1,060 1 4,637 45.18% 2,095 22.73% 1,064 1 4,637 45.18% 2,095 22.17% 1,024 1 4,637 45.18% 2,095 22.17% 1,024 1 4,637 45.18% 2,095 22.17% 1,024 1 A,637 45.18% 2,095 22.17% 1,024 1 A,637 45.18% 2,095 22.17% 1,024 1		15.18%	2,095		1,261	834
4,637 45.18% 2,095 26.08% 1,209 4,637 45.18% 2,095 25.52% 1,183 4,637 45.18% 2,095 24.96% 1,158 4,637 45.18% 2,095 24.40% 1,132 4,637 45.18% 2,095 23.85% 1,106 4,637 45.18% 2,095 23.29% 1,060 1 4,637 45.18% 2,095 23.29% 1,060 1 4,637 45.18% 2,095 22.73% 1,064 1 4,637 45.18% 2,095 22.73% 1,054 1 4,637 45.18% 2,095 22.17% 1,028 1 4,637 45.18% 2,095 22.17% 1,028 1 A,637 45.18% 2,095 22.17% 1,028 1 A,637 45.18% 2,095 22.17% 1,028 1 A,637 45.18% 2,095 22.17% 1,028 1		15.18%	2,095	26.64%	1,235	860
4,637 45.18% 2,095 25.52% 1,183 4,637 45.18% 2,095 24.96% 1,158 4,637 45.18% 2,095 24.40% 1,132 4,637 45.18% 2,095 23.85% 1,106 4,637 45.18% 2,095 23.29% 1,060 1 4,637 45.18% 2,095 22.73% 1,054 1 4,637 45.18% 2,095 22.73% 1,028 1 4,637 45.18% 2,095 22.73% 1,028 1 4,637 45.18% 2,095 22.17% 1,028 1 7.0tai Years 1-20 41,710 28,166 1	-	15.18%	2,095		1,209	886
4,637 45.18% 2,095 24.96% 1,158 4,637 45.18% 2,095 24.40% 1,132 4,637 45.18% 2,095 23.85% 1,106 4,637 45.18% 2,095 23.29% 1,066 4,637 45.18% 2,095 22.73% 1,054 1 4,637 45.18% 2,095 22.17% 1,028 1 4,637 45.18% 2,095 22.17% 1,028 1 70tu, Years 1-20 41,710 28,166 1	-	45.18%	2,095		1,183	912
4,637 45.18% 2,095 24.40% 1,132 4,637 45.18% 2,095 23.85% 1,106 4,637 45.18% 2,095 23.29% 1,066 1 4,637 45.18% 2,095 22.73% 1,054 1 4,637 45.18% 2,095 22.17% 1,028 1 7.0tai Years 1-20 41,710 28,166 1	-	45.18%	2,095		1,158	938
4,637 45.18% 2,095 23.85% 1,106 4,637 45.18% 2,095 23.29% 1,080 1 4,637 45.18% 2,095 22.73% 1,054 1 4,637 45.18% 2,095 22.17% 1,028 1 70tu, Years 1-20 41,710 28,166	•	45.18%	2,095		1,132	963
4,637 45.18% 2,095 23.29% 1,080 1 4,637 45.18% 2,095 22.73% 1,054 1 4,637 45.18% 2,095 22.17% 1,028 1 70lui Years 1-20 41,710 28,166 1	·	45.18%	2,095		1,106	989
4,637 45.18% 2,095 22.73% 1,054 1 4,637 45.18% 2,095 22.17% 1,028 1 Tolda: Years 1-20 41,710 28,166	•	45.18%	2,095		1,080	1,015
4,637 45.18% 2,095 22.17% 1,028 1 Tolda: Years 1-20 41,710 28,166	-	45.18%	2,095		1,054	1,041
41,710 28,166		45.18%	2,095		1,028	1,067
	1-20		41,710		28,166	
2 ABG 1 4 AB	acros levie		2006		1 408	677
Average Annual Acres				44.36% 44.36% 44.45% 44.54% 44.63% 45.18% 45.00% 45.00% 45.18% 45.18% 45.18% 45.18% 45.18% 45.18% 45.18%	44.36% 2,057 44.36% 2,057 44.45% 2,057 44.45% 2,061 44.45% 2,061 44.45% 2,061 44.45% 2,057 44.54% 2,070 44.54% 2,070 44.65% 2,074 44.65% 2,074 44.91% 2,095 45.09% 2,095 45.09% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 45.18% 2,095 <td>44.36% 2,057 44.36% 44.36% 2,057 44.36% 44.45% 2,057 44.36% 44.45% 2,065 40.67% 44.45% 2,065 40.67% 44.45% 2,070 38.83% 44.54% 2,070 38.83% 44.57% 2,070 38.83% 44.67% 2,070 38.83% 44.91% 2,074 36.98% 45.09% 2,070 38.83% 45.09% 2,091 29.60% 45.18% 2,095 27.76% 45.18% 2,095 27.76% 45.18% 2,095 26.09% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 22.17% 45.18% 2,095 22.17% <td< td=""></td<></td>	44.36% 2,057 44.36% 44.36% 2,057 44.36% 44.45% 2,057 44.36% 44.45% 2,065 40.67% 44.45% 2,065 40.67% 44.45% 2,070 38.83% 44.54% 2,070 38.83% 44.57% 2,070 38.83% 44.67% 2,070 38.83% 44.91% 2,074 36.98% 45.09% 2,070 38.83% 45.09% 2,091 29.60% 45.18% 2,095 27.76% 45.18% 2,095 27.76% 45.18% 2,095 26.09% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 23.35% 45.18% 2,095 22.17% 45.18% 2,095 22.17% <td< td=""></td<>

Caemarvon Diversion Outfall Management (BS-3a)

Total First Cost	\$1,487,000
Total Fully Funded Cost	\$2,522,200

Annual Charges	Present Worth	Average <u>Annual</u> *
Interest & Amortization	\$1,735,800	\$183,400
Monitoring	244,900	25,900
O&M cost	28,400	3,000
Other Costs	0	
Total	\$2,009,100	\$212300
Average Annual Habitat Units		504
Cost per Habitat Unit		\$422
Average Annual Acres of Eme	ergent Marsh	448

*Interest rate of 8.5 percent over a 20-year project life

Caernarvon Outfall Management (BS-3a)

Ξ.

First Costs and Annual	nnual Charges	S						
		Casissorian	Facements	Supervision &	Supervision		First Cost	Total First
	FISCAI	Crigineening 2 Decisio	e Land Dichte	Administration	& Inspection Contingency		Construction	Cost
Үөаг	Year			05	\$ 0	C\$	0 \$	9
5 Compound					50	\$0	0 \$	9
4 Compound				C 83	05	2 0	0 \$	\$41,143
3 Compound	1993	108,213	oon'nz¢	•	260 000	\$139.320	\$557,280	\$933,171
2 Compound 1 Compound	1994 1995	\$//,143 \$0	3			\$92,880	\$371,520	\$512,686
Base Year						6000 0000	CO28 BM	\$1 487 000
	TOTAL	000'06\$	\$20,000	\$116,000		002'2C2¢		
	Fiscal	Monitoring	0&M	Other				
Voar	Year	Costs	Costs	Costs				
1 Discount	1996	\$25 875	\$3,000					
o Discount	1997	\$25,875	\$3,000					
2 Discount	1998	\$25,875	\$3,000					
A Discount	1999		\$3,000					
5 Discount	2000		\$3,000					
6 Discount	2001		\$3,000		_			
7 Discount	2002				_			
A Discount	2003							
9 Discount	2004			-	_			
10 Discount	2005	\$25,875	\$3,000		_			
11 Discount	2006			-				
12 Discount	2007	\$25,875			-			
13 Discount	2008			•••				
14 Discount	2009	\$25,875			_			
15 Discount	2010	\$25,875						
16 Discount	2011	\$25,875			_			
17 Discount	2012	25,875						
18 Discount	2013	3 \$25,875			\$ 0			
19 Discount	2014				\$ 0			
20 Discount	2015	5 \$25,875	\$3,000					
	Total	\$517,500) \$60,000		2 0			

Costs amortized over 20 year operation life

18--Sept-92

Caernarvon Outfall Management (BS-3a)

	\$183,418	Total First Cost	0 90 9 9	\$52,551	\$1,098,553 \$556,264	\$1,707,368	
	ts	First Cost Construction	2 0	3		\$1,059,143	
	Amortized Costs	Contingency	\$0	05 05		\$264.786	
	•	Supervision	\$0	\$ 0	\$70,634	\$114 034	
ł	\$1,735,758	Supervision & Supervision First Cost		0\$	\$117,050	066'85	\$130'0F1
	d Costs	ents	Land Rights	20 S	\$25,546 \$0	8	\$25,546
5	Total Discounted Costs	Engineering	& Design	3 3	\$16,422 \$90,815		\$107,237
		scal	Үөаг	00	1993 1994	1995	[otal
			Year Rates	5 1.504	3 1.277	2 1.177	

	Other	Costs	3				50			%	9	9			3	50		2	0 \$	%	5				3	9		3	3		0 \$	
010.030	O&M	Costs	CO 765		\$ 2,548	s 2.349		7 2, 103	\$1,995	\$1 ,839	C1 695		20C 1	\$1,440	\$1.327	e 1 2 2 3	10716	\$1,127	\$1 ,039	\$957		7004	\$813	\$750	1693	627	1000	\$587	\$28,390		\$3,000	
\$101,231	Monitorina	Coete	0000	\$23,040	\$21,980	CON 258	007'07¢	\$18,671	\$17.208	CIS BED		214'01/	\$13,472	\$12.417	e11 444		\$10,548	\$9 ,721	CA 960		007'04	\$7,611	\$7,015	CG 465	ec 060		\$5,4 92	\$5.062	COAA REA		\$ 25.875	
Total	Cicnal	-	Year	1996	1997	0001	9661	1999	0000	0007	2001	2002	2003	1000	1007	CN02	2006	2007	000		2009	2010	2011		7107	2013	2014	2015		Total		ותמו
To	ł	Discount	Rates	0 922		2 0.045	a 0.783	002.0	4 0.144	5 0.665	6 0.613	7 0 565	0.601	1 20.0	.9 0.4bU	0.442	0.408	326.0	12 0.3/0	13 0.346	14 0.319	APC 0 34		16 U.Z/1	17 0.250	18 0.230	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		20 0.196	-		Average Annua
			Үөаг		1	ï	1		i	1	١		l	1	ł	ī	•	ł	1	1	ļ		I	1	1	1		ł	I			

Costs amortized over 20 year operation life

Caernarvon Outfall Management (BS-3a)

\$266,521	Total First			03	\$42,871	\$1,003,480	\$568,956	\$1,615,307																							
sts	First Cost	Construction	n¢.	\$ 0	\$ 0	\$599,268	\$412,296	\$1,011,564																							
Amortized Costs			0.4	3	\$ 0	\$149,817	\$103,074	\$252,891																							
	Supervision	& Inspection Contingency	\$0	\$0	\$ 0	\$64.521	\$44,390	\$108,911																							
\$2,522,199			\$0		\$ 8,634	\$106.920	\$9,195	\$124,749	Other	Costs	0 \$	\$ 0	9	\$ 0	3	2 0									0\$						3
ed Costs	Easements	& Land Rights	\$ 0	2 0	\$20.840	05	9	\$20,840	O&M	Costs	\$3,436	\$3,546	\$3,659	\$3,776	\$3,897	\$4,022	\$4,151	\$4,283	\$4,420	\$4,562	\$4,708	\$4,859	\$5,014	\$5,174	\$5,340	\$5,511	\$5,687	\$5,869	\$6,057	\$6,251	\$94,223
Total Fully Funded Costs	Englneering	& Design &	9	05	213 397	682 055	05 02	\$96,352	Monitoring	Costs	\$29,634	\$30,582	\$31,561	\$32,571	\$33,613	\$ 34,689	\$35,799	\$ 36,944	\$38,126	\$39,346	\$40,605	\$41,905	\$43,246	\$44,630	\$46,058	\$47,532	\$49,053	\$50,622	\$52,242	\$53,914	\$812,670
	Fiscal	Үөаг	0	Ċ	1993	P 001	1995	TOTAL	Fiscal	Үөаг	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Fully Funded Costs	Inflation	Factor			040	260.1	6/0/1 011 1	TC	Inflation	Factor	1.145	1.182	1.220	1.259	1.299	1.341	1.384	1.428	1.473	-	-	1.620	1.671	1.725	1.780	•	•	1.956	2.019	2.084	T
Fully Fi		Year	9) ◄	• •	° (N -	-		Year	1	- 2	1	4	- 2 -	9-	- 7	80	6	- 10	Ξ	- 12	- 13	- 14	- 15	- 16	- 17	- 18	- 19	-20	

Costs amortized over 20 year operation life

Costs amortized over 20 year operation life

18-Sept-92

		with Project		Without Project		
	Acres	% Acreage Veoetated	Vegetated Acres	% Acreage Vegetated	Vegetated Acres	ACIES
C	970	42.63%	1,394	42.63%	1,394	
5				40 63%	1.394	50
-	3,270	44.16%	+++ -		967 1	57
•	3 270	45.67%	1,493	•		59
4	3.270	47,18%	1,543		1,4/8) r
n	017'0		1 592	46.49%	1,520	2
4	3,2/0				1.562	64
ŝ	3,270	20.21%	760'1		1 605	87
Ľ	3.270	51.72%	1,691		242 4	94
•	3 270	53.24%	1,741			
- (010,0	54 75%	1.790	51.64%	1,689	= :
20	0/2/0	201.00	1 840	52.93%	1,731	601
6	3,270	207.00			1.773	116
₽	3,270				-	124
11	3.270	59.29%	1,939	-		131
: ;	3 270	60.80%	1,988		- 1	961
4	020 0	62 31 %	2,038	58.08%	-	- •
5	017'0		2 087	7 59.37%	-	140
=	3,270		0 1 27		1,983	153
15	3,270	-			-	161
16		66.85%	001 12	-		168
		68.37%	2,236	-		175
2			2.285	5 64.52%		
18			0 335	5 65.81%	2,152	183
19	3,2/0				2 194	190
20		72.91%	2,384			
	Total Vears 1-20	-20	38,280	q	35,880	
			101		1 794	

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

Caernarvon Outfall Management (BS-3a)

-

Marsh Type

.

.

Caernarvon Outfall Management (BS-3a)

.

Marsh Type: Brackish (Sub-Area 2)

		% Acreage	Vegetated	% Acreage	Vegetated	Net
Years	Acres	Vegetated	Acres	Vegetated	ACIES	ACIES
0	7,778	84.01%	6,534	84.01%	6,534	0
-	877 T	84 19%	6.548	83.99%	6,533	15
- ~	77.8	84.36%	6.561	83.99%	6,533	28
	977.7	84 53%	6.575	83.99%	6,533	4
•	778	RA 71%	6.588	83.99%	6,533	55
•	778	84 88%	6.602	83.99%	6,533	69
שכ	877.7	R5 05%	6.615	83.99%	6,533	82
	7 7 7	A5 23%	6.629	83.99%	6,533	96
~ 0	7 7 78	R5 40%	6.642	83,99%	6,533	109
	7 7 8	85.57%	6.656	83.99%	6,533	123
n (7 778	85.75%	6.669	83.99%	6,533	136
2 :	7 778	85.92%	6.683	83.99%	6,533	150
: 2	7 778	86.09%	6,696	83.99%	6,533	163
<u>i c</u>		86.26%	6.710	83.99%	6,533	171
	_	86 44%	6.723	83.99%	6,533	190
ιų		86.61%	6.737	83.99%	6,533	204
<u>, 1</u>			6,750	83.99%	6,533	217
2 C			6.764	83 99%	6,533	53.
81		87.13%	6,777	83.99%	6,533	244
0 T		87.30%	6,791	83.99%	6,533	25(
2 02	7,778	87.48%	6,804	83.99%	6,533	271
	Total Years 1-20	20	133,520		130,660	
	Averane Annual Arres	al Acres	6.676		6,533	143

Costs amortized over 20 year operation life

-

Caernarvon Outfall Management (BS-3a)

Marsh Type: Brackish to Intermediate (Sub-Area 3)

.

Net Acres	0	9	12	11	23	28	9	39	45	50	56	61	67	5	2 4	8/	83	68	9 6	100	105				58
Vegetated Acres	1,174	1,173	1,173	1,173	1,173	1,173	1.173	1,173	1,173	1.173	1.173	1 173		C/1/1	1,1/3	1,173	1,173	1,173	1,173	1 173	1173		6/1'1	23,460	1,173
Without Project % Acreage / Vegetated	84.04%	83.97%	83.97%	83.97%	83.97%	83.97%	83.97%	83.97%	R3 97%	83 97%	83.97%	5 10.00 1970	K/7.72	83.97%	83.97%	83.97%	83.97%	83.97%	83 97%	0.00		83.97%	83.97%		
Vegetated %	1,174	1.179	1,185	1 190	1 196	1001	1,201	10101	1 218	1,210	000 1	6771	1,234	1,240	1,245	1.251	1 256	1 26.0	1,202	102'1	C17'I	1,278	1,284	24,630	1,231
With Project % Acreage Venetated	84.04%	84 40%	201.10	04.10%	00.10 M	500.00 20	50.00 1010	80.37%	R 1.00	87.16%	81.56%	87.96%	88.35%	88.75%	89.14%	BO SAK	00.02	8 7 7 7 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	* 77.05	80.12%	91.12%	91.52%	91.91%	20	al Acres
SOLA	1,397	1 207	160,1	160'1	195'1	195,1	166,1	1,397	1,397	1,397	1,397	1,397	1,397	1 397	1 307	100'I	160'I	195,1	1,397	1,397	1,397	1 397	1,397	Total Years 1-20	Average Annual Acres
	. 0	•	- (N 4	e	4	9	9	7	80	6	0	F	: 5	4 5	2 :	4	15	16	11	18	9	20		

.__

Caernarvon Outfall Management (BS-3a)

Marsh Type: Brackish to Intermediate (Sub-Area 4)

.

		With Project	-	Without Project		
Yaars	Acres	% Acreage Vegetated	Vegetated Acres	% Acreage Vegetated	Vegetated Acres	Net Acres
0	3,111	83.99%	2,613	83.99%	2,613	0
-	3,111	84.38%	2,625	83.99%	2,613	12
2	3,111	84.76%	2,637	83.99%	2,613	24
e	3,111	85.15%	2,649	83.99%	2,613	36
4	3,111	85.54%	2,661	83 99%	2,613	48
S	3,111	85.92%	2,673	83.99%	2,613	60
9	3,111	86.31%	2,685	83.99%	2,613	72
7	3,111	86.69%	2,697	83.99%	2,613	84
80	3,111	87.08%	2,709	83.99%	2,613	96
6	3,111	87.46%	2,721	83.99%	2,613	108
10	3,111	87.85%	2,733	83.99%	2,613	120
11	3,111	88.24%	2,745	83.99%	2,613	132
12	3,111	88.62%	2,757	83.99%	2,613	144
13	3,111	89.01%	2,769	83.99%	2,613	156
14	3,111	89.39%	2,781	83.99%	2,613	168
15	3,111	89.78%	2,793	83.99%	2,613	180
16	3,111	90.16%	2,805	83.99%	2,613	192
17	3,111	90.55%	2,817	83.99%	2,613	204
18	3,111	90.94%	2,829	83.99%	2,613	216
19	3,111	91.32%	2,841	83.99%	2,613	228
20	3,111	91.71%	2,853	83.99%	2,613	240
·	Total Years 1–20	20	54,780		52,260	
-	Average Annual Acres	il Acres	2,739		2,613	126
)					

Costs amortized over 20 year operation life

18 - Sept - 92

Caernarvon Outfall Management (BS-3a)

Summation of Emergent Marsh Acreages

.

11,715 3% 11,715 5% 11,716 5% 11,796 5% 11,957 9% 12,118 2% 12,198 3% 12,198 3% 12,198 3% 12,198 3% 12,198 3% 12,198 3% 12,198 3% 12,198 3% 12,520 9% 12,198 12,520 12,601 13,54 12,003 14% 13,084 13,245 13,084 14% 13,084 13,245 13,084 14% 13,084 13,245 13,084 14% 13,084 13,251 251,210 251,210 251,210			With Project % Acreage	Vegetated	Wittiout Flored % Acreage Vegetated	Vegetated Acres	Net Acres
15,556 75,83% 11,796 75,57% 11,713 15,556 76,35% 11,957 75,57% 11,797 15,556 76,86% 11,957 75,57% 11,797 15,556 76,86% 11,957 75,54% 11,997 15,556 77,90% 12,118 76.58% 11,924 15,556 78,42% 12,198 76.58% 11,924 15,556 79,45% 12,198 76.58% 11,924 15,556 79,45% 12,198 76.58% 11,924 15,556 79,45% 12,198 76.92% 11,924 15,556 79,97% 12,198 76.92% 12,008 15,556 79,97% 12,440 77.46% 12,050 15,556 80,49% 12,601 78.00% 12,134 15,556 81,00% 12,601 78.00% 12,134 15,556 81,00% 12,601 78.00% 12,134 15,556 81,00% 12,601 78.27% 12,134 15,556 82,04% 12,601 78.27%	0	15,556	75.31%	11,715	75.31%	11,715	0
15,556 76.35% 11,876 75.57% 11,755 15,556 76.35% 11,957 75.84% 11,797 15,556 76.86% 12,037 76.11% 11,813 15,556 77.38% 12,108 76.38% 11,924 15,556 77.38% 12,108 76.35% 11,924 15,556 78.45% 12,108 76.65% 11,924 15,556 78.45% 12,138 76.35% 11,924 15,556 79.97% 12,138 76.35% 11,956 15,556 80.49% 12,601 77.19% 12,008 3 15,556 81.00% 12,601 78.27% 12,134 2 15,556 81.00% 12,601 78.27% 12,134 2 15,556 81.00% 12,762 78.27% 12,134 2 2 15,556 82.04% 12,762 78.27% 12,134 2 2 12,134 15,556 82.04% 12,762 78.27% 12,176 12,134 15,556 82.04% 12			96 g 75	11 796	•	11,713	83
15,556 76.96% 11,957 75.84% 11,797 15,556 77.38% 12,037 76.11% 11,881 15,556 77.38% 12,037 76.11% 11,881 15,556 77.38% 12,118 76.55% 11,924 15,556 78.93% 12,198 76.65% 11,924 15,556 79.97% 12,198 76.65% 11,924 15,556 79.97% 12,239 77.19% 12,008 15,556 79.97% 12,220 77.19% 12,008 15,556 81.00% 12,601 78.00% 12,134 15,556 81.00% 12,601 78.00% 12,134 15,556 81.00% 12,601 78.27% 12,134 15,556 82.04% 12,762 78.57% 12,134 15,556 82.04% 12,762 78.57% 12,134 15,556 82.04% 12,762 78.57% 12,134 15,556 82.04% 12,903 79.69% 12,345 15,556 82.55% 13,003 79.69%	_	15,550	10.00%	11 876		11,755	121
15,556 76.86% 11,957 70.84% 11,957 76.11% 11,839 15,556 77.38% 12,037 76.11% 11,881 2 15,556 78.42% 12,198 76.65% 11,924 2 15,556 78.42% 12,198 76.65% 11,924 3 15,556 78.93% 12,198 76.65% 11,966 3 15,556 79.97% 12,198 76.65% 11,966 3 15,556 79.97% 12,359 77.19% 12,092 3 15,556 80.49% 12,520 77.73% 12,092 3 15,556 81.00% 12,601 78.00% 12,134 15,556 81.00% 12,601 78.27% 12,134 15,556 81.60% 12,603 79.09% 12,134 15,556 82.04% 12,003 79.09% 12,134 15,556 82.04% 12,003 79.09% 12,134 15,556 82.04% 12,003 79.09% 12,134 15,556 83.07% 12	2	15,556	ACE.0/			707 11	160
15,556 77,38% 12,037 76,11% 11,839 15,556 77,90% 12,118 76,38% 11,924 15,556 78,42% 12,198 76,55% 11,924 15,556 78,42% 12,198 76,55% 11,924 15,556 79,45% 12,198 76,55% 11,924 15,556 79,45% 12,359 77,19% 12,008 15,556 80,49% 12,520 77,19% 12,008 15,556 81,00% 12,520 77,73% 12,032 15,556 81,00% 12,601 78,00% 12,134 15,556 81,00% 12,601 78,00% 12,134 15,556 81,52% 12,603 73,36 12,134 15,556 81,55% 12,603 73,36 12,134 15,556 82,64% 12,134 12,236 73,36 15,556 83,55% 12,903 79,36% 12,345 15,556 84,11% 12,303 79,36% 12,345 15,556 84,56% 13,003 79,36%	~	15,556	76.86%	11,957	15.84%	16/11	001
15,556 77,90% 12,118 76.38% 11,924 2 15,556 78,45% 12,198 76.55% 11,924 2 15,556 78,93% 12,198 76.55% 11,924 2 15,556 79,97% 12,139 75,008 3 15,556 79,97% 12,440 77,19% 12,008 15,556 81,00% 12,520 77,13% 12,032 15,556 81,00% 12,601 78,00% 12,134 15,556 81,00% 12,601 78,00% 12,134 15,556 82,04% 12,762 78,00% 12,176 15,556 82,04% 12,762 78,00% 12,134 15,556 82,04% 12,762 78,00% 12,176 15,556 82,04% 12,762 78,09% 12,302 15,556 83,07% 12,903 79,09% 12,302 15,556 84,11% 12,303 12,903 12,305 15,556 81,11% 13,003 79,09% 12,345 15,556 81,11%		15,556	77.38%	12,037	76.11%	11,839	0.01
15,556 78.42% 12,198 76.65% 11,924 2 15,556 78.93% 12,279 76.92% 11,966 3 15,556 79.97% 12,440 77.19% 12,008 3 15,556 79.97% 12,440 77.19% 12,008 3 15,556 80.49% 12,520 77.73% 12,092 3 15,556 81.00% 12,601 78.00% 12,134 3 15,556 81.00% 12,601 78.00% 12,134 3 15,556 82.04% 12,601 78.00% 12,176 3 15,556 82.05% 12,842 78.81% 12,218 15,556 83.07% 12,903 79.09% 12,345 15,556 84.11% 12,903 79.09% 12,345 15,556 84.11% 13,003 79.63% 12,345 15,556 81.11% 13,003 79.69% 12,345 15,556 81.11% 13,003 79.69% 12,429 15,556 81.11% 13,030 12,345<	► 14	15,556	%06 LL	12,118		11,881	236
13,556 78,93% 12,279 76,92% 11,966 15,556 79,45% 12,359 77,19% 12,008 15,556 79,45% 12,440 77,73% 12,008 15,556 80,49% 12,520 77,19% 12,008 15,556 81.00% 12,601 78,00% 12,134 15,556 81.00% 12,681 78,00% 12,136 15,556 82.04% 12,762 78,81% 12,176 15,556 82.04% 12,762 78,81% 12,176 15,556 82.04% 12,762 78,81% 12,208 15,556 83.07% 12,903 79.09% 12,345 15,556 83.07% 13,003 79.09% 12,345 15,556 84.11% 13,003 79.63% 12,345 15,556 85.14% 13,003 79.63% 12,345 15,556 85.14% 13,003 79.63% 12,429 15,556 85.14% 13,033 79.63% 12,429 15,556 85.66% 13,164 79.90% 12,429 15,556 85.66% 13,164 79.90% 12,429 15,556 85.66% 13,164 79.90%	. .	12,000	78.42%	12,198	•	11,924	275
19,556 79,45% 12,520 77,19% 12,008 15,556 79,45% 12,520 77,19% 12,008 15,556 80,49% 12,520 77,19% 12,092 15,556 81.00% 12,601 78,00% 12,134 15,556 81.00% 12,601 78,00% 12,134 15,556 81.00% 12,601 78,00% 12,134 15,556 82.04% 12,762 78,54% 12,176 15,556 82.04% 12,762 78,54% 12,218 15,556 82.04% 12,903 79,09% 12,302 15,556 83.07% 13,003 79,63% 12,345 15,556 84.11% 13,003 79,63% 12,345 15,556 84.11% 13,003 79,63% 12,345 15,556 85,14% 13,003 79,63% 12,429 15,556 85,14% 13,164 79,90% 12,429 15,556 85,14% 13,164 79,90% 12,429 15,556 85,14% 13,164 79,90% 12,429 15,556 85,14% 13,164 79,90% 12,429 15,556 85,66% 13,164 79,90%	<u>م</u>	000 01	N 31-101	10 079		11,966	313
15,556 79.97% 12,440 77.46% 12,050 15,556 79.97% 12,440 77.73% 12,092 15,556 81.00% 12,601 78.00% 12,134 15,556 81.00% 12,681 78.27% 12,136 15,556 81.00% 12,681 78.57% 12,176 15,556 82.04% 12,762 78.81% 12,218 15,556 82.04% 12,923 79.09% 12,302 15,556 83.07% 12,923 79.09% 12,302 15,556 83.59% 13,003 79.63% 12,302 15,556 84.11% 13,003 79.63% 12,302 15,556 84.11% 13,003 79.63% 12,302 15,556 84.11% 13,003 79.63% 12,429 15,556 85.14% 13,003 79.63% 12,429 15,556 85.14% 13,164 79.90% 12,429 15,556 85.14% 13,164 79.90% 12,429 15,556 85.14% 13,164 79.90% 12,429 15,556 85.14% 13,164 79.90% 12,429 15,556 85.66% 13,164 79.90%	_	15,550	800.01	10 250	77 19%	·	352
15,556 80.49% 12,520 77.73% 12,092 15,556 81.00% 12,681 78.27% 12,176 15,556 81.00% 12,681 78.27% 12,176 15,556 81.00% 12,762 78.54% 12,218 15,556 82.04% 12,762 78.54% 12,218 15,556 82.04% 12,923 79.09% 12,302 15,556 83.07% 12,923 79.09% 12,302 15,556 83.55% 13,003 79.63% 12,345 15,556 84.11% 13,003 79.63% 12,345 15,556 84.11% 13,003 79.63% 12,345 15,556 84.11% 13,003 79.63% 12,429 15,556 85.14% 13,164 79.90% 12,429 15,556 85.14% 13,325 80.47% 12,429 15,556 85.66% 13,325 80.47% 12,429 15,556 85.66% 13,325 80.44% 12,411 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44%	.	15,550		12,000		•	390
15,556 80,457 12,134 15,556 81,00% 12,681 78,00% 12,134 15,556 81,52% 12,681 78,00% 12,134 15,556 81,52% 12,681 78,57% 12,136 15,556 82,55% 12,842 78,81% 12,218 15,556 82,55% 12,923 79,09% 12,302 15,556 83,59% 13,003 79,63% 12,345 15,556 84,11% 13,003 79,63% 12,345 15,556 84,11% 13,003 79,63% 12,345 15,556 84,11% 13,003 79,63% 12,429 15,556 84,11% 13,045 80,17% 12,429 15,556 85,14% 13,325 80,44% 12,429 15,556 85,14% 13,325 80,44% 12,429 15,556 85,14% 13,325 80,17% 12,429 15,556 85,14% 13,325 80,44% 12,513 15,556 85,66% 13,325 80,44% 12,513 15,556 85,66% 13,325 80,44% 12,513 15,556 85,66% 13,325 80,44% 12,513	ന	15,556	96 1 D. D. 1	10 5 01			428
15,556 81.52% 12,681 78.27% 12,176 15,556 82.04% 12,762 78.54% 12,218 15,556 82.04% 12,762 78.54% 12,216 15,556 82.55% 12,923 79.09% 12,302 15,556 83.07% 12,923 79.09% 12,302 15,556 83.59% 13,003 79.56% 12,345 15,556 84.11% 13,084 79.63% 12,345 15,556 84.62% 13,164 79.90% 12,429 15,556 85.14% 13,325 80.44% 12,429 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513	0	15,550	84.54.00 • 000 • 0	12,020			467
15,556 82.04% 12,762 78.54% 12,218 15,556 82.04% 12,762 78.54% 12,260 15,556 82.04% 12,923 79.09% 12,302 15,556 83.59% 13,003 79.36% 12,345 15,556 84.11% 13,003 79.63% 12,345 15,556 84.11% 13,084 79.63% 12,345 15,556 84.62% 13,164 79.90% 12,429 15,556 85.14% 13,245 80.17% 12,429 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513	-	15,550	%00.10 /00.10	12,001			505
15,556 82,04% 12,102 78,81% 12,260 15,556 82,55% 12,842 78,81% 12,302 15,556 83,59% 12,903 79,09% 12,302 15,556 83,59% 13,003 79,36% 12,345 15,556 84,11% 13,003 79,56% 12,345 15,556 84,11% 13,164 79,90% 12,429 15,556 85,14% 13,164 79,90% 12,429 15,556 85,14% 13,245 80,17% 12,429 15,556 85,14% 13,325 80,44% 12,513 15,556 85,66% 13,325 80,44% 12,513 15,556 85,66% 13,325 80,44% 12,513 15,556 85,66% 13,325 80,44% 12,513 15,556 85,66% 13,325 80,44% 12,513 Atomical Acres 12,201 242,260 242,260	2	15,550	9.7C.10	100,21			543
15,556 82.55% 12,042 79,09% 12,302 15,556 83.07% 12,923 79,09% 12,302 15,556 83.59% 13,003 79,63% 12,345 15,556 84.11% 13,064 79,60% 12,429 15,556 84.62% 13,164 79,90% 12,429 15,556 84.62% 13,164 79,90% 12,429 15,556 85.14% 13,245 80.17% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 Average Annual Acres 12,510 242,260	0	15,556	82.04%	201 21			583
15,556 83.07% 12,923 79.05% 12,923 15,556 83.59% 13,003 79.36% 12,345 15,556 84.11% 13,084 79.63% 12,345 15,556 84.62% 13,164 79.90% 12,429 15,556 85.14% 13,245 80.17% 12,429 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 Average Annual Acres 12,510 242,260 Average Annual Acres 12,561 12,113	4	15,556	82.55%	240'71			62(
15,556 83.59% 13,003 79.50% 12,30% 15,556 84.11% 13,084 79.63% 12,387 15,556 84.62% 13,164 79.90% 12,429 15,556 85.14% 13,245 80.17% 12,429 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 Average Annual Acres 12,510 242,260 Average Annual Acres 12,561 12,113	ŝ	15,556		12,923	- •		556
15,556 84.11% 13,084 79.63% 12,307 15,556 84.62% 13,164 79.90% 12,429 15,556 85.14% 13,164 79.90% 12,429 15,556 85.14% 13,255 80.17% 12,471 15,556 85.66% 13,325 80.44% 12,513 70tal Years 1-20 251,210 242,260	9	15,556		13,003			.03
15,556 84.62% 13,164 79.90% 12,429 15,556 85.14% 13,245 80.17% 12,471 15,556 85.14% 13,255 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 15,556 85.66% 13,325 80.44% 12,513 70tal Years 1-20 251,210 242,260 Average Annual Acres 12,561 12,113	~	15,556		13,084			
15,556 85.14% 13,245 80.17% 12,471 15,556 85.66% 13,325 80.44% 12,513 1 15,556 85.66% 13,325 80.44% 12,513 1 15,556 85.66% 13,325 80.44% 12,513 1 Total Years 1-20 251,210 242,260 12,113 12,113		15 556		13,164	• -		Ž
15,556 85,66% 13,325 80.44% 12,513 1 Total Years 1 – 20 251,210 242,260		15,556		13,245	-		
Total Years 1–20 251,210 242,260		15,556		13,325			81
12,561 12,113	-	otal Years 1-	20	251,21(242,260	
	•	Verage Annu	al Acres	12,56	_	12,113	44

.

•

Mud Lake Management (PCS-24)

Total First Cost\$1,504,500Total Fully Funded Cost

Annual Charges	Present Worth	Average <u>Annual*</u>
Interest & Amortization	\$1,852,100	\$195,700
Monitoring	244,900	25,900
0&M cost	111,600	11,800
Other Costs		0
Total	\$2,208,600	\$233,400
Average Annual Habitat Units		487
Cost per Habitat Unit		\$479
Average Annual Acres of Eme	rgent Marsh	798

*Interest rate of 8.5 percent over a 20-year project life

East Mud Lake (PC/S-24)

First Costs and Annual Charges

	Fiscal	Engineering	Easements	Engineering Easements Supervision & Supervision	Supervision		First Cost	Total First
Year	Year	& Design	& Land Rights	& Land Rights Administration & Inspection Contingency Construction	& Inspection (Contingency	Construction	Cost
5 Compound		0 \$	\$0	. \$0	9 5	3	9	0 \$
4 Compound	1993	\$ 41,563	\$10,000	\$17,500	\$ 0	\$0	\$0	\$69,063
3 Compound	1994	\$53,438	\$0	\$30,000	\$ 0	\$0	\$ 0	\$83,438
2 Compound	ſ	\$0	\$0	\$30,000	\$68,571	\$134,800	\$539,200	\$772,571
1 Compound		\$0	\$0	••	\$51,429	\$101,100	\$404,400	\$579,429
Base Year								
	TOTAL	000'96\$	\$10,000	\$100,000	\$120,000	\$235,900	\$943,600	\$1,504,500
	Fiscal	Monitoring	O&M	Other				
Үөаг	Үөаг	Costs	Costs	Costs				
1 Discount	1997	\$25,875	\$11,795	\$ 0				
2 Discount	1998	\$25,875	\$11,795	\$0				
3 Discount	1999	\$25,875	\$11,795	\$ 0				

	Fiscal	Monitoring	O&M	Other
Year	Үөаг	Costs	Costs	Costs
1 Discount	1997	\$25,875	\$11,795	0 \$
2 Discount	1998	\$25,875	\$11,795	\$0
3 Discount	1999	\$25,875	\$11,795	\$ 0
4 Discount	2000	\$25,875	\$11,795	\$ 0
5 Discount	2001	\$25,875	\$11,795	0\$
-6 Discount	2002	\$25,875	\$11,795	9
7 Discount	2003	\$25,875	\$11,795	\$ 0
8 Discount	2004	\$25,875	\$11,795	\$ 0
9 Discount	2005	\$25,875	\$11,795	9 0
10 Discount	2006	\$25,875	\$11,795	3 0
11 Discount	2007	\$25,875	\$11,795	\$ 0
12 Discount	2008	\$25,875	\$11,795	\$ 0
13 Discount	2009	\$25,875	\$11,795	9 0
14 Discount	2010	\$25,875	\$11,795	\$ 0
15 Discount	2011	\$25,875	\$11,795	9
16 Discount	2012	\$25,875	\$11,795	9
17 Discount	2013	\$25,875	\$11,795	9
18 Discount	2014	\$25,875	\$11,795	\$ 0
19 Discount	2015	\$25,875	\$11,795	\$ 0
20 Discount	2016	\$25,875	\$11,795	\$ 0
	Total	\$517,500	\$235,900	9

Costs amortized over 20 year operation life

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II
--

East Mud Lake (PC/S-24)

Compound	ind Fiscal	Encineering	Easements	Supervision &	Supervision		First Cost	Total First
Year Rates		& Design	& Land Rights	Administration	& Inspection Contingency Construction	Contingency	Construction	Cost
	04	0 \$0	0\$	0 \$ ·	\$0	\$ 0	0 \$	°s
	386 1993	3 57 6	\$13.859	\$24,253	\$ 0	\$ 0	\$	\$95,711
 r c			05		\$0	\$0	\$ 0	\$106,574
 	·				580 724	\$158 690	\$634.760	064'606\$
 N +					\$55,800	\$109,694	\$438,774	\$628,680
	Total	\$125,8	\$13,859	•	\$136,524	\$268,383	\$1,073,534	\$1,740,455
Discount	ot Fiscal	Monitorina	O&M	Other				
Year Rates		Costs	Costs	Costs				
	0.922 19	1997 \$23,848	\$10,871	%				
· ~		998 \$ 21,980	\$10,019					
	-		\$9,234					
		2000 \$18,671	\$8,511					
		2001 \$17,208	\$7,844					
		2002 \$15,860	\$7,230					
		2003 \$14,617	\$6,663					
.0	0.521 20	2004 \$13,472	\$6,141					
.0	0.480 20	2005 \$12,417	\$5,660					
-10 0.	0.442 20	2006 \$11,444	\$5,217					
		2007 \$10,548	\$4,808					
. 0		2008 \$9,721	\$4,431					
		2009 \$8,960						
		2010 \$8,258	\$3,764	2 0				
- 15 0		2011 \$7,611	\$3,469	9				
			\$3,198	3				
	_	2013 \$6,465		\$0				
_		2014 \$5,959		\$0				
		2015 \$5,492						
		2016 \$5,062	\$2,307					
	Total	\$244,864	\$111,620	\$ 0				
Averaci	Averade Annual	. \$25.875	\$11.795	° \$ 0				
カトラトレ								

Costs amortized over 20 year operation life

18-Sept-92

East Mud Lake (PC/S-24)

			Total Fully Funded Costs	ted Costs	\$2,903,635		Amortized Costs	sts	\$306,827
	Inflation	Fiscal	Engineering	Easements	Supervision &	Supervision	c	First Cost	Total First
	r actor	Year	& Design	& Land Hights			Contingency	& inspection Contingency Construction	Cost
	1.042	1993	\$43.308	\$10.420	\$18.235	05			5 71.963
	1.075	1994	\$57,464	2 0	\$32,260	\$0		9 0	\$89,724
	1.110	1995	2 0	0 \$	\$33,293	\$76,097	\$149,5	\$598,380	\$857,365
		1996	95	\$ 0	\$25,769	\$58,899		\$463,146	\$663,601
1	1	TOTAL	\$100,772	\$10,420	\$109,556	\$134,997		\$1,061,526	\$1,682,653
	Inflation	Fiscal	Monitoring	O&M	Other				
	Factor	Year	Costs	Costs	Costs				
1	1.182	1997	\$30,582	\$13,941	9				
	1.220	1998	\$31,561	\$14,387	90				
	1.259	1999	\$32,571	\$14,847	\$0				
	1.299	2000	\$33,613	\$15,322	9				
	1.341	2001	\$34,689	\$15,813	0\$				
	1.384	2002	\$35,799	\$16,319	\$ 0				
	1.428	2003	\$36,944	\$16,841	8				
	1.473	2004	\$38,126	\$17,380	\$ 0				
	1.521	2005	\$39,346	\$17,936	9				
	1.569	2006	\$40,605	\$18,510	\$ 0				
	1.620	2007	\$41,905	\$19,102	\$0				
	1.671	2008	\$43,246	\$19,713	9				
	1.725	2009	\$44,630	\$20,344	9				
	1.780	2010	\$46,058	\$20,995	9				
	1.837	2011	\$47,532	\$21,667	3				
	1.896	2012	\$49,053	\$22,360	8				
	•1.956	2013	\$50,622	\$23,076	9				
	2.019	2014	\$52,242	\$23,814	8				
	2.084	2015	\$53,914	\$24,576	\$0				
	2.150	2016	\$55,639	\$25,363	\$0				
	F		973 000 CTC	000 0000					

Costs amortized over 20 year operation life

18--Sept-92

East Mud Lake (PC/S-24)

Marsh Type: Brackish

Voars	Acres	% Acreage Vegetated	Vegetated Acres	% Acreage Vegetated	Vegetated Acres	Net Acres
•		40.14%	3,233	40.14%	3,233	0
•	0 064	40144	3 233	39.20%	3,157	76
- (40.14%	3 233	38.25%	3,081	152
			3 233	37.31%	3,005	228
. ر		•	3 233	36.37%	2.929	N
- - -			3 233	35.42%	2,853	380
			3 233	34.48%	2,777	456
			3,233	33.54%	2,701	532
~ 6			3 233	32.59%	2,625	608
			3 233	31.65%	2,549	684
			3,233	30.71%	2,473	160
2:			3.233	29.76%	2,397	836
			3.233	28.82%	2,321	912
7 ;			3.233	27.87%	2,245	886
2;			3 233	26.93%	2,169	1,064
* ¥			3.233	25.99%	2,093	1,140
<u> </u>			3.233	25.04%	2,017	1,21
₽ \$			3.233	24.10%	1,941	1,292
			3.233	23.16%	1,865	1,368
-			3 233	22.21%	1,789	1,444
- ñ	20 8,054		3,233	21.27%	1,713	1,520
	Total Years 1-20	- 20	64,660		48,700	
	Averace Annual Acres	ual Acres	3,233		2,435	362

East Mud Lake (PC/S-24)

Summation of Emergent Marsh Acreages

0 - N M ¥ W		Vegetated	20050	Vegetated	Acres	Acres
- N O * W	8,054	40.14%	3,233	40.14%	3,233	0
N ⊂ ▼ 10	8.054	40.14%	3.233	39.20%	3,157	76
10 4 10	8 054 .	40.14%	3.233	38.25%	3,081	152
) 4 W	8 054	40.14%	3.233	37.31%	3,005	228
- vo	8.054	40.14%	3,233	36.37%	2,929	304
	8.054	40.14%	3,233	35.42%	2,853	380
	8.054	40.14%	3,233	34.48%	2,777	456
	8.054	40.14%	3,233	33.54%	2,701	532
	8.054	40.14%	3,233	32.59%	2,625	7 9
σ	8.054	40.14%	3,233	31.65%	2,549	8
	8.054	40.14%	3,233	30.71%	2,473	760
2 =	8.054	40.14%	3,233	29.76%	2,397	93 93
12	8.054	40.14%	3,233	28.82%	2,321	912
: : :	8.054	40.14%	3,233	27.87%	2,245	986
1	8.054	40.14%	3,233	26.93%	2,169	1,064
15	8.054	40,14%	3,233	25.99%	2,093	1,140
16	8.054	40.14%	3,233	25.04%	2,017	1,216
17	8.054	40,14%	3,233	24.10%	1,941	1,292
	8.054	40.14%	3,233	23.16%	1,865	1,368
	8.054	40.14%	3,233	22.21%	1,789	1,444
50	8,054	40.14%	3,233	21.27%	1,713	1,520
Total Years 1-20	ars 1-2	50	64,660		48,700	
Averana Annual Acres		l ≜rres	3.233		2,435	798

Costs amortized over 20 year operation life

.

Johnathan Davis Wetlands (PBA-35)

Total First Cost	\$2,182,700
Total Fully Funded Cost	\$3,398,900

Annual Charges	Present Worth	Average <u>Annual*</u>
Interest & Amortization	\$2,722,500	\$287,700
Monitoring	195,900	20,700
O&M cost	94,400	10,000
Other Costs	0	0
Total	\$3,012,800	\$318,400
Average Annual Habitat Uni	ts	485
Cost per Habitat Unit		\$657
Average Annual Acres of En	nergent Marsh	255

*interest rate of 8.5 percent over a 20-year project life

Jonathan Davis Wetland (PBA-35)

\$182,383 \$626,686 \$915,779 \$457,890

\$2,182,739

3

Total First Cost

First Costs and Annual Charges

& Design \$03 \$114 545	& Land Rights	Administration	& Inspection	& Inspection Contingency Construction	Construction	
					A DESCRIPTION OF A DESC	
	°\$	\$0		\$0	• \$ 0	
	\$30.000	\$37,838	\$0	\$ 0		
	2 0	\$64,865	\$53,200	\$88,633	\$354,533	
		\$64,865		**	\$607,772	
		\$32,432	\$45,600		\$303,886	
					1	
\$180,000	\$30,000	\$200,000	\$190,000	\$ 316,548	\$1,266,191	
Monitoring	O&M	Other				
Costs	Costs	Costs				
\$20,700	\$9,974	9				
1998 \$20,700		\$ 0				
	\$9,974	\$ 0				
	\$9,974	\$				
	\$9,974	9				
20,700	\$9,974	3				
	\$9,974	9 5				
2004 \$20,700	\$9,974		_			
	\$9,974	9				
•••	\$9,974		_			
••			_			
2008 \$20,700			_			
2009 \$20,700			_			
			_			
			_			
			_			
			_			
			_			
\$414,000			•			
2000 2000 2000 2000 2000 2001 2011 2011	\$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700 \$20,700		\$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$199,974 \$199,480	\$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974	\$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$19,978 \$199,480 \$199,480	\$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$9,974 \$19,974 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$19,978 \$10,078

Costs amortized over 20 year operation life

.....

Jonathan Davis Wetland (PBA-35)

Present V	Present Valued Costs		Total Discounted Costs	d Costs	\$2,722,493		Amortized Costs	sts	\$287,686
Col	Compound	iscal	6	Easements	Supervision &	Supervision	Supervision * teseection Continuency	First Cost Construction	Total First Cost
Year f	Rates	Year	- 1	& Land Highis	AUTIMISUAU				3
2	1 504	0	3 0						2252 757
, •	1 286	1993	\$158.744	\$41,576	\$52,438	0.5			
*	000.1		603 E04	05	\$ 82.851	\$67,952	\$113,210	2402,042	
m	1.2//					\$107 363	\$178.871	\$715,484	\$1,078,078
~	1.177	1995				449 476		\$329,716	\$496,810
-	1.085	1996	3	2				S1 498 042	\$2,628,106
	71	Total	\$242,348	\$41,576	\$246,839	16/ ¹ 622			
SiO	Discount	Fiscal	Monitoring	O&M	Other				
Vear Rates	tes	Year	Costs	Costs	Costs				
	0 922	1997	\$19,078	\$9,193					
- c	0.849	1998	\$17,584	\$8,472					
u (* 	0.783	1999	\$16,206	\$7,809					
	0.722	2000	\$14,937	\$7,197					
r 4	0.665	2001	S 13.766	\$6,633					
, 4	0.000	2002	\$12,688	\$6,114					
0 P	0.565	2003	\$11,694						
	0.521	2004	\$10,778			_			
ο σ 	0.480	2005	\$9,934			_			
	0.442	2006	\$9,155			_			
2	0.408	2007	•						
	0.376	2008		\$3,747	-	_			
	0.346	2009				_			
14	0.319	2010	\$6,606	\$ 3,183	• -	_			
- 4 - 1	0 294	2011	\$6,089			_			
24	0 271	2012	\$5,612	\$2,704		~			
2	0.250	2013		\$2,492		~			
	0.230	2014				•			
5	0 212	2015				•			
	0 106	2016				20			
N7 -		Total	5	~		80			
4	Average Annual	nal	\$20,700	¢29,974		\$0			

Costs amortized over 20 year operation life

Jonathan Davis Wetland (PBA-35)

\$0 \$190,043 \$673,903 \$1,016,291 \$524,406 \$2,404,644

\$359,158

Total First Cost

2									
Үөаг	Inflation Factor	Fiscal Year	Engineering & Desian	Easements & Land Richts	Supervision & Administration	Supervision & Inspection	Contingency	Supervision First Cost & Inspection Continuency Construction	
S		0 ·	\$ 0	\$0		95 .	9 \$	9 0	
4	1.042	· 1993	\$119,356	\$31,260	\$39,427	0\$		0\$	
ო	1.075	1994	\$70,386	\$0		\$57,208	\$95,311	\$381,245	
2	1.110	1995	3	9		\$	\$168,619	\$674,478	
-	1.145	1996	\$	\$ 0	\$37,144	\$52,224	\$87,008	\$348,030	
	л Т	TOTAL	\$189,743	\$31,260	\$218,307	\$210,642	\$350,938	\$1,403,754	
	Inflation	Fiscal	Monitoring	O&M	Other				
Year	Factor	Year	Costs	Costs	Costs				
-	1.182	1997	\$24,466	\$11,788					
2	1.220	1998	\$25,249	\$12,166	0\$				
5	1.259	1999	\$26,057	\$12,555	95				
+	1.299	2000	\$26,890	\$12,957	0\$				
ŝ	1.341	2001	\$27,751	\$13,371	9				
9-	1.384	2002	\$28,639	\$13,799	\$0				
2-	1.428	2003	\$29,555	\$14,241	0\$				
8 1	1.473	2004	\$30,501	\$14,696	\$0				
ი 	1.521	2005	\$31,477	\$15,167	\$0				
- 10	1.569	2006	\$32,484	\$15,652	3				
Ξ	1.620	2007	\$33,524	\$16,153	3				
- 12	1.671	2008	\$34,597	\$16,670	9				
- 13	1.725	2009	\$35,704	\$17,203	9				
+	1.780	2010	\$36,846	\$17,754	8				
- 15	1.837	2011	\$38,025	\$18,322	9				
- 16	1.896	2012	\$39,242	\$18,908	3				
- 17	1.956	2013	\$40,498	\$19,513	0\$				
- 18	2.019	2014	\$41,794	\$20,138	\$ 0				
- 19	2.084	2015	\$ 43,131	\$20,782	3				
-20	2.150	2016	\$44,511	\$21,447					
	ž	Total	\$670,940	\$323,283	3				

Costs amortized over 20 year operation life

-

- -

Jonathan Davis Wetland (PBA-35)

Marsh Type: Fresh/Inter

9]"

Acres Vegetated Acres. Vegetated Acres. Vegetated Acres. Acres. <th< th=""><th></th><th></th><th>With Project % Acreade</th><th>Vegetated</th><th>Without Project % Acreage</th><th>Vegetated</th><th>Net</th></th<>			With Project % Acreade	Vegetated	Without Project % Acreage	Vegetated	Net
7,199 66.50% 4,787 66.66% 4,787 7,199 66.16% 4,771 66.06% 4,756 7,199 66.16% 4,771 65.63% 4,725 7,199 66.16% 4,771 65.63% 4,725 7,199 66.16% 4,763 65.20% 4,725 7,199 66.16% 4,747 65.63% 4,725 7,199 65.83% 4,747 65.39% 4,501 7,199 65.61% 4,731 63.44% 4,601 7,199 65.61% 4,733 63.91% 4,601 7,199 65.61% 4,713 63.91% 4,601 7,199 65.61% 4,713 63.95% 4,570 7,199 65.61% 4,715 62.19% 4,411 7,199 65.50% 4,715 62.19% 4,411 7,199 65.50% 4,667 63.05% 4,675 7,199 65.16% 4,667 59.06 4,411 7,199 65.16% 4,667 59.08 4,411 7,199 65.16% 4,667 59.08 4,411 7,199 65.16% 4,667 59.08% 7,199 64.17%	Years	ACIES	Vegetated	ACCES.	Vegetated	Acres	Acres
7,199 66.38% 4,779 66.06% 4,756 7,199 66.16% 4,755 64.77% 4,694 7,199 66.05% 4,755 64.77% 4,694 7,199 65.63% 4,755 64.77% 4,601 7,199 65.83% 4,733 63.91% 4,601 7,199 65.83% 4,733 63.91% 4,601 7,199 65.83% 4,733 63.91% 4,601 7,199 65.50% 4,733 63.91% 4,601 7,199 65.50% 4,733 63.91% 4,601 7,199 65.50% 4,715 62.19% 4,717 7,199 65.50% 4,715 62.19% 4,717 7,199 65.50% 4,715 62.19% 4,411 7,199 65.50% 4,691 61.19% 4,411 7,199 65.16% 4,691 61.19% 4,405 7,199 65.16% 4,667 59.69% 4,305 7,199 65.16% 4,661 59.69% 4,305 7,199 65.16% 4,661 61.19% 4,405 7,199 64.61% 4,667 59.69% 7,199 64.61%	0	7,199	66.50%	4,787	66.50%	4,787	0
7,199 66.27% 4,771 65.63% 4,725 7,199 66.16% 4,763 65.20% 4,634 7,199 66.05% 4,747 64.34% 4,632 7,199 65.94% 4,747 64.34% 4,632 7,199 65.63% 4,773 65.20% 4,570 7,199 65.63% 4,773 63.34% 4,601 7,199 65.61% 4,715 63.48% 4,570 7,199 65.50% 4,715 63.48% 4,570 7,199 65.50% 4,715 62.19% 4,471 7,199 65.50% 4,707 62.19% 4,471 7,199 65.50% 4,707 62.19% 4,411 7,199 65.05% 4,691 61.19% 4,405 7,199 65.05% 4,683 60.19% 4,363 7,199 65.05% 4,667 59.69% 4,333 7,199 64.33% 4,651 59.69% 4,333 7,199 64.19% 4,667 59.69% 4,341 7,199 64.33% 4,651 59.69% 4,363 7,199 64.33% 4,651 59.69% 4,333 7,199	-	7 100	282.38	6/1/ 4	66.06%	4,756	23
7,199 66.16% 4,763 65.20% 4,634 7,199 66.05% 4,716 64.34% 4,632 7,199 65.94% 4,731 64.34% 4,631 7,199 65.53% 4,731 63.91% 4,601 7,199 65.61% 4,731 63.41% 4,570 7,199 65.61% 4,715 64.34% 4,570 7,199 65.61% 4,715 63.05% 4,510 7,199 65.50% 4,691 61.19% 4,477 7,199 65.50% 4,691 61.19% 4,477 7,199 65.50% 4,691 61.19% 4,477 7,199 65.50% 4,691 61.19% 4,411 7,199 65.16% 4,691 61.19% 4,411 7,199 65.05% 4,693 61.69% 4,411 7,199 64.83% 4,675 60.19% 4,405 7,199 64.83% 4,675 59.69% 4,411 7,199 64.83% 4,675 59.69% 4,415 7,199 64.83% 4,675 59.69% 4,415 7,199 64.83% 4,667 59.69% 7,199 64.63%	- <	1 100	66.97%	177.4	65.63%	4,725	46
7,193 66.05% 4,755 64.17% 4,663 7,193 65.94% 4,733 63.91% 4,632 7,193 65.83% 4,733 63.91% 4,633 7,193 65.61% 4,733 63.05% 4,570 7,193 65.61% 4,723 63.05% 4,570 7,193 65.61% 4,773 63.05% 4,570 7,193 65.50% 4,707 62.19% 4,477 7,193 65.50% 4,707 62.19% 4,477 7,193 65.50% 4,707 62.19% 4,477 7,193 65.16% 4,691 61.19% 4,417 7,193 65.05% 4,693 61.69% 4,417 7,193 65.05% 4,693 61.99% 4,413 7,193 65.05% 4,663 60.19% 4,405 7,193 64.03% 4,675 59.69% 4,405 7,193 64.17% 4,653 59.19% 4,237 7,193 64.13% 4,663 59.19% 4,261 7,193 64.61% 4,653 59.69% 4,261 7,193 64.63% 4,663 59.19% 7,193 64.21%	~ ~	001 2	66 16%	4,763	65.20%	4,694	69
7,199 65.94% 4,747 64.34% 4,601 7,199 65.83% 4,731 63.91% 4,601 7,199 65.61% 4,723 63.05% 4,570 7,199 65.50% 4,715 62.26% 4,500 7,199 65.50% 4,715 62.19% 4,477 7,199 65.50% 4,707 62.19% 4,477 7,199 65.50% 4,707 62.19% 4,441 7,199 65.50% 4,690 61.69% 4,441 7,199 65.16% 4,693 61.19% 4,441 7,199 65.05% 4,693 61.9% 4,405 7,199 65.05% 4,693 61.9% 4,405 7,199 65.05% 4,683 60.19% 4,405 7,199 64.83% 4,675 59.69% 4,405 7,199 64.83% 4,675 59.69% 4,237 7,199 64.172% 4,651 59.69% 4,261 7,199 64.61% 4,651 59.69% 4,261 7,199 64.61% 4,651 59.69% 4,261 7,199 64.61% 4,651 59.19% 7,199 64.61%		661'1 2 100	00. 10 %	4 755	64.77%	4,663	92
7,199 65,83% 4,739 63,91% 4,601 7,199 65,50% 4,731 63,48% 4,570 7,199 65,50% 4,715 62,62% 4,539 7,199 65,50% 4,707 62,19% 4,477 7,199 65,50% 4,707 62,19% 4,477 7,199 65,50% 4,707 62,19% 4,441 7,199 65,16% 4,693 61,19% 4,441 7,199 65,16% 4,693 61,19% 4,441 7,199 65,16% 4,693 61,19% 4,441 7,199 65,16% 4,693 61,19% 4,405 7,199 64,94% 4,675 60,19% 4,405 7,199 64,83% 4,675 59,69% 4,297 7,199 64,172% 4,667 59,69% 4,297 7,199 64,61% 4,651 59,69% 4,261 7,199 64,61% 4,651 58,09% 4,261 7,199 64,61% 4,651 58,09% 4,261 7,199 64,61% 4,651 58,19% 4,261 7,199 64,61% 4,651 58,19% 4,265 7,199	•	1,133	85 04%	4 747	64.34%	4,632	115
7,199 65.72% 4,731 63.48% 4,570 7,199 65.61% 4,723 63.05% 4,539 7,199 65.50% 4,715 62.19% 4,477 7,199 65.38% 4,707 62.19% 4,477 7,199 65.16% 4,690 61.69% 4,441 7,199 65.16% 4,693 61.19% 4,441 7,199 65.05% 4,683 60.69% 4,441 7,199 65.05% 4,683 60.19% 4,405 7,199 64.94% 4,675 60.19% 4,405 7,199 64.83% 4,675 60.19% 4,333 7,199 64.83% 4,675 59.69% 4,297 7,199 64.61% 4,653 59.19% 4,261 7,199 64.61% 4,653 59.19% 4,297 7,199 64.50% 4,653 59.19% 4,117 7,199 64.27% 4,653 57.69% 4,183 7,199 64.61% 4,653 59.19% 4,163 7,199 64.27% 4,635 57.69% 4,183 7,199 64.27% 4,635 57.69% 7,199 64.27%	0 4	1,133	65.83%	4 739	63.91%	4,601	138
7,199 65,61% 4,723 63,05% 4,539 7,199 65,50% 4,715 62,62% 4,508 7,199 65,538% 4,707 62,19% 4,411 7,199 65,538% 4,707 62,19% 4,411 7,199 65,16% 4,699 61,69% 4,441 7,199 65,16% 4,693 61,19% 4,441 7,199 65,05% 4,683 60,69% 4,405 7,199 64,94% 4,675 60,19% 4,333 7,199 64,83% 4,675 60,19% 4,333 7,199 64,83% 4,675 59,69% 4,297 7,199 64,83% 4,675 59,69% 4,297 7,199 64,61% 4,651 58,69% 4,261 7,199 64,61% 4,651 58,69% 4,283 7,199 64,50% 4,651 58,19% 4,263 7,199 64,50% 4,651 58,09% 4,261 7,199 64,50% 4,651 58,09% 4,263 7,199 64,50% 4,653 57,69% 4,163 7,199 64,27% 4,635 57,69% 4,163 7,199		1001 1	55 79%	167.4		4,570	161
7,199 65.50% 4,715 62.62% 4,508 7,199 65.27% 4,699 61.69% 4,477 7,199 65.16% 4,699 61.69% 4,441 7,199 65.16% 4,693 61.19% 4,441 7,199 65.05% 4,683 60.69% 4,441 7,199 65.05% 4,683 60.69% 4,445 7,199 64.94% 4,675 60.19% 4,333 7,199 64.83% 4,675 60.19% 4,333 7,199 64.61% 4,657 59.69% 4,297 7,199 64.61% 4,651 59.19% 4,297 7,199 64.61% 4,651 58.69% 4,261 7,199 64.61% 4,651 58.69% 4,261 7,199 64.61% 4,651 58.69% 4,183 7,199 64.27% 4,651 58.19% 4,163 7,199 64.27% 4,635 57.69% 4,163 7,199 64.27% 4,635 57.19% 4,163 7,199 64.27% 4,635 57.19% 4,163 7,199 64.27% 4,635 57.19% 4,163 7,199	~ 0	CC1'1	65.61%	4.723		4,539	184
7,199 65.38% 4,707 62,19% 4,477 7,199 65.27% 4,699 61,69% 4,441 7,199 65.16% 4,693 61,19% 4,441 7,199 65.05% 4,683 60,19% 4,441 7,199 65.05% 4,683 60,19% 4,363 7,199 64.94% 4,675 60,19% 4,333 7,199 64.83% 4,675 60,19% 4,333 7,199 64.83% 4,657 59,69% 4,297 7,199 64.61% 4,651 58,69% 4,297 7,199 64.61% 4,651 58,19% 4,261 7,199 64.61% 4,651 58,19% 4,183 7,199 64.27% 4,653 58,19% 4,183 7,199 64.27% 4,635 57,69% 4,183 7,199 64.27% 4,635 57,69% 4,153 7,199 64.27% 4,635 57,19% 4,153 7,199 64.27% 4,635 57,19% 4,153 7,199 64.27% 4,635 57,19% 4,153 7,199 64.27% 4,635 57,19% 4,153 7,199	0 0	001 1	65.50%	4.715		4,508	207
7,199 65.27% 4,699 61.69% 4,441 7,199 65.16% 4,691 61.19% 4,405 7,199 65.05% 4,683 60.69% 4,363 7,199 64.94% 4,675 60.19% 4,333 7,199 64.83% 4,667 59.69% 4,297 7,199 64.172% 4,653 59.19% 4,297 7,199 64.61% 4,651 59.69% 4,297 7,199 64.61% 4,651 59.19% 4,297 7,199 64.61% 4,651 58.69% 4,183 7,199 64.61% 4,651 58.69% 4,183 7,199 64.27% 4,651 58.19% 4,183 7,199 64.27% 4,651 58.19% 4,153 7,199 64.27% 4,635 57.19% 4,153 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,186 7,199 64.27% 4,635 57.19% 4,186 7,199		601 L	65 38%	4.707		4,477	23(
7,199 65.16% 4,691 61.19% 4,405 7,199 65.05% 4,683 60.69% 4,369 7,199 64.94% 4,675 60.19% 4,333 7,199 64.83% 4,667 59.69% 4,297 7,199 64.172% 4,655 59.19% 4,297 7,199 64.61% 4,651 59.69% 4,297 7,199 64.61% 4,651 58.69% 4,297 7,199 64.61% 4,651 58.69% 4,261 7,199 64.27% 4,651 58.69% 4,183 7,199 64.27% 4,651 58.19% 4,183 7,199 64.27% 4,635 57.69% 4,153 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117	2 ‡	201.7	65 27%	4.699		4,441	25(
7,199 65.05% 4,683 60.69% 4,369 7,199 64.94% 4,675 60.19% 4,333 7,199 64.83% 4,667 59.69% 4,297 7,199 64.72% 4,659 59.19% 4,297 7,199 64.61% 4,651 58.69% 4,297 7,199 64.61% 4,651 58.69% 4,225 7,199 64.50% 4,651 58.19% 4,189 7,199 64.27% 4,635 57.19% 4,183 7,199 64.27% 4,635 57.19% 4,153 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,183 7,199 64.27% 4,635 57.19% 4,117	= \$	2011	65 16%	4.691	-	4,405	28(
7,199 64.94% 4,675 60.19% 4,333 7,199 64.83% 4,667 59.69% 4,297 7,199 64.172% 4,653 59.19% 4,297 7,199 64.61% 4,651 58.69% 4,297 7,199 64.61% 4,651 58.69% 4,225 7,199 64.50% 4,635 57.19% 4,189 7,199 64.27% 4,635 57.19% 4,163 7,199 64.27% 4,635 57.19% 4,163 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117 7,199 64.27% 4,635 57.19% 4,117	<u>2</u>	001 4	65.05%	4.683		4,369	31
7,199 64.83% 4,667 59,69% 4,297 7,199 64.72% 4,651 59,19% 4,261 7,199 64.61% 4,651 58,69% 4,261 7,199 64.50% 4,651 58,19% 4,189 7,199 64.38% 4,635 57,69% 4,189 7,199 64.27% 4,637 57,19% 4,163 7,199 64.27% 4,627 57,19% 4,117 7,199 64.27% 4,627 57,19% 4,117 7,199 64.27% 4,635 57,19% 4,117 7,199 64.27% 4,627 57,19% 4,117 7,199 64.27% 4,635 57,19% 4,117 7,199 64.27% 4,637 57,19% 4,117 7,199 64.27% 4,637 57,19% 4,117 7,199 64.27% 4,637 57,19% 4,117	2:	001 2	54 94%	4.675	-	4,333	ž
7,199 64.72% 4,659 59.19% 4,261 7,199 64.61% 4,651 58.69% 4,225 7,199 64.50% 4,635 57.69% 4,189 7,199 64.38% 4,635 57.69% 4,153 7,199 64.27% 4,627 57.19% 4,117 7,199 64.27% 4,627 57.19% 4,117 7,199 64.27% 4,627 57.19% 4,117 7,01al Years 1-20 94,060 88,955 4,448	<u>t</u> 4	7 100	64 83%	4.667		4,297	37
7,199 64.61% 4,651 58.69% 4,225 7,199 64.50% 4,643 58.19% 4,189 7,199 64.38% 4,635 57.69% 4,153 7,199 64.27% 4,627 57.19% 4,117 7,199 64.27% 4,627 57.19% 4,117 7,199 64.27% 4,627 57.19% 4,117 7,01al Years 1-20 94,060 88,955 4,448	24	001 4	64 72%	4.659		•	99
7,199 64.50% 4,643 58.19% 4,189 7,199 64.20% 4,635 57.69% 4,153 7,199 64.27% 4,627 57.19% 4,117 7,199 64.27% 4,627 57.19% 4,117 7,199 64.27% 4,627 57.19% 4,117 7 (10al Years 1-20 94,060 88,955 4,448	₽ ₽	001 2	64.61%	4.651		•	42
7,199 64.38% 4,635 57.69% 4,153 7,199 64.27% 4,627 57.19% 4,117 7,199 64.27% 4,627 57.19% 4,117 7,199 64.27% 4,627 57.19% 4,117 7,199 64.27% 4,627 57.19% 4,117 7 Otal Years 1-20 94,060 88,955 4,448	2 9	001 4	64 50%	4.643		•	45
7,199 64.27% 4,627 57.19% 4,117 Total Years 1-20 94,060 94,060 88,955	2 9	7 100	64 38%	4.635		•	48
94,060 88,955 4,448	5 20	261'2	64.27%	4,627			51
4,703 4,448	•-	Total Years 1-	20	54 ,060	_	88,955	
		tinna Annus	al Acres	4.70	_	4,448	255

Costs amortized over 20 year operation life

18--Sept--92

Jonathan Davis Wetland (PBA-35)

Summation of Emergent Marsh Acreages

Years	Acres	WIIII Project % Acreage Vegetated	Vegetated Acres	Without Project % Acreage Vegetated	L Vegetated Acres	Net Acres
0	7,199	66.50%	4,787	66.50%	4,787	0
-	7,199	66.38%	4,779	66.06%	4.756	23
2	7,199	66.27%	4,771	65.63%	4.725	9
e	7,199	66.16%	4,763	65.20%	4.694	69
-	7,199	66.05%	4,755	64.77%	4,663	92
S	7,199	65.94%	4,747	64.34%	4,632	115
9	7,199	65.83%	4,739	63.91%	4.601	138
1	7,199	65.72%	4,731	63.48%	4,570	161
80	661'/.	65.61%	4,723	63.05%	4,539	184
6	7,199	65.50%	4,715	62.62%	4,508	207
₽	7,199	65.38%	4,707	62.19%	4,477	230
Ξ	7,199	65.27%	4,699	61.69%	4,441	258
12	7,199	65.16%	4,691	61.19%	4,405	286
13	7,199	65.05%	4,683	60.69%	4,369	314
±	7,199	64.94%	4,675	60.19%	4,333	342
15	7,199	64.83%	4,667	59.69%	4,297	370
16	7,199	64.72%	4,659	59.19%	4,261	398
11	7,199	64.61%	4,651	58.69%	4,225	426
18	7,199	64.50%	4,643	58.19%	4,189	454
19	7,199	64.38%	4,635	57.69%	4,153	482
20	7,199	64.27%	4,627	57.19%	4,117	510
Τc	Total Years 1–20	. 0	94,060		88,955	
¥	Average Annual Acres	Acres	4.703		4.448	255

Point Au Fer Island Plugs (ME-221211

Total First Cost	\$935,200
Total Fully Funded Cost	\$1,069,600

Annual Charges	Present Worth	Average <u>Annual+</u>
Interest & Amortization	\$1,018,700	\$107,700
Monitoring	20,400	2,200
Other cost	0	0
Other Costs		0
Total	\$1,039,100	\$109,900
Average Annual Habitat Un	iits	158
Cost per Habitat Unit		\$696
Average Annual Acres of E	mergent Marsh	196

*Interest rate of 8.5 percent over a 20-year project life

Ccontract Restoration Act Priority Project List II

Point Au Fer Island Plugs (PTE-22/24)

۰.

Total First Cost

<mark>8 8 8</mark>

\$43,957 \$891,207

\$935,163

First Costs and Annual Charges

Үөаг	Year	Lengineering & Design	Land Rights	Supervision & Administration	Supervision & Inspection Contingency	Contingency	First Cost Construction
5 Compound	•	\$0	\$0	0\$		2 0	\$
4 Compound		\$ 0	\$ 0	\$ 0	•	3 0	9
3 Compound	_	0 \$	\$ 0	\$ 0	\$ 0	0\$	\$0
2 Compound	1993	\$30,000	\$0	\$13,957	\$0	0\$	\$0
1 Compound		\$0	\$0		\$79,750	\$159,500	\$638,000
Da39 1 941	TOTAL	\$30,000	0 \$	\$27,913	\$79,750	\$159,500	\$638,000
	Fiscal	Monitoring	O&M	Other			
Year	Үөаг	Costs	Costs	Costs			
1 Discount	1995	\$2,150	9	9			
2 Discount	1996	\$2,150	\$ 0	\$ 0			
3 Discount	1997	\$ 2,150	\$0	\$ 0			
4 Discount	1998	\$2,150	8	9			
5 Discount	1999	\$ 2,150	0 \$	0 \$			
6 Discount	2000	\$ 2,150	3 0	3 0			
7 Discount	2001	\$ 2,150	9	3			
B Discount	2002	\$2,150	\$ 0				
9 Discount	2003	\$ 2,150	\$ 0	9			
10 Discount	2004	\$ 2,150	3	3 0			
11 Discount	2005	\$ 2,150	\$ 0	9			
12 Discount	2006	\$2,150	\$ 0	\$ 0			
13 Discount	2007	\$ 2,150	\$ 0	9			
14 Discount	2008	\$ 2,150	\$ 0	3			
15 Discount	2009	\$ 2,150	\$ 0	9			
16 Discount	2010	\$ 2,150	\$ 0				
17 Discount	2011	\$2,150	\$ 0	3			
18 Discount	2012	\$ 2,150	\$ 0				
19 Discount	2013	\$2,150					
20 Discount	2014	\$2,150	\$ 0				
	Total	C12 000	U S	C.S.			

Costs amortized over 20 year operation life

-

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II
--

Point Au Fer Island Plugs (PTE-22/24)

	\$101,041	Total First	50 50	0 5	\$51,747 \$966,959	\$1,018,706			
	sts	First Cost	Construction \$0	3 3	\$ 0 \$ 692,230				
	Amortized Costs		Contingency \$0	20	\$0 \$173 058				
		Supervision	& Inspection			\$86,529		1	
Point Au Fer Island rives v	\$1,018,706	Contraction B. Supervision	Easements Supervision & Inspection Contingency Construction & Land Rights Administration & Inspection Contingency Construction		\$0 \$16,430	\$15,143 631,573		Other Costs	
oint Au Fer Isl	Costs	ł	Easements Land Rights	3 3	\$ 0 \$ 0	9	2	O&M Costs	8 8 8 8
P	Total Discounted Costs		Engineering & Design 8	9 9 9	\$ 0 \$ 17	05	\$35,317	Monitoring Costs	
			Fiscal	00	00	1994	Total	Fiscal	
		Present Valued Costs	0	Year naus 5 1.504 ·	4 1.386 3 1.277	2 1.177 4 1.085		Discount	Year Rates -1 0.922 -2 0.849 -3 0.783
		Рге	:	Xe					>

		\$ 0	%	05				0	%	9 0	5			2 0	\$	95			\$ 0	9		5	3	2	9	95	•	0\$	
	Other Costs																								_		_	~	
		50	5			2	3 0	2 0	9				;;	20	Ş		2	%	05			23	2	3	20			30	
	O&M Costs																												
	Monitoring	0019	206,14	\$1,820	\$1,683	\$1,551	\$1430		010'10	CI2'15	\$1,119	\$1,032	1995	101E	0/00	2808	\$744	CAR		2004	\$583	\$537	\$495	6456		1764	\$20,346	4 2 150	
•	_	Year	1995	1996	1997	1998	1000	CCC1	2000	2001	2002	2003			2005	2006	2007	0000	20002	2009	2010	2011	0110	2016	5102	2014	Total		ual
	Discount	es	0.922	0.849	0.783		0.722	0.665	0.613	0 565	0.501	130.0	0.480	0.442	0.408	0.376		0.340	0.319	0.294	0.971	0.250	0.500	0.230	0.212	0.196			Average Annual
	Dis	Year Rates	1		u (n 1	4	ۍ ۱	ي ۱	•	- c 1	τ α 	6 1	- 10			- 12	- 13	- 14	15			1-1	- 18	- 19	00			-

Costs amortized over 20 year operation life

18-Sept-92

Average Annual

Point Au Fer Island Plugs (PTE-22/24)

\$113,023	First Cost Total First	Construction Cost	\$ 0 · \$ 0	2 0 . 2 0	\$0 \$0	\$0 \$ 45,803	\$686,069 \$958,354	\$686,069 \$1,004,156																						
Amortized Costs	First	Contingency Const	\$0	\$0	\$0	2 0	\$171,517	\$171,517																						
-	Supervision	& Inspection	\$ 0	\$0	9	2 0	\$85,759	\$85,759																						
\$1,069,589	Supervision &	Administration	%	\$ 0	\$0	\$14,543	\$15,008	\$29,551	Other	Costs	0 \$	\$ 0	\$ 0	\$ 0	\$ 0	9	\$ 0	9 0	\$ 0	9	05	3	\$ 0	0 \$	9	3	9	3	2 0	
ed Costs	Easements	& Land Rights	\$0	2 0	2 0	9 0	99	\$0	O&M	Costs	\$ 0	\$ 0	\$	\$ 0	\$0	\$ 0	9	9	9	9	8	3	9	9 0	\$ 0					
Total Fully Funded Costs	Engineering		30	\$ 0	9 3	5 31,260	80	\$31,260	Monitoring	Costs	\$2,386	\$2,462	\$2,541	\$2,622	\$2,706	\$2,793	\$2,882	\$2,975	\$3,070	\$3,168	\$3,269	\$3,374	\$3,482	\$ 3,59 3	\$3,708	\$3,827	\$3,949	\$4,076	\$4,206	
		Year	0	G	0	1993	1994	TOTAL	Fiscal	Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
Fully Funded Costs	Inflation	Factor				1 042	1.075	Ĭ	Inflation	Factor	1.110	1.145	1.182	1.220	1.259	1.299	1.341	1.384	1.428	1.473	1.521	1.569	1.620	1.671	1.725	1.780	1.837	1.896	1.956	
Fully F		Үөаг	S - -	4						Үөаг	-	- 2	ب	4	- S -	9-	- 7	80	6 -	- 10		- 12	- 13	+	- 15	- 16	- 17	- 18	- 19	

Costs amortized over 20 year operation life

58

1,204

1,230 24,600

Average Annual Acres

Total Years 1-20

24,080

18-Sept-92

With Project % Acreage Venetated
81.73%
B1 734
91.10 24 73%
101.12
81 73%
81 73%
81 73%
81 73%
91 73%
81.73%
81.73%
81.73%
B1 734
81./3%
81.73%
81.73%

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

Point Au Fer Island Plugs (PTE-22/24)

. .

0

Marsh Type: Brackish (Area 1a)

Years

. .

Point Au Fer Island Plugs (PTE-22/24)

Marsh Type: Brackish (Area 2a)

Acres Vegetated Acres Vegetated Acres Vegetated Acres Acres			With Project % Acreage	Vegetated	Without Project % Acreage	ँ	Net
880 63.18% 600 68.18% 600 880 67.39% 596 66.55% 586 880 67.70% 596 66.55% 586 880 67.18% 593 65.71% 578 880 67.18% 593 65.71% 578 880 67.18% 591 64.87% 571 880 66.63% 589 67.30% 578 880 66.15% 589 64.04% 571 880 66.15% 582 61.53% 541 880 65.54% 582 61.53% 541 880 65.13% 573 581 61.53% 541 880 65.13% 573 581 61.53% 573 880 65.13% 573 581 512 6 880 65.13% 573 581 573 573 880 65.13% 573 581 573 573 880 65.13% 573 581 573 573	Years	ACIES	Vegetated	ACres	Vegetated	ACIES	ACIES
880 67.39% 593 66.55% 586 880 67.70% 593 65.71% 571 880 67.18% 593 65.71% 571 880 67.18% 593 65.71% 571 880 67.18% 593 64.04% 564 880 67.18% 583 64.04% 564 880 66.15% 583 64.04% 564 880 66.15% 582 61.53% 549 880 65.90% 580 67.36% 549 880 65.64% 573 549 549 880 65.13% 57.34% 519 512 880 65.13% 57.34% 505 5901% 512 880 65.13% 57.34% 505 501% 516 880 65.13% 57.34% 505 501% 516 880 65.13% 57.34% 505 506 666 57.34% 505 880 64.61% 566 51.61% 516	0	880	68.18%	600	68.18%	600	0
880 67.70% 596 66.55% 586 880 67.11% 591 64.87% 571 880 67.18% 593 65.71% 564 880 66.7% 583 64.04% 565 880 66.67% 583 64.04% 564 880 66.67% 587 63.20% 556 880 66.15% 587 63.20% 556 880 66.15% 582 61.53% 549 880 65.38% 582 61.53% 549 880 65.13% 578 59.01% 519 880 65.13% 577 59.01% 512 880 64.10% 566 55.66% 490 880 64.10% 566 55.66% 490 880 64.10% 566 53.39% 475 880 64.10% 566 53.39% 475 880 63.33% 55.66% 490 880 63.33% 55.66% 460 880	-	880	67.95%	598	67.39%	593	2
880 67.14% 593 65.71% 578 880 67.18% 591 64.87% 571 880 66.67% 589 64.04% 564 880 66.67% 589 64.04% 564 880 66.67% 589 64.04% 564 880 66.67% 589 64.04% 564 880 66.15% 582 61.53% 541 880 65.90% 580 60.69% 534 880 65.13% 575 59.01% 519 880 65.13% 577 58.18% 512 880 65.13% 577 59.01% 519 880 64.10% 566 55.66% 490 880 64.10% 566 53.95% 475 880 63.84% 577 57.34% 505 880 64.10% 566 57.34% 505 880 64.61% 566 57.34% 505 880 63.84% 565 57.34% 505	8	880	67.70%	596	66.55%	586	10
880 67.18% 591 64.87% 571 880 66.67% 589 64.04% 564 880 66.67% 589 64.04% 564 880 66.67% 589 64.04% 564 880 66.67% 589 64.04% 564 880 66.15% 582 61.53% 541 880 65.90% 580 60.69% 534 880 65.13% 576 590% 519 880 65.13% 577 59.01% 519 880 65.13% 577 59.01% 512 880 65.13% 577 57.34% 505 880 64.0% 566 55.66% 490 880 64.10% 566 55.66% 475 880 63.84% 577 57.34% 505 880 63.84% 57.34% 505 880 63.84% 57.34% 505 880 63.84% 56.333% 475 880 63.84%	ę	880	67.44%	593	65.71%	578	15
880 66.93% 589 64.04% 564 880 66.67% 587 63.20% 556 880 66.67% 587 63.20% 556 880 66.15% 582 61.53% 541 880 66.15% 582 61.53% 541 880 65.90% 580 60.69% 534 880 65.38% 576 591% 519 880 65.13% 575 59.01% 519 880 65.13% 577 59.15% 519 880 65.13% 577 59.01% 519 880 64.61% 566 55.66% 490 880 64.10% 566 55.66% 475 880 63.84% 557 53.15% 460 880 63.07% 555 51.48% 460 880 63.07% 555 51.48% 453 880 63.07% 555 51.48% 453 880 63.07% 555 51.48% 453 </td <td>4</td> <td>880</td> <td>67.18%</td> <td>591</td> <td>64.87%</td> <td>571</td> <td>20</td>	4	880	67.18%	591	64.87%	571	20
880 66.67% 587 63.20% 556 880 66.41% 584 62.36% 549 880 66.41% 582 61.53% 541 880 65.90% 580 60.69% 534 880 65.90% 580 60.69% 534 880 65.64% 576 580 60.69% 534 880 65.13% 575 59.01% 519 519 880 65.13% 577 59.01% 519 512 880 65.13% 577 58.18% 512 880 64.61% 566 55.66% 490 880 64.10% 566 55.66% 475 880 63.84% 555 51.48% 460 880 63.33% 555 51.48% 453 880 63.07% 555 51.48% 453 880 63.07% 555 51.48% 453 880 63.07% 555 51.48% 453 880 63.07% <	S	880	66.93%	589	64.04%	564	25
880 66.41% 584 62.36% 549 880 66.15% 582 61.53% 541 880 65.90% 580 60.69% 534 880 65.90% 580 60.69% 534 880 65.64% 576 590% 519 880 65.13% 575 59.01% 519 880 65.13% 573 58.18% 512 880 64.61% 573 58.18% 512 880 64.61% 566 55.66% 490 880 64.10% 566 55.66% 475 880 63.84% 560 53.15% 460 880 63.33% 557 53.15% 460 880 63.07% 555 51.48% 453 70tal Years 1-20 11,530 10,460 10,460	9	880	66.67%	587	63.20%	556	31
880 66.15% 582 61.53% 541 880 65.90% 580 60.69% 534 880 65.90% 580 60.69% 534 880 65.38% 575 59.01% 519 880 65.13% 575 59.01% 519 880 65.13% 573 58.18% 512 880 65.13% 573 58.18% 512 880 64.61% 573 58.18% 512 880 64.61% 566 55.66% 490 880 64.10% 566 53.99% 475 880 63.84% 560 53.15% 460 880 63.33% 557 53.15% 460 880 63.07% 555 51.48% 453 70tal Years 1-20 11,530 10,460 10,460	2	680	66.41%	584	62.36%	549	36
880 65.90% 530 60.69% 534 880 65.64% 576 59.85% 527 880 65.13% 575 59.01% 519 880 65.13% 575 59.01% 519 880 65.13% 573 58.18% 512 880 65.13% 573 58.18% 512 880 64.61% 569 56.50% 497 880 64.10% 566 55.66% 490 880 63.84% 560 53.95% 475 880 63.84% 560 53.15% 460 880 63.07% 557 52.31% 460 880 63.07% 555 51.48% 453 70tal Years 1-20 11,530 10,460 10,460	80	880	66.15%	582	61.53%	541	4
880 65.64% 578 59.85% 527 880 65.13% 575 59.01% 519 880 65.13% 573 58.18% 512 880 65.13% 573 58.18% 512 880 64.61% 573 58.18% 512 880 64.61% 569 56.50% 497 880 64.10% 566 55.66% 490 880 64.10% 564 54.83% 482 880 63.84% 560 53.15% 468 880 63.33% 557 53.15% 468 880 63.07% 555 51.48% 453 70tal Years 1-20 11,530 10,460 10,460	6	880	65.90%	580	60.69%	534	46
880 65.38% 575 59.01% 519 880 65.13% 573 58.18% 512 880 64.61% 573 58.18% 512 880 64.61% 569 56.50% 497 880 64.61% 566 55.66% 490 880 64.10% 566 55.66% 490 880 63.84% 560 53.15% 468 880 63.33% 560 53.15% 460 880 63.07% 557 52.31% 460 70tal Years 1-20 11,530 11,530 10,460	5	880	65.64%	578	59.85%	527	51
880 65,13% 573 58,18% 512 880 64,61% 571 57,34% 505 880 64,61% 569 56,50% 497 880 64,10% 566 55,66% 490 880 64,10% 566 55,66% 490 880 64,10% 564 54,83% 482 880 63,84% 560 53,15% 468 880 63,33% 557 52,31% 468 880 63,07% 555 51,48% 453 70tal Years 1-20 11,530 10,460 10,460	11	880	65.38%	575	59.01%	519	56
880 64.87% 571 57.34% 505 880 64.61% 569 56.50% 497 880 64.10% 566 55.66% 490 880 64.10% 564 54.83% 482 880 63.84% 562 53.99% 475 880 63.84% 560 53.15% 468 880 63.33% 557 52.31% 460 880 63.07% 555 51.48% 453 70tal Years 1-20 11,530 10,460 10,460	12	880	65.13%	573	58.18%	512	61
880 64.61% 569 56.50% 497 880 64.10% 566 55.66% 490 880 64.10% 564 54.83% 482 880 63.84% 562 53.99% 475 880 63.33% 560 53.15% 468 880 63.07% 557 52.31% 460 70tal Years 1-20 11,530 11,630 10,460	13	880	64.87%	571	57.34%	505	99
B80 64.35% 566 55.66% 490 B80 64.10% 564 54.83% 482 B80 63.84% 562 53.99% 475 B80 63.56% 560 53.15% 468 B80 63.33% 557 53.15% 468 B80 63.07% 555 51.48% 450 Total Years 1-20 11,530 11,530 523 523	2	880	64.61%	569	56.50%	497	12
B80 64.10% 564 54.83% 482 B80 63.84% 562 53.99% 475 B80 63.58% 560 53.15% 468 B80 63.33% 557 52.31% 460 B80 63.07% 555 51.48% 450 Total Years 1-20 11,530 11,630 523 523	15	880	64.35%	566	55.66%	06 †	76
880 63.84% 562 53.99% 475 880 63.58% 560 53.15% 468 880 63.33% 557 52.31% 460 880 63.07% 555 51.48% 453 70tal Years 1-20 11,530 11,530 523 523	16	880	64.10%	564	54.83%	482	82
880 63.58% 560 53.15% 468 880 63.33% 557 52.31% 460 880 63.07% 555 51.48% 453 Total Years 1-20 11,530 10,460 Average Annual Acres 577 523	17	880	63.84%	562	53.99%	475	87
880 63.33% 557 52.31% 460 880 63.07% 555 51.48% 453 Total Years 1 - 20 11,530 11,530 577 523	18	880	63.58%	560	53.15%	468	92
880 63.07% 555 51.48% 453 Total Years 1 – 20 11,530 11,530 10,460 Average Annual Acres 577 523	19	880	63.33%	557	52.31%	460	97
11,530 10,460 577 523	20	880	63.07%	555	51.48%	453	102
577 523	Ĩ	otal Years 1-2	8	11,530		10,460	
	~	verage Annual	I Acres	577		523	5

Costs amortized over 20 year operation life

~

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

Point Au Fer Island Plugs (PTE-22/24)

Marsh Type: Brackish (Area 2b)

Net Acres		•	1	•••	= :	23	53	37		; ;	52	59	99	8 7	t	81	6 8	96	507	3	111	118	126	1 13	3	141	148				78	
Vegetated Acres		400	391		382	373	364	355		347	338	926		360	311	302	293	284	5	275	266	258	040		240	231	666		6,130		306	
Without Project X Acreage V Vegetated		68.26%	700 J	00.12 0	65.21%	63.69%	E2 174		K.co.no	59.13%	57.62%	201 22	201.00	54.58%	53.06%	51 54%			48.01%	46.99%	45.47%	11 064		R++	40.92%	39.40%	27 000	200.10				
Vegetated <u>V</u>		400	000	920	397	305			392	391	289	8		386	385	202	8	285	380	379	111	920	0/0	3/4	373	171		3/0	7 680		384	
With Project % Acreage	Vegetated	68.26%		67.92%	E7 674		91.424	67.16%	66.91%	CE EFel		PO.41%	66.16%	65.91%	CE ESE		65 .69	65.15%	64.90%	64 65%		64.40%	64.15%	63.89%	63.64%		200.00	63.14%		R	al Acres	
	ACIES	586		5.RG		000	586	586	F.R.	2	200	586	586	202		092	586	586	SAG	202	000		586	586	586 686	-	586	586		Total Years 1-20	Average Annual Acres)
	Years	0		•		2	e	-		0	9	7	œ		ת	5	=	12	: :	2:	4	15	16	17		2	19	20				

Costs amortized over 20 year operation life

18 - Sept-92

. .

Point Au Fer Island Plugs (PTE-22/24)

Marsh Type: Saline

Acres	<u>s</u> * >	Will Flued % Acreage Vegetated	Vegetated Acres	Wilhout Project % Acreage Vegetated	Vegetated Acres	Net Acres
2,259		81.67%	1,845	81.67%	1,845	0
2,259		81.67%	1,845	81.50%	1,841	4
2,259		81.67%	1,845	81.33%	1,837	80
~	-	81.67%	1,845	81.17%	1,834	=
	~	81.67%	1,845	81.00%	1,830	15
~		81.67%	1,845	80.83%	1,826	19
	80	81.67%	1,845	80.67%	1,822	23
2,259 8	à	81.67%	1,845	80.50%	1,819	26
2,259 8	èo	81.67%	1,845	80.34%	1,815	8
2,259 81	8	81.67%	1,845	80.17%	1,811	34
2,259 81	81	81.67%	1,845	80.01%	1,807	8 8
2,259 81	81	81.67%	1,845	79.84%	1,804	4
2,259 81.	8	81.67%	1,845	79.68%	1,800	45
2,259 81	81	81.67%	1,845	79.51%	1,796	49
2,259 81	81	81.67%	1,845	79.35%	1,792	53
2,259 81	81	81.67%	1,845	79.18%	1,789	56
2,259 81	81	81.67%	1,845	79.01%	1,785	60
	8	81.67%	1,845	78.85%	1,781	64
2,259 8	άQ	81.67%	1,845	78.68%	1,777,1	68
~	àO	81.67%	1,845	78.52%	1,774	12
2,259 8	80	81.67%	1,845	78.35%	1,770	75
Total Years 1–20			36,900		36,110	
Average Annual Acres	X es		1,845		1,806	39
1						

Costs amortized over 20 year operation life

-

. . .

Costs amortized over 20 year operation life

•

18-Sept-92

% Acreage Vegetated % Acreage Vegetated 77.92% 4.075 77.92% 4.071 77.17% 4.067 77.78% 4.067 77.78% 4.066 77.63% 4.066 77.55% 4.056 77.41% 4.066 77.55% 4.066 77.55% 4.066 77.41% 4.066 77.55% 4.066 77.27% 4.045 77.27% 4.045 77.27% 4.045 77.12% 4.045 77.12% 4.045 77.12% 4.045 77.12% 4.037 76.99% 4.037 76.99% 4.037 76.99% 4.017 76.91% 4.017 76.55% 4.007 76.55% 4.007 76.55% 4.007 76.55% 4.007 76.55% 4.007 76.55% 4.007 76.55% 4.007 76.55% 4.007 76.55% 4.007 76.55% 4.007 76.55% 4.003 76.55% 4.003 76.55% <

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

Point Au Fer Island Plugs (PTE-22/24)

ch Acreanes Mar

D-55

Big Island Mining, Atchafalaya Delta, Increment 1,(XAT-7)

Total First Cost	\$3734,900
Totai Fully Funded Cost	\$4,136,100

Annual Charges	Present Worth	Average <u>Annual*</u>
Interest & Amortization	\$4,085,000	\$431,700
Monitoring	40,900	4,300
O&M Cost	0	0
Other Costs	0	0
Total	\$4,125,900	
Average Appual Habitat Un	ite	467

Average Annual Habitat Units	467
Cost per Habitat Unit	\$933
Average Annual Acres of Emergent Marsh	944

*Interest rate of 8.5 percent over a 20-year project life

Big Island Sediment Mining Increment # 1 (XAT-7)

First Costs and Annual Charges

First Cost Total First icy Construction Cost	\$0 \$0 \$ 0	. 05	SO		9203,840	38 \$2,518,154 \$3,380,456		00 \$2,728,000 \$3,734,850																						
Supervision & Inspection Contingency	S 0	9				\$157,385 \$629,538		\$170,500 \$682,000																						
Supervision & S Administration	-				\$43,971	\$75,379		\$119,350	Other	Costs	\$ 0	\$ 0		9											3			9		80
Easements & Land Rights	05				\$ 0	\$ 0		\$0	O&M	Custs	\$ 0	\$ 0	\$0	\$ 0	9	\$ 0	\$0	\$ 0	\$ 0	\$0	\$0	\$ 0	\$0	\$ 0	\$ 0	\$ 0	\$ 0	9	\$ 0	50
Engineering A Desion	5				\$35,000	0\$		\$35,000	Monitoring	Costs	\$4,325	\$4,325	\$4,325	\$ 4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4,325	\$4 325
Fiscal Vear	100				1993	1994		TOTAL	Fiscal	Үөаг	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Vaar				3 Compound	2 Compound	1 Compound	Base Year			Үөаг	1 Discount	2 Discount	3 Discount	4 Discount	5 Discount	6 Discount	7 Discount	8 Discount	9 Discount	10 Discount	11 Discount	12 Discount	13 Discount	14 Discount	15 Discount	16 Discount	17 Discount	18 Discount	19 Discount	20 Discount

Costs amortized over 20 year operation life

23-Oct-92

Big Island Sediment Mining Increment # 1 (XAT-7)

Year Compound Fiscal Engineering Easements 7 1.504 0 \$0 \$0 \$0 \$0 3 1.277 1993 \$41,203 \$0 \$0 \$0 \$0 2 1.177 1993 \$41,203 \$0 <td< th=""><th>s Supervision & hts Administration & 50 \$50 \$51,764 \$0 \$133,550 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0</th><th>Supervision & Inspection Contingency \$0 \$0 \$15,440 \$170,762 \$170,762 \$186,202 \$744,808</th><th>1</th><th>First Cost Construction \$0</th><th>Total First</th></td<>	s Supervision & hts Administration & 50 \$50 \$51,764 \$0 \$133,550 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Supervision & Inspection Contingency \$0 \$0 \$15,440 \$170,762 \$170,762 \$186,202 \$744,808	1	First Cost Construction \$0	Total First
Iscal Enginering (aar 0 \$0 1993 \$41,203 1994 \$41,203 1994 \$41,203 1995 \$3,614 1996 \$3,614 1996 \$3,614 1996 \$3,614 1999 \$2,876 2000 \$2,651 2001 \$2,651 2003 \$2,075 2005 \$1,763 2006 \$1,625 2007 \$1,625 2003 \$2,075 2005 \$1,763 2006 \$1,626 2007 \$1,626 2008 \$1,763 2009 \$1,626 2003 \$2,075 2003 \$1,626 2003 \$1,626 2003 \$1,626 2003 \$1,630 2003 \$1,630 2003 \$1,630 2003 \$1,630 2003 \$1,630 <t< th=""><th>Administratio \$51,70 \$133,55 0 ther Costs</th><th>8 Inspection C 50 50 515,440 51762 5186,202 5186,202</th><th></th><th>Construction \$0 \$0</th><th></th></t<>	Administratio \$51,70 \$133,55 0 ther Costs	8 Inspection C 50 50 515,440 51762 5186,202 5186,202		Construction \$0 \$0	
Hear Constrain Constrain <thconstrain< th=""> <thconstrain< th=""> <thconstr< th=""><th>\$51,70 \$81,71 \$133,55 Other Costs</th><th>\$0 \$0 \$15,440 \$176,762 \$186,202</th><th>\$0 \$0 \$61,759 \$683,049 \$744,808</th><th>80 80 80</th><th>Cost</th></thconstr<></thconstrain<></thconstrain<>	\$51,70 \$81,71 \$133,55 Other Costs	\$0 \$0 \$15,440 \$176,762 \$186,202	\$0 \$0 \$61,759 \$683,049 \$744,808	80 80 80	Cost
0 50 1993 \$41,203 1994 \$41,203 1994 \$41,203 1995 \$3,674 1995 \$3,596 1996 \$3,674 1995 \$3,574 1995 \$3,574 1996 \$3,674 1997 \$3,386 1999 \$2,651 2000 \$2,651 2001 \$2,651 2003 \$2,651 2003 \$2,651 2005 \$1,763 2006 \$1,625 2007 \$1,763 2008 \$1,763 2009 \$1,625 2003 \$1,763 2006 \$1,625 2007 \$1,4380 2008 \$1,723	\$51,70 \$81,77 \$133,55 \$133,55 Costs	\$0 \$15,440 \$1762 \$186,202	\$0 \$0 \$61,759 \$683,049 \$744,808	20	20
0 \$0 1993 \$41,203 1994 \$41,203 1994 \$41,203 1995 \$3,986 1995 \$3,986 1996 \$3,674 1998 \$3,121 1998 \$3,121 1999 \$2,876 1999 \$2,876 1999 \$2,876 2000 \$2,443 2001 \$2,443 2003 \$1,213 2003 \$2,675 2003 \$1,763 2006 \$1,625 2006 \$1,625 2008 \$1,763 2006 \$1,625 2009 \$1,272	\$61,70 \$133,55 \$133,55 Other Costs	\$15,440 \$170,762 \$186,202	\$61,759 \$61,759 \$683,049 \$744,808	0\$	0 \$
0 \$0 1993 \$41,203 1994 \$41,203 1994 \$41,203 1994 \$41,203 1995 \$3,574 1996 \$3,674 1998 \$3,674 1999 \$3,674 1999 \$3,674 1999 \$3,674 1999 \$3,674 1999 \$1,215 2000 \$2,651 2000 \$2,752 2000 \$2,7	\$61,74 \$81,77 \$133,55 01her Costs	\$15,440 \$170,762 \$186,202	\$61,759 \$683,049 \$744,808		8 0
1993 \$41,203 1994 \$41,203 1994 \$41,203 Fiscal Monitoring Year Costs 1995 \$3,986 1995 \$3,986 1995 \$3,674 1995 \$3,386 1995 \$3,386 1996 \$3,674 1998 \$3,121 1999 \$2,876 1999 \$2,876 2000 \$2,651 2001 \$2,443 2002 \$2,651 2003 \$2,075 2004 \$1,913 2005 \$1,763 2006 \$1,625 2007 \$1,438 2008 \$1,763 2009 \$1,763 2005 \$1,763 2006 \$1,763 2007 \$1,438 2008 \$1,722	\$51,7 \$81,7 \$133,5 \$133,5 Costs	\$15,440 \$170,762 \$186,202	\$61,733 \$683,049 \$744,808		C417 202
1994 \$1 \$0 iscal Monitoring \$41,203 Year Monitoring \$41,203 Year Costs \$1,966 1995 \$3,986 \$1,213 1996 \$3,674 \$1,214 1998 \$3,121 \$1,215 1999 \$2,876 \$2,651 2001 \$2,443 \$2,075 2003 \$2,651 \$2,075 2003 \$2,075 \$2,075 2003 \$2,075 \$2,075 2003 \$1,763 \$2,075 2005 \$1,763 \$2,075 2006 \$1,625 \$2,075 2007 \$1,498 \$2,005 2008 \$1,763 \$2,006 \$1,498 \$2,006 \$1,438 2003 \$1,763 \$2,006 \$1,763 \$1,763 \$1,722 2003 \$1,722 \$1,272	\$81,71 \$133,55 Other Costs	\$170,762 \$186,202	\$744,808	000'1+7¢	202'114 202 795
\$41,203 \$41,203 \$41,203 Year Costs Year Costs 1995 \$3,986 1996 \$3,674 1996 \$3,674 1996 \$3,674 1996 \$3,674 1998 \$3,121 1999 \$2,876 1999 \$2,876 2000 \$2,651 2001 \$2,443 2003 \$2,075 2003 \$2,075 2003 \$1,763 2005 \$1,763 2006 \$1,625 2007 \$1,498 2008 \$1,763 2009 \$1,763 2006 \$1,763 2007 \$1,763 2008 \$1,722 2009 \$1,272	\$133,5 Other Costs	\$186,202	\$/44,808	101 201 20	EA DRA 096
Monitoring 995 53,986 995 53,986 996 53,674 999 53,674 999 53,674 999 53,674 999 53,674 999 53,674 73,121 999 53,674 900 53,674 51,763 2000 52,655 500 51,625 2000 51,625 2000 51,625 2000 51,625 2000 51,272 2009 51,272	Other Costs			CC7'EIE'Z¢	
Costs 995 53,986 997 53,986 53,674 53,674 53,674 53,674 53,676 53,765 53,765 53,765 52,651 52,443 52,651 52,443 52,651 52,443 52,075 5003 52,651 52,443 52,075 5003 52,651 51,763 51,763 51,763 51,763 51,763 51,763 51,725 5009 51,725 5009 51,725 51,725 5009 51,725 51,725 5009 51,725 51,725 51,725 5009 51,725 51,725 51,725 5009 51,725 51,725 51,725 51,725 51,725 51,725 51,725 51,725 51,725 51,725 51,725 51,725 51,725 51,725 51,725 51,725 51,7555 51,7555 51,7555 51,7555 51,75555 51,75555 51,75555555555	Costs				
1995 \$3,986 1996 \$3,674 1996 \$3,674 1996 \$3,674 1998 \$3,674 1998 \$3,674 1998 \$3,674 2000 \$2,876 2001 \$2,876 2002 \$2,651 2003 \$2,651 2003 \$2,075 2005 \$1,913 2006 \$1,625 2007 \$1,626 2008 \$1,763 2009 \$1,626 21,627 \$1,380					
	•				
	\$0 \$				
	\$0 \$				
_					
	20 20				
	\$0 \$0				
2013 \$918					
2014 \$846	\$0				
S 40	\$0 \$0				

Costs amortized over 20 year operation life

3

9

\$4,325

Average Annual

23-Oct-92

Big Island Sediment Mining Increment # 1 (XAT-7)

-

۰.

Inflation Year Factor 5								
6		Engineering	Easements	Supervision &	Supervision		First Cost	Total First
6	Үөаг	& Design	& Land Rights	Administration	& Inspection Contingency	Contingency	Construction	Cost
•	o	2 0	9 5	\$ 0	\$ 0	9	3 0	20
	Ċ	05	S 0	2 0	\$ 0	•	\$ 0	9
		9	05	9 0	9	0 \$	\$	9 0
	1002	C 420	05	S45 818	\$13.666	\$54,665	\$218,660	\$369,279
1 1075	1994	5 0	2 3	\$81,058	\$169,243	\$676,970	\$2,707,882	\$3,635,153
	TOTAL	\$36,470	\$ 0	\$126,876	\$182,909	\$731,635	\$2,926,541	\$4,004,432
Inflation	Fiscal	Monitoring	O&M	Other				
Year Factor	Үөаг	Costs	Costs	Costs				
	1995	\$4,800	3	\$ 0				
2 1.145	1996	54 ,953	3	0\$				
3 1.182	1997	\$5,112	3	9				
4 1.220	1998	\$5,275	3					
5 1.259	1999	\$5,444	\$ 0					
6 1.299	2000	\$5,618						
7 1.341	2001	\$5,798						
8 1.384	2002	\$5,984						
9 1.428	2003	\$6,175	3					
0 1.473	2004	\$6,373	\$ 0					
-11 1.521	2005	\$6,577	\$ 0					
-12 1.569	2006	\$6,787	\$					
-	2007	\$7,004	0\$	\$0				
-	2008	\$7,229						
-	2009	\$7,460						
-16 1.780	2010	\$7,699						
•	2011	\$7,945						
-	2012	\$8,199						
	2013	\$8,462						
-20 2.019	2014	\$8,732						
	Total	\$131,626	9 5	\$ 0				

Costs amortized over 20 year operation life

23-Oci-92

-

Big Island Sediment Mining Increment # 1 (XAT-7)

Marsh Type: Fresh/Intermediate

· .

Acres Vegetated Acres Vegetated Acres Vegetated Acres Vegetated Acres Vegetated Acres Vegetated Acres 900 26.47% 900 26.41% 12.17 27.21% 11.10% 17.41% 27.22 27.24% 77.4 73.23 27.46% 77.41% 73.23 27.21% 77.41% 73.23 27.21% 77.41% 73.21% 77.41% 77.41% 73.21% 77.41% 77.41% 73.21% 77.41% 72.21%			-	WITH Project	Vecetated	% Acreage	Vegetated	Net
3,400 26.47% 900 26.47% 3,400 35.59% 1,210 25.94% 3,400 35.59% 1,210 25.94% 3,400 36.97% 1,210 25.94% 3,400 36.97% 1,210 25.94% 3,400 36.97% 1,210 25.94% 3,400 36.97% 1,210 25.94% 3,400 38.34% 1,304 24.86% 3,400 41.10% 1,301 23.82% 3,400 41.10% 1,301 23.82% 3,400 42.48% 1,401 23.29% 3,400 42.48% 1,401 22.76% 3,400 43.85% 1,401 22.76% 3,400 45.23% 1,565 21.71% 3,400 45.23% 1,565 21.71% 3,400 50.74% 1,725 20.65% 3,400 51.76% 1,725 20.12% 3,400 51.76% 1,913 18.00% 3,400 51.63% 1,913 18.00% 3,400 51.63% 1,913 18.00% 3,400 51.63% 1,913 18.00% 3,400 51.63% 1,913 18.00%	Years		Acres	Vegetated	ACIES	Vegetated	Acres	ACLES
3,400 35.59% 1,210 25.94% 3,400 36.97% 1,257 25.41% 3,400 36.97% 1,257 25.41% 3,400 38.34% 1,351 24.86% 3,400 39.72% 1,351 24.86% 3,400 41.10% 1,351 24.35% 3,400 41.10% 1,351 23.82% 3,400 41.10% 1,351 23.82% 3,400 42.48% 1,491 23.29% 3,400 45.23% 1,538 21.71% 3,400 45.23% 1,538 21.71% 3,400 45.23% 1,538 21.71% 3,400 45.23% 1,538 21.71% 3,400 45.23% 1,585 21.71% 3,400 50.74% 1,772 19.59% 3,400 51.25% 1,913 18.00% 3,400 51.25% 1,913 18.00% 3,400 51.25% 1,913 18.00% 3,400 51.25% 1,913 18.00% 3,400 <td< td=""><td></td><td>0</td><td>3,400</td><td>. 26.47%</td><td>006</td><td>26.47%</td><td>006</td><td>0</td></td<>		0	3,400	. 26.47%	006	26.47%	006	0
3,400 36,97% 1,257 25,41% 3,400 36,7% 1,351 24,86% 3,400 39,72% 1,351 24,86% 3,400 41.10% 1,351 24,35% 3,400 41.10% 1,351 24,35% 3,400 41.10% 1,351 23,25% 3,400 42,48% 1,491 23,29% 3,400 43,85% 1,491 22,76% 3,400 45,23% 1,585 21,71% 3,400 45,23% 1,585 21,71% 3,400 45,23% 1,585 21,71% 3,400 47,99% 1,678 20,65% 3,400 50,74% 1,725 20,12% 3,400 54,88% 1,913 19,06% 3,400 54,88% 1,913 18,66 3,400 54,88% 1,913 18,66% 3,400 55,63% 1,913 18,66% 3,400 55,63% 1,913 18,66% 3,400 51,76% 2,066 16,94% 3,400 5		,	007 6	36 504	1 210	25,94%	882	328
3,400 38,34% 1,304 24,88% 3,400 39,72% 1,304 24,88% 3,400 41,10% 1,397 23,82% 3,400 41,10% 1,397 23,82% 3,400 42,48% 1,444 23,29% 3,400 42,48% 1,491 22,76% 3,400 45,23% 1,538 21,71% 3,400 45,23% 1,538 21,71% 3,400 45,23% 1,538 21,71% 3,400 45,23% 1,538 21,11% 3,400 43,37% 1,538 21,11% 3,400 40,37% 1,725 20,12% 3,400 50,74% 1,725 19,59% 3,400 50,74% 1,725 20,12% 3,400 53,50% 1,819 19,06% 3,400 54,13% 1,913 18,00% 3,400 51,63% 2,953 17,47% 3,400 51,63% 2,953 16,94% 3,400 51,00 19,1913 18,00% 3,400 <t< td=""><td></td><td>- (</td><td>3,400</td><td>4 CO.OO</td><td>1 257</td><td>25.41%</td><td>864</td><td>393</td></t<>		- (3,400	4 CO.OO	1 257	25.41%	864	393
3,400 39,72% 1,351 24,35% 3,400 39,72% 1,397 23,82% 3,400 41,10% 1,397 23,82% 3,400 42,48% 1,444 23,82% 3,400 42,48% 1,491 22,76% 3,400 43,85% 1,491 22,76% 3,400 45,23% 1,538 21,71% 3,400 45,23% 1,538 21,71% 3,400 45,23% 1,538 21,71% 3,400 45,23% 1,538 21,11% 3,400 47,99% 1,538 21,11% 3,400 50,74% 1,725 19,59% 3,400 50,74% 1,725 19,59% 3,400 51,63% 1,819 19,06% 3,400 53,50% 1,819 19,06% 3,400 54,26% 1,913 18,00% 3,400 55,55% 1,913 18,00% 3,400 51,66% 2,053 16,41% 3,400 51,66% 2,053 16,41% 3,400 <td< td=""><td></td><td>2</td><td>3,400</td><td>4 10.00</td><td>100⁻¹</td><td>24 84%</td><td>846</td><td>458</td></td<>		2	3,400	4 10.00	100 ⁻¹	24 84%	846	458
3,400 39.72% 1,351 24.55% 3,400 41.10% 1,397 23.82% 3,400 41.10% 1,491 23.29% 3,400 43.85% 1,491 23.29% 3,400 45.23% 1,538 21.71% 3,400 45.23% 1,558 21.71% 3,400 45.23% 1,565 20.12% 3,400 49.37% 1,568 21.71% 3,400 49.37% 1,585 21.71% 3,400 50.74% 1,725 20.65% 3,400 53.50% 1,619 19.66% 3,400 53.50% 1,913 18.00% 3,400 54.88% 1,913 18.00% 3,400 54.88% 1,913 18.00% 3,400 55.5% 1,913 18.00% 3,400 55.6% 1,913 18.00% 3,400 55.6% 1,913 18.00% 3,400 57.6% 2,053 16.41% 3,400 61.76% 2,053 16.41% 3,400 59.		ෆ	3,400	尺 ち ひつ		0 4 9 C 6 V	808	525
3,400 41.10% 1,397 23.62% 3,400 42.48% 1,444 23.29% 3,400 43.85% 1,491 22.76% 3,400 45.23% 1,585 21.71% 3,400 45.23% 1,585 21.71% 3,400 46.61% 1,585 21.71% 3,400 49.37% 1,585 21.71% 3,400 49.37% 1,585 21.18% 3,400 50.74% 1,725 20.65% 3,400 52.12% 1,772 19.66% 3,400 53.50% 1,819 19.06% 3,400 54.88% 1,913 18.00% 3,400 54.25% 1,913 18.00% 3,400 55.25% 1,913 18.00% 3,400 57.63% 1,913 18.00% 3,400 57.63% 2,006 16.94% 3,400 51.76% 2,053 16.41% 3,400 51.76% 2,006 16.94% 3,400 51.76% 2,006 16.94% 3,400 <td< td=""><td></td><td>4</td><td>3,400</td><td>39.72%</td><td></td><td>400.42 200.000</td><td>070</td><td>587</td></td<>		4	3,400	39.72%		400.42 200.000	070	587
3,400 42.48% 1,444 23.29% 3,400 43.85% 1,491 22.76% 3,400 45.23% 1,585 21.71% 3,400 45.23% 1,585 21.71% 3,400 45.23% 1,585 21.71% 3,400 47.99% 1,585 21.18% 3,400 50.74% 1,725 20.65% 3,400 53.50% 1,819 19.59% 3,400 53.50% 1,819 19.66% 3,400 53.50% 1,819 19.66% 3,400 56.25% 1,913 18.63% 3,400 56.25% 1,913 18.63% 3,400 56.25% 1,913 18.63% 3,400 56.25% 1,913 18.63% 3,400 56.25% 1,913 18.63% 3,400 57.63% 2,006 16.94% 3,400 51.76% 2,005 16.41% 3,400 60.39% 2,005 16.41% 3,400 61.76% 2,006 16.41% 3,400 <td< td=""><td></td><td>J.</td><td>3.400</td><td>41.10%</td><td>1,397</td><td>23.82%</td><td></td><td></td></td<>		J.	3.400	41.10%	1,397	23.82%		
3,400 43.85% 1,491 22.76% 3,400 45.23% 1,538 22.24% 3,400 45.61% 1,585 21.71% 3,400 45.61% 1,585 21.71% 3,400 45.23% 1,585 21.71% 3,400 49.37% 1,678 20.65% 3,400 50.74% 1,725 20.12% 3,400 50.74% 1,725 20.12% 3,400 52.12% 1,712 19.66% 3,400 53.50% 1,819 19.06% 3,400 54.88% 1,913 18.00% 3,400 54.88% 1,913 18.00% 3,400 55.5% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 57.63% 2,053 16.41% 3,400 57.63% 2,053 16.41% 3,400 51.66% 2,053 16.41% 3,400 61.76% 2,053 16.41% 3,400 61.76% 2,053 16.41% 3,400		,		42 48%	1.444		792	
3,400 45.23% 1,538 22.24% 3,400 45.23% 1,538 21.71% 3,400 47.99% 1,678 20.65% 3,400 49.37% 1,678 20.65% 3,400 49.37% 1,725 20.12% 3,400 50.74% 1,725 20.12% 3,400 50.74% 1,725 19.59% 3,400 52.12% 1,819 19.06% 3,400 53.50% 1,819 19.06% 3,400 54.88% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 57.63% 2,053 16.41% 3,400 61.76% 2,053 16.41% 3,400 61.76% 2,053 16.41% 3,400 61.76% 2,053 16.41% 3,400 61.76% 2,053 16.41% 3,400 <td< td=""><td></td><td>0 1</td><td>2010</td><td>43 85%</td><td>1671</td><td></td><td>174</td><td>12</td></td<>		0 1	2010	43 85%	1671		174	12
3,400 45.535 21.71% 3,400 46.61% 1,585 21.71% 3,400 40.37% 1,678 20.65% 3,400 49.37% 1,678 20.65% 3,400 50.74% 1,725 20.12% 3,400 50.74% 1,725 19.59% 3,400 52.12% 1,772 19.59% 3,400 53.50% 1,819 19.66% 3,400 54.88% 1,819 19.66% 3,400 56.25% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 57.63% 2,053 16.41% 3,400 60.39% 2,053 16.41% 3,400 61.76% 2,053 16.41% 3,400 61.76% 2,100 15.88% 100 15.88% 2,053 16.41% 3,400 61.76% 2,100 15.88% 4.00 51.76% 2			3,400		1 538		756	782
3,400 40.01% 40.01% 40.01% 3,400 47.99% 1,532 21.18% 3,400 50.74% 1,725 20.65% 3,400 50.74% 1,725 20.65% 3,400 52.12% 1,725 20.12% 3,400 52.12% 1,772 19.59% 3,400 53.50% 1,819 19.66% 3,400 53.50% 1,819 19.66% 3,400 56.25% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 56.25% 1,959 17.47% 3,400 56.25% 1,959 17.47% 3,400 57.63% 2,053 16.41% 3,400 60.39% 2,053 16.41% 3,400 61.76% 2,053 16.41% 3,400 61.76% 2,100 15.88% 3,400 61.76% 2,100 15.88% 3,401 61.76% 2,100 15.88% 3,401 <t< td=""><td></td><td>80</td><td>3,400</td><td></td><td></td><td></td><td></td><td>84</td></t<>		80	3,400					84
3,400 47.99% 1,032 21.00 3,400 49.37% 1,678 20.65% 3,400 50.74% 1,725 29.59% 3,400 52.12% 1,772 19.59% 3,400 53.50% 1,819 19.66% 3,400 53.50% 1,819 19.66% 3,400 54.88% 1,913 18.60% 3,400 56.25% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 56.25% 1,959 17.47% 3,400 56.25% 1,959 17.47% 3,400 56.03% 2,056 16.94% 3,400 60.39% 2,053 16.41% 3,400 61.76% 2,100 15.88% 3,400 61.76% 2,100 15.88% 3,400 61.76% 2,100 15.88% 3,400 61.76% 2,100 15.88% 3,400 61.76% 2,100 15.88%		6	3,400	40.01%	565 F			912
3,400 49.37% 1,678 20.03% 3,400 50.74% 1,725 20.12% 3,400 52.12% 1,772 19.59% 3,400 53.50% 1,819 19.06% 3,400 54.88% 1,913 18.60% 3,400 56.25% 1,913 18.60% 3,400 57.63% 1,959 17.47% 3,400 59.01% 2,006 16.94% 3,400 60.39% 2,053 16.41% 3,400 61.76% 2,100 15.88%		₽	3,400	41.99%	2001			976
3,400 50.74% 1,725 20.12% 3,400 52.12% 1,772 19.59% 3,400 53.50% 1,819 19.06% 3,400 54.88% 1,866 18.53% 3,400 56.25% 1,913 18.00% 3,400 59.01% 2,006 16.94% 3,400 60.39% 2,006 16.94% 3,400 61.76% 2,100 15.88% Total Years 1–20 33,100		=	3,400	40.37%	1,0/0			2
3,400 52,12% 1,772 19.59% 3,400 53.50% 1,819 19.06% 3,400 54.88% 1,819 19.06% 3,400 54.88% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 57.63% 1,913 18.00% 3,400 57.63% 1,959 17.47% 3,400 59.01% 2,006 16.94% 3,400 60.39% 2,005 16.41% 3,400 61.76% 2,100 15.88% Total Years 1-20 33,100 1.5.88% 1.655		5	3.400	50.74%	1,725		-	5
3,400 53.50% 1,819 19.06% 3,400 54.88% 1,913 18.53% 3,400 56.25% 1,913 18.00% 3,400 57.63% 1,959 17.47% 3,400 57.63% 1,959 17.47% 3,400 57.63% 2,006 16.94% 3,400 60.39% 2,005 16.41% 3,400 61.76% 2,100 15.88% 7,00al Years 1-20 33,100 15.68% 1,655		:;	3 400	52 12%	1.772			01'1
3,400 54,88% 1,866 18.53% 3,400 56,25% 1,913 18.00% 3,400 57,63% 1,959 17.47% 3,400 59,01% 2,006 16.94% 3,400 60.39% 2,053 16.41% 3,400 61.76% 2,100 15.88% 3,400 61.76% 2,100 15.88% 7,00al Years 1-20 33,100 16.65		2:	004 6	53 50%	1.815			1,17
3,400 56.25% 1,913 18.00% 3,400 56.25% 1,913 18.00% 3,400 57.63% 1,959 17.47% 3,400 59.01% 2,006 16.94% 3,400 60.39% 2,053 16.41% 3,400 61.76% 2,100 15.88% 7.01al Years 1-20 33,100 15.66%		4	3,400					1,23
3,400 36.23% 1,919 17.47% 3,400 57.63% 1,959 17.47% 3,400 59.01% 2,006 16.94% 3,400 60.39% 2,053 16.41% 3,400 61.76% 2,100 15.88% Total Years 1–20 33,100		5	3,400	N 00.40				1,30
3,400 5,163% 1,555 1,54% 3,400 59,01% 2,006 16.94% 3,400 60.39% 2,053 16.41% 3,400 61.76% 2,100 15.88% Total Years 1–20 33,100		16	3,400	Ke7.00	1011			1.365
3,400 59.01% 2,000 10.94% 3,400 60.39% 2,053 16.41% 3,400 61.76% 2,100 15.88% Total Years 1–20 33,100		17	3,400	450.10		-		1 43
3,400 60.39% 2,053 16.41% 3,400 61.76% 2,100 15.88% Total Years 1–20 33,100		18	3,400	59.01%	2012			
3,400 61.76% 2,100 15.88% Total Years 1–20 33,100		19	3 400	60.39%	2,05			
33,100 1 655		2 8	3,400	61.76%	2,10			1,560
1 655		Ť	otal Years 1-	20	33,10	9	14,220	
		4	Averane Annual Acres	al Acres	1,655	c.	111	944

Costs amortized over 20 year operation life

23-Oct-92

Big Island Sediment Mining Increment # 1 (XAT-7)

Summation of Emergent Marsh Acreages

Years Acres Vegetated Acres 1 3,400 26.47% Acres 2 3,400 35.59% 1 3 3,400 36.97% 1 2 3,400 36.47% 4 3 3,400 35.59% 1 3 3,400 36.97% 1 4 3,400 36.97% 1 5 3,400 36.97% 1 6 3,400 37.2% 1 8 3,400 41.10% 1 9 3,400 45.23% 1 11 3,400 45.23% 1 12 3,400 47.99% 1 12 3,400 50.74% 1 13 3,400 50.74% 1 14 3,400 50.74% 1 15 3,400 50.74% 1 15 3,400 56.25% 1 17 3,400<	900 900 1,257 1,304 1,34 1,34 1,444	A & & &	Acres 0 328
3,400 26.47% 3,400 35.59% 3,400 36.97% 3,400 36.97% 3,400 41.10% 3,400 45.23% 3,400 45.23% 3,400 50.74% 3,400 55.25% 3,400 55.25% 3,400 55.25%			328
3,400 35.59% 3,400 36.97% 3,400 36.97% 3,400 39.72% 3,400 41.10% 3,400 45.23% 3,400 45.23% 3,400 50.74% 3,400 52.12% 3,400 55.25% 3,400 55.25%			328
3,400 36.97% 3,400 38.34% 3,400 38.34% 3,400 41.10% 3,400 42.48% 3,400 45.23% 3,400 49.37% 3,400 50.74% 3,400 52.12% 3,400 52.12% 3,400 55.23%			;
3,400 38.34% 3,400 39.72% 3,400 41.10% 3,400 42.48% 3,400 45.23% 3,400 45.23% 3,400 50.74% 3,400 52.12% 3,400 52.12% 3,400 52.12% 3,400 55.25%		-	393
3,400 39,72% 3,400 39,72% 3,400 41,10% 3,400 42,48% 3,400 45,23% 3,400 49,37% 3,400 50,74% 3,400 52,12% 3,400 52,12% 3,400 52,12% 3,400 55,25%			458
3,400 41.10% 3,400 42.48% 3,400 42.23% 3,400 45.23% 3,400 46.61% 3,400 50.74% 3,400 52.12% 3,400 52.12% 3,400 55.25% 3,400 55.25%		828	523
3,400 42.48% 3,400 42.48% 3,400 45.23% 3,400 46.61% 3,400 49.37% 3,400 50.74% 3,400 52.12% 3,400 52.12% 3,400 55.25% 3,400 56.25%		-	587
3,400 43.85% 3,400 45.23% 3,400 45.23% 3,400 45.23% 3,400 50.74% 3,400 52.12% 3,400 52.12% 3,400 55.25% 3,400 56.25%		792	652
3,400 45.23% 3,400 46.61% 3,400 49.37% 3,400 50.74% 3,400 52.12% 3,400 52.12% 3,400 55.25% 3,400 55.25%	1.491 22.76%	• -	117
3,400 46.61% 3,400 47.99% 3,400 50.74% 3,400 52.12% 3,400 52.12% 3,400 55.25% 3,400 56.25% 3,400 56.25%		·	782
3,400 47.99% 3,400 49.37% 3,400 50.74% 3,400 52.12% 3,400 53.50% 3,400 54.88% 3,400 56.25% 3,400 57.63%			847
3,400 49.37% 3,400 50.74% 3,400 52.12% 3,400 52.12% 3,400 54.88% 3,400 56.25% 3,400 57.63%		3% 720	915
3,400 50.74% 3,400 52.12% 3,400 52.12% 3,400 53.50% 3,400 54.88% 3,400 56.25% 3,400 57.63%		-	976
3,400 52,12% 3,400 52,12% 3,400 53,50% 3,400 54,88% 3,400 56,25% 3,400 57,63%		2% 684	1,041
3,400 53.50% 3,400 54.88% 3,400 56.25% 3,400 57.63%		3% 666	1,106
3,400 54,88% 3,400 56,25% 3,400 57,63%	1,819 19.06%	5% 648	1,171
3,400 56.25% 3,400 57.63%	1,866 18.53%	3% 630	1,236
3,400 57.63%	1,913 18.00%	0% 612	1,30
	1,959 17.47%		1,365
59.01%	2,006 16.94%		1,430
3,400 60.39%	2,053 16.41%	1% 558	1,495
3,400 61.76%	2,100 15.89%	8% 540	1,560
Total Years 1–20	33,100	14,220	
	1 665	711	944

Costs amortized over 20 year operation life

•

23-Oct-92

Highway 384 Hydrologic Restoration (PCS-251

Total First Cost	\$285,100
Total Fully Funded Cost	\$700,700

Annual Charges	Present Worth	Average <u>Annual*</u>
Interest & Amortization	\$377,400	\$39,900
Monitoring	68,200	7,200
cost	43,600	4,600
Other Costs	0	0
Total	\$489,200	\$51,700
Average Annual Habitat Unit	S	51
Cost per Habitat Unit		\$1,023
Average Annual Acres of Em	nergent Marsh	79

*Interest rate of 8.5 percent over a 20-year project life

Highway 384 Hydrologic Restoration (PC/S-25)

First Costs and Annual Charges

Year		C		n linicia indino				
	Year	& Design	& Land Rights	Administration	& Inspection Contingency	ontingency	Construction	Cost
5 Compound		\$ 0	\$0	\$ 0	0 \$	\$0	9 5	3 0
4 Compound	. 1993	\$12,000	\$20,000	\$3,659	• \$ 0	\$0	9 5	\$35,659
3 Compound	1994	\$18,000	\$0	\$7,317	3 0	\$0	9	\$25,317
2 Compound	1995	\$ 0	\$ 0		\$7,579	\$16,179	\$64,716	\$95,791
1 Compound	1996	\$ 0	9		\$10,421	\$22,246		\$128,359
Base Year								
	TOTAL	\$30,000	\$20,000	\$25,000	\$18,000	\$38,425	\$153,700	\$285,125
	Fiscal	Monitoring	O&M	Other				
Year	Year	Costs	Costs	Costs				
1 Discount	1997	\$7,206	\$4,611	0 \$				
2 Discount	1998	\$7,206	\$4,611	\$0				
3 Discount	1999	\$7,206	\$4,611	\$0				
4 Discount	2000	\$7,206	\$4,611	0\$				
5 Discount	2001	\$7,206	\$4,611	\$ 0				
6 Discount	2002	\$7,206	\$4,611	9				
7 Discount	2003	\$7,206	\$4,611	3				
8 Discount	2004	\$7,206	\$4,611	8 0				
9 Discount	2005	\$7,206	\$4,611	\$ 0				
10 Discount	2006	\$7,206	\$4,611	3 0				
11 Discount	2007	\$7,206	\$4,611	\$				
12 Discount	2008	\$7,206	\$4,611	\$ 0				
13 Discount	2009	\$7,206	\$4,611	\$ 0				
14 Discount	2010	\$7,206	\$4,611	\$ 0				
15 Discount	2011	\$7,206	\$4,611	0 \$				
16 Discount	2012	\$7,206	\$4,611	%				
17 Discount	2013	\$7,206	\$4,611	\$0				
18 Discount	2014	\$7,206	\$4,611	\$ 0				
19 Discount	2015	\$7,206	\$4,611					
20 Discount	2016	\$7,206	\$4,611	9				
	Total	\$144,124	\$92,220	0\$				

Costs amortized over 20 year operation life

Highway 384 Hydrologic Restoration (PC/S-25)

				5477 497		Amortized Costs	sts	\$39,883
Present Valued Costs		Total Discounted Custs						i i i
ŏ	Fiscal	Engineering	Easements	Supervision & Supervision Administration & Inspection	Supervision Eritst Cost & Inspection Contingency Construction	Contingency	First Cost Construction	Total First Cost
Year Rates	Year				\$ 0	95	3	0 \$
1.504	1002	616 630	217 762	\$ 5,070	\$0	\$ 0	3	5 49,418
1 1.386	5881			CO 346	50	9	3	232,331
3 1.277	1994	166 225			CCP 83	\$19.046	\$76,185	\$112,767
2 1.177	1995			40'0 H	4 11 307		\$96,548	\$139,269
1 1.085	1996			117'14			\$172 733	\$333,791
	Total	\$39,622	\$27,717	\$30,308	677'N7¢			
Discount	Fiscal	Monitoring	O&M	Other				
Year Rates	Year	Costs	Costs	0.0010				
1 0.922	1997	\$6,642						
2 0.849	1998							
3 0.783	1999			3				
4 0.722	2000							
5 0.665	2001	\$4,792						
6 0.613	2002							
7 0.565	2003	120'15	\$2,605					

• •

			0	3	Ş	;;	3	3	%	3	8	8	3	8	05			2		3	%	\$	50	}	\$0
Other	Costs																								
O&M	Costs	\$4,250	\$3,917	\$3,610	\$3,327	\$3,067	\$2,826	\$2,605	\$2,401	\$2,213	\$2,039	\$1,880	\$1.732	\$1.597	1 479		1300	\$1,250	\$ 1,152	\$1,062	\$ 979	\$902	E13 625		\$4,611
Monitoring	Costs	\$6,642	5 6,121	\$5.642	\$5,200	5 4 792	54.417	54.071	\$3 752	\$3.458	\$3,187	SC 938	20 Z 0 Z	C 102	004'70	22,300	\$ 2,120	\$1,954	\$1,801	\$1,659	\$1.529	C1 410		000	\$7,206
Fiscal	Үөаг	1997	1998	1999	2000	2001	2000	2003	2004	2005	2005	2000	8000	0007	5002	2010	2011	2012	2013	2014	2015	20102		Total	ual
Discount	Bates	0 922	0.940	2020	0.70	0.126	0.003	0.013	0.500	120.0	0.440	0.442	0.400	0.376	0.346	0.319	0.294	0 271	0.250	0.230		0.212	0.190		Average Annual
ő	vaar Ra	- I _	- c	N 6 1	n - 1	e 1	0 (0 P	- (ю 	ר כ ו	2	=	- 12	- 13	- 14	- 15	2 4	2 -		<u>e</u> : 1	<u>ה</u>	-20		≪

Costs amortized over 20 year operation life

.

Highway 384 Hydrologic Restoration (PC/S-25)

ully i	Fully Funded Costs		Total Fully Funded Costs	ded Costs	\$700,717		Amortized Costs	sts	\$74,045
	Inflation	Fiscal	Engineering	Easements	Supervision &	Supervision		First Cost	Total First
Year	Factor	Year	& Design	& Land Rights	Administration	& Inspection	Contingency	Construction	Cost
5		0	\$ 0		\$ 0	\$ 0	9	9 3	\$ 0
4	1.042	1993	\$12,504	\$20,840	\$3,812	\$0	\$0		\$37,156
e	1.075	1994	\$19,356	0 \$		\$0	\$0	3 0	\$27,225
2	1.110	1995	\$ 0	2 0		\$8,411	\$17,955	\$71,819	\$106,304
-	1.145	1996	\$ 0	\$ 0		•7		\$101,911	\$147,005
	Ĭ	TOTAL	\$31,860	\$20,840				\$173,729	\$317,690
	Inflation	Fiscal	Monitoring	O&M	Other				
Year	Factor	Year	Costs	Costs	Costs				
1	1.182	1997	\$8,517	\$5,450	0\$				
2	1.220	1998	\$8,790	\$5,624	8				
د ۱	1.259	1999	\$9,071	\$5,804					
4	1.299	2000	\$9,361	\$5,990	9				
5 -	1.341	2001	\$9,661	\$6,182					
9	1.384	2002	\$9,970	\$6,379	3				
- 7	1.428	2003	\$10,289	\$6,584	3				
8	-	2004	\$10,618	\$6,794	\$ 0				
61	1.521	2005	\$10,958	\$7,012	9				
- 10	1.569	2006	\$11,309	\$7,236	8				
Ξ	1.620	2007	\$11,671	\$7,468	\$ 0				
- 12	1.671	2008	\$12,044	\$7,707	3 0				
- 13	•	2009	\$12,429	\$7,953					
- 14	1.780	2010	\$12,827	\$8,208	8				
- 15		2011	\$13,238	\$8,470	8				
- 16		2012	\$13,661	\$8,741					
-17	1.956	2013	\$14,098	\$9,021	0 \$				
- 18		2014	\$14,550	\$9,310					
- 19		2015	\$15,015	809'6\$	\$ 0				
-20		2016	\$15,496	\$9,915					
	7	Total	\$933 579	5149 454	95				

Costs amortized over 20 year operation life

_

18-Sept-92

•

Coastal Wetlands Ptanning, Protection, and Restoration Act Priority Project List II

Highway 384 Hydrologic Restoration (PC/S-25)

Marsh Type: Fresh/Intermediate

		% Acreage	Vegetated	% Acreage	Vegetated	Net
Years	ACIES	Vegetated	Acres	Vegetated	ACIES	ACIES
0	322	45.03%	145	45.03%	145	0
•	400	45.03%	145	43.17%	139	-
- (325	45.03%	145	41.48%	134	-
	3.25	45.03%	145	30.80%	128	-
•	33	45.03%	145	38.12%	123	8
* 4	320	45.03%	145	36.43%	117	Ñ
n (45.03%	145	34.75%	112	33
0 r	225	45.03%	145	33.07%	106	e
- 0	22 22	45.03%	145	31.38%	101	44
o c	335	45.03%	145	29.70%	8	64
	325	45.03%	145	28.02%	8	'n
2;	77C	45.03%	145		85	3
= \$	32	45.03%	145		62	9 9
<u>7</u> ;	3.25	45.03%	145		72	17
2.	575 575	45.03%	145		69	76
* 4	325	45.03%	145		63	82
5 4		45.03%	145	17.91%	2 8	87
		45.03%	145		52	66
21		45.03%	145	-	47	86
0		45.03%	145		4	2
<u>5</u> 8		45.03%	145	11.18%	36	109
	Total Years 1-20	-20	2,900		1,750	
			145		88	57

Costs amortized over 20 year operation life

Highway 384 Hydrologic Restoration (PC/S-25)

Marsh Type: Brackish

•••

	Acres	With Project % Acreage Vegetated	Vegetated Acres	Without Project % Acreage Vegetated	t Vegetated Acres	Net Acres
0	328	39.33%	129	39.33%	129	0
	328	39.33%	129	38.72%	127	
2	328	39.33%	129	38.09%	125	•
e	328	39.33%	129	37.47%	123	9
*	328	39.33%	129	36.84%	121	80
ŝ	328	39.33%	129	36.22%	119	5
9	328	39.33%	129	35.59%	117	12
7	328	39.33%	129	34.96%	115	1
8	328	39.33%	129	34.34%	113	16
6	328	39.33%	129	33.71%	111	18
0	328	39.33%	129	33.09%	109	8
-	328	39.33%	129	32.46%	106	23
2	328	39.33%	129	31.84%	104	25
9	328	39.33%	129	31.21%	102	21
4	328	39.33%	129	30.58%	100	X
S	328	39.33%	129	29.96%	86	31
9	328	39.33%	129	29.33%	%	33
2	328	39.33%	129	28.71%	94	35
8	328	39.33%	129	28.08%		37
6	328	39.33%	129	27.46%	6	39
20	328	39.33%	129	26.83%	88	4
To	Totai Years 1–20	20	2,580		2,150	
Avi	Average Annual Acres	I Acres	129		108	21

Costs amortized over 20 year operation life

18-- Sept-92

-

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

Highway 384 Hydrologic Restoration (PC/S-25)

Summation of Emergent Marsh Acreages

5% 274 42.15% 2 5% 274 40.92% 2 5% 274 39.77% 2 5% 274 36.32% 2 5% 274 36.32% 2 5% 274 36.32% 2 5% 274 36.32% 2 5% 274 36.32% 2 5% 274 36.32% 2 5% 274 36.32% 2 5% 274 36.32% 2 5% 274 36.32% 2 5% 274 30.57% 2 5% 274 28.08% 5% 274 28.08% 5% 274 28.08% 5% 274 28.08% 5% 274 28.08% 5% 274 28.08% 5% 274 28.08% 5% 274 28.08% 5% 274 28.08% 5% 274 28.08% 5% 274 28.08% 5% 274 28.08% 5% 274 28.08% 5% 274 29.08% <t< th=""><th></th><th>9000 A</th><th>With Project % Acreage Venetated</th><th>Vegetated Acres</th><th>Without Project % Acreage Veoetated</th><th>Vegetated Acres</th><th>Net Acres</th></t<>		9000 A	With Project % Acreage Venetated	Vegetated Acres	Without Project % Acreage Veoetated	Vegetated Acres	Net Acres
650 42.15% 274 40.92% 266 650 42.15% 274 39.77% 259 266 650 42.15% 274 39.77% 259 266 650 42.15% 274 39.77% 259 266 650 42.15% 274 31.77% 259 266 650 42.15% 274 36.32% 236 33.47% 236 650 42.15% 274 36.32% 236 33.67% 236 36.32% 221 36.32% 226 36.32% 221 36.32% 221 36.32% 236 37.7% 236 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32% 221 36.32%	c		42.15%	1		274	
650 42.15% 27.4 39.77% 259 650 42.15% 27.4 39.77% 259 650 42.15% 27.4 39.77% 259 650 42.15% 27.4 36.2% 27.4 650 42.15% 27.4 36.7% 251 650 42.15% 27.4 36.7% 221 650 42.15% 27.4 36.7% 221 650 42.15% 27.4 36.7% 221 650 42.15% 27.4 30.57% 199 650 42.15% 27.4 30.57% 199 650 42.15% 27.4 20.5% 21.4 650 42.15% 27.4 20.5% 191 650 42.15% 27.4 20.5% 191 650 42.15% 27.4 20.6% 161 650 42.15% 27.4 20.8% 161 650 42.15% 27.4 20.8% 161 650 42.15% 27.4 20.8% 161 <td></td> <td>000</td> <td>40 16 W</td> <td>976</td> <td></td> <td>266</td> <td></td>		000	40 16 W	976		266	
650 42.15% 274 38.62% 251 25 650 42.15% 274 38.62% 251 650 42.15% 274 38.62% 251 650 42.15% 274 36.32% 236 650 42.15% 274 36.32% 236 650 42.15% 274 36.32% 229 650 42.15% 274 32.87% 214 650 42.15% 274 32.87% 214 650 42.15% 274 32.87% 214 650 42.15% 274 30.57% 199 650 42.15% 274 29.63% 161 650 42.15% 274 29.63% 161 650 42.15% 274 29.83% 161 650 42.15% 274 29.83% 161 650 42.15% 274 29.83% 163 650 42.15% 274 29.83% 161 650 42.15% 274 29.36% 136 650 42.15% 274 29.36% 136 650 42.15% 274 20.33% 146 <td< td=""><td>- 1</td><td>0.0</td><td>8 CT . 74</td><td>12</td><td></td><td>259</td><td></td></td<>	- 1	0.0	8 CT . 74	12		259	
050 42.15% 274 37.47% 244 3 650 42.15% 274 35.37% 236 3 650 42.15% 274 35.37% 236 3 650 42.15% 274 35.17% 229 3 650 42.15% 274 35.17% 229 3 650 42.15% 274 32.87% 214 3 650 42.15% 274 32.87% 214 3 650 42.15% 274 30.57% 199 3 650 42.15% 274 28.98% 184 3<	2	650	42.1376	12		251	
650 42.15% 274 36.32% 236 650 42.15% 274 36.32% 236 650 42.15% 274 34.07% 229 650 42.15% 274 34.07% 229 650 42.15% 274 32.87% 214 650 42.15% 274 32.87% 214 650 42.15% 274 30.57% 199 650 42.15% 274 30.57% 199 650 42.15% 274 30.57% 199 650 42.15% 274 29.68% 184 650 42.15% 274 29.68% 184 650 42.15% 274 29.38% 161 650 42.15% 274 23.68% 164 650 42.15% 274 23.68% 164 650 42.15% 274 23.68% 134 650 42.15% 274 23.38% 161 650 42.15% 274 23.38% 161 650 42.15% 274 20.38% 134 650 42.15% 274 20.38% 134 650 <t< td=""><td></td><td>000</td><td>4C. 10 %</td><td>110</td><td></td><td>244</td><td></td></t<>		000	4C. 10 %	110		244	
650 42.15% 274 35.17% 229 650 42.15% 274 34.07% 221 650 42.15% 274 32.87% 214 650 42.15% 274 32.87% 214 650 42.15% 274 30.57% 199 650 42.15% 274 30.57% 199 650 42.15% 274 29.43% 191 650 42.15% 274 29.43% 191 650 42.15% 274 29.43% 191 650 42.15% 274 29.68% 184 650 42.15% 274 28.98% 161 650 42.15% 274 23.68% 163 650 42.15% 274 23.68% 164 650 42.15% 274 23.68% 134 650 42.15% 274 23.38% 161 650 42.15% 274 20.38% 134 650 42.15% 274 20.38% 134 650 42.15% 274 20.38% 134 650 42.15% 274 20.38% 134 650 <t< td=""><td>e 1</td><td>0.00</td><td>101.2F</td><td>110</td><td></td><td>236</td><td></td></t<>	e 1	0.00	101.2F	110		236	
650 42.15% 27.4 34.02% 221 650 42.15% 27.4 32.87% 214 650 42.15% 27.4 30.57% 199 650 42.15% 27.4 30.57% 199 650 42.15% 27.4 30.57% 199 650 42.15% 27.4 29.43% 191 650 42.15% 27.4 29.43% 191 650 42.15% 27.4 29.43% 191 650 42.15% 27.4 29.43% 191 650 42.15% 27.4 29.43% 191 650 42.15% 27.4 29.83% 161 650 42.15% 27.4 23.68% 154 650 42.15% 27.4 20.33% 161 650 42.15% 27.4 20.33% 136 650 42.15% 27.4 20.33% 131 650 42.15% 27.4 20.33% 131 650 42.15% 27.4 20.33%	^	033	10.127	110		229	
650 42.15% 274 32.87% 214 650 42.15% 274 30.57% 199 650 42.15% 274 30.57% 199 650 42.15% 274 30.57% 199 650 42.15% 274 29.43% 191 650 42.15% 274 29.43% 191 650 42.15% 274 28.28% 184 650 42.15% 274 28.28% 161 650 42.15% 274 28.28% 164 650 42.15% 274 23.68% 154 650 42.15% 274 23.68% 154 650 42.15% 274 20.33% 161 650 42.15% 274 20.33% 136 650 42.15% 274 20.23% 136 650 42.15% 274 20.23% 131 650 42.15% 274 20.33% 131 650 42.15% 274 20.33% 131	0 1	000	42.15%	274		221	
650 42.15% 274 31.72% 206 650 42.15% 274 30.57% 199 650 42.15% 274 29.43% 191 650 42.15% 274 29.43% 191 650 42.15% 274 29.43% 191 650 42.15% 274 28.28% 184 650 42.15% 274 28.28% 161 650 42.15% 274 28.28% 166 650 42.15% 274 28.28% 166 650 42.15% 274 23.68% 154 650 42.15% 274 22.53% 161 650 42.15% 274 22.53% 136 650 42.15% 274 20.23% 131 650 42.15% 274 20.23% 131 650 42.15% 274 20.23% 131 650 42.15% 274 20.23% 131 650 42.15% 274 19.08% 131	- a	650 650	42 15%	274		214	
650 42.15% 274 30.57% 199 650 42.15% 274 29.43% 191 650 42.15% 274 29.43% 191 650 42.15% 274 29.43% 191 650 42.15% 274 28.28% 184 650 42.15% 274 28.28% 166 650 42.15% 274 28.38% 166 650 42.15% 274 28.83% 166 650 42.15% 274 23.68% 154 650 42.15% 274 22.53% 146 650 42.15% 274 22.53% 139 650 42.15% 274 20.23% 131 650 42.15% 274 20.23% 131 650 42.15% 274 20.23% 131 650 42.15% 274 20.23% 131 650 42.15% 274 20.23% 131 650 42.15% 274 19.08% 131	. .	650	42,15%	274		206	
650 42.15% 274 29.43% 191 9 650 42.15% 274 28.28% 184 9 650 42.15% 274 28.28% 184 9 650 42.15% 274 28.28% 166 9 650 42.15% 274 28.28% 166 9 650 42.15% 274 28.83% 161 17 650 42.15% 274 28.83% 161 17 650 42.15% 274 23.68% 154 17 650 42.15% 274 22.53% 146 17 650 42.15% 274 20.23% 13 17 650 42.15% 274 20.23% 13 12 650 42.15% 274 19.08% 13 12 650 42.15% 274 19.08% 13 12 650 42.15% 274 19.08% 13 12 650 42.15% 274 19.08% 13	n ç	650	42.15%	574		199	
650 42.15% 274 28.28% 184 9 650 42.15% 274 27.13% 176 9 650 42.15% 274 27.13% 176 9 650 42.15% 274 28.83% 161 650 42.15% 274 28.83% 161 650 42.15% 274 28.83% 161 650 42.15% 274 23.68% 154 650 42.15% 274 22.53% 146 650 42.15% 274 22.53% 136 650 42.15% 274 20.23% 131 650 42.15% 274 20.23% 131 650 42.15% 274 19.08% 131 650 42.15% 274 19.08% 134 650 42.15% 274 19.08% 134 650 42.15% 274 19.08% 134 650 5,480 5,480 3,900 3,900	2 7	650	42.15%	274		161	
650 42.15% 274 27.13% 176 9 650 42.15% 274 25.98% 169 16 650 42.15% 274 24.83% 161 1 650 42.15% 274 24.83% 161 1 650 42.15% 274 23.68% 154 1 650 42.15% 274 22.53% 146 1 650 42.15% 274 22.53% 136 13 650 42.15% 274 20.23% 131 1 650 42.15% 274 20.23% 131 1 650 42.15% 274 20.23% 131 1 650 42.15% 274 19.08% 124 1 10tal Years 1-20 5,480 5,480 3,900 3,900	: :	650	42.15%	274		184	
650 42.15% 274 25.98% 169 16 650 42.15% 274 24.83% 161 1 650 42.15% 274 24.83% 161 1 650 42.15% 274 23.68% 154 1 650 42.15% 274 22.53% 146 1 650 42.15% 274 22.53% 136 13 650 42.15% 274 20.23% 131 14 650 42.15% 274 20.23% 131 14 650 42.15% 274 19.08% 124 12 10tal Years 1-20 5,480 5,480 3,900 3,900	4 5	650	42 15%	27,		176	
650 42.15% 274 24.83% 161 1 650 42.15% 274 23.68% 154 15 650 42.15% 274 22.53% 146 11 650 42.15% 274 22.53% 136 13 650 42.15% 274 22.53% 136 13 650 42.15% 274 20.23% 131 14 650 42.15% 274 20.23% 131 14 650 42.15% 274 19.08% 124 12 10tal Years 1-20 5,480 5,480 3,900 3,900	2 7	650	42 15%	27		169	-
650 42.15% 274 23.68% 154 11 650 42.15% 274 22.53% 146 11 650 42.15% 274 22.53% 136 13 650 42.15% 274 21.38% 139 13 650 42.15% 274 20.23% 131 14 650 42.15% 274 20.23% 131 14 650 42.15% 274 20.23% 131 14 650 42.15% 274 19.08% 124 14 70tal Years 1-20 5,480 5,480 3,900 3,900	ŗ¥	650	42.15%	21		161	-
650 42.15% 274 22.53% 146 11 650 42.15% 274 21.38% 139 13 650 42.15% 274 20.23% 131 1 650 42.15% 274 20.23% 131 1 650 42.15% 274 20.23% 131 1 650 42.15% 274 19.08% 124 1 7otal Years 1-20 5,480 3,900 3,900	2 4	650	42.15%	27		154	-
650 42.15% 274 21.38% 139 11 650 42.15% 274 20.23% 131 1 650 42.15% 274 20.23% 131 1 650 42.15% 274 20.23% 124 1 1 19.08% 124 1 1 1 1 1 Total Years 120 5,480 5,480 3,900 3,900 1 1 1 1	2 5	650	42.15%	27	_	146	-
650 42.15% 274 20.23% 131 14 650 42.15% 274 19.08% 124 11 Total Years 120 5,480 3,900	- -	650	42 15%	27	_	139	
650 42.15% 274 19.08% 124 11 Total Years 1-20 5,480 3,900	2 9	650	42.15%	27		131	•
5,480 3,900 274 195	2 8	650	42.15%	27		124	
914 195	-	fotal Years 1	20	5,48	0	3,900	
			Acros	76		195	

18-Sept-92

Fritchie Marsh Restoration)(PO-6)

Total First Cost\$1,540,100

Total Fully Funded Cost

Annual Charges	Present Worth	Average <u>Annual</u> *
Interest & Amortization	\$1,882,700	\$199,000
Monitoring	244,900	25,900
cost	113,100	12,000
Other Costs		
Total	\$2,240,700	\$236,900
Average Annual Habitat Uni	ts	201
Cost per Habitat Unit		\$1,176
Average Annual Acres of En	nergent Marsh	546

*Interest rate of 8.5 percent over a 20-year project life

Fritchie Marsh Restoration (PO-6)

• •

First Costs and Annual Charges

Total First Cost	80	S 114,161	\$70,589	\$548,125	\$807,250		\$1,540,125																							
First Cost Construction	50	. 9	8 0	\$382,600	\$573,900		\$956,500																							
continuency	105	50	\$ 0	\$95,650	\$143,475		\$239,125																							
Supervision & Instruction Continuency	. 50		\$0	\$40,000	\$60,000		\$100,000																							
Supervision &	US SUBTREMINENCE	279 875	\$29.875	\$29.875	\$29,875		\$119,500	Other	Costs	\$ 0	\$ 0	\$ 0	\$ 0	9	\$ 0	\$ 0	\$ 0	\$ 0	9	\$ 0	9	\$ 0	\$ 0	\$ 0	\$0	\$ 0				
Easements 1 and Biobts	1		05		3		\$30,000	O&M	Costs	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$11,956	\$239,120
Engineering	5	40 454 286	540 714	50	3		\$95,000	Monitoring	Costs	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$517,500
Fiscal	1001	7001	1995	9661	1997		TOTAL	Fiscal	Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
	F Compound			2 Compound	1 Compound	Base Year			Year	1 Discount	2 Discount	3 Discount	4 Discount	5 Discount	6 Discount	7 Discount	8 Discount	9 Discount	10 Discount	11 Discount	12 Discount	13 Discount	14 Discount	15 Discount	16 Discount	17 Discount	18 Discount	19 Discount	20 Discount	

Costs amortized over 20 year operation life

Fritchle Marsh Restoration (PO-6)

\$198,940	Total First Cost \$ 0	\$158,211 \$90,163 \$645,266 \$875,866	\$1,769,500
sls	First Cost Construction	\$0 \$0 \$450,406 \$622,682	\$1,073,088
Amortized Costs	Contingency \$0	\$0 \$0 \$112,602 \$155,670	
	Supervision & Inspection	\$47,089 \$65,100	\$112,189
\$1,882,650	Easements Supervision & Supervision & Land Rights Administration & Inspection Contingency C		\$147,146
d Costs	Easements & Land Rights	\$0 \$41,576 \$0 \$0	\$41,576
Total Discounted Costs	Engineering & Design d	\$0 \$75,232 \$52,004 \$0	\$127,236
	Fiscal Year	. 1993 . 1994 1995 1996	1997 Total
Present Valued Costs	Compound Bates		1 1.085
d	>	- 1	1

			5			9	9	2 0	5		2		0	2	3	20			2	8	3	Ş			8	;;	9	2	0 \$
	Other	Costs																											
	O&M	Costs	0000	sin'iit	\$10,156	2 9,360	5 8,627	e7 051		\$1,328	\$6,754	\$ 6,225	\$5,737	\$5,288	54,874	E 4 400		\$4,140	\$3,816	\$3,517	172 23		196'74	\$2,753	\$ 2,538	\$2,339		**1'011#	\$11,956
4151 P	Monitarina		COSIS	\$23,848	\$21,980	\$20,258	C10 671		211,208	\$15,860	\$14,617	\$13,472	\$12.417	511 444	e10 548		12/'6\$	\$ 8,960	\$8.258	e7 611	e7 015		\$6,465	\$ 5,959	\$5.492	65 063	300'00	\$244,864	\$25,875
E	Cienal		Үөаг	1998	1999		1000	2002	2002	2003	2004	2005	2006	2007	1002	2008	2009	2010	2011	103	2102	2013	2014	2015	2015	100		Total	jer
Total		Discount	les	0 922	0 0 40	C 010	0.783	0.722	0.665	0.613	0.565	0.500	120.0	0.400	0.442	0.408	0.376	0.346		0.014	0.294	0.271	0.250	0.020	0.2.0	0.212	0.196	Ŧ	Average Annual
	i	Dis	Year Rates		- c 1	х (. 1	↓	-5) (J		- c 	10 (ת ו	- 10	=	- 10	4	2:	- 14	- 15	- 16	- 17			- 19	- 20	2	•

Costs amortized over 20 year operation life

5 . in ć

	To	Total Fully Funded Costs	ied Costs	\$3,048,389	A	Amortized Costs	sts	\$322,123
	ш	Engineering & Desion	Easements	Supervision & Administration	Supervision & Inspection Contingency	1	First Cost Construction	Total First Cost
12	693	3	9 5)		\$ 0	9	05
	9 64	\$58,376	\$32,260		\$ 0	\$ 0	3	59/'721 \$
-	395	\$45,183	950	\$33,154	\$ 0	3 0		100'9/4
-	966	80	0\$		\$45,811	\$109,545	\$438,179	\$627,750
	766	9	3	\$35,310	\$70,915	\$169,575	\$678,301	101,4084
•		\$103,559	\$32,260	\$134,804	\$116,726	\$279,120	\$1,116,4 81	nce'28/'1\$
Fiscal		Monitoring	0&M	Other				
(ear		Costs	Costs	Costs				
· · · · ·	998	\$31,561	\$14,583					
-	6661	\$32,571	\$15,050					
N	2000	\$33,613	\$15,531					
2	2001	\$34,689						
3	2002	\$35,799	\$16,541					
CN	2003	\$36,944	\$17,071					
CN.	2004	\$38,126						
0	2005	\$39,346						
CN	2006	\$40,605						
(1	2007	\$41,905			_			
	2008	\$43,246			_			
.4	2009	\$44,630			_			
	2010	\$4 6,058			_			
	2011	\$47,532			-			
	2012	\$49,053			_			
	2013	\$50,622						
	2014	\$52,242	\$24,139		_			
	2015	\$53,914			_			
	2016	\$55,639			~			
	2017	\$57,420	\$26,532					
	,	010 2000	6300 00E	50 S	~			

Costs amortized over 20 year operation life

18-- Sept-92

-

18-Sept-92

.

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

Fritchie Marsh Restoration (PO-6)

Marsh Type: Brackish to Intermediate

0 2,962 58.04% 1,719 58.04% 1,719 1 2,962 57.77% 1,711 56.89% 1,685 2 2,962 57.77% 1,711 56.89% 1,685 3 2,962 56.90% 1,694 54.56% 1,616 4 2,962 56.90% 1,685 53.39% 1,616 5 2,962 56.04% 1,677 52.22% 1,547 6 2,962 56.04% 1,617 52.22% 1,541 7 2,962 56.04% 1,650 1,617 52.22% 1,541 7 2,962 56.04% 1,651 48.73% 1,413 7 2,962 55.46% 1,653 47.56% 1,413 11 2,962 55.17% 1,653 47.56% 1,314 12 2,962 55.17% 1,653 45.23% 1,340 11 2,962 54.80% 1,650 47.53% 1,314 12 2,962 54.80% 1,650 45.23% 1,340 13 2,962 54.80% 1,650 45.23% 1,340 13 2,962 54.80% 1,650 45.23% 1,374<			Acre	With Project % Acreage Venetated	Vegetated Acres	% Acreage Vegetated	Vegetated Acres	Net Acres
2,962 57.77% 1,711 56.89% 1,685 2,962 57.17% 1,711 56.89% 1,685 2,962 57.19% 1,702 55.72% 1,685 2,962 56.19% 1,694 53.39% 1,516 2,962 56.04% 1,685 53.39% 1,512 2,962 56.04% 1,685 51.06% 1,512 2,962 56.04% 1,683 51.06% 1,512 2,962 56.04% 1,683 51.06% 1,413 2,962 55.17% 1,683 48.73% 1,443 2,962 55.17% 1,643 47.56% 1,443 2,962 55.17% 1,643 47.56% 1,443 2,962 55.17% 1,643 47.56% 1,340 2,962 54.16% 1,617 44.07% 1,305 2,962 53.17% 1,609 42.90% 1,271 2,962 53.16% 1,617 44.07% 1,305 2,962 53.16% 1,617 44.07% 1,305 <td< th=""><th>Years</th><th>0</th><th>2,962</th><th>58.04%</th><th>1,719</th><th>58.04%</th><th>1,719</th><th>0</th></td<>	Years	0	2,962	58.04%	1,719	58.04%	1,719	0
2.962 57.19% 1,702 55.72% 1,650 2.962 57.19% 1,617 52.22% 1,561 2.962 56.19% 1,617 52.22% 1,561 2.962 56.04% 1,617 52.22% 1,512 2.962 56.04% 1,617 52.22% 1,512 2.962 56.04% 1,617 52.22% 1,512 2.962 56.04% 1,617 52.22% 1,512 2.962 56.04% 1,617 52.22% 1,512 2.962 55.17% 1,613 47.36% 1,413 2.962 55.17% 1,617 48.73% 1,413 2.962 54.0% 1,617 46.40% 1,374 2.962 54.0% 1,617 41.73% 1,309 2.962 54.0% 1,617 41.73% 1,309 2.962 54.0% 1,600 41.73% 1,305 2.962 54.0% 1,600 41.73% 1,305 2.962 54.0% 1,513 38.44% 1,305 2.962					1 711	56.89%	1,685	26
2.962 57.19% 1,694 54.56% 1,616 2.962 56.90% 1,685 53.33% 1,581 2.962 56.61% 1,617 52.22% 1,512 2.962 56.04% 1,617 52.22% 1,581 2.962 56.04% 1,617 52.22% 1,581 2.962 56.04% 1,660 49.89% 1,478 2.962 55.46% 1,634 46.40% 1,374 2.962 55.46% 1,617 40.756% 1,403 2.962 55.46% 1,617 44.07% 1,374 2.962 55.46% 1,617 44.07% 1,374 2.962 54.00% 1,617 44.07% 1,374 2.962 54.00% 1,617 44.07% 1,374 2.962 54.00% 1,617 44.07% 1,374 2.962 53.17% 1,600 41.77% 1,305 2.962 53.46% 1,617 44.07% 1,133 2.962 53.46% 1,517 41.07% 1,167 <t< td=""><td></td><td>-</td><td>20672</td><td></td><td></td><td>55 72%</td><td>1.650</td><td>52</td></t<>		-	20672			55 72%	1.650	52
2,962 57.19% 1,694 34.30% 1,547 2,962 56.61% 1,617 52.22% 1,547 2,962 56.04% 1,617 52.22% 1,512 2,962 56.04% 1,660 49.89% 1,478 2,962 56.04% 1,660 49.89% 1,443 2,962 55.75% 1,661 48.73% 1,443 2,962 55.17% 1,651 48.73% 1,443 2,962 55.17% 1,661 41.07% 1,340 2,962 54.60% 1,617 41.07% 1,340 2,962 54.131% 1,600 41.07% 1,340 2,962 54.31% 1,600 41.07% 1,340 2,962 54.31% 1,603 42.90% 1,271 2,962 53.74% 1,609 41.07% 1,340 2,962 53.14% 1,609 41.07% 1,305 2,962 53.14% 1,600 41.73% 1,271 2,962 53.45% 1,600 41.73% 1,205 <t< td=""><td></td><td>2</td><td>2,962</td><td>57.48%</td><td></td><td></td><td>1.515</td><td>7</td></t<>		2	2,962	57.48%			1.515	7
2,962 56,90% 1,685 53.39% 1,581 2,962 56,61% 1,677 52.22% 1,512 2,962 56,04% 1,660 49,89% 1,478 2,962 55,04% 1,660 49,89% 1,478 2,962 55,17% 1,651 48,73% 1,443 2,962 55,17% 1,651 48,73% 1,443 2,962 55,17% 1,661 40% 1,374 2,962 55,17% 1,617 46,0% 1,374 2,962 54,89% 1,617 46,40% 1,374 2,962 54,09% 1,617 44,07% 1,340 2,962 54,09% 1,617 44,07% 1,340 2,962 54,09% 1,617 44,07% 1,340 2,962 53,74% 1,593 39,40% 1,167 2,962 53,17% 1,593 39,40% 1,167 2,962 53,14% 1,593 39,40% 1,167 2,962 53,14% 1,593 39,40% 1,167 2,9			2.962	57.19%	1,694	24.00%	010'1	ç
2,962 56,61% 1,677 52,22% 1,547 2,962 56,04% 1,651 51,06% 1,512 2,962 55,04% 1,660 49,89% 1,443 2,962 55,17% 1,651 48,73% 1,443 2,962 55,17% 1,651 48,73% 1,443 2,962 55,17% 1,651 48,73% 1,443 2,962 55,17% 1,634 46,40% 1,374 2,962 54,00% 1,617 44,07% 1,374 2,962 54,03% 1,617 44,07% 1,314 2,962 54,03% 1,609 42,90% 1,271 2,962 53,15% 1,509 42,90% 1,271 2,962 53,15% 1,593 39,40% 1,133 2,962 53,16% 1,593 39,40% 1,133 2,962 53,16% 1,593 39,40% 1,133 2,962 53,16% 1,593 39,40% 1,133 2,962 52,36% 1,593 30,40% 1,964 <td< td=""><td></td><td>•</td><td>0,00</td><td>56.90%</td><td>1,685</td><td>53.39%</td><td>196'1</td><td>2</td></td<>		•	0,00	56.90%	1,685	53.39%	196'1	2
2,962 56.33% 1,668 51.06% 1,512 2,962 56.04% 1,660 49.89% 1,478 2,962 55.75% 1,660 49.89% 1,478 2,962 55.46% 1,613 47.56% 1,403 2,962 55.46% 1,613 47.56% 1,403 2,962 55.46% 1,613 46.40% 1,374 2,962 54.80% 1,617 44.07% 1,374 2,962 54.31% 1,600 41.73% 1,271 2,962 54.31% 1,600 41.73% 1,205 2,962 53.74% 1,592 40.57% 1,203 2,962 53.74% 1,592 40.57% 1,305 2,962 53.74% 1,592 40.57% 1,305 2,962 53.74% 1,592 40.57% 1,167 2,962 53.45% 1,583 39.40% 1,167 2,962 53.45% 1,583 39.40% 1,167 2,962 53.45% 1,583 39.40% 1,167 2,962 53.66% 1,583 39.40% 1,167 2,962 52.36% 1,588 35.91% 1,098 2,962		r 1		EE E1 C	1 677	52.22%	1,547	E.
2.962 56.33% 1,600 49.89% 1,478 2.962 56.04% 1,660 49.89% 1,478 2.962 55.46% 1,661 48.73% 1,443 2.962 55.46% 1,661 48.73% 1,443 2.962 55.46% 1,661 41.07% 1,374 2.962 55.46% 1,617 44.07% 1,374 2.962 54.80% 1,617 44.07% 1,374 2.962 54.80% 1,617 44.07% 1,374 2.962 54.80% 1,617 44.07% 1,305 2.962 54.31% 1,600 41.73% 1,271 2.962 53.74% 1,502 40.57% 1,205 2.962 53.74% 1,503 39.40% 1,167 2.962 53.16% 1,583 39.40% 1,167 2.962 53.16% 1,583 39.40% 1,167 2.962 53.16% 1,583 39.40% 1,167 2.962 53.16% 1,583 39.40% 1,167 2.962 53.16% 1,583 39.40% 1,167 2.962 52.36% 1,583 30.70% 1,098 2.962		'n	206'2	N 10.00			1.512	156
2,962 55.04% 1,651 48.73% 1,443 2,962 55.17% 1,651 48.73% 1,443 2,962 55.17% 1,634 46.40% 1,374 2,962 55.17% 1,634 46.40% 1,374 2,962 55.17% 1,617 44.07% 1,374 2,962 54.60% 1,617 44.07% 1,305 2,962 54.31% 1,600 41.73% 1,271 2,962 54.31% 1,600 41.73% 1,271 2,962 54.31% 1,600 41.73% 1,236 2,962 53.74% 1,592 40.57% 1,205 2,962 53.14% 1,593 39.40% 1,167 2,962 53.16% 1,583 39.40% 1,167 2,962 53.16% 1,583 39.40% 1,167 2,962 53.16% 1,583 39.40% 1,167 2,962 53.16% 1,583 39.40% 1,167 2,962 53.16% 1,583 39.40% 1,167 2,962 52.30% 1,566 37.07% 1,098 2,962 52.30% 1,558 34.74% 1,064 2,962		9	2,962	56.33%		•	1 478	182
2,962 55.75% 1,651 46.10% 1,705 2,962 55.46% 1,643 47.56% 1,409 2,962 55.46% 1,634 46.40% 1,374 2,962 55.17% 1,634 46.40% 1,374 2,962 54.89% 1,617 44.07% 1,374 2,962 54.00% 1,617 44.07% 1,335 2,962 54.31% 1,609 42.90% 1,216 2,962 54.31% 1,600 41.73% 1,236 2,962 53.74% 1,592 40.57% 1,202 2,962 53.45% 1,583 39.40% 1,167 2,962 53.16% 1,583 39.40% 1,167 2,962 53.16% 1,583 39.40% 1,167 2,962 53.16% 1,583 39.40% 1,167 2,962 53.16% 1,583 39.40% 1,167 2,962 53.16% 1,586 37.07% 1,098 2,962 52.30% 1,558 35.91% 1,029 2,962 52.30% 1,558 37.07% 1,098 2,962 52.30% 1,558 37.07% 1,098 2,962		2	2,962	56.04%	noo'i			8
2,962 55,46% 1,643 47,56% 1,403 2,962 55,17% 1,634 46,40% 1,374 2,962 54,80% 1,617 44,07% 1,374 2,962 54,00% 1,617 44,07% 1,305 2,962 54,00% 1,617 44,07% 1,305 2,962 54,02% 1,600 41,73% 1,236 2,962 53,74% 1,592 40,57% 1,236 2,962 53,74% 1,592 40,57% 1,236 2,962 53,14% 1,592 40,57% 1,236 2,962 53,14% 1,592 40,57% 1,236 2,962 53,14% 1,593 39,40% 1,133 2,962 53,16% 1,583 39,40% 1,133 2,962 53,16% 1,583 39,40% 1,133 2,962 53,16% 1,558 37,07% 1,098 2,962 52,86% 1,556 37,07% 1,093 2,962 52,86% 1,558 37,07% 1,098 2,962 52,86% 1,556 37,07% 1,098 2,962 52,30% 1,556 37,07% 1,093 2,962		đ	2.962	55.75%	1,651		- (25
2,962 55.17% 1,634 46.40% 1,374 2 2,962 54.89% 1,617 44.07% 1,374 2 2,962 54.89% 1,617 44.07% 1,305 2,962 54.31% 1,609 42.90% 1,271 2,962 53.37% 1,509 42.90% 1,271 2,962 53.45% 1,592 40.57% 1,202 2,962 53.45% 1,592 40.57% 1,203 2,962 53.45% 1,583 39.40% 1,167 2,962 53.45% 1,583 39.40% 1,167 2,962 53.45% 1,583 39.40% 1,133 2,962 53.45% 1,583 39.40% 1,167 2,962 53.45% 1,583 39.40% 1,167 2,962 52.80% 1,575 38.24% 1,133 2,962 52.30% 1,566 37.07% 1,098 2,962 52.30% 1,568 35.91% 1,064 2,962 52.30% 1,568 35.91% 1,098 2,962 52.30% 1,568 37.07% 1,098 2,962 52.30% 1,549 34.74% 1,096 <td></td> <td>0 0</td> <td>696 6</td> <td>55.46%</td> <td>1,643</td> <td></td> <td>-</td> <td>3.8</td>		0 0	696 6	55.46%	1,643		-	3.8
2,962 54.89% 1,626 45.23% 1,340 2,962 54.60% 1,617 44.07% 1,305 2,962 54.31% 1,600 41.73% 1,271 2,962 54.31% 1,600 41.73% 1,236 2,962 53.45% 1,592 40.57% 1,202 2,962 53.45% 1,592 40.57% 1,202 2,962 53.45% 1,583 39.40% 1,167 2,962 53.45% 1,575 38.24% 1,133 2,962 52.86% 1,566 37.07% 1,098 2,962 52.30% 1,566 37.07% 1,098 2,962 52.36% 1,566 37.07% 1,098 2,962 52.30% 1,568 35.91% 1,029 2,962 52.30% 1,568 35.91% 1,029 2,962 52.30% 1,568 35.91% 1,029 2,962 52.30% 1,569 34.74% 1,029 2,962 52.30% 1,569 34.74% 1,029 <td< td=""><td></td><td>b (</td><td>206.2</td><td>55.17%</td><td>1.634</td><td></td><td>-</td><td>R :</td></td<>		b (206.2	55.17%	1.634		-	R :
2,962 54,60% 1,617 44,07% 1,305 3 2,962 54,60% 1,617 44,07% 1,305 3 2,962 54,31% 1,600 41,73% 1,271 3 2,962 53,74% 1,502 40,57% 1,202 3 2,962 53,74% 1,532 39,40% 1,167 3 2,962 53,16% 1,575 38,40% 1,167 3 2,962 53,16% 1,575 38,24% 1,133 2,962 53,16% 1,566 37,07% 1,098 2,962 52,87% 1,566 37,07% 1,098 2,962 52,30% 1,558 34,74% 1,029 2,962 52,30% 1,568 34,74% 1,029 2,962 52,30% 1,568 34,74% 1,029 2,962 52,30% 1,569 34,74% 1,029 2,962 52,30% 1,569 34,74% 1,029 2,962 52,30% 1,569 34,74% 1,029 2,962 52		2	206'2		1 626		-	28
2,962 54.31% 1,609 42.90% 1,271 2,962 54.31% 1,600 41.73% 1,236 2,962 54.02% 1,592 40.57% 1,202 2,962 53.74% 1,592 40.57% 1,202 2,962 53.74% 1,583 39.40% 1,167 2,962 53.45% 1,583 39.40% 1,167 2,962 53.45% 1,566 37.07% 1,038 2,962 53.16% 1,558 36.24% 1,133 2,962 53.16% 1,556 37.07% 1,098 2,962 52.80% 1,558 35.91% 1,064 2,962 52.30% 1,558 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,558 34.74% 1,029 2,962 52.30% 1,559 34.74% 1,029 2,962		1	2,902		1 5 1		-	31
2,962 54.31% 1,003 4.2.962 2,962 54.02% 1,600 41.73% 1,236 2,962 53.74% 1,592 40.57% 1,202 2,962 53.45% 1,583 39.40% 1,167 2,962 53.45% 1,583 39.40% 1,167 2,962 53.16% 1,575 38.24% 1,133 2,962 53.16% 1,566 37.07% 1,098 2,962 52.87% 1,556 37.07% 1,098 2,962 52.89% 1,556 37.07% 1,098 2,962 52.30% 1,558 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30%		5	2,962	Kno.+0				33
2,962 54,02% 1,600 41,73% 1,200 2,962 53,74% 1,592 40,57% 1,202 2,962 53,16% 1,575 38,24% 1,167 2,962 53,16% 1,575 38,24% 1,133 2,962 52,87% 1,566 37,07% 1,098 2,962 52,80% 1,558 35,91% 1,096 2,962 52,30% 1,558 35,91% 1,029 2,962 52,30% 1,558 34,74% 1,029 2,962 52,30% 1,558 34,74% 1,029 2,962 52,30% 1,558 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029		13	2,962	54.31%	00'1			5
2,962 53.74% 1,592 40.57% 1,202 2,962 53.45% 1,583 39.40% 1,167 2,962 53.16% 1,575 38.24% 1,133 2,962 52.87% 1,566 37.07% 1,098 2,962 52.58% 1,558 35.91% 1,098 2,962 52.58% 1,558 35.91% 1,098 2,962 52.30% 1,558 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029		14	2,962		1,600		-	3
2,962 53,45% 1,583 39,40% 1,167 2,962 53,16% 1,575 38,24% 1,133 2,962 52,87% 1,566 37,07% 1,098 2,962 52,58% 1,558 35,91% 1,064 2,962 52,30% 1,558 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029 2,962 52,30% 1,549 34,74% 1,029		<u>t</u> ¥	690 6		1,592		-	5
2,962 53.16% 1,575 38.24% 1,133 2,962 52.87% 1,566 37.07% 1,098 2,962 52.58% 1,558 35.91% 1,064 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,963 32,600 27,140 1,357		2 4	690 6		1,58		-	•
2,962 52.87% 1,566 37.07% 1,098 2,962 52.58% 1,558 35.91% 1,064 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 2,963 32,600 27,140 1,357		2 ;	2 063		1,57		-	4
2,962 52.58% 1,558 35.91% 1,064 2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 Total Years 1-20 32,600 27,140		2 9	200,2		1.56		-	4
2,962 52.30% 1,549 34.74% 1,029 2,962 52.30% 1,549 34.74% 1,029 Total Years 1-20 32,600 27,140		0	706'7		1 551		•	464
2,962 52.30% 1,349 34.17% 1,249 Total Years 1-20 32,600 27,140		19	2,962					520
32,600 27,140 1,630 1,357		20	2,962		4C'I		-	
1,630 1,357		-	otal Years 1-	-50	32,60	-	27,140	
		•		al Acres	1.63	0	1,357	273

Fritchie Marsh Restoration (PO-6)

Marsh Type: Brackish

ted Net s Acres	0 0	1,685 26	1,650 52	1.616 78	-	1547 130	· ·	1.478 182			1.374 260			1.271 338						1,167 416 1,133 442 1,098 468				
Without Project % Acreage Vegetated Vegetated Acres	58.04%	56.89%	55.72%	54 56%	53.39%	50 00 C	51 06%	49.89%	48 73%	47 56%	46.40%	45 23%	44 07%	42.904	41 73%	40.57%		30 ANS	39.40%	39.40% 38.24% 37.07%	39.40% 38.24% 37.07%	39.00% 39.24% 38.24% 35.91% 35.91%	39.40% 39.24% 37.07% 35.91% 34.74%	
Vegetated <u>Vi</u>	. 1,719	1171	202	1 604	+C0'I	1,000,1	110'1	1,660	1,000	1001	1674	1 626	1,000	1001	600'I				1,583	1,575	1,583 1,575 1,566	1,583 1,575 1,558 1,558	1,583 1,575 1,566 1,558 1,558	1,583 1,575 1,566 1,558 1,558 1,549 32,600
With Project % Acreage Vegetated	58.04%	57 77 4	201.12	AOF. 10	57.19%	20.90	50.01%	30.33%	20.00 201	40/ 00	504.00 AC+ 33			800.40	04.01%	24.n.40	ペオン・クロ	10.150	53.45%	53.45% 53.16%	53.45% 53.16% 52.87%	53.45% 53.16% 52.87% 52.58%	53.45% 53.16% 52.87% 52.30%	
ACIES	2,962	0.00	2,902	206'2	2,962	2,962	2,962	2,962	2,962	2,962	2,962	206,2	296'2	2,962	2,962	2,962	2,962		2,962	2,962 2,962	2,962 2,962 2,962	2,962 2,962 2,962 2,962	2,962 2,962 2,962 2,962 2,962	2,962 2,962 2,962 2,962 2,962 2,962 70tal Years 1–20
Years	0	•	- (2	e	4	ŝ	9	7	80	סי	2	=	12	13	-	5		16	11	11 16	11 11 19 19	11 11 19 20	16 17 19 20 20

Costs amortized over 20 year operation life

Fritchie Marsh Restoration (PO-6)

Summation of Emergent Marsh Acreages

	Net	Acres	0	52	104	156	208	090	2002	312	364	416	468		070	2/5	624	676	728	780	001	200	884	936	988	1 040			373	0+0
	Vegetated	ACIES	3,438	3,370	3 301	1 232	3 163	201.0	3,034	3,025	2,956	2 887	0.0010	5 0 1 0 7	2,749	2,679	2.610	2 541	0 479	111-12	2,403	2,334	2,265	2.196	701 0	1	0cn'2	54,280		2,/14
Without Project		Vegetated	58.04%	56.89%	55 79%		54.00 kg	200.00	52.22%	51.06%	49.89%	40 73%		400.14	46.40%	45.23%	44.07%	2 0.04		K0/14	40.57%	39.40%	38.24%	37.07%		R D OD	34.74%			
IM.	Vegetated		3,438	9 407	0,405	5, 4U3	3,388	3,371	3,354	3 337	006 6	0,000	3,303	3,286	3,269	3 251	1040	107'0 107'0	3,217	3,200	3,183	3.166	3 149		2010	3,115	3,093	65,200		3,260
Act Designat	VIIII FIUEU	Venetated	58.04%		811.10	57.48%	57.19%	56.90%	56.61%	20.00		20.00	55.75%	55.46%	55 17%			54.60%	54.31%	54.02%	53.74%	53 45%		201.00	52.87%	52.58%	52.30%	20		al Acres
-	- •	Acros	5,924		5,924	5,924	5,924	5.924	5 024	120'0	478'C	5,924	5,924	5 924	5 024	130'C	5,924	5,924	5,924	5,924	5.924		128'0	5,924	5,924	5.924	5,924	Total Years 1-20		Average Annual Acres
			19415		-	2	e		•	0	9	2	8			01	=	12	13		ŢŢ	2 9	16	17	18	19	20			

Costs amortized over 20 year operation life

Vermilion Bay/Boston Canal Shore Protection (TV-9/PTV-18))

Total First Cost	\$664,900
Total Fully Funded Cost	\$1,008,600

Annual Charges	Present Worth	Average <u>Annual</u> *
Interest & Amortization	\$829,500	\$87,700
Monitoring	20300	2,200
Q&M cost	57300	6,100
Other Costs	0	
Total	\$907,100	\$96,000
Average Annual Habitat Units		78
Cost per Habitat Unit		\$1,233
Average Annual Acres of Emerg	gent Marsh	199

*Interest rate of 8.5 percent over a 20-year project life

Boston Canal/Vermilion Bay Shore Protection (TV-9/PTV-18)

and Annual Charoes at Coate FIG

	Elecal	Ennineering	Easements	Supervision &	Supervision		First Cost	Total First
			e Land Binhts	Administration	& Inspection Contingency		Construction	COSI
Үөаг	Year	1			9	50	\$0	
5 Compound		3					S O	\$54.333
	1003	£16.000	\$30,000	\$8,333	2			233 014
4 Compound	000			C16 667	\$0	3 0		100'044
3 Compound	1994	\$24,000			e	450 450	\$201,800	\$ 289,097
	1995	2 0	°\$	~				\$280.763
	1006	50	\$ 0	\$8 ,333	\$20,180	\$50,45U		
								000 000
Base Year			000 000	660 000	S40.360	\$100.900	\$403,600	\$664,66U
	TOTAL	\$40,000	\$30,000					
	Fiscal	Monitoring	O&M	Other				
Voor	Year	Costs	Costs	Costs				
	1997	\$2 150	\$6,054	3				
	1008	\$2 150	S6.054	9				
2 Discount	0001		CE DEA	50				
3 Discount	1999	net 'zt						
4 Discount	2000	\$ 2,150	+cn'94					
5 Discount	2001	\$ 2,150	\$6,054					
6 Discount	2002	\$2,150	\$6,054					
7 Discount	2003	\$2,150	\$6,054					
a Discount	2004	\$2,150	\$6,054		_			
	2005	\$ 2,150	\$6,054		_			
	9000			\$0	_			
10 Discount	2002			1 20	_			
11 Discount	2008				_			
12 Discount	2000				~			
13 Discount	2010				~			
14 Discount	2011			\$0	-			
15 Discount	2012				2 0			
11 Discould	2013			•	2 0			
	2014				\$ 0			
	2015				2 0			
19 Discount	2012				0\$			
SU DISCOULT	Total		\$121,080		0\$			

Costs amortized over 20 year operation life

18-Sept-92

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II
Coastal Wei

Boston Canal/Vermilion Bay Shore Protection (TV-9/PTV-18)

	\$87,652	Total First Cost \$0 \$75,298 \$51,943 \$340,332 \$304,628 \$772,201	
	sts	First Cost Construction \$0 \$237,564 \$218,953 \$456,517	
	Amortized Costs	Contingency 50 50 559,391 554,738 5114,129	
		Supervision & Inspection \$0 \$0 \$0 \$0 \$2 \$23,756 \$252 \$45,652	
•	\$829,492	Engineering Easements Supervision Land Rights Administration & Land Rights Administration & Land Rights Administration & Land Rights Administration & Rispection \$ 0 <th< th=""><th></th></th<>	
	d Costs	Engineering Easements & Design & Land Rights 10 \$22,174 \$41,576 \$30,655 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
	Total Discounted Costs	ω.	
	sts.	Fiscal Year 0 1993 1994 1995 1995	
	Constant Valued Costs	Compound Year Compound 5 1.504 4 1.386 3 1.277 2 1.177 1 1.085	
	è		

		1	\$	5		2	8	50				6	8	5		3	8	9	3			2	%	\$	3	5		0 \$	3
	Other	Costs																											- - -
	O&M	Costs	\$5,580			54,740	S4 368	300 1 4		\$3,711	\$3,420	\$ 3,152	CO 005		2/0/24	\$2,468	\$2,274	\$2,096	e 1 032		\$1,781	\$1,641	\$1,513	\$1 394	e1 285		\$1,184	\$57,291	\$6,054
•	Monitoring	Costs	e1 087	•	\$1,826				~	\$1,318			•	•									\$537		-			\$2	\$2,150
	Finnel	riscal Voor	1 Adi	1661	1998	1000		2000	2001	2002	2003	0007		2005	2006	2002		0007	5002	2010	2011	2012	2102	1102		2015	2016	Total	laur
2	•	Discount	Rates	0.922	0.849		U./63	0.722	0 665	0.00	0.010	COC.D	0.521	0.480	0 447		0.400	0.376	0.346	0.319	0.004		1.12.0	0.62.0	0.230	0.212	1010		Average Annual
	i	_	Үөаг Аа	1		N -	ا	4-	·u) (0	- 1	60 1	ð		2	-11	- 12	- 13	14		<u>e</u> :	- 16	- 17	- 18	10	<u>ה</u> 	20	-

Costs amortized over 20 year operation life

18-Sept-92

•

ston Canal/Vermilion Bay Shore Protection (TV-9/PTV-18) ć

. .

			Boston Cane		Boston Canal/Verminum bay sindle i second to		•		
	atao Doba		Total Fully Funded Costs	ed Costs	\$1,008,634	Ā	Amortized Costs	ts	\$106,582
	Fully Funded Cuara					-		Circt Cost	Total First
-	Inflation	Fiscal	Engineering	Easements	Supervision &	Supervision		Construction	- 1
No.Y	Eactor	Year		& Land Rights	Administration			2 0	9
1 4 41	5100	C ·		3				05	\$56,615
n		600 ·	416.6	5 31.260	\$ 8,683	9 6			543 731
4	1.042	0661			\$17.922	9	0		
e	1.075	1994				\$ 22,395	\$55,987	\$ 223,949	
~	1,110	1995				\$23 111	\$57,779	\$231,115	2421/242
I -	1 145	1996		2		445 506	\$113 766	\$455,063	\$742,721
-	10	TOTAL	\$42,480	\$31,260	0+0'+0\$				
		i		O.L.M	Other				
	Inflation	Fiscal	MONITORING	E .	Coche				
Vear	Eactor	Year	Costs	Costs	COSIS				
	1 100	1997	7 \$2,541	\$7,155	-				
ī	1.104	9001			\$ 0				
- 2	1.220	0661			95				
ן ני	1.259	1999							
	1 299	2000							
r 4	145 1	2001	1 \$2,662	\$ 8,116	-	_			
0 (}		2002		\$8,376					
9	1.004				\$ 0				
- 7	1.428	2003							
8	1.473	2004							
	1 521	2005							
ם מ ו	1.560	2006	6 \$3,374		-	_			
2		2007		\$9,805		_			
1	070.1	2008		\$10,118		_			
-12	1.0.1	8			2 20	•			
- 13	-	ENN2			6 \$0	•			
-14	-	2010				05			
- 15	-	2011							
	1 896	2012	12 \$4,076	•••					
	- •	2013							
-1-		100		1 \$12,223		5 0			
- 18		2				2 0			
- 19		2015				05			
- 20	2.150	2016							
	ļ	Total	\$69,687	1300,220		2			

Costs amortized over 20 year operation life

÷

18--Sept-92

Boston Canal/Vermilion Bay Shore Protection (TV-9/PTV-18)

Marsh Type: Brackish

Net Acres		0	19	38	57	76	95	113	1 2 2	136	101	170	189	80°2	221	246	265		107	302	321	340	359	178	25		199
Vegetated Acres		378	359	340	321	302	283	265	507	240	227	208	189	170	151	132	112	23	5	76	57	9 8	19	į	>	3,590	179
		81.12%	77.04%	72.98%	68 93%	64.87%	50 B 7 %	00.00 A	K	52.71%	48.66%	44.60%	40.55%	36.49%	30 44%	20 20%	× 00.02	K00.47	20.27%	16.22%	12.16%	8.11%	4 05%		0.00%		
ğ	ACIES	378	378	378	370	370	0/0	0/0	378	378	378	378	378	378	978	010	9/6	3/8	378	378	378	378	010	2/0	378	7,560	378
With Project % Acreage	Vegetated	81.12%	701 10	5 1 1 0 2 4 1 2 4	01.167	81.12%	81.12%	81.12%	81.12%	81.12%	81 12%	01.12 M	01.12 2	N N N N N N N N N N N N N N N N N N N	61.12	871.18	81.12%	81.12%	81.12%	R1 12%	01.10 01 10 01	10 10 A	01.12 8	81.12%	81.12%	8	Acres
- •	Acres	466	337	004		466	466	466	466	466	954		004	00	466	466	466	466	AFF	901	994		400	466	466	Total Years 1-20	Avelage Annual Acres
	Years .	0			8	6	4	S	y		- 6	20 (מי פ	10	Ξ	12	13	14	. 4	2 4	<u>ם</u> י	21	18	19	20	F	<

Boston Canal/Vermilion Bay Shore Protection (TV-9/PTV-18)

Summation of Emergent Marsh Acreages

Years Acces 	466)	Acros			
0 - N M 4 W	166	Vegetated	ALIBO	Vegetated	Acres	ACIES
- 0 0 4 0		81.12%	378	81.12%	378	0
- 0 0 4 0	466	81 12%	378	77.04%	359	19
N 69 4 49		B1 12%	378	72.98%	340	38
5 4 10 1	004	81 12%	378	68.93%	321	57
τ. 4 τ. 10 -		81 124	378	64.87%	302	76
0		81.12%	378		283	95
		01.15.2	378		265	113
D t		01.15 ×	378		246	132
_ (01.15.7 01.12%	378		227	151
200	400	81 12%	378		208	170
-	00+	91.12%	378	-	189	189
2:	100	81.12%	378		170	20
•	100	81 12%	378		151	2
•	904	B1 12%	378		132	24
-		81 10 K	378		113	26
-		81.12%	378		4 6	284
<u></u>	996	81 12%	378		76	30
	466	81.12%	378		57	32
	466	81.12%	378		38	34
-	466	81 12%	378	4.05%	19	359
50 3	466 4	81.12%	378	3 0.00%	0	378
Total Years 1-20	S 1-2	2	7,560	0	3,590	
Access Annual Acces		l Acres	378		179	199

-

Brown Lake Hydrologic Restoration (CS-9)

Total First Cost	\$1,740,000
Total Fully Funded Cost	\$3,222,800

Annual Charges	Present Worth	Average <u>Annual</u> *
Interest & Amortization	\$2,161,400	\$228,400
Monitoring	244,900	25,900
O&M cost	129,900	13,700
Other Costs	0	0
Total	\$2,536,200	\$268,000
Average Annual Habitat Units		121
Cost per Habitat Unit		\$2,223
Average Annual Acres of Eme	ergent Marsh	152

*Interest rate of 8.5 percent over a 20-year project life

Brown's Lake Hydrotogic Restoration (C/S-9)

\$112,647 \$68,824 \$1,045,454 \$513,021

\$

Total First Cost \$1,739,946

First Costs and Annual Charges

First Cost Constructio				-	30 \$366,119		89 \$1,098,357																								
Contingen				\$183,060	\$91,530		\$274.589																								
Supervision & Inspection	\$ 0	\$0	\$0	\$91,333	\$ 45,667		\$137,000	-																						_	_
1	\$ 0	\$22,647	\$38,824	\$38,824	5 9 706		\$110.000		Other	Costs	9	9	\$ 0	\$ 0	0 5	2 0	9 5	0 \$	2 0	20	9						\$ 0	\$ 0	\$ 0	\$	\$0
Easements	\$ 0	\$20,000	2 0	05	5	•	600 MM		O&M	Costs	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$13,729	\$274,580
Engineering & Design 8	3	\$70,000	230 000			n	000 000		Monitoring	Costs	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875	\$25,875		\$25,875	•
Fiscal Year		1993	1994	1005	0001	0661		IUIAL	Fiscal	Үөаг	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Хваг	5 Compound				z Compound	1 Compound	Base Year			Vear	1 Discount	2 Discount	3 Discount	4 Discount	5 Discount	6 Discount	7 Discount	8 Discount	9 Discount	10 Discount	11 Discount	12 Discount	13 Discount	14 Discount	15 Discount	16 Discount	17 Discount	18 Discount	19 Discount	20 Discount	

Costs amortized over 20 year operation life

j

18-Sept-92

Average Annual

Costs amortized over 20 year operation life

	Supervision First Cost			OS S	€015 502 \$862.0	4010,000	433,310 614 813 5																								
		í (n ¢	\$31,386				\$137,209 \$137	Other	Costs	Det	2	\$0	D¢	2 0	3		<mark></mark>		D¢	2	04								\$ 0	\$0
			\$ 0	\$27,717	3	3	0\$	\$27,717	O&M	Costs	\$12,653	\$11,662	\$10,749	906'6\$	\$9,130	\$8,415	\$7,756	\$7,148	\$6,588	\$6,072										t \$129,922	\$ \$13,729
	Engineering		\$0	\$97,010	\$38,319	9	9	\$135,329	Monitoring	Costs	\$23,848	\$21,980	\$20,258							\$11,444	\$10,548	38,960	0 \$8,258		2 \$7,015					3	\$25,875
	Fiscal	Year	0	1993	1994	1995	1996	Total	Eicrai	Year	1997	1998	1999	2000	2001	2002	2003			2006		2009								Total	nnual
Present Valued Costs	Componind	Bates	1 504	1 386	1 977		- *	1		Discount			-		-															-20	Average Annual
Preset		Voor		, ,	4 (, ,	N 1	-		2007		- c 1	1	, ,	Ĩ	1		- • •		1	27	 1 7 5		1	1	1	I	ı İ	!	ī	

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

Brown's Lake Hydrologic Restoration (C/S-9)

\$2,161,306

Total Discounted Costs

\$228,385

Amortized Costs

Total First Cost

\$0 \$156,113 \$87,908 \$1,230,735 \$556,628 \$2,031,384

Present Valued Costs

Brown's Lake Hydrologic Restoration (C/S-9)

\$340,553	ist Total First			~		\$812,605 \$1,160,198		,909 \$ 1,939,132																							
d Costs	First Cost		04	\$0	\$ 0			977 \$1,231,909																							
Amortized Costs	n Contoco			\$ 0	\$ 0	358 \$203,151	301 \$104,826	558 \$307,977																							
-			_	•	•	5 \$101,358		7 \$153,658		ł	\$ 0		0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	0\$	\$ 0	\$ 0	\$ 0	2 0
\$3,222,800	Supervision &	Administration	\$0	\$23,598	\$41,749	\$43,085	\$11,116	\$119,547	Other	Costs	\$	\$0	\$0	Ŵ	ø	Ā	Ø,	Ø	÷.	Ŵ	••	•	•	••	••	••	**				-
ed Costs	Easements	& Land Hights	\$ 0	\$20,840	0 \$	S 0	90	\$20,840	O&M	Costs	\$16,227	\$16,746	\$17,282	\$17,835	\$18,405	\$18,994	\$19,602	\$20,229	\$20,877	\$21,545	\$22,234	\$22,946	\$23,680	\$24,438	\$25,220	\$26,027	\$26,860	\$27,719	\$28,606	\$29,522	\$444,992
Total Fully Funded Costs	5		\$ 0	\$72,940	\$ 32,260	80	9 3	\$105,200	Monitoring	Costs	\$30,582	\$31,561	\$32,571	\$33,613	\$34,689	\$35,799	\$36,944	\$38,126	\$39,346	\$40,605	\$41,905	\$43,246	\$44,630	\$46,058	\$47,532	\$49,053	\$50,622	\$52,242	\$53,914	\$55,639	\$838,676
	Fiscal	Year	•	1993	1994	1995	1996	TOTAL	Fiscal	Үөаг	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Fully Funded Costs	Inflation	Factor		1.042	1 075	1 110	1.145		Inflation	Factor	1.182	1.220	1.259	1.299	1.341	1.384	1.428	1.473	1.521	1.569	1.620	1.671	1.725	1.780	1.837	1.896	1.956	2.019	2.084	2.150	
Fully F		Year	5	4			4	•		Үөаг		-2	1	4	-5	9-		8	6-	- 10	=-	- 12	- 13	- 14	- 15	- 16	- 17	- 18	- 19	-20	

Costs amortized over 20 year operation life

.

18 - Sept - 92

•

Brown's Lake Hydrologic Restoration (C/S-9)

Marsh Type: Brackish

		% Acreage	Vegetated	% Acreage Vegetated	Vegetated Acres	Net Acres
Years	. Ades 2.794	15.00%	419	15.00%	419	0
•	Ī		110	14 85%	415	4
-	2,794	15.00%		2/00/L	411	23
c	2.794	15.52%	404	_		C 17
	707 0	16.05%	449	-		2
,		10 600	463	14.37%	402	0
4	2,734	K00.01	A78		397	81
5	2,794	211.11			393	94
ÿ	2.794	17.43%	481		000	108
7 6	407 0	17.75%	496	-		
-		10.074	505	13.73%		121
8	2,/34	K 10.01	514	•	379	135
6	2,794	18.33%		- •		148
10	2,794	18.71%	626		070	16
-	2 794	19.03%	532			: ‡
		19.35%	541 S41			
21		10.574	549	12.93%	361	8
13		er 10.61	5.5			20
14	2,794	19.99%				215
15					340	6
		20.63%	576	-	-	
				5 12.29%		42
17					339	25
18						26
19	a 2.794	21.58%				282
20		21.90%	612	2 11.81%		3
	Total Ye	-20	10,485	S	7,449	
						Ţ
	Average Applied Acres	ol Acros	524	4	3/2	301

.

Brown's Lake Hydrologic Restoration (C/S--9)

Summation of Emergent Marsh Acreages

			% Acreage	Vegetated	% Acreage	ຸ >	Net
2,794 15.00% 419 15.00% 419 14.85% 415 2,794 15.52% 419 14.85% 415 415 2,794 15.52% 434 14.65% 415 2,794 15.52% 434 14.65% 415 2,794 15.55% 434 14.53% 415 2,794 16.55% 436 14.53% 416 2,794 16.55% 463 14.53% 406 2,794 17.11% 478 14.05% 393 2,794 17.15% 466 13.89% 393 2,794 18.07% 505 13.73% 303 2,794 18.07% 505 13.73% 375 2,794 19.03% 514 13.57% 375 2,794 19.03% 567 532 13.55% 376 2,794 19.03% 567 532 13.55% 376 2,794 19.03% 576 532 13.55% 376 2,794 19.03% 567 533 <th>ears</th> <th>Acres</th> <th>Vegetated</th> <th>ACIES</th> <th>Vegetated</th> <th>ACres .</th> <th>Acres</th>	ears	Acres	Vegetated	ACIES	Vegetated	ACres .	Acres
2,794 15.00% 419 14.85% 415 $2,794$ 15.52% 434 14.69% 411 $2,794$ 16.05% 439 14.53% 406 $2,794$ 16.05% 439 14.53% 406 $2,794$ 16.05% 463 14.53% 406 $2,794$ 16.58% 463 14.21% 393 $2,794$ 17.11% 478 14.05% 393 $2,794$ 17.75% 496 13.89% 388 $2,794$ 18.71% 505 13.73% 379 $2,794$ 18.71% 505 13.73% 376 $2,794$ 19.03% 523 13.67% 376 $2,794$ 19.03% 523 13.67% 376 $2,794$ 19.03% 523 13.61% 376 $2,794$ 19.03% 523 13.61% 376 $2,794$ 19.03% 523 13.61% 376 $2,794$ 19.03% 549 376 376 $2,794$ 20.34% <td>0</td> <td>2,794</td> <td>15.00%</td> <td>419</td> <td>15.00%</td> <td>419</td> <td>0</td>	0	2,794	15.00%	419	15.00%	419	0
2,794 15.52% 434 14.69% 411 2,794 16.05% 463 14.53% 406 2,794 16.58% 463 14.53% 406 2,794 16.58% 463 14.53% 402 2,794 16.58% 463 14.53% 406 2,794 17.11% 4.78 14.65% 393 2,794 17.75% 496 13.89% 388 2,794 18.07% 505 13.73% 379 2,794 18.39% 514 13.57% 379 2,794 19.03% 523 13.41% 376 2,794 19.03% 532 13.25% 379 2,794 19.03% 532 13.25% 370 2,794 19.03% 558 12.77% 375 2,794 19.03% 567 558 12.77% 366 2,794 19.03% 567 523 13.41% 370 2,794 19.03% 558 12.77% 367 279 2,794	-	794 2	15 00%	419	14.85%	415	4
2,794 16.05% 449 14.53% 406 2,794 16.56% 449 14.53% 406 2,794 16.56% 463 14.37% 397 2,794 16.56% 463 14.37% 303 2,794 17.15% 487 14.05% 393 2,794 18.07% 505 13.73% 304 2,794 18.07% 505 13.73% 304 2,794 18.07% 505 13.73% 379 2,794 19.03% 523 13.41% 375 2,794 19.03% 532 13.55% 370 2,794 19.03% 541 13.55% 370 2,794 19.03% 543 12.99% 366 2,794 19.03% 543 12.99% 367 2,794 19.65% 543 12.99% 366 2,794 19.65% 543 12.99% 367 2,794 19.65% 549 12.99% 367 2,794 20.31% 567 3	- c	2 794	15.52%	434	14.69%	411	23
2,794 16.58% 463 14.37% 402 2,794 15.58% 463 14.37% 397 2,794 17.11% 487 14.05% 393 2,794 17.15% 496 13.89% 388 2,794 18.07% 505 13.73% 388 2,794 18.07% 505 13.73% 384 2,794 18.07% 505 13.73% 384 2,794 18.07% 505 13.57% 379 2,794 19.03% 532 13.57% 379 2,794 19.03% 532 13.55% 370 2,794 19.03% 541 13.09% 365 2,794 19.03% 549 12.93% 366 2,794 19.67% 549 12.93% 366 2,794 19.67% 549 12.93% 366 2,794 19.67% 549 12.93% 367 2,794 19.67% 567 12.93% 367 2,794 20.63% 567 5		20112	16.05%	449	14.53%	406	43
2,794 17,11% 478 14,21% 397 2,794 17,11% 487 14,05% 393 2,794 17,75% 496 13,89% 388 2,794 18,07% 505 13,73% 384 2,794 18,07% 505 13,73% 379 2,794 18,07% 505 13,41% 375 2,794 19,03% 523 13,41% 375 2,794 19,03% 532 13,25% 370 2,794 19,03% 532 13,25% 370 2,794 19,03% 532 13,25% 370 2,794 19,03% 541 12,09% 366 2,794 19,03% 543 12,09% 367 2,794 19,03% 567 533 367 2,794 19,03% 566 12,05% 366 2,794 20,31% 558 12,05% 367 2,794 20,31% 567 538 377 2,794 20,36% 567 367 <td>. .</td> <td>2,131</td> <td>16 58%</td> <td>463</td> <td>14.37%</td> <td>402</td> <td>62</td>	. .	2,131	16 58%	463	14.37%	402	62
2,794 17,43% 487 14,05% 393 2,794 17,75% 496 13,73% 388 2,794 18,07% 505 13,73% 384 2,794 18,07% 505 13,73% 384 2,794 18,07% 505 13,73% 379 2,794 18,03% 52,3 13,41% 375 2,794 19,03% 53,2 13,41% 375 2,794 19,03% 53,2 13,25% 376 2,794 19,03% 541 13,09% 365 2,794 19,03% 543 12,09% 366 2,794 19,03% 543 12,09% 366 2,794 19,99% 543 12,09% 367 2,794 20,31% 556 12,01% 357 2,794 20,31% 556 12,01% 367 2,794 20,31% 567 538 343 2,794 20,31% 567 538 343 2,794 21,56% 588 12,1	er u	102 C	17 11%	478	14.21%	397	81
2,794 17,75% 496 13,89% 388 2,794 18,07% 505 13,73% 384 2,794 18,07% 505 13,73% 379 2,794 18,03% 523 13,41% 375 2,794 19,03% 523 13,41% 375 2,794 19,03% 532 13,25% 376 2,794 19,03% 532 13,25% 376 2,794 19,03% 541 13,09% 366 2,794 19,03% 543 12,09% 366 2,794 19,99% 558 12,03% 361 2,794 19,99% 567 12,61% 357 2,794 20,31% 558 12,17% 357 2,794 20,31% 567 12,61% 357 2,794 20,31% 585 12,17% 352 2,794 20,63% 585 12,13% 339 2,794 21,26% 584 12,13% 333 2,794 21,26% 594 337 2,794 21,26% 585 12,13% 339 2,794 21,26% 594 21,3% 2,794	0 4	101.2	17 43%	487	14.05%	393	96
2,794 18.07% 505 13.73% 384 2,794 18.07% 505 13.57% 379 2,794 18.71% 523 13.41% 375 2,794 19.03% 532 13.41% 375 2,794 19.03% 532 13.25% 370 2,794 19.03% 532 13.25% 370 2,794 19.03% 532 13.09% 366 2,794 19.99% 549 12.09% 366 2,794 19.99% 567 12.61% 357 2,794 19.99% 567 12.61% 357 2,794 20.31% 567 12.61% 357 2,794 20.31% 567 12.61% 357 2,794 20.31% 567 12.61% 357 2,794 20.56% 585 12.77% 352 2,794 21.26% 594 333 2,794 21.26% 594 372 2,794 21.56% 585 12.13% 2,794 21.56% 594 333 2,794 21.56% 594 21.97% 2,794 21.56% 594 21.97% <		107 0	17 75%	496	13.89%	388	108
2,794 18.39% 514 13.57% 379 2,794 18.71% 523 13.41% 375 2,794 19.03% 532 13.25% 370 2,794 19.03% 532 13.25% 370 2,794 19.03% 532 13.25% 370 2,794 19.03% 541 13.09% 366 2,794 19.99% 558 12.77% 357 2,794 19.99% 556 12.61% 357 2,794 20.31% 556 12.61% 357 2,794 20.31% 556 12.61% 357 2,794 20.31% 567 12.61% 352 2,794 20.63% 585 12.77% 352 2,794 20.94% 585 12.13% 333 2,794 21.26% 594 12.13% 334 2,794 21.56% 594 12.13% 334 2,794 21.56% 594 12.13% 334 2,794 21.56% 594 2	- 0	2 704	18.07%	505	13.73%	384	121
2,794 18.71% 523 13.41% 375 2,794 19.03% 532 13.25% 370 2,794 19.03% 532 13.25% 370 2,794 19.03% 532 13.25% 370 2,794 19.05% 549 12.09% 366 2,794 19.99% 558 12.77% 357 2,794 19.99% 556 12.61% 357 2,794 20.31% 567 12.61% 357 2,794 20.31% 567 12.61% 357 2,794 20.31% 567 12.61% 352 2,794 20.63% 585 12.77% 352 2,794 21.26% 585 12.13% 333 2,794 21.26% 594 12.13% 334 2,794 21.56% 594 12.13% 334 2,794 21.56% 594 12.13% 334 2,794 21.56% 50% 612 11.97% 334 2,794 21.56% 5	• •	201.2	18.39%	514	·	379	135
2,794 19.03% 532 13.25% 370 2,794 19.03% 541 13.09% 366 2,794 19.67% 549 12.93% 361 2,794 19.99% 558 12.77% 357 2,794 19.99% 558 12.77% 357 2,794 19.99% 567 12.61% 357 2,794 20.31% 567 12.61% 352 2,794 20.31% 567 12.61% 352 2,794 20.63% 585 12.61% 343 2,794 20.94% 585 12.13% 333 2,794 21.26% 504 12.13% 333 2,794 21.56% 504 12.13% 333 2,794 21.56% 503 11.97% 334 2,794 21.56% 50% 612 11.87% 334 2,794 21.56% 50% 612 11.97% 334 2,794 21.56% 603 11.97% 334 2,794 21.9	n ç	2 704	18 71%	523	•	375	148
2,794 19.35% 541 13.09% 366 2,794 19.67% 549 12.93% 361 2,794 19.99% 558 12.77% 357 2,794 20.31% 567 12.61% 352 2,794 20.63% 576 12.45% 348 2,794 21.26% 594 12.13% 339 2,794 21.56% 503 11.97% 334 2,794 21.56% 603 11.97% 334 2,794 21.56% 603 11.97% 334 2,794 21.90% 612 11.81% 330	2:	101.0	19 03%	532	•	370	161
2,794 19.67% 549 12.93% 361 2,794 19.99% 558 12.77% 357 2,794 19.99% 567 12.61% 357 2,794 20.31% 567 12.61% 352 2,794 20.63% 576 12.45% 348 2,794 20.94% 585 12.45% 343 2,794 21.26% 594 12.13% 339 2,794 21.26% 594 12.13% 339 2,794 21.26% 594 12.13% 339 2,794 21.26% 503 11.97% 334 2,794 21.56% 603 11.97% 334 2,794 21.56% 603 11.97% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.41% 334 2,794 21.90% 612 11.41%	= \$	101.2	19.35%	541	·	366	175
2,734 19.99% 558 12.77% 357 357 2,794 19.99% 567 12.61% 352 2,794 20.31% 567 12.61% 352 2,794 20.63% 576 12.45% 348 2,794 20.94% 585 12.45% 343 2,794 21.26% 594 12.13% 339 2,794 21.26% 594 12.13% 339 2,794 21.26% 594 12.13% 339 2,794 21.26% 594 12.13% 339 2,794 21.56% 603 11.97% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.41% 334	<u>4</u> ;	2 704	10 67%	549	•		188
2,734 20.31% 567 12.61% 352 2,794 20.63% 576 12.45% 348 2,794 20.94% 585 12.45% 343 2,794 21.26% 594 12.13% 339 2,794 21.26% 594 12.13% 339 2,794 21.56% 594 12.13% 339 2,794 21.56% 60.3 11.97% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 330 2,794 21.90% 612 11.81% 330 2,794 21.90% 612 11.81% 330 2,794 21.90% 612 11.485 7,449	2:	2012	19.994	558	·		202
2,794 20.63% 576 12.45% 348 2,794 20.94% 585 12.29% 343 2,794 21.26% 594 12.13% 339 2,794 21.26% 594 12.13% 339 2,794 21.56% 603 11.97% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 334 2,794 21.90% 612 11.81% 330 2,794 21.90% 612 11.81% 330 2,794 21.90% 612 11.81% 330 2,794 21.90% 612 11.81% 330 2,794 21.90% 612 11.81% 330 2,794 21.90% 612 7,449 Total Years 120 10,485 7,449	± ¥	FC1'3	20.31%	567			215
2,794 20.94% 585 12.29% 343 2,794 21.26% 594 12.13% 339 2,794 21.58% 603 11.97% 334 2,794 21.58% 612 11.81% 330 7,449 Total Years 1-20 10,485 7,449	<u> </u>		20.63%	576			226
2,794 21.26% 594 12.13% 339 2,794 21.56% 603 11.97% 334 2,794 21.90% 612 11.81% 330 Total Years 1-20 10,485 7,449	2 Ç		20.94%	585			242
2,794 21.58% 603 11.97% 334 2.794 21.58% 603 11.91% 330 2.794 21.90% 612 11.81% 330 7.449 Total Years 1-20 10,485 7,449			21.26%	294			255
2,794 21.90% 612 11.81% 330 7 Total Years 1-20 10,485 7,449	2 \$			603			269
10,485 7,449 524 372	502			612			28
504 372		Total Years 1-	-20	10,485		7,449	
			al Acros	52		372	152

•

West Belle Pass Headland Re	estoration (PTE-27)
-----------------------------	---------------------

Total First Cost	\$4,187,400
Total Fully Funded Cost	\$4,854,100

Annual Charges	Present Worth	Average <u>Annual*</u>
Interest & Amortization	\$4638,200	\$490,100
Monitoring	40,900	4,300
O&M cost	71,000	
Other Costs	0	0
Total	\$4,750,100	\$501,900
Average Annual Habitat Uni	ts	216
Cost per Habitat Unit		\$2,325
Average Annual Acres of En	nergent Marsh	336

*Interest rate of 8.5 percent over a 20-year project life

West Belle Pass Restoration (PTE-27)

First Lusts and Annual Charges

	Fiscal	Engineering	Easements	Supervision &	Supervision			Total First
Year	Үөаг	& Design	& Land Rights	Administration	& Inspection	& Inspection Contingency	Construction	Cost
5 Compound		0 \$	2 0	0\$	\$0	\$0	3	0 \$
4 Compound			\$0	\$0	\$0	. \$0	\$ 0	3
3 Compound		. 0 5	95	0\$	\$0	\$0	\$ 0	3
2 Compound	1993	\$ 85,714	\$121,000	\$52,533	\$0	\$0	%	\$259,248
1 Compound	1994	\$64,286	9	\$144,467	\$ 235,000	\$696,875	\$2,787,500	\$3,928,127
Base Year								
	TOTAL	\$150,000	\$121,000	\$197,000	\$235,000) \$ 696,875	\$2,787,500	\$4,187,375
	Fiscal	Monitoring	0&M	Other				
Үөаг	Үөаг	Costs	Costs	Costs				
1 Discount	1995	\$4,325	\$7,500					
2 Discount	1996	\$4,325	\$7,500	\$ 0				
3 Discount	1997	\$4,325	\$7,500	\$ 0				
4 Discount	1998	\$4,325	\$7,500	\$ 0				
5 Discount	1999	\$4,325	\$7,500					
6 Discount	2000	\$4 ,325	\$7,500	\$ 0				
7 Discount	2001	\$4,325	\$7,500					
8 Discount	2002	\$4,325	\$7,500					
9 Discount	2003	\$4,325	\$7,500					
10 Discount	2004	\$4,325	\$7,500					
11 Discount	2005	\$4,325	\$7,500	\$				
12 Discount	2006	\$4 ,325						
13 Discount	2007	\$4,325						
14 Discount	2008	\$4,325	\$7,500	•••				
15 Discount	2009	\$4,325						
16 Discount	2010	\$4,325		0 \$				
17 Discount	2011	\$4,325	\$7,500	\$ 0				
18 Discount	2012							
19 Discount	2013		\$7,500					
20 Discount	2014	\$4,325						
•	Total	\$86,500	\$150,000	0\$				

Costs amortized over 20 year operation life

18--Sept--92

West Belle Pass Restoration (PTE-27)

\$4,638,186

Present Valued Costs	sts	Total Discounted Costs	ad Costs	\$4,638,186	A	Amortized Costs		4400,111
Compound Year Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Engineering Easements Supervision & Supervision First Cost & Design & Land Rights Administration & Inspection Contingency Construction 50	Supervision & Inspection C	ontingency Co	First Cost Construction \$0	Total First Cost \$0
5 1.504 4 1.386	00	2 2 2	000	80 80 80	05	05	\$ 0	\$0 \$
3 1.277 2 1.177	1993	\$100,905	\$142,444 \$0			\$0 \$756,109	\$3,024,438	\$305,193 \$4,262,018
	Fotal 1934		\$142,	\$218,590	\$254,975	\$756,109	\$3,024,438	112'/96'5\$
				Ċ				

. .

\$490,117

Amortized Costs

×		9	0 \$	50				9	9	3	9	9	3	9	%	3	3	3	3	8	3	3	9	0 \$
O&M Other	Costs Costs	\$6,912	56.371	€5 870		\$5,412	\$4 ,988	\$4,597	\$4,237	\$3,905	\$3,599	\$3,317	\$3,057	\$2,818	\$2,597	\$2,394	\$2,206	\$2,033	\$1,874	\$1,727	\$1,592	\$1.467	\$70,975	\$7,500
Monitoring	Costs	\$ 3,986	A7 674		13,380	\$ 3,121	\$2,876	\$2,651	\$2,443	\$2,252	\$2,075	\$1,913	\$1,763	\$1,625	\$1,498	5 1,380	\$1 272	5 1.172	5 1,081	\$ 996	5 918	\$846	\$40,929	\$4,325
Fiscal	Year	1995	3001	0661	1661	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2012	Total	len
Discount	Dates	0.00	776.0	0.849	0.783	0.722	0.665	0.613	0.00	0.000	0.36.0			001-0	0.010		0.00	120.0	0.250	0.230	0.10	0.406		Averade Annual
Ö			- 1	- 2	- C	4	r u2	י ה ו	0 P 	- a I	0 C	ה מ ו	2:	= \$	29			0 1 1		2 9	0	- 19	02 -	

Costs amortized over 20 year operation life

West Belle Pass Restoration (PTE-27)

Fully F	Fully Funded Costs		Total Fully Funded Costs	ded Costs	\$4,854,102	×	Amortized Costs	sts	\$512,933
Үөаг	Inflation Factor	Fiscal Year	Engineering & Destan	Easements & Land Rights	Engineering Easements Supervision & Supervision & Desion & Land Richts Administration & Inspection Contingency Construction	Supervision & Inspection C	Contingency	First Cost Construction	Total First Cost
5		O	50	S 0	\$ 0	\$ 0	\$0	· 0 \$	9 \$
•			05	05	\$0	\$0	2 0	0 \$	9 \$
·		0	9	9 0	2 0	0 \$	\$0	0 \$	3
	1 042	1993	\$89.314	\$126.082	\$54,740	\$0	\$0	\$ 0	\$270,136
	1.075	1994	\$69,129	0\$	~	\$252,706	\$749,380	\$2,997,521	\$4,224,088
	10	TOTAL	\$158,444	\$126,082				\$2,997,521	\$ 4,494,224
		Fiscal	Monitoring	O&M	Other				
Үөаг	Factor	Үөаг	Costs	Costs	Costs				
1	1 110	1995	54 ,800	\$ 8,323	%				

		9	\$	Ş	8	30	\$	3	\$	8	8	Ş	8	8	8	8	3	8	8	8	8	\$ 0
Other	Costs																					
O&M	Costs	\$8,323	\$ 8,590	\$8,864	\$9,148	\$9,441	\$9,743	\$10,055	\$10,376	\$10,708	\$11,051	\$11,405	\$11,770	\$12,146	\$12,535	\$12,936	\$13,350	\$13,777	\$14,218	\$14,673	\$15,143	\$228.252
Monitoring	Costs	\$4,800	\$4 ,953	\$5,112	\$5,275	\$5,444	\$5,618	\$5,798	\$5,984	\$6,175	\$6,373	\$6,577	\$6,787	\$7,004	\$7,229	\$7,460	\$7,699	\$7,945	\$8,199	\$8,462	\$8,732	\$131,626
Fiscal	Үөаг	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Inflation	Factor	1.110	1.145	1.182	1.220	1.259	1.299	1.341	1.384	1.428	1.473	1.521	1.569	1.620	1.671	1.725	1.780	1.837	1.896	1.956	2.019	
	Year	-	- 2	. .	4	5-	9	- 7	80	6 	- 10	Ξ	- 12	- 13	14	- 15	- 16	- 17	- 18	- 19	- 20	

Costs amortized over 20 year operation life

ł

_

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

West Belle Pass Restoration (PTE-27)

Marsh Type: Saline

0	Acres	% Acreage Vegetated	Vegetated Acres	% Acreage Vegetated	vegetated Acres.	ACIES
,	2,459	65.07%	1,600	65.07%	1,600	0
-	2 459	72 22%	1.776	64.09%	1,576	200
- ເ	9 459	71.84%	1.767	63.12%	1,552	214
1 6	9 459	71.45%	1.757	62.16%	1,528	229
•	9 459	71 07%	1.748	61.19%	1,505	243
r v	2 459	70.68%	1.738	60.22%	1,481	257
5 4	9 459	70.30%	1.729	59.25%	1,457	272
~ ~	2.459	%16 89	1,719	58.29%	1,433	286
- 0	2.459	69.53%	1.710	57.32%	1,409	300
о т	2 459	69.14%	1.700	56.35%	1,386	315
, t	2 459	68.76%	1,691	55.38%	1,362	329
2 =	2 459	68.37%	1,681	54.42%	1,338	343
: :	2 459	67.99%	1,672	53.45%	1,314	357
: =	2 459	67,60%	1.662	52.48%	1,291	372
2 4	2 459	67.22%	1.653	51.51%	1,267	386
i t	2 459	66.83%	1.643	50.55%	1,243	004
16	2,459	66.45%	1,634	49.58%	1,219	415
: 5	2 459	66.06%	1.624	48.61%	-	429
: #	2.459	65.67%	1,615	47.64%	-	644
19	2,459	65.29%	1,605	46.68%	1,148	458
20	2,459	64.90%	1,596	45.71%	1,124	472
Total Y	Total Years 1–20	8	33,720		27,000	
	Autoro Acoust Acres		1 686		1.350	336

Costs amortized over 20 year operation life

West Belle Pass Restoration (PTE-27)

Summation of Emergent Marsh Acreages

Acres Vegetated Acres Acres Vegetated Acres Acres			With Project	Vegetated	% Acreage	Vegetated	Net
2,459 65.07% 1,600 65.07% 1,576 2,459 72.22% 1,776 64.09% 1,576 2,459 71.84% 1,767 63.12% 1,552 2,459 71.84% 1,767 63.12% 1,552 2,459 71.07% 1,748 61.19% 1,552 2,459 70.30% 1,738 60.22% 1,481 2,459 69.91% 1,719 58.25% 1,481 2,459 69.91% 1,719 58.25% 1,461 2,459 69.14% 1,710 57.32% 1,463 2,459 69.14% 1,710 57.32% 1,409 2,459 68.76% 1,601 55.38% 1,386 2,459 68.76% 1,601 55.34.5% 1,336 2,459 66.06% 1,661 54.42% 1,338 2,459 66.06% 1,661 54.42% 1,338 2,459 67.00% 1,662 53.45% 1,291 2,459 66.06% 1,661 54.42% 1,338 <	ears	ACres .	Vegetated	Acres	Vegetated	Acres	. Acres
2,459 72.22% 1,776 64.09% 1,576 2,459 71.84% 1,767 63.12% 1,552 2,459 71.07% 1,748 61.19% 1,552 2,459 70.068% 1,738 60.22% 1,481 2,459 70.068% 1,738 60.22% 1,481 2,459 70.068% 1,729 59.25% 1,481 2,459 69.31% 1,710 57.32% 1,481 2,459 69.14% 1,710 57.32% 1,481 2,459 69.14% 1,710 57.32% 1,481 2,459 69.14% 1,710 57.32% 1,433 2,459 63.37% 1,710 57.32% 1,409 2,459 63.37% 1,691 55.38% 1,346 2,459 67.99% 1,672 53.36% 1,362 2,459 67.09% 1,661 54.42% 1,314 2,459 67.22% 1,631 56.36% 1,314 2,459 67.22% 1,661 55.38% 1,362	0	2,459	65.07%	1,600	65.07%	1,600	0
2,459 71,04% 1,767 63.12% 1,552 2,459 71,07% 1,748 61.19% 1,552 2,459 70.60% 1,748 61.19% 1,552 2,459 70.60% 1,748 61.19% 1,505 2,459 70.30% 1,729 59.25% 1,481 2,459 69.91% 1,710 57.32% 1,481 2,459 69.14% 1,710 57.32% 1,409 2,459 69.14% 1,710 57.32% 1,409 2,459 69.14% 1,700 56.35% 1,409 2,459 68.37% 1,710 57.32% 1,386 2,459 67.99% 1,691 54.42% 1,386 2,459 67.60% 1,662 55.38% 1,338 2,459 67.60% 1,662 55.345% 1,367 2,459 66.63% 1,662 55.44% 1,291 2,459 66.683% 1,662 55.44% 1,291 2,459 66.683% 1,662 55.44% 1,291	-	2 459	72.22%	1,776	64.09%	1,576	200
2,459 71,45% 1,757 62,16% 1,528 2,459 71,07% 1,748 61,19% 1,505 2,459 70,30% 1,729 59,25% 1,467 2,459 69,91% 1,719 58,29% 1,467 2,459 69,91% 1,710 57,32% 1,461 2,459 69,91% 1,710 57,32% 1,403 2,459 69,14% 1,710 57,32% 1,403 2,459 69,14% 1,700 56,35% 1,403 2,459 63,37% 1,710 57,32% 1,403 2,459 63,37% 1,601 55,38% 1,366 2,459 66,45% 1,612 53,45% 1,267 2,459 66,45% 1,615 47,64% 1,172 2,459 66,45% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,124 2,459 65,67% 1,615 4,64% 1,126 <tdt< td=""><td>- ~</td><td>2,459</td><td>71.84%</td><td>1.767</td><td>63.12%</td><td>1,552</td><td>214</td></tdt<>	- ~	2,459	71.84%	1.767	63.12%	1,552	214
2,459 71,07% 1,748 61,19% 1,505 2,459 70,66% 1,738 60,22% 1,461 2,459 69,91% 1,719 58,25% 1,461 2,459 69,91% 1,719 58,29% 1,461 2,459 69,91% 1,710 57,32% 1,461 2,459 69,14% 1,710 57,32% 1,403 2,459 69,14% 1,710 57,32% 1,403 2,459 68,76% 1,691 55,36% 1,403 2,459 68,76% 1,691 55,34% 1,346 2,459 67,60% 1,681 54,42% 1,346 2,459 66,63% 1,672 53,45% 1,267 2,459 66,63% 1,662 52,48% 1,243 2,459 66,65% 1,615 47,64% 1,172 2,459 66,65% 1,615 47,64% 1,124 2,459 65,67% 1,615 47,64% 1,122 2,459 65,67% 1,615 47,64% 1,122 <td< td=""><td>1 07</td><td>2.459</td><td>71.45%</td><td>1,757</td><td>62.16%</td><td>1,528</td><td>229</td></td<>	1 07	2.459	71.45%	1,757	62.16%	1,528	229
2,459 70,68% 1,738 60.22% 1,481 2,459 69.91% 1,719 59.25% 1,457 2,459 69.91% 1,710 57.32% 1,467 2,459 69.91% 1,710 57.32% 1,403 2,459 69.14% 1,710 57.32% 1,403 2,459 69.14% 1,700 56.35% 1,403 2,459 68.76% 1,691 55.38% 1,366 2,459 68.37% 1,700 56.35% 1,316 2,459 67.60% 1,681 54.42% 1,362 2,459 66.83% 1,672 53.45% 1,267 2,459 66.45% 1,615 49.58% 1,267 2,459 66.65% 1,615 47.64% 1,172 2,459 65.67% 1,615 47.64% 1,172 2,459 65.67% 1,615 47.64% 1,124 2,459 65.67% 1,615 47.64% 1,122 2,459 65.67% 1,615 4.64% 1,122 <tdt< td=""><td>•</td><td>2 459</td><td>71.07%</td><td>1.748</td><td>61.19%</td><td>1,505</td><td>243</td></tdt<>	•	2 459	71.07%	1.748	61.19%	1,505	243
2,459 70,30% 1,729 59,25% 1,457 2,459 69,91% 1,710 57,32% 1,457 2,459 69,14% 1,710 57,32% 1,403 2,459 69,14% 1,710 57,32% 1,403 2,459 69,14% 1,700 56,35% 1,403 2,459 68,76% 1,691 55,38% 1,366 2,459 67,99% 1,681 54,42% 1,362 2,459 67,60% 1,681 54,42% 1,314 2,459 67,60% 1,662 53,45% 1,267 2,459 66,63% 1,672 53,45% 1,267 2,459 66,63% 1,662 52,48% 1,243 2,459 66,66% 1,662 52,48% 1,243 2,459 66,06% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,128 <td< td=""><td>· va</td><td>2.459</td><td>70.68%</td><td>1,738</td><td>60.22%</td><td>1,481</td><td>257</td></td<>	· va	2.459	70.68%	1,738	60.22%	1,481	257
2,459 69.91% 1,719 58.29% 1,433 2,459 69.14% 1,710 57.32% 1,403 2,459 69.14% 1,710 57.32% 1,403 2,459 69.14% 1,700 56.35% 1,366 2,459 68.76% 1,691 55.38% 1,366 2,459 68.37% 1,681 54.42% 1,366 2,459 67.60% 1,681 54.42% 1,314 2,459 67.60% 1,672 53.45% 1,314 2,459 66.83% 1,672 53.45% 1,267 2,459 66.83% 1,653 51.51% 1,267 2,459 66.65% 1,615 47.64% 1,172 2,459 65.67% 1,615 47.64% 1,172 2,459 65.67% 1,615 47.64% 1,172 2,459 65.67% 1,605 46.68% 1,148 2,459 65.67% 1,605 46.68% 1,148 2,459 65.29% 1,605 46.68% 1,148 <td< td=""><td></td><td>2.459</td><td>70.30%</td><td>1,729</td><td>59.25%</td><td>1,457</td><td>272</td></td<>		2.459	70.30%	1,729	59.25%	1,457	272
2,459 69,53% 1,710 57,32% 1,409 2,459 69,14% 1,700 56,35% 1,386 2,459 68,76% 1,691 55,38% 1,362 2,459 68,37% 1,691 55,38% 1,362 2,459 67,99% 1,672 53,45% 1,314 2,459 67,60% 1,672 53,45% 1,314 2,459 67,60% 1,662 53,45% 1,291 2,459 66,83% 1,653 51,51% 1,291 2,459 66,66% 1,653 51,51% 1,243 2,459 66,66% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,172 2,459 65,67% 1,605 46,68% 1,148 2,459 65,67% 1,605 46,68% 1,148 2,459 65,67% 1,596 4,51% 1,124 2,459 65,67% 1,596 4,64% 1,122 2	~	2.459	69.91%	1,719	58.29%	1,433	286
2,459 69,14% 1,700 56.35% 1,386 2,459 68,77% 1,691 55.38% 1,362 2,459 68,37% 1,691 55.38% 1,362 2,459 67,99% 1,672 53,45% 1,314 2,459 67,60% 1,662 53,45% 1,314 2,459 67,60% 1,662 53,45% 1,291 2,459 66,83% 1,653 51,51% 1,291 2,459 66,83% 1,643 50,55% 1,243 2,459 66,06% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,172 2,459 65,67% 1,605 46,68% 1,148 2,459 65,67% 1,596 45,64% 1,124 2,459 65,07% 1,596 4,51% 1,124 2,459 65,07% 1,596 4,51% 1,148 2		2,459	69.53%	1,710	57.32%	1,409	306
2,459 68.76% 1,691 55.38% 1,362 2,459 68.37% 1,681 54.42% 1,348 2,459 67.99% 1,672 53.45% 1,314 2,459 67.60% 1,662 53.45% 1,314 2,459 67.60% 1,662 53.45% 1,291 2,459 66.83% 1,653 51.51% 1,267 2,459 66.83% 1,653 51.51% 1,267 2,459 66.06% 1,615 47.64% 1,172 2,459 65.67% 1,615 47.64% 1,172 2,459 65.67% 1,615 47.64% 1,172 2,459 65.67% 1,615 47.64% 1,172 2,459 65.29% 1,605 46.68% 1,148 2,459 65.29% 1,505 46.68% 1,148 2,459 65.29% 1,505 46.68% 1,148 2,459 65.29% 1,505 46.68% 1,148 2,459 65.29% 1,505 46.68% 1,148 <td< td=""><td>) on</td><td>2.459</td><td>69.14%</td><td>1,700</td><td>56.35%</td><td>1,386</td><td>315</td></td<>) on	2.459	69.14%	1,700	56.35%	1,386	315
2,459 68,37% 1,681 54,42% 1,338 2,459 67,99% 1,672 53,45% 1,314 2,459 67,60% 1,662 53,45% 1,314 2,459 67,60% 1,662 53,45% 1,291 2,459 66,83% 1,653 51,51% 1,267 2,459 66,83% 1,643 50,55% 1,243 2,459 66,06% 1,615 47,64% 1,195 2,459 65,67% 1,615 47,64% 1,172 2,459 65,67% 1,615 46,68% 1,148 2,459 65,67% 1,605 46,68% 1,172 2,459 65,29% 1,605 46,68% 1,172 2,459 65,29% 1,505 46,68% 1,172 2,459 65,29% 1,596 45,71% 1,124 2,459 64,90% 1,596 45,71% 1,124 2,459 63,00% 1,596 45,71% 1,124 2,459 64,90% 1,596 45,71% 1,124 <td< td=""><td>0</td><td>2.459</td><td>68.76%</td><td>1,691</td><td>55.38%</td><td>1,362</td><td>329</td></td<>	0	2.459	68.76%	1,691	55.38%	1,362	329
2,459 67,99% 1,672 53,45% 1,314 2,459 67,60% 1,662 52,48% 1,291 2,459 66,83% 1,662 52,48% 1,291 2,459 66,83% 1,653 51,51% 1,267 2,459 66,83% 1,643 50,55% 1,243 2,459 66,06% 1,615 47,64% 1,195 2,459 65,67% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,172 2,459 65,29% 1,605 46,68% 1,148 2,459 65,29% 1,505 46,68% 1,172 2,459 65,29% 1,505 46,68% 1,124 2,459 63,20% 1,596 45,11% 1,124 2,459 64,90% 1,596 45,11% 1,124 2,459 64,90% 1,596 45,11% 1,124 2,459 64,00% 1,596 45,11% 1,124 <td< td=""><td>: =</td><td>2.459</td><td>68.37%</td><td>1,681</td><td>54.42%</td><td>1,338</td><td>343</td></td<>	: =	2.459	68.37%	1,681	54.42%	1,338	343
2,459 67,60% 1,662 52,48% 1,291 2,459 66,83% 1,653 51,51% 1,267 2,459 66,83% 1,643 50,55% 1,243 2,459 66,66% 1,643 50,55% 1,243 2,459 66,66% 1,634 49,58% 1,219 2,459 66,06% 1,615 47,64% 1,172 2,459 65,67% 1,615 47,64% 1,172 2,459 65,29% 1,605 46,68% 1,148 2,459 65,29% 1,505 46,68% 1,172 2,459 65,29% 1,505 46,68% 1,172 2,459 65,29% 1,505 45,71% 1,124 2,459 65,29% 1,505 45,71% 1,124 2,459 63,20% 1,596 45,71% 1,124 2,459 63,00% 1,596 45,71% 1,124 2,459 63,00% 1,596 45,71% 1,124 2,459 63,71% 1,596 45,71% 1,124	: -	2.459	67.99%	1,672	53.45%	1,314	351
2,459 67,22% 1,653 51,51% 1,267 2,459 66,83% 1,643 50,55% 1,243 2,459 66,66% 1,634 49,58% 1,219 2,459 66,06% 1,615 47,64% 1,195 2,459 65,67% 1,615 47,64% 1,172 2,459 65,29% 1,605 46,68% 1,148 2,459 65,29% 1,605 46,68% 1,148 2,459 65,29% 1,505 46,68% 1,148 2,459 65,29% 1,505 46,68% 1,148 2,459 63,20% 1,505 45,71% 1,124 2,459 64,90% 1,596 45,71% 1,124 2,459 63,20% 1,596 45,71% 1,124 2,459 63,20% 1,596 45,71% 1,124 2,459 63,00% 1,596 45,71% 1,124 2,459 63,00% 1,596 45,71% 1,124	1	2 459	67.60%	1,662	52.48%	1,291	373
2,459 66.83% 1,643 50.55% 1,243 2,459 66.45% 1,634 49.58% 1,219 2,459 66.06% 1,615 47.64% 1,172 2,459 65.67% 1,615 47.64% 1,172 2,459 65.29% 1,605 46.68% 1,148 2,459 65.29% 1,505 46.68% 1,148 2,459 65.29% 1,505 45.68% 1,148 2,459 64.90% 1,596 45.71% 1,124 2,459 64.90% 1,596 45.71% 1,124 2,459 63.09% 1,596 45.71% 1,124 2,459 63.09% 1,596 45.71% 1,124 2,459 63.09% 1,596 45.71% 1,124	2	2,459	67.22%	1,653	51.51%	1,267	386
2,459 66.45% 1,634 49.58% 1,219 2,459 66.06% 1,624 48.61% 1,195 2,459 65.67% 1,615 47.64% 1,172 2,459 65.29% 1,605 46.68% 1,148 2,459 65.29% 1,505 45.68% 1,148 2,459 64.90% 1,596 45.71% 1,124 2,459 64.90% 1,596 45.71% 1,124 2,459 63.09% 1,596 45.71% 1,124 2,459 63.90% 1,596 45.71% 1,124 2,459 63.90% 1,596 45.71% 1,124 2,459 64.90% 1,596 45.71% 1,124 2,459 64.90% 1,596 45.71% 1,124	5	2 459	66.83%	1.643	50.55%	1,243	400
2,459 66.06% 1,624 48.61% 1,195 2,459 65.67% 1,615 47.64% 1,172 2,459 65.29% 1,605 46.68% 1,148 2,459 64.90% 1,596 45.71% 1,124 2,459 64.90% 1,596 45.71% 1,124 2,459 64.90% 1,596 45.71% 1,124 2,459 64.90% 1,596 45.71% 1,124 Autorial Acres 1,596 45.71% 1,124	5 1	2.459	66.45%	1,634	49.58%	1,219	414
2,459 65,67% 1,615 47,64% 1,172 2,459 65,29% 1,605 46,68% 1,148 2,459 64,90% 1,596 45,71% 1,124 2,459 64,90% 1,596 45,71% 1,124 70tal Years 1-20 33,720 27,000 27,000	1	2.459	66.06%	1,624	48.61%	1,195	429
2,459 65.29% 1,605 46.68% 1,148 2,459 64.90% 1,596 45.71% 1,124 2,459 64.90% 1,596 45.71% 1,124 Total Years 1-20 33,720 27,000 1,350	. 6	2.459	65.67%	1,615	-	1,172	44
2,459 64.90% 1,596 45.71% 1,124 Total Years 1 - 20 33,720 27,000	6	2 459	65.29%	1,605	•	1,148	45(
33,720 27,000 1.886 1.350	50 50	2,459	64.90%	1,596		1,124	472
1 686 1,350		fotal Years 1-	20	33,720		27,000	
		Morana Annua	I Acres	1 686		1,350	336

Costs amortized over 20 year operation life

• •

Barrier Island Restoration, Isle Dernieres, Phase 1 (XTE-41)

Total First Cost	\$6,339,400
Total Fully Funded Cost	\$6,907,900

Annual Charges	Present Worth	Average <u>Annual</u> *
Interest & Amortization	\$6,991,100	\$738,800
Monitoring	10,900	4,300
O&M cost	0	0
Other Costs	0	0 00
Total	\$7,032,000	\$743,100
Average Annual Habitat Unit	ts	120
Cost per Habitat Unit		\$6,195
AverageA Annual Acres of Em	ergent Marsh	

*Interest rate of 8.5 percent over a 20-year project life

Isle Deniers Island Phase I (XTE-41)

\$0 \$0 \$1,223,387 \$5,116,039

Total First Cost \$6,339,426

First Costs and Annual Charges

 Tual 5 Compound 4 Compound 3 Compound 2 Compound 1 Compound Base Year TOTAL 	1 9 4 1	o nasigu					
		S.	. 50	5 0	0\$ 0\$	05	0\$
		0 5		\$ 0			\$ 0
		3	\$ 0	\$0	9 \$ 0	\$ 0	\$ 0
	1993	\$266,365	\$ 6,000	\$114,741	\$37,195	\$38,052	\$761,035
_	1994	\$0	0 \$		\$223,170	\$228,310	\$4,566,209
101							
	Ļ	\$266,365	\$6,000	\$213,090	\$260,365	\$266,362	\$5,327,244
L.	Fiscal	Monitoring	O&M	Other			
	Үөаг	Costs	Costs	Costs			
Discount	1995	\$4,325	3	9	,		
2 Discount	1996	\$4,325	\$ 0	\$ 0			
3 Discount	1997	\$4,325	\$0	\$ 0			
4 Discount	1998	\$4,325	\$0	\$ 0			
5 Discount	1999	\$4,325	\$ 0	\$ 0			
6 Discount	2000	\$4,325	\$ 0	9			
7 Discount	2001	\$4,325	\$ 0				
8 Discount	2002	\$4,325	\$ 0				
9 Discount	2003	\$4,325	\$ 0				
10 Discount	2004	\$4,325	3	9			
11 Discount	2005	\$4,325	2 0				
12 Discount	2006	\$4,325	\$ 0				
3 Discount	2007	\$4,325	\$ 0				
4 Discount	2008	\$4,325	\$ 0				
15 Discount	2009	\$4,325	\$0				
16 Discount	2010	\$4,325	\$ 0				
17 Discount	2011	\$4,325	0\$	\$ 0	_		
8 Discount	2012	\$4,325	\$ 0	\$ 0			
19 Discount	2013	\$4,325	\$ 0	3			
20 Discount	2014	\$4,325	\$ 0	9 5			
Total		\$86,500	\$ 0	0 \$			

Costs amortized over 20 year operation life

Costs amortized over 20 year operation life

;

8

\$4,325

Average Annual

\$738,750	Total Firct		2 0	\$ 0			\$1,440,202	\$5,550,902	\$6,991,104																										
its		Construction	50			0 \$	\$895,909	SA 954 337	65 850 246																										
Amortized Costs						0 \$	244 795	717 712	6100 E 10	710'7674																									
•		Supervision Lissection Continuency			3	2 0	CA3 787		\$242,133	076'0974																						_	_		-
1 Costs 56,991,104		Supervision &			\$	50	220 3014	0/0/0514	\$100,709	\$241,785	Other		COSIS	0.4		\$ 0	2 0																		\$ 0
1 Costs								\$7,063	3	\$7,063	0.8M	50	Costs	%	\$ 0	\$0	95																9	3	\$ 0
Total Disconneted Gosts		Ð	- 1	3	99			\$313,572	0 \$	\$313,572			Costs	\$3,986	\$3.674	\$3 386	*3 101	171'rt	\$2'B/0	\$2,651	\$2,443	\$2,252	\$2,075	\$1,913	\$1,763	\$1,625	\$1,498	\$1,380	\$1,272				\$918	\$846	\$4 0,929
			Year	0		> (•	1993	1994	Total	i	FISCAL	Year	1995	1996	1001	1001	9661	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
	Present Valued Costs	Compound	Rates	1 504		1.386	1.277	1.177	1.085			Discount	Rates	0.0			0./83	0.722	0.665	0.613	0.565	a 0.521						A 0.319							
1	Preser	-	Year	4	י ר	4	e	2		-			Year		- c	1	1	4	S 1	9-	L	1	1	- 10	: =	- 13	- 13	- 14	- 15	- 1 1 - 1	2 7	a f		- 6	N I

Coastal Wetlands Planning, Protection, and Restoration Act Priority Project List II

Isle Deniers Island Phase I (XTE-41)

Isle Deniers Island Phase I (XTE-41)

۰.

\$729,957	First Cost Total First	Construction Cost	\$0	\$ 0 \$ 0	\$0 \$0	\$792.998 \$1,274,770		\$ 5,703,24 4 \$ 6,776,271																						
Amortized Costs	Firs	Contingency Cons	\$0	\$ 0	0 \$	3 39 650																								
-	Supervision	& Inspection Contingency	2 0	\$ 0	\$0	S 38 757	\$239,985	\$278,742																			_	_	_	
\$6,907,897	Supervision &	Administration	\$0	S 0	2 0	C119 560	\$105 759	\$225,319	Other	Costs	\$ 0	0\$	0 \$	9 5	\$ 0	\$	\$	\$ 0	9											
ed Costs	Easements	s	1			66 767	207'0 6	\$6,252	O&M	Costs	%	9	9	\$ 0	\$ 0	\$ 0	Ó \$	\$ 0	9	9	\$ 0	\$ 0	9	\$ 0	9	9	\$ 0	9 5	\$ 0	
Total Fully Funded Costs	Encineering		5	5			766'117 4	\$217,552	Monitoring	Costs	\$4,800	\$4,953	\$5,112	\$5,275	\$5,444	\$5,618	\$5,798	\$5,984	\$6,175	\$6,373	\$6,577	\$6,787	\$7,004	\$7,229	\$7,460	\$7,699	\$7,945	\$ 8,199	\$8,462	
		Year					5991 1990	TOTAL	Fiscal	Yaar	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	I
Fully Funded Costs	Inflation	Eactor	- 4000				1.042	TC	Inflation	Factor	1.110	1.145	1.182	1.220	1.259	1.299	1.341	1.384	1.428	1.473	1.521	1.569	1.620	1.671	1.725	1.780	1.837	1.896	1 956	
Fully Fi		Voar		י ר י	e (。	~ ~	-		Үөаг	ī	-2	- C	4	ري آ	91	- 1	- 60	6-	- 10	Ţ	- 12	-13	- 14	- 15	- 16	- 17	- 18	- -	

Costs amortized over 20 year operation life

18-Sept-92

Isle Deniers Island Phase I (XTE-41)

Marsh Type: Saline (Phase I)

• •

Years	Acres	% Acreage Vegetated	Vegetated Acres	% Acreage Vegetated	Vegetated Acres	Net Acres
0	776	24.87%	193	24.87%	193	0
-	776	31,19%	242	23.07%	179	63
- ~	176	30,80%	239		165	74
1 63	776	30.41%	236	19.46%	151	85
•	776	30.03%	233	17.65%	137	96
r uf	776	29.64%	23(•	123	107
, (2)	776	29.25%	227	14.05%	109	118
~	776	28.87%	22		96	129
	776	28.48%	22	10.44%	81	140
	176	28,09%	218	3 8.63%	67	151
0	776	27.71%	215	6.83%	53	162
2 =	776	27.32%	213	5.03%	9 6	173
: 9	776	25.86%	50	1 3.35%	26	175
: 5	776	24.40%	189	1.68%	13	176
2 7	776	22.94%	178		0	178
5	776	21.46%	167	7 0.00%	0	167
9 19	776	19.97%	155	5 0.00%	0	155
: 1	776	18.49%	144	4 0.00%	0	144
. 81	776	17.01%	132	2 0.00%	0	132
61	776	15.53%	121	1 0.00%	0	121
20	176	14.05%	109	%00.0 6	0	109
•-	Total Years 1–20	20	3,892	5	1,238	
					ç	101

•

Isle Deniers Island Phase I (XTE-41)

Summation of Emergent Marsh Acreages

۰.

• •

7% 193 24.87% 9% 242 23.07% 9% 242 23.07% 1% 193 24.87% 1% 242 23.07% 1% 233 19.46% 1% 233 17.65% 1% 233 17.65% 1% 223 19.46% 1% 233 17.65% 1% 221 14.05% 2% 221 10.44% 1% 215 6.83% 2% 211 3.35% 1% 178 0.00% 1% 178 0.00% 1% 121 0.00% 1% 121 0.00% 1% 121 0.00% 1% 121 0.00% 1% 121 0.00% 1% 132 0.00% 1% 132 0.00% 1% 195 0.00%			% Acreage	Vegetated	% Acreage	Vegetated Acres	Net Acres
776 31.19% 242 23.07% 179 776 30.41% 239 21.26% 165 776 30.41% 233 17.65% 131 776 30.03% 233 17.65% 131 776 29.64% 233 17.65% 131 776 29.64% 233 17.65% 123 776 29.64% 231 14.05% 109 776 29.86% 221 14.05% 131 776 28.87% 221 10.44% 81 776 28.09% 213 21 12.24% 95 776 28.09% 215 6.83% 53 53 776 27.32% 212 3.35% 26 776 21.46% 167 0.00% 0 776 21.46% 178 0.00% 0 776 21.46% 155 0.00% 0 776 19.97% 178 0.00% 0 776 19.97% 155 0.00%	0	1 .	24.87%		24.87%	193	
776 30.80% 239 21.26% 165 776 30.41% 236 19.46% 151 776 30.3% 233 17.65% 137 776 30.3% 233 17.65% 137 776 29.64% 233 17.65% 123 776 29.64% 230 15.85% 123 776 29.64% 221 14.05% 109 776 28.48% 221 14.05% 109 776 28.09% 218 8.63% 67 776 28.09% 218 8.63% 67 776 27.71% 212 5.03% 53 776 27.32% 212 5.03% 53 776 27.32% 212 3.35% 26 776 27.46% 167 0.00% 0 776 21.46% 167 0.00% 0 776 21.46% 167 0.00% 0 776 21.46% 167 0.00% 0 776 21.46% 167 0.00% 0 776 18.49% 167 0.00% 0 776 18.49% 167		776	31 194	242	23.07%	179	ò
776 30.41% 236 19.46% 151 776 30.03% 233 17.65% 137 776 30.03% 233 17.65% 137 776 29.64% 230 15.85% 123 776 29.64% 230 15.85% 123 776 29.86% 221 10.44% 81 776 28.48% 221 10.44% 81 776 28.48% 221 10.44% 81 776 28.48% 212 6.83% 53 776 21.32% 215 6.83% 53 776 27.32% 212 5.03% 39 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 19.97% 178 0.00% 0 77	- 0	776	30.80%	239	21.26%	165	~
776 30.03% 233 17.65% 137 776 29.64% 230 15.85% 123 776 29.64% 230 15.85% 123 776 29.86% 224 12.24% 95 776 28.86% 224 12.24% 95 776 28.48% 221 10.44% 81 776 28.48% 213 86.3% 67 776 21.98% 215 6.83% 53 776 27.32% 212 5.03% 53 776 27.32% 212 5.03% 53 776 27.40% 189 1.68% 13 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 19.97% 178 0.00% 0 776 18.49% 178 0.00% 0 776 <td></td> <td>776</td> <td>30.41%</td> <td>236</td> <td>19.46%</td> <td>151</td> <td>80</td>		776	30.41%	236	19.46%	151	80
776 29.64% 230 15.85% 123 776 29.25% 227 14.05% 109 776 29.86% 224 12.24% 95 776 28.87% 221 10.44% 81 776 28.86% 221 10.44% 81 776 28.48% 221 10.44% 81 776 28.99% 215 6.83% 53 776 27.32% 212 5.03% 53 776 27.32% 212 5.03% 53 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 19.97% 178 0.00% 0 776 15.53% 132 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 122 0.00% 0 776		776	30.03%	233	17.65%	137	Ђ
776 29.25% 227 14.05% 109 776 28.87% 224 12.24% 95 776 28.48% 221 10.44% 81 776 28.48% 221 10.44% 81 776 28.99% 215 6.83% 53 776 27.31% 215 6.83% 53 776 27.32% 212 5.03% 53 776 27.32% 212 5.03% 53 776 27.32% 212 5.03% 53 776 27.40% 189 1.68% 13 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 21.46% 178 0.00% 0 776 19.97% 178 0.00% 0 776 18.49% 144 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 121 0.00% 0 176 15.53% 123 0.00%	+ 14	776	29.64	230	·	123	10
776 28.87% 224 12.24% 95 776 28.48% 221 10.44% 81 776 28.48% 215 6.83% 53 776 28.48% 215 6.83% 53 776 27.71% 215 6.83% 53 776 27.32% 212 5.03% 53 776 27.32% 212 5.03% 53 776 27.32% 212 5.03% 56 776 22.94% 178 0.00% 0 776 21.46% 167 0.00% 0 776 19.97% 178 0.00% 0 776 19.97% 155 0.00% 0 776 19.97% 144 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 123 0.00% <td></td> <td>776</td> <td>29.25%</td> <td>227</td> <td></td> <td>109</td> <td>11</td>		776	29.25%	227		109	11
776 28,48% 221 10,44% 81 776 28,48% 215 6.83% 53 776 27,71% 215 6.83% 53 776 27,32% 212 5.03% 53 776 27,32% 212 5.03% 53 776 27,32% 201 3.35% 26 776 25,86% 201 3.35% 26 776 24,40% 178 0.00% 0 776 21,46% 167 0.00% 0 776 21,46% 167 0.00% 0 776 19,97% 155 0.00% 0 776 18,49% 144 0.00% 0 776 15,53% 121 0.00% 0 776 15,53% 121 0.00% 0 776 15,53% 121 0.00% 0 776 15,53% 121 0.00% 0 776 14,05% 132 0.00% 0 776 15,53% 121 0.00% 0 776 14,05% 109 0.00% 0 776 12,05% 3,892 1,238 <td></td> <td>776</td> <td>28.87%</td> <td>224</td> <td></td> <td>95</td> <td>12</td>		776	28.87%	224		95	12
776 28.09% 218 8.63% 67 1 776 27.71% 215 6.83% 53 53 776 27.32% 212 5.03% 53 776 27.32% 201 3.35% 26 776 25.86% 201 3.35% 26 776 22.94% 178 0.00% 0 776 21.46% 167 0.00% 0 776 19.97% 155 0.00% 0 776 19.97% 144 0.00% 0 776 18.49% 144 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 121 0.00% 0 776 15.53% 121 0.00% 0 776 14.05% 132 0.00% 0 776 15.53% 121 0.00% 0 776 14.05% 132 0.00% 0 776 15.53% 121 0.00% 0 776 14.05% 132 0.00% 0 776 15.53% <td< td=""><td></td><td>776</td><td>28.48%</td><td>221</td><td></td><td>81</td><td>4</td></td<>		776	28.48%	221		81	4
776 27.71% 215 6.83% 53 1 776 27.32% 212 5.03% 53 1 776 25.86% 201 3.35% 26 1 776 25.86% 201 3.35% 26 1 776 22.94% 178 0.00% 0 1 776 21.46% 167 0.00% 0 1 776 19.97% 155 0.00% 0 1 776 18.49% 144 0.00% 0 1 776 15.53% 121 0.00% 0 1 776 15.53% 121 0.00% 0 1 776 15.53% 121 0.00% 0 1 776 15.53% 121 0.00% 0 0 776 15.53% 121 0.00% 0 0 776 14.05% 132 0.00% 0 0 776 15.53% 121 0.00% 0 0 776 15.53% 121 0.00% 0 0 776 14.05% 132 0.00% 0 776 15.53% <		776	28.09%	218		67	15
776 27,32% 212 5.03% 39 1 776 25,86% 201 3.35% 26 1 776 24,40% 189 1.68% 13 776 24,40% 178 0.00% 0 776 22,94% 178 0.00% 0 776 21,46% 167 0.00% 0 776 19,97% 155 0.00% 0 776 18,49% 144 0.00% 0 776 17,01% 132 0.00% 0 776 15,53% 121 0.00% 0 776 15,53% 121 0.00% 0 776 15,53% 121 0.00% 0 776 14,05% 109 0.00% 0 776 14,05% 132 0.00% 0 776 12,03% 3,892 1,238	, c	776	27.71%	215		53	16
776 25.86% 201 3.35% 26 1 776 24.40% 189 1.68% 13 776 24.40% 178 0.00% 0 776 21.46% 167 0.00% 0 776 19.97% 155 0.00% 0 776 19.97% 144 0.00% 0 776 18.49% 144 0.00% 0 776 17.01% 132 0.00% 0 776 15.53% 121 0.00% 0 776 14.05% 121 0.00% 0 776 15.53% 121 0.00% 0 776 14.05% 109 0.00% 0 776 14.05% 132 0.00% 0 776 14.05% 132 0.00% 0 776 12.10 3,892 1,238	, -	776	27.32%	212		39	17
776 24.40% 189 1.68% 13 1 776 22.94% 178 0.00% 0 1 776 21.46% 167 0.00% 0 1 776 19.97% 155 0.00% 0 1 776 18.49% 144 0.00% 0 1 776 17.01% 132 0.00% 0 1 776 15.53% 121 0.00% 0 1 776 14.05% 121 0.00% 0 1 776 14.05% 121 0.00% 0 1 776 14.05% 121 0.00% 0 1 776 14.05% 132 0.00% 0 1 776 15.53% 121 0.00% 0 1 776 14.05% 132 0.00% 0 0 776 12.10 3,892 1,238 1,238	- 0	776	25.86%	201		26	17
776 22.94% 178 0.00% 0 776 21.46% 167 0.00% 0 776 19.97% 155 0.00% 0 776 18.49% 144 0.00% 0 776 17.01% 132 0.00% 0 776 15.53% 121 0.00% 0 776 14.05% 109 0.00% 0 776 14.05% 109 0.00% 0 776 14.05% 199 0.00% 0 776 14.05% 199 0.00% 0	4 9	776	24.40%	189		13	17
776 21.46% 167 0.00% 0 776 19.97% 155 0.00% 0 776 18.49% 144 0.00% 0 776 17.01% 132 0.00% 0 776 17.01% 132 0.00% 0 776 15.53% 121 0.00% 0 776 14.05% 109 0.00% 0 776 14.05% 109 0.00% 0 776 14.05% 109 0.00% 0 776 14.05% 109 0.00% 0	, .	776	22.94%	178		0	17
776 19.97% 155 0.00% 0 1 776 18.49% 144 0.00% 0 1 776 17.01% 132 0.00% 0 1 776 15.53% 121 0.00% 0 1 776 15.53% 121 0.00% 0 1 776 14.05% 109 0.00% 0 1 776 14.05% 109 0.00% 0 1 716 14.05% 109 0.00% 0 1 716 14.05% 109 0.00% 0 1	• •	776	21.46%	167		•	16
776 18.49% 144 0.00% 0 1 776 17.01% 132 0.00% 0 1 776 15.53% 121 0.00% 0 1 776 15.53% 121 0.00% 0 1 776 14.05% 109 0.00% 0 1 776 14.05% 109 0.00% 0 1 70tal Years 1-20 3,892 1,238 1,238 1,238	. .	776	19.97%	155		0	15
776 17.01% 132 0.00% 0 1 776 15.53% 121 0.00% 0 1 776 15.53% 121 0.00% 0 1 776 14.05% 109 0.00% 0 1 776 14.05% 109 0.00% 0 1 716 14.05% 109 0.00% 0 1 70tal Years 1-20 3,892 1,238 1,238 1,238		776	18.49%	144		0	14
776 15.53% 121 0.00% 0 1 776 14.05% 109 0.00% 0 1 776 14.05% 109 0.00% 0 1 716 14.05% 109 0.00% 0 1 70tal Years 1-20 3,892 1,238 1,238	- a	776	17 01%	132		0	13
T76 14.05% 109 0.00% 0 1 Total Years 1-20 3,892 1,238 1,238 1,238 1,5		776	15.53%	121		0	12
3,892 1,238 195 62	. 0	176	14.05%	109		0	2
195 62	Ĭ	otal Years 1–	20	3,892		1,238	
			al Acros	195		62	4

Costs amortized over 20 year operation life

_ .

Humble Canal Structure (PME-15)

Total First Cost	\$270,500
Total Fully Funded Cost	\$650,300

Annual Charges	Present Worth	Average <u>Annual</u> *
Interest & Amortization	\$358,000	\$37,800
Monitoring	65,300	6,900
O&M Cost	42,600	4,500
0 ther Costs	0	
Total	\$465,900	
Average Annual Habitat Units		674
Cost per Habitat Unit		\$73
Average Annual Acres of Emerge	ent Marsh	383

*Interest rate of 8.5 percent over a 20-year project life

Humble Canal (PME-15)

\$0 \$43,354 \$147,391 \$79,756

3 3

3

Engineering Easements Supervision & Supervision First Cost & Design & Land Rights Administration & Inspection Contingency Construction

\$93,750 **\$**56,250

Total First Cost \$270,500

\$150,000

First Costs and Annual Charges

Fiscal Year

	Liscal	-	RinipoliiRiis					
Year	Үөаг		& Design	& Land Rights	Administration	& Inspection Contingency	Contingency	2
5 Compound	pun		0 5	3 0	0\$	9 5	9	_
	pu			2 0	\$0	\$ 0		0
	-	603	S19 444	\$15,000	\$ 8,909	0\$	\$0	0
	- •		* 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		\$15 273	\$9.375	\$23,438	80
z compound		+00						~
1 Compound	-	995	0 \$	20	\$3,818	c70'c¢	-	,
Base Year	aar							
second and the second se	TOTAL		\$25,000	\$15,000	\$28,000	\$15,000	000'/25	5
	[[[[Monitoring	OAM	Other			
Year	Year		Costs	Costs				
+ Discourt		996	56 901	\$ 4,500	3			
		200	66 901	\$4 500	2 0			
1 Discout	- 1			64 E00	-			
3 Discount	_	866	106'91					
4 Discount		6661	\$6,901	\$4,500				
5 Discount		2000	\$ 6,901	\$4,500				
6 Discount		2001	\$6,901	\$4,500				
7 Discount		2002	\$6,901	\$4,500				
8 Discount		2003	\$6,901	\$4,500				
9 Discount		2004	\$6,901	\$4,500				
10 Discount		2005	\$6,901	\$4,500				
11 Discount		2006	\$6,901	\$4,500				
12 Discount		2007	\$6,901	\$4,500		_		
13 Discount		2008	\$ 6,901	\$4,500		_		
14 Discount		2009	\$ 6,901	\$4,500				
15 Discount		2010	\$6,901	\$4 ,500		_		
16 Discount		2011	\$6,901	\$4,500		_		
17 Discount		2012	\$6,901	\$4,500		_		
18 Discount		2013	\$6,901	\$4,500		_		
19 Discount		2014	\$6,901	\$4,500	9	_		
20 Discount		2015	\$6,901		\$0			
	Total		\$138,029	000'06\$				

18-Sept-92

Costs amortized over 20 year operation life

Humble Canal (PME-15)

-

Present /	Present Valued Costs		Total Discounted Costs	ad Costs	\$358,007	A	Amortized Costs	sts	\$37,831
Col Vear	Compound Rates	Fiscal Year	Engineering & Design	Easements & Land Rights	Easements Supervision & Supervision & Land Rights Administration & Inspection Contingency C	Supervision & Inspection C	ontingency	First Cost Construction	Total First Cost
	1.504	0		0 \$	0 \$	· 0\$	0 5		29
4	1.386	,0	9 0	0 5		0 3			465 375
ę	1.277	1993	\$24,836	\$19,159			-	00 6110 265	£173.512
2	1.177	1994	\$6,540	9	\$17,979	\$11,036 *6 402		\$61 031	\$86.535
-	1.085	1995	3	2				300 1214	C15 400
	Ĩ	Total	\$31,376	\$19,159	\$ 33,502	\$17,140	640'24¢		
SiO.	liscount	Fiscal	Monitoring	08M	Other				
Year Rates	ntes	Year	Costs	Costs	Costs				

Other	Costs	0 \$	\$ 0	\$ 0	0 \$	\$ 0	\$ 0	\$ 0	\$ 0	9	3	9	\$ 0	\$ 0	\$ 0	%	3	0 5	\$ 0	0 \$	0 \$	3	3
		\$4,147	\$3,823	\$3,523	\$3,247	\$2,993	\$2,758	\$2,542	\$2,343	\$ 2,159	\$1,990	\$1,834	\$1,691	\$1,558	\$1,436	\$1,324	\$1,220	\$1,124	\$ 1,036	\$ 955	\$880	\$ 42,585	54 500
Monitoring	Costs	\$6,361	\$5,862	\$5,403	\$4,980	\$4,590	\$4,230	\$3,899	\$3,593	\$3,312	\$3,052	\$2,813	\$2,593	\$2,390	\$2,203	\$2,030	\$1,871	\$1,724	\$1,589	\$1,465	\$1,350	\$65,311	56 901
Fiscal	Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total	
Discount	Rates	0.922	0.849	0 783	0.722	0.665	0.613	0.565	0.521	0.480	0 442	0.408	0.376	0.346	0.319	0.294	0.271	0.250	0.230	0.212	0 196		
ā	Year Ra	1	- ^	1	• •	- va 1	ي ر ا		. ac 1	ו ס ו	10,0	2 =	: :	113	1	. 15	- 16	- 12	- 18 1	5 6	00	2	•

D-105

Costs amortized over 20 year operation life

18-- Sept-92

Humble Canal (PME-15)

II I	Fully Funded Costs		Total Fully Funded Costs	ded Costs	\$650,270		Amortized Costs	sts	\$68,714
	Inflation	Fiscal	Engineering	Easements	Engineering Easements Supervision & Supervision	Supervision		First Cost	Total First
Year	Factor	Year	& Design	& Land Rights	& Design & Land Rights Administration & Inspection Contingency Construction	& Inspection	Contingency	Construction	Cost
0	•	0	\$ 0	\$0	\$0		\$0	\$ 0	9 5
4	•	0	3	2 0	\$0		\$0	\$ 0	\$ 0
3	1.042	1993	\$20,261	\$15,630	\$9,283	\$0	\$ 0	9	\$45,174
2	1.075	1994		93	\$16,423	\$10,081	\$25,203	\$100,814	\$158,496
-	1,110	1995		0 \$	\$4,237	\$6,242	\$15,606	\$62,424	\$88,509
·	10	TOTAL	\$26,235	\$15,630	•	\$16,324		\$163,237	\$292,179
	Inflation	Fiscal	Monitoring	O&M	Other				

•••

			~	~	~	~	~	~	_	~	~	•	~	~	~	2	0	•	0	0	0	
Other		0\$	ÿ	\$	ž	ÿ	ÿ	\$	ÿ	ÿ	ÿ,	8	ÿ	\$	S	7	Ø,	ø	Ø	Ŵ	•	9
O&M	Costs	\$5,154	\$5,319	\$5,489	\$5,664	\$5,846	\$6,033	\$6,226	\$6,425	\$6,631	\$6,843	\$7,062	\$7,288	\$7,521	\$7,762	\$8,010	\$ 8,266	\$8,531	\$8,804	\$9,086	\$9,376	\$141.334
Monitoring	Costs	\$7,904	\$ 8,157	\$8,418	\$8,687	\$8,965	\$9,252	\$9,548	\$9,854	\$10,169	\$10,495	\$10,830	\$11,177	\$11,535	\$11,904	\$12,285	\$12,678	\$13,083	\$13,502	\$13,934	\$14,380	\$216.757
Fiscal	Үөаг	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Inflation	Factor	1.145	1.182	1.220	1.259	1.299	1.341	1.384	1.428	1.473	1.521	1.569	1.620	1.671	1.725	1.780	1.837	1.896	1.956	2.019	2.084	
	Үөаг	-	-2	6 1	4	<u>د</u> ا	9-	- 7	60 1	6 	- 10	F	- 12	- 13	- 14	- 15	- 16	-17	- 18	- 19	- 20	

D-106

Costs amortized over 20 year operation life

18-- Sept-- 92

_

Humble Canal (PME-15)

Marsh Type: Fresh/Intermediate

0 5,500 76.64% 4,215 76.64% 4,215 2 5,500 74.93% 4,117 74.93% 4,117 2 5,500 74.93% 4,117 74.85% 4,117 3 5,500 74.66% 4,117 74.85% 4,117 5 5,500 74.66% 4,117 74.85% 4,117 7 5,500 74.66% 4,103 74.66% 4,103 6 5,500 74.66% 4,103 74.66% 4,103 7 7.4.66% 4,103 74.66% 4,103 7 5,500 74.44% 4,099 74.36% 4,094 7 5,500 74.36% 4,077 71.60% 3,936 11 5,500 74.13% 4,077 71.60% 3,735 11 5,500 74.13% 4,077 71.60% 3,735 12 5,500 74.05% 4,077 71.60% 3,735 13 5,500 74.05% 4,017 71.60% 3,735 14 5,500 74.05% 4,017 71.60% 3,735 15 5,500 74.05% 4,017 71.60% 3,735 16	Years	ACIES	With Project % Acreage Vegetated	Vegetated .Acres	Without Project % Acreage Vegetated	Vegetated Acres	Net Acres
5,500 74,93% 4,121 74,93% 4,121 5,500 74,85% 4,117 74,85% 4,112 5,500 74,68% 4,112 74,68% 4,103 5,500 74,68% 4,103 74,68% 4,103 5,500 74,68% 4,103 74,68% 4,103 5,500 74,52% 4,099 74,52% 4,099 5,500 74,58% 4,094 74,56% 4,099 5,500 74,36% 4,094 74,56% 4,099 5,500 74,28% 4,091 74,56% 4,091 5,500 74,13% 4,077 71,60% 3,533 5,500 74,13% 4,077 71,60% 3,533 5,500 74,13% 4,077 71,60% 3,533 5,500 74,13% 4,077 74,20% 4,081 5,500 74,13% 4,074 6,014% 3,553 5,500 74,13% 4,074 6,014% 3,550 5,500 74,06% 4,067 6,014% 3,550 <td< th=""><th></th><th>5,500</th><th>76.64%</th><th>4,215</th><th>76.64%</th><th>4,215</th><th>0</th></td<>		5,500	76.64%	4,215	76.64%	4,215	0
5,500 74.85% 4,117 74.85% 4,112 5,500 74.77% 4,112 74.77% 4,112 5,500 74.68% 4,103 74.68% 4,103 5,500 74.68% 4,103 74.66% 4,103 5,500 74.66% 4,103 74.66% 4,103 5,500 74.45% 4,093 74.52% 4,093 5,500 74.44% 4,094 74.44% 4,094 5,500 74.28% 4,017 71.60% 3,938 5,500 74.13% 4,077 71.60% 3,938 5,500 74.07% 4,077 71.60% 3,938 5,500 74.07% 4,077 71.60% 3,938 5,500 74.07% 4,077 71.60% 3,535 5,500 74.07% 4,077 69.01% 3,55 5,500 73.387% 4,077 63.01% 3,65 5,500 73.387% 4,077 63.01% 3,67 5,500 73.387% 4,065 63.01% 3,66	•	5 500	74 93%	4.121	74.93%	4,121	0
5,500 74,77% 4,112 74,77% 4,112 5,500 74,60% 4,103 74,60% 4,103 5,500 74,60% 4,103 74,60% 4,103 5,500 74,52% 4,099 74,52% 4,099 5,500 74,44% 4,094 74,52% 4,099 5,500 74,44% 4,090 74,44% 4,090 5,500 74,28% 4,090 74,44% 4,090 5,500 74,28% 4,017 71,60% 3,936 5,500 74,13% 4,077 69,01% 3,795 5,500 74,13% 4,070 66,41% 3,653 5,500 74,13% 4,070 66,41% 3,653 5,500 74,00% 4,070 66,41% 3,653 5,500 73,81% 4,070 66,41% 3,653 5,500 73,81% 4,063 61,22% 3,610 5,500 73,81% 4,055 56,03% 2,736 5,500 73,81% 4,055 56,63% 3,610 <td< td=""><td>- ‹</td><td>0,000</td><td>74 85%</td><td>4 117</td><td>74.85%</td><td>4,117</td><td>0</td></td<>	- ‹	0,000	74 85%	4 117	74.85%	4,117	0
5,500 74,68% 4,108 74,68% 4,103 5,500 74,52% 4,039 74,52% 4,039 5,500 74,44% 4,034 74,52% 4,039 5,500 74,44% 4,034 74,52% 4,039 5,500 74,56% 4,030 74,56% 4,039 5,500 74,28% 4,030 74,28% 4,090 5,500 74,28% 4,077 71.60% 3,936 5,500 74,13% 4,077 71.60% 3,936 5,500 74,13% 4,077 69.01% 3,795 5,500 74,13% 4,070 66.41% 3,653 5,500 73.81% 4,070 66.41% 3,653 5,500 73.81% 4,055 53.43% 2,796 5,500 73.81% 4,055 56.03% 2,796 5,500 73.61% 4,055 56.03% 2,796 5,500 73.81% 4,055 56.03% 2,796 5,500 73.81% 4,055 56.03% 2,796 5,500 73.61% 4,055 56.03% 2,796 5,500 73.61% 4,055 56.63% 2,796 5,500		2,200	74 77%	4.112	74.77%	4,112	0
5,500 74,60% 4,103 74,60% 4,103 5,500 74,52% 4,099 74,52% 4,099 5,500 74,44% 4,094 74,44% 4,094 5,500 74,45% 4,090 74,44% 4,094 5,500 74,28% 4,090 74,44% 4,090 5,500 74,28% 4,017 71.60% 3,936 5,500 74,13% 4,077 71.60% 3,936 5,500 74,13% 4,077 71.60% 3,795 5,500 74,13% 4,077 69.01% 3,795 5,500 73.81% 4,070 66.41% 3,653 5,500 73.81% 4,067 63.01% 3,795 5,500 73.81% 4,055 56.03% 2,796 5,500 73.81% 4,055 56.03% 2,796 5,500 73.81% 4,055 56.03% 2,796 5,500 73.56 50.03% 2,796 1,1 5,500 73.56 50.03% 2,796 1,1 5,500	0 -	200	74 68%	4,108	74.68%	4,108	0
5,500 74,52% 4,099 74,52% 4,099 5,500 74,44% 4,094 74,44% 4,094 5,500 74,28% 4,094 74,44% 4,094 5,500 74,28% 4,081 74,28% 4,096 5,500 74,28% 4,017 71.60% 3,938 5,500 74,13% 4,077 71.60% 3,938 5,500 74,13% 4,077 69.01% 3,795 5,500 74,00% 4,070 66.41% 3,653 5,500 73.81% 4,070 66.41% 3,653 5,500 73.81% 4,067 63.81% 3,510 5,500 73.81% 4,055 56.03% 3,633 5,500 73.81% 4,055 56.03% 2,939 5,500 73.81% 4,055 56.03% 2,939 5,500 73.61% 4,055 56.03% 2,736 5,500 73.61% 4,055 56.03% 2,736 5,500 73.61% 4,055 56.03% 2,736 5,500 73.61% 4,055 56.03% 2,736 5,500 73.61% 4,055 56.03% 2,736 5,500	r v	5,500	74.60%	4,103	74.60%	4,103	0
5,500 74,44% 4,094 74,44% 4,094 5,500 74,36% 4,090 74,36% 4,090 5,500 74,20% 4,081 74,20% 4,081 5,500 74,20% 4,077 71.60% 3,938 5,500 74,13% 4,077 71.60% 3,938 5,500 74,13% 4,077 71.60% 3,938 5,500 74,07% 4,070 66.41% 3,795 5,500 73.94% 4,070 66.41% 3,653 5,500 73.81% 4,070 66.41% 3,653 5,500 73.81% 4,053 61.22% 3,510 5,500 73.81% 4,053 58.62% 3,633 5,500 73.61% 4,055 58.03% 2,796 5,500 73.61% 4,055 53.43% 2,796 5,500 73.61% 4,055 53.43% 2,796 5,500 73.61% 4,049 50.83% 2,796 5,500 73.55% 4,049 50.83% 2,796 5,500 73.61% 4,049 50.83% 2,796 5,500 73.55% 4,049 50.83% 2,796 5,500	שכ	5,500	74.52%	4,099	74.52%	4,099	0
5,500 74,36% 4,090 74,36% 4,090 5,500 74,28% 4,005 74,28% 4,085 5,500 74,13% 4,077 71,60% 3,938 5,500 74,13% 4,077 71,60% 3,938 5,500 74,07% 4,077 69,01% 3,795 5,500 74,00% 4,074 69,01% 3,795 5,500 74,00% 4,070 66,41% 3,653 5,500 73,94% 4,063 61,22% 3,510 5,500 73,81% 4,065 61,22% 3,510 5,500 73,81% 4,055 56,03% 3,081 5,500 73,81% 4,055 56,03% 3,081 5,500 73,61% 4,055 56,03% 3,081 5,500 73,61% 4,055 56,03% 2,796 5,500 73,61% 4,049 50,83% 2,796 5,500 73,55% 4,049 50,83% 2,796 5,500 73,55% 73,55% 73,966 5,500 73,55% 4,049 50,83% 2,796 5,500 73,55% 4,049 50,83% 2,796 5,500 73,55%		5,500	74 44%	4.094	74.44%	4,094	0
5,500 74,28% 4,085 74,28% 4,085 5,500 74,20% 4,077 71,60% 3,938 5,500 74,07% 4,077 71,60% 3,938 5,500 74,07% 4,077 69,01% 3,795 5,500 74,00% 4,074 69,01% 3,795 5,500 74,00% 4,070 66,41% 3,653 5,500 73,94% 4,063 61,22% 3,510 5,500 73,81% 4,065 61,22% 3,510 5,500 73,81% 4,056 56,03% 3,081 5,500 73,81% 4,055 56,03% 3,081 5,500 73,61% 4,055 56,03% 3,081 5,500 73,61% 4,055 56,03% 3,081 5,500 73,61% 4,055 53,43% 2,939 5,500 73,61% 4,049 50,83% 2,796 5,500 73,55% 4,049 50,83% 2,796 5,500 73,55% 4,049 50,83% 2,796 5,500 73,55% 4,049 50,83% 2,796 5,500 73,55% 7,949 2,653 5,500 73,55%	- 0	000's	74 36%	060.4		4,090	J
5,500 74.20% 4,017 74.20% 4,011 74.20% 4,011 5,500 74.13% 4,077 71.60% 3,938 5,500 74.07% 4,074 69.01% 3,795 5,500 74.00% 4,070 66.41% 3,653 5,500 73.94% 4,070 66.41% 3,553 5,500 73.94% 4,063 61.22% 3,510 5,500 73.81% 4,063 61.22% 3,367 5,500 73.81% 4,055 56.03% 3,081 5,500 73.68% 4,055 56.03% 3,081 5,500 73.68% 4,052 53.43% 2,939 5,500 73.61% 4,049 50.83% 2,796 5,500 73.55% 4,049 50.83% 2,796 5,500 73.55% 4,049 50.83% 2,796 5,500 73.55% 4,049 50.83% 2,796 5,500 73.55% 4,049 50.83% 2,796 5,500 73.55% 4,049 50.83%	00	5500	74 28%	4.085		4,085	
5,500 74.13% 4,077 71.60% 3,938 5,500 74.07% 4,074 69.01% 3,795 5,500 74.00% 4,070 66.41% 3,653 5,500 73.94% 4,070 66.41% 3,553 5,500 73.94% 4,067 63.81% 3,510 5,500 73.81% 4,063 61.22% 3,357 5,500 73.81% 4,056 56.03% 3,081 5,500 73.68% 4,056 56.03% 3,081 5,500 73.68% 4,052 53.43% 2,939 1, 5,500 73.61% 4,049 50.83% 2,796 1, 5,500 73.55% 4,049 50.83% 2,796 1, 5,500 73.55% 4,045 50.83% 2,796 1, 5,500 73.55% 4,045 50.83% 2,796 1, 5,500 73.55% 4,045 50.83% 2,796 1, 5,500 73.55% 4,045 50.83% 2,796 1, <td< td=""><td>n Ç</td><td>5,500 5,500</td><td>74 20%</td><td>4.081</td><td></td><td>4,081</td><td>•</td></td<>	n Ç	5,500 5,500	74 20%	4.081		4,081	•
5,500 74.07% 4,074 69.01% 3,795 5,500 74.00% 4,070 66.41% 3,653 5,500 73.94% 4,067 63.81% 3,510 5,500 73.81% 4,063 61.22% 3,357 5,500 73.81% 4,056 56.03% 3,081 5,500 73.81% 4,056 56.03% 3,081 5,500 73.68% 4,056 56.03% 3,081 5,500 73.68% 4,052 53.43% 2,939 5,500 73.61% 4,049 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,653 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 73,966 1,3 5,500 73.55% 7,045 73,966	2 7	5,500	74 13%	4,077		3,938	139
5,500 74.00% 4,070 66.41% 3,653 5,500 73.94% 4,067 63.81% 3,510 5,500 73.81% 4,063 61.22% 3,367 5,500 73.81% 4,053 58.62% 3,224 5,500 73.74% 4,056 56.03% 3,081 5,500 73.68% 4,052 53.43% 2,939 5,500 73.61% 4,049 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,653 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 73,966 7.00al Years 1-20 81,622 73,966		5,500	74.07%	4.074		3,795	278
5,500 73.94% 4,067 63.81% 3,510 5,500 73.81% 4,063 61.22% 3,367 5,500 73.81% 4,056 56.03% 3,081 5,500 73.74% 4,056 56.03% 3,081 5,500 73.68% 4,052 53.43% 2,939 5,500 73.61% 4,049 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,653 5,500 73.55% 4,045 73,966 7.0tal Years 1-20 81,622 73,966	<u>4</u> ;	5,500	74.00%	4.070		3,653	418
5,500 73.87% 4,063 61.22% 3,367 5,500 73.81% 4,056 58.62% 3,224 5,500 73.74% 4,056 56.03% 3,081 5,500 73.68% 4,052 53.43% 2,939 5,500 73.61% 4,049 50.83% 2,796 5,500 73.61% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 6,500 73.55% 4,045 50.83% 2,653 7.1a 5,500 73.566 1,1	2 7	5,500	73.94%	4.067	-	3,510	557
5,500 73.81% 4,059 58.62% 3,224 5,500 73.74% 4,056 56.03% 3,081 5,500 73.68% 4,052 53.43% 2,939 5,500 73.61% 4,049 50.83% 2,796 5,500 73.55% 4,045 48.24% 2,653 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,796 5,500 73.55% 4,045 50.83% 2,653 5,500 73.55% 4,045 73,966 1,01al Years 1-20 81,622 73,966	t 4	0000	73.87%	4.063	-	3,367	69
5,500 73.74% 4,056 56.03% 3,081 5,500 73.68% 4,052 53.43% 2,939 1, 5,500 73.61% 4,049 50.83% 2,796 1, 5,500 73.55% 4,045 48.24% 2,653 1, 5,500 73.55% 4,045 48.24% 2,653 1, 5,500 73.55% 4,045 48.24% 2,653 1, 7 Otal Years 1-20 81,622 73,966 3.698	<u>.</u>	5,500	73.81%	4.059		3,224	83
5,500 73.68% 4,052 53.43% 2,939 1, 5,500 73.61% 4,049 50.83% 2,796 1, 5,500 73.55% 4,045 48.24% 2,653 1, 5,500 73.55% 4,045 48.24% 2,653 1, Total Years 1-20 81,622 73,966	2 -	5,500	73.74%	4.056		3,081	974
5,500 73.61% 4,049 50.83% 2,796 1, 5,500 73.55% 4,045 48.24% 2,653 1, Total Years 1–20 81,622 73,966	81	5 500	73.68%	4,052		2,939	1,11
5,500 73.55% 4,045 48.24% 2,653 1, Total Years 1 – 20 81,622 73,966	Ģ	5 500	73.61%	4.049		2,796	1,25
81,622 73,966 2000 4 AB1 250 3698	50	5,500	73.55%	4,045		2,653	1,392
a nat 3 698		Total Years 1-	20	81,622		73,966	
				A 081		3,698	383

18-Sept-92

Costs amortized over 20 year operation life

D-107

Humble Canal (PME-15)

Summation of Emergent Marsh Acreages

			With Project	Vegetated	Without Project % Acreage	Vegetated	Net
Years		Acres	Vegetated	Acres	Vegetated	Acres	Acres .
	0	5,500	76.64%	4,215	76.64%	4,215	0
	-	5,500	74.93%	4,121	74.93%	4,121	0
	- 0	5 500	74.85%	4,117	74.85%	4,117	0
	1 9	5 500	74.77%	4,112	74.77%	4,112	J
	, 4	5 500	74.68%	4,108	74.68%	4,108	J
	r vC	5,500	74.60%	4,103	74.60%	4,103	J
		5,500	74.52%	660'*	74.52%	4,099	Ŭ
	•	5 500	74.44%	4,094	74.44%	4,094	J
	- «	5,500	74.36%	4,090	74.36%	4,090	J
	о σ	5 500	74.28%	4,085	74.28%	4,085	•
	, č	5 500	74.20%	4,081	74 20%	4,081	•
	2 =	5 500	74.13%	4,077	71.60%	3,938	139
	: 2	5 500	74.07%	4,074	69.01%	3,795	278
	::	5 500	74.00%	4,070	66.41%	3,653	418
	2 4	5,500	73 94%	4,067	63.81%	3,510	557
		5,500	73.87%	4.063	61.22%	3,367	969
	2 9	5,500	73.81%	4,059	58.62%	3,224	835
	2 5	5,500	73.74%	4,056	56.03%	3,081	974
	. F	5 500	73.68%	4,052	53.43%	2,939	1,114
	2 q	5 500	73.61%	640,4	50.83%	2,796	1,25
	2 2	5,500	73.55%	4,045	48.24%	2,653	1,392
	Tot	Total Years 1–20	20	81,622		73,966	
	•			1001		3 698	383

D-108

•

Highway 90 to GIWW Hydrologic Restoration (BA-6)

Total First Cost	\$2,239,400
Total Fully Funded Cost	\$3,924,600

Annual Charges	Present Worth	Average <u>Annual*</u>
Interest & Amortization	\$2,710,200	\$286,400
Monitoring	244,900	25,900
O&M cost	197,900	20,900
Other Costs	0	
Total	\$3,153,000	\$333,200
Average Annual Habitat Un	its	1,562
Cost per Habitat Unit		\$213
Average Annual Acres of En	mergent Marsh	1,271

*Interest rate of 85 percent over a 20-year project life

D-109

Highway 90 to GIWW (BA-6)

First Costs and Annual Charges

		I			Custon		First Cost	Total First
	Fiscal	6	Easements	Supervision & Administration	& Inspection Contingency	ontingency	Construction	
Year	Year	1		0.0	\$0	\$0	0 \$	04
5 Compound				05	2 0	\$0	\$ 0	3 0
4 Compound				¢ 33 871	05	\$0	\$ 0	\$155,071
3 Compound	1993	\$91,200	000'024	10'00¢	812 BUB	\$82.021	\$328,085	\$571,456
2 Compound	1994	\$ 60,800		241'10¢	\$106.628	\$266,569	\$1,066,275	\$1,512,859
1 Compound	1995	\$ 0						
Base Year				C175 000	£139 436	\$348,590	\$1,394,360	\$2,239,386
	TOTAL	\$ 152,000	000'024			-		
	Fiscal	Monitoring	0&M	Uuiel				
Vert	Year	Costs	Costs	Costs				
1 Discount	1996	\$25.875	\$20,915					
2 Discount	2001	\$25,875	\$20,915					
2 Discount	1998	\$25,875	\$20,915					
	6661	\$25,875	\$20,915					
	2000	\$25.875	\$20,915					
o Discount	2001	\$25,875	\$20,915					
a Discount	2002	\$25,875	\$20,915					
A Discount	2003							
a Discount	2004		\$20,915		_			
a Discount	2005		•••		_			
11 Discount	2006							
12 Discount	2007							
13 Discount	2008				_			
14 Discount	2009							
15 Discount	2010	\$25,875			-			
16 Discount	2011							
17 Discount	2012				00			
18 Discount	2013	\$ 25,875	5 \$20,915		\$ 0			
10 Discount	2014				\$ 0			
20 Discount	2015				2 0			
	Total	\$	0 \$418,300		\$ 0			

D-110

Costs amortized over 20 year operation life

.

18-Sept-92

Highway 90 to GIWW (BA-6)

Present Valued Costs	lued Co:	sts	Total Discounted Costs	od Costs	\$2,710,181		Amortized Costs	sts	\$286,385
Com Voer Ba	Compound Bates	Fiscal Vear	Engineering & Desion	Easements & Land Rights	Engineering Easements Supervision & Supervision & Design & L and Rights Administration & Inspection Contingency Construction	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5 1.50 3 1.27 2 1.17 1.08	1.504 1.386 1.277 1.177 1.085	0 0 1993 1994		\$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$43,263 \$79,748 \$79,625	\$0 \$0 \$38,623 \$115,691	\$0 \$0 \$96,557 \$289,227	\$0 \$0 \$386,230 \$1,156,909	\$0 \$198,070 \$672,733 \$1,641,452
		Total	\$188,064	\$38,319	(\$ 1,543,138	662,216,2 8

Ulher	Costs	\$ 0	0 \$	\$ 0	9	\$0	\$ 0	9	9	0 5	9 0	0 \$											
O&M		\$19,276	\$17,766	\$16,375	\$15,092	\$13,909	\$12,820	\$11,815	\$10,890	\$10,037	\$9,250	\$8,526	\$7,858	\$7,242	\$6,675	\$ 6,152	\$5,670	\$5,226	\$4,816	\$4,439	\$4,091	\$197,926	\$20,915
Monitoring	Costs	\$23,848	\$21,980	\$20,258	\$18,671	\$17,208	\$15,860	\$14,617	\$13,472	\$12,417	\$11,444	\$10,548	\$9,721	\$8,960	\$8,258	\$7,611	\$7,015	\$6,465	\$ 5,959	\$5,492	\$5,062	\$244,864	\$25,875
Fiscal	Үөаг	; -	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total	Į.
Discount	9S	0.922	0.849	0,783	0.722	0.665	0.613	0.565	0 521	0.480	0.442	0.408	0.376	0.346	0.319	0.294	0.271	0.250	0.230	0.212	0 196		Average Annual
Disi	Year Rates		· ()	1	1	ۍ ا	9 9 1	- 7	. cc 	ס ס ו	- t 0	2 =	- 12	- 13	- 14	- 15	- 16	- 17	- 1 8	61	06-	2	Š

D-111

Costs amortized over 20 year operation life

Highway 90 to GIWW (BA-6)

Fully Funded Costs		Total Fully Funded Costs	ded Costs	\$3,924,557		Amortized Costs	sts	\$414,708
Inflation Factor	Fiscal Year	Engineering & Design	Easements & Land Rights	Engineering Easements Supervision & Supervision First Cost & Design & Land Rights Administration & Inspection Contingency Construction	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost 50
042	0 1993 1994		\$0 \$31,260 \$0 \$0	\$0 \$0 \$35,294 \$72,846 \$12,846	\$0 \$0 \$35,280 \$118,330	\$0 \$0 \$88,201 \$295,826	\$0 \$352,804 \$1,183,304	\$161,584 \$161,584 \$614,512 \$1,678,903
	TOTAL	\$160	\$31,260	\$189,581	\$153,611	\$384,027	\$1,536,108	\$2,454,999
lation	Fiscal	Monitoring	O&M	Other				

Other	Costs	\$ 0	2 0	3 0	\$ 0	\$ 0	\$ 0	2 0	\$ 0	3	3	9	9	\$0	\$0	3	3	3	3	0 5	9	0 \$
O&M		\$23,953	\$24,720	\$25,511	\$26,327	\$27,170	\$ 28,039	\$28,936	\$29,862	\$30,818	\$31,804	\$32,822	\$33,872	\$34,956	\$36,075	\$37,229	\$38,420	\$39,650	\$40,918	\$42,228	\$43,579	\$656,889
Monitoring	Costs	\$29.634	\$30.582	\$31,561	\$32,571	\$33,613	\$34,689	\$ 35,799	\$ 36,944	\$38,126	\$39,346	\$40,605	\$41,905	\$43,246	\$44 ,630	\$46.058	\$4 7,532	\$49,053	\$50,622	\$52,242	\$53,914	\$812,670
Fiscal	Хааг	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Inflation	Eactor	1 145	1 183	1 200	1 259	1 299	1 341	1 284	1 428	1 473	1 5 2 1	1569	1 620	1.671	1 725	1 780	1 837	1 896	1 956	010 0	2.013	
-		1 4 4	- c	4 C 1	י פ ו	er ve 	י ו		- 0	0 0 1		2;	- ÷	1	2 7	<u>r</u> ¥	1 5 4		- 9			N7 -

D-112

Costs amortized over 20 year operation life

Highway 90 to GIWW (BA-6)

-Mars

Ì

Vegetated Acres 53,574 Acres 53,534 53,494 53,494 53,494 53,294 53,294 55,294 55,297 57,777 55,297 57,777 57,777 57,777 57,977 57,777 57,777 57,977 57,977 57,977 57,977 57,977 57,777 57,977 57,977 57,977 57,977 57,977 57,977 57,977 57,977 57,977 57,977 57,977 57,977 57,977 57,974 57,9777 57,9777 57,9777 57,9777 57,9777 57,9777 57,97777 57,977777 57,97777777777			With Project	~	WIIIIONI LIOIECI		
Acres Vegetated Acres Vegetated Acres 0 56,974 94.03% 53,574 94.03% 5 2 56,974 93.96% 53,534 93.15% 5 3 56,974 93.96% 53,534 93.15% 5 3 56,974 93.89% 53,494 93.16% 5 4 56,974 93.80% 53,414 92.90% 5 5 56,974 93.66% 53,374 92.05% 5 7 56,974 93.66% 53,374 92.05% 5 7 56,974 93.66% 53,374 92.05% 5 9 56,974 93.47% 53,254 91.49% 5 9 56,974 93.33% 53,174 91.49% 5 10 56,974 93.33% 53,174 91.49% 5 11 56,974 93.33% 53,174 91.49% 5 11 56,974 <td< th=""><th></th><th></th><th>% Acreage</th><th></th><th>% Acreage</th><th>Vegetated</th><th>Net</th></td<>			% Acreage		% Acreage	Vegetated	Net
56,974 94.03% 53,574 94.03% 53,574 94.03% 56,974 93.86% 53,534 93.75% 93.75% 93.75% 93.75% 56,974 93.89% 53,494 93.16% 93.16% 53,494 93.16% 93.75% 56,974 93.89% 53,414 92.90% 53,414 92.90% 53,314 92.62% 56,974 93.68% 53,314 92.62% 53,314 92.65% 93.16% 53,314 92.05% 56,974 93.61% 53,314 92.65% 53,314 92.65% 93.16% 53,314 92.65% 93.16% 53,314 92.05% 93.16% 53,214 92.05% 93.16% 53,214 92.05% 93.36% 53,214 91.49% 91.49% 91.49% 91.49% 91.21% 53,014 90.92% 53,014 90.92% 53,014 90.36% 53,014 50.92% 53,014 50.79% 53,014 50.79% 53,014 50.79% 53,014 50.79% 53,014 50.71% 53,014 50.71% 53,014 50.71% 53,016% 53,014 50.55		cres	Vegetated	Acres	Vegetated	Acres	ACIUS .
56,974 93,96% 53,534 93.75% 56,974 93,89% 53,494 93.47% 56,974 93,82% 53,414 92.90% 56,974 93,86% 53,414 92.90% 56,974 93,66% 53,314 92.34% 56,974 93,66% 53,314 92.05% 56,974 93,66% 53,314 92.05% 56,974 93,54% 53,314 92.05% 56,974 93,54% 53,234 92.34% 56,974 93,54% 53,214 91.49% 56,974 93,54% 53,214 91.49% 56,974 93,47% 53,214 91.21% 56,974 93,47% 53,214 91.21% 56,974 93,333 53,214 91.21% 56,974 93,19% 53,174 91.21% 56,974 93,19% 53,014 90.92% 56,974 93,19% 53,014 90.96% 56,974 93,12% 52,934 89.21% 56,974 92,05% 52,934 89.23% 56,974 92,05% 52,934 90.96% 56,974 92,05% 52,934 90.96% 56,974 92,05%	0	56,974	94.03%	53,574	94.03%	53,574	0
56,974 93,89% 53,494 93,47% 56,974 93,89% 53,414 92,90% 56,974 93,89% 53,414 92,90% 56,974 93,68% 53,374 92,62% 56,974 93,68% 53,374 92,62% 56,974 93,61% 53,374 92,62% 56,974 93,61% 53,374 92,62% 56,974 93,47% 53,334 92,65% 56,974 93,47% 53,294 92,05% 56,974 93,40% 53,214 91,49% 56,974 93,40% 53,174 91,21% 56,974 93,33% 53,174 91,21% 56,974 93,33% 53,174 91,49% 56,974 93,33% 53,174 91,21% 56,974 93,33% 53,174 91,21% 56,974 93,19% 53,014 90,06% 56,974 93,12% 53,014 90,36% 56,974 93,12% 52,934 89,79% 56,974 93,05% 52,934 89,79% 56,974 92,05% 52,934 89,79% 56,974 92,07% 52,934 89,79% 56,974 92,07%	-	56 97 4	93 96%	53,534	93.75%	53,413	121
56,974 93.82% 53,454 93.18% 56,974 93.68% 53,374 92.90% 56,974 93.68% 53,374 92.62% 56,974 93.61% 53,374 92.62% 56,974 93.61% 53,374 92.62% 56,974 93.61% 53,374 92.62% 56,974 93.61% 53,334 92.65% 56,974 93.47% 53,294 92.05% 56,974 93.40% 53,174 91.77% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.35% 53,054 90.64% 56,974 93.12% 53,014 90.36% 56,974 93.05% 53,014 90.36% 56,974 93.05% 52,934 89.79% 56,974 93.05% 52,934 89.79% 56,974 92.07% 52,934 89.21% 56,974 92.05% 52,934 89.23% 56,974 92.91% 52,934 89.23% 56,974 92.63%	- (510'00 56 074	23.89%	53,494	93.47%	53,252	242
56,974 93.75% 53,414 92.90% 56,974 93.61% 53,374 92.62% 56,974 93.61% 53,374 92.62% 56,974 93.61% 53,374 92.62% 56,974 93.61% 53,374 92.65% 56,974 93.61% 53,294 92.05% 56,974 93.47% 53,294 92.05% 56,974 93.40% 53,174 91.77% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.19% 53,014 90.96% 56,974 93.12% 53,014 90.36% 56,974 93.05% 53,014 90.36% 56,974 93.05% 52,934 89.79% 56,974 92.05% 52,934 89.21% 56,974 92.05% 52,934 89.21% 56,974 92.05% 52,934 89.23% 56,974 92.91% 52,934 89.23% 56,974 92.91%		56 074	93.82%	53.454	93.18%	53,091	363
56,974 93,68% 53,374 92.62% 56,974 93,54% 53,334 92.34% 56,974 93,54% 53,294 92.05% 56,974 93,54% 53,294 92.05% 56,974 93,40% 53,294 92.05% 56,974 93,40% 53,214 91.77% 56,974 93,40% 53,214 91.77% 56,974 93,33% 53,174 91.21% 56,974 93,33% 53,174 91.21% 56,974 93,33% 53,174 91.21% 56,974 93,33% 53,174 91.21% 56,974 93,19% 53,054 90.92% 56,974 93,12% 53,014 90.36% 56,974 93,12% 53,014 90.36% 56,974 93,12% 52,974 89.79% 56,974 92.05% 52,974 89.25% 56,974 92.05% 52,934 89.25% 56,974 92.05% 52,934 89.25% 56,974 92.07% 52,934 89.25% 56,974 92.07% 52,934 89.23% 56,974 92.07% 52,014 90.29% 56,974 92.07%	. .	+1c'nc	93.75%	53,414	92.90%	52,930	484
56,974 93,61% 53,334 92.34% 56,974 93,54% 53,294 92.05% 56,974 93,47% 53,294 92.05% 56,974 93,40% 53,214 91.77% 56,974 93,40% 53,214 91.77% 56,974 93,35% 53,174 91.49% 56,974 93,33% 53,174 91.21% 56,974 93,33% 53,174 91.21% 56,974 93,33% 53,174 91.21% 56,974 93,19% 53,014 90.92% 56,974 93,12% 53,014 90.08% 56,974 93,12% 53,014 90.08% 56,974 93,12% 52,974 90.36% 56,974 92.08% 52,974 90.36% 56,974 92.09% 52,934 89.51% 56,974 92.09% 52,934 89.25% 56,974 92.07% 52,934 89.25% 56,974 92.07% 52,934 89.25% 56,974 92.07% 52,934 89.25% 56,974 92.63% 52,934 89.23% 56,974 92.63% 52,814 89.23% 56,974 92.63%	er u	20,074	93.68%	53.374	92.62%	52,769	605
56,974 93.54% 53,294 92.05% 56,974 93.47% 53,254 91.77% 56,974 93.47% 53,214 91.49% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.19% 53,014 90.92% 56,974 93.12% 53,014 90.64% 56,974 93.12% 53,014 90.08% 56,974 93.05% 53,014 90.08% 56,974 92.98% 52,974 89.79% 56,974 92.91% 52,934 89.25% 56,974 92.91% 52,934 89.25% 56,974 92.91% 52,934 89.25% 56,974 92.07% 52,894 89.25% 56,974 92.63% 52,934 89.55% 56,974 92.77% 52,934 89.55% 56,974 92.63% 52,934 89.25% 56,974 92.63% 52,934 89.56% 56,974 92.63% 52,814 89.35% 56,974 92.63%	с ч	56 07A	93.61%	53,334	92.34%	52,608	726
56,974 93.47% 53,254 91.77% 56,974 93.40% 53,214 91.49% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.19% 53,014 90.92% 56,974 93.19% 53,014 90.64% 56,974 93.12% 53,014 90.08% 56,974 93.12% 53,014 90.08% 56,974 93.05% 53,014 90.08% 56,974 92.98% 52,974 89.79% 56,974 92.91% 52,934 89.25% 56,974 92.91% 52,934 89.25% 56,974 92.91% 52,934 89.25% 56,974 92.63% 52,894 89.25% 56,974 92.63% 52,894 89.55% 56,974 92.63% 52,894 89.55% 56,974 92.63% 52,894 89.56% 56,974 92.63% 52,894 89.56% 56,974 92.63% 52,894 89.56% 56,974 92.63% 52,894 89.36% 56,974 92.63%	0 -	56.974	93.54%	53,294	92.05%	52,447	847
56,974 93.40% 53,214 91.49% 56,974 93.33% 53,174 91.21% 56,974 93.33% 53,174 91.21% 56,974 93.19% 53,094 90.92% 56,974 93.12% 53,014 90.36% 56,974 93.12% 53,014 90.36% 56,974 93.12% 53,014 90.08% 56,974 93.05% 53,014 90.36% 56,974 92.98% 52,974 89.79% 56,974 92.91% 52,934 89.79% 56,974 92.91% 52,934 89.23% 56,974 92.91% 52,934 89.23% 56,974 92.91% 52,934 89.23% 56,974 92.63% 52,814 89.23% 56,974 92.63% 52,814 89.55% 56,974 92.63% 52,814 89.56% 56,974 92.63% 52,814 89.35% 56,974 92.63% 52,934 89.56% 56,974 92.63% 52,814 89.36% 56,974 92.63% 52,814 89.36% 56,974 92.63% 52,814 89.36% 56,974 92.63%	- 0	56 97A	93 47%	53,254	91.77%	52,286	896
56,974 93.33% 53,174 91.21% 56,974 93.19% 53,174 91.21% 56,974 93.19% 53,094 90.64% 56,974 93.12% 53,094 90.64% 56,974 93.12% 53,014 90.36% 56,974 93.05% 53,014 90.08% 56,974 93.05% 53,014 90.08% 56,974 92.98% 52,974 89.79% 56,974 92.91% 52,934 89.79% 56,974 92.91% 52,934 89.23% 56,974 92.91% 52,934 89.23% 56,974 92.91% 52,934 89.23% 56,974 92.07% 52,894 89.23% 56,974 92.63% 52,814 89.23% 56,974 92.63% 52,814 89.55% 56,974 92.63% 52,814 89.66% 56,974 92.63% 52,1774 88.38% 56,974 92.63% 52,080 1,063,080 1,01al Years 1-20 1,063,080 1,0		56 974	93.40%	53,214	91.49%	52,125	1,089
56,974 93.26% 53,134 90.92% 56,974 93.19% 53,094 90.64% 56,974 93.12% 53,094 90.64% 56,974 93.12% 53,014 90.36% 56,974 93.05% 53,014 90.08% 56,974 93.05% 53,014 90.08% 56,974 92.98% 52,974 89.79% 56,974 92.91% 52,934 89.23% 56,974 92.91% 52,934 89.23% 56,974 92.91% 52,934 89.23% 56,974 92.91% 52,934 89.23% 56,974 92.77% 52,894 89.23% 56,974 92.77% 52,814 89.55% 56,974 92.63% 52,814 89.66% 56,974 92.63% 52,174 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,014 88.38% 56,974 92.63% 52,014 88.38% 56,974 92.63% 52,014 88.38% 56,974 92.63% 52,014 88.38% 56,974 92.63%	n ç	56.974	93.33%	53,174	91.21%	51,964	1,21(
56,974 93.19% 53,094 90.64% 56,974 93.12% 53,054 90.36% 56,974 93.12% 53,014 90.36% 56,974 93.05% 53,014 90.08% 56,974 92.98% 52,974 89.79% 56,974 92.91% 52,934 89.51% 56,974 92.91% 52,934 89.23% 56,974 92.91% 52,934 89.23% 56,974 92.84% 52,894 89.23% 56,974 92.77% 52,814 89.55% 56,974 92.77% 52,814 89.55% 56,974 92.77% 52,814 89.55% 56,974 92.63% 52,814 89.56% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,704 92.63%	2 =	56.974	93.26%	53, 134	90.92%	51,803	1,33
56,974 93,12% 53,054 90,36% 56,974 93,05% 53,014 90,08% 56,974 92,98% 52,974 89,79% 56,974 92,91% 52,934 89,51% 56,974 92,91% 52,934 89,51% 56,974 92,91% 52,894 89,23% 56,974 92,84% 52,894 89,23% 56,974 92,77% 52,814 88,95% 56,974 92,77% 52,814 88,95% 56,974 92,77% 52,814 88,95% 56,974 92,63% 52,174 88,95% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,70% 52,774 88,38%	: 9	56.974	93.19%	53,094	90.64%	51,642	1,452
56,974 93.05% 53,014 90.08% 56,974 92.98% 52,974 89.79% 56,974 92.91% 52,934 89.51% 56,974 92.91% 52,934 89.51% 56,974 92.84% 52,934 89.51% 56,974 92.84% 52,894 89.55% 56,974 92.63% 52,814 88.66% 56,974 92.63% 52,174 88.36% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38% 56,974 92.63% 52,774 88.38%	1 5	56.974	93.12%	53,054	90.36%	51,481	1,573
56,974 92,98% 52,974 89,79% 56,974 92,91% 52,934 89,51% 56,974 92,91% 52,934 89,51% 56,974 92,84% 52,894 89,53% 56,974 92,84% 52,894 89,53% 56,974 92,77% 52,894 89,95% 56,974 92,77% 52,814 88,66% 56,974 92,63% 52,7174 88,38% 56,974 92,63% 52,7174 88,38% 56,974 92,63% 52,7174 88,38% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 7,0 1,063,080 1,0 1,0	2 7	56 974	93.05%	53.014	90.08%	51,320	1,69,
56,974 92,91% 52,934 89,51% 56,974 92,81% 52,834 89,51% 56,974 92,84% 52,834 89,53% 56,974 92,77% 52,834 89,55% 56,974 92,63% 52,174 88,66% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 56,974 92,63% 52,774 88,38% 70tal Years 1-20 1,063,080 1,0 1,0		56 974	32 98%	52.974	89.79%	51,159	1,815
56,974 92.84% 52,894 89.23% 56,974 92.77% 52,894 89.95% 56,974 92.77% 52,814 88.66% 56,974 92.63% 52,7174 88.38% 56,974 92.63% 52,774 88.38% Total Years 1-20 1,063,080 1,0	<u>.</u> 4	56 974	92.91%	52.934	89.51%	50,998	1,936
56,974 92.77% 52,854 88.95% 56,974 92.77% 52,814 88.66% 56,974 92.63% 52,714 88.38% Total Years 1-20 1,063,080 1,0	2 Ç	56 974	92.84%	52.894	89.23%	50,837	2,057
56,974 92.70% 52,814 88.66% 56,974 92.63% 52,774 88.38% Total Years 1-20 1,063,080 1,0		56.074	92.77%	52.854	88.95%	50,676	2,178
56,974 92.63% 52,774 88.38% Total Years 1-20 1,063,080 1,063,080	<u> </u>	56 074	202 00	52.814	88.66%	50,515	2,299
1,063,080	20 3	56,974	92.63%	52,774	88.38%	50,354	2,420
	Total	Years 1–	20	1,063,080		1,037,670	
51,884			Acres	53 154		51,884	1,271

D-113

18-- Sept-92

Highway 90 to GIWW (BA-6)

_

Summation of Emergent Marsh Acreages

5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		Acres
56,974 93.96% 53,534 9 56,974 93.89% 53,494 9 56,974 93.89% 53,494 9 56,974 93.89% 53,494 9 56,974 93.86% 53,414 9 56,974 93.66% 53,414 9 56,974 93.66% 53,374 9 56,974 93.66% 53,374 9 56,974 93.66% 53,374 9 56,974 93.66% 53,714 9 56,974 93.66% 53,714 9 56,974 93.47% 53,294 9 56,974 93.33% 53,214 9 56,974 93.33% 53,214 9 56,974 93.33% 53,014 53,014 56,974 92.19% 53,014 53,014 56,974 92.98% 53,014 52,934 56,974 92.98% 53,014 52,934 56,974 92.98% 53,014 52,934 56,974 92.98% 53,014 </th <th>94.03% 53,574</th> <th>0</th>	94.03% 53,574	0
56,974 93.89% 53,494 9 56,974 93.89% 53,494 9 56,974 93.87% 53,494 9 56,974 93.68% 53,414 9 56,974 93.68% 53,374 9 56,974 93.68% 53,374 9 56,974 93.61% 53,374 9 56,974 93.61% 53,374 9 56,974 93.61% 53,374 9 56,974 93.61% 53,374 9 56,974 93.47% 53,294 9 56,974 93.337% 53,174 9 56,974 93.337% 53,174 9 56,974 93.19% 53,174 9 56,974 93.19% 53,014 9 56,974 93.19% 53,014 9 56,974 93.05% 53,014 9 56,974 92.96% 53,014 9 56,974 92.98% 53,014 9 56,974 92.98% 53,014 5	93 75% 53,413	12
56,974 93,89% 53,454 93,89% 53,454 56,974 93,75% 53,414 53,414 56,974 93,68% 53,374 53,334 56,974 93,64% 53,374 53,334 56,974 93,64% 53,374 53,334 56,974 93,64% 53,374 53,334 56,974 93,64% 53,374 53,334 56,974 93,47% 53,294 53,374 56,974 93,47% 53,294 53,374 56,974 93,40% 53,174 53,294 56,974 93,40% 53,174 53,094 56,974 93,12% 53,174 53,094 56,974 93,12% 53,094 53,094 56,974 92,17% 52,934 52,934 56,974 92,05% 52,094 52,934 56,974 92,05% 52,094 52,934 56,974 92,05% 52,094 52,934 56,974 92,05% 52,094 52,934 56,974 92,05% 52,094 5		242
56,974 93.82% 53,454 56,974 93.75% 53,414 56,974 93.68% 53,414 56,974 93.61% 53,334 56,974 93.61% 53,334 56,974 93.61% 53,334 56,974 93.54% 53,334 56,974 93.47% 53,294 56,974 93.40% 53,294 56,974 93.33% 53,294 56,974 93.33% 53,294 56,974 93.33% 53,294 56,974 93.33% 53,174 56,974 93.33% 53,174 56,974 93.12% 53,134 56,974 93.12% 53,094 56,974 93.05% 53,014 56,974 93.05% 53,014 56,974 92.91% 52,974 56,974 92.91% 52,974 56,974 92.05% 52,934 56,974 92.05% 52,914 56,974 92.05% 52,914 56,974 92.05% 52,914 56,974 92.05% 52,914 56,974 92.05% 52,914 56,974 92.05% 52,914 56,9		363
56,974 93.75% 53,414 53,414 56,974 93.68% 53,374 53,374 56,974 93.61% 53,374 53,374 56,974 93.54% 53,294 53,374 56,974 93.47% 53,294 53,334 56,974 93.47% 53,294 53,294 56,974 93.40% 53,294 53,294 56,974 93.33% 53,294 53,294 56,974 93.33% 53,294 53,294 56,974 93.33% 53,174 53,294 56,974 93.33% 53,174 53,294 56,974 93.35% 53,094 53,014 56,974 93.12% 53,014 52,974 56,974 92.98% 52,974 52,974 56,974 92.05% 52,974 52,974 56,974 92.05% 52,974 52,974 56,974 92.05% 52,934 52,974 56,974 92.05% 52,934 52,934 56,974 92.05% 52,934 52,934		
56,974 93,68% 53,374 55,374 56,974 93,54% 53,374 53,374 56,974 93,54% 53,294 53,334 56,974 93,54% 53,294 53,294 56,974 93,40% 53,294 53,294 56,974 93,40% 53,294 53,294 56,974 93,33% 53,214 53,214 56,974 93,33% 53,174 53,214 56,974 93,33% 53,174 53,174 56,974 93,33% 53,014 53,014 56,974 93,12% 53,014 53,014 56,974 93,12% 53,014 52,974 56,974 92,91% 52,974 52,974 56,974 92,05% 52,014 52,974 56,974 92,05% 52,934 52,934 56,974 92,05% 52,894 52,934 56,974 92,05% 52,894 52,934 56,974 92,05% 52,894 52,934 56,974 92,05% 52,894 52,934	92.90% 52,930	
56,974 93,61% 53,334 56,974 93,54% 53,294 56,974 93,54% 53,294 56,974 93,54% 53,294 56,974 93,47% 53,294 56,974 93,47% 53,294 56,974 93,40% 53,174 56,974 93,40% 53,174 56,974 93,33% 53,174 56,974 93,19% 53,174 56,974 93,19% 53,134 56,974 93,19% 53,094 56,974 93,12% 53,014 56,974 93,05% 53,014 56,974 92,05% 53,014 56,974 92,05% 52,934 56,974 92,05% 52,934 56,974 92,05% 52,934 56,974 92,05% 52,854 56,974 92,05% 52,814 56,974 92,63% 52,814 56,974 92,63% 52,814 56,974 92,63% 52,814	92.62% 52,769	6 09
56,974 93.61% 53,294 56,974 93.54% 53,294 56,974 93.54% 53,294 56,974 93.47% 53,294 56,974 93.40% 53,214 56,974 93.33% 53,214 56,974 93.33% 53,174 56,974 93.33% 53,174 56,974 93.33% 53,094 56,974 93.12% 53,094 56,974 93.12% 53,094 56,974 93.12% 53,094 56,974 92.12% 53,094 56,974 92.98% 52,974 56,974 92.91% 52,934 56,974 92.93% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,814		726
56,974 93.54% 53,254 56,974 93.47% 53,254 56,974 93.40% 53,214 56,974 93.33% 53,174 56,974 93.33% 53,174 56,974 93.33% 53,174 56,974 93.19% 53,174 56,974 93.19% 53,174 56,974 93.12% 53,094 56,974 93.12% 53,094 56,974 93.05% 53,014 56,974 93.05% 53,014 56,974 93.05% 53,014 56,974 93.05% 53,014 56,974 92.98% 52,974 56,974 92.98% 52,934 56,974 92.91% 52,894 56,974 92.63% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,814		847
56,974 93.47% 53,254 56,974 93.40% 53,214 56,974 93.33% 53,174 56,974 93.33% 53,174 56,974 93.19% 53,134 56,974 93.19% 53,034 56,974 93.12% 53,034 56,974 93.12% 53,034 56,974 93.12% 53,034 56,974 93.12% 53,014 56,974 93.05% 53,014 56,974 93.05% 53,014 56,974 93.05% 53,014 56,974 92.08% 52,974 56,974 92.08% 52,934 56,974 92.09% 52,894 56,974 92.09% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,774 56,974 92.63% 52,774	_	998
56,974 93.40% 53,214 56,974 93.33% 53,174 56,974 93.33% 53,174 56,974 93.19% 53,134 56,974 93.12% 53,094 56,974 93.12% 53,094 56,974 93.12% 53,014 56,974 93.05% 53,014 56,974 93.05% 53,014 56,974 92.98% 52,974 56,974 92.98% 52,934 56,974 92.98% 52,894 56,974 92.06% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,814		1 080
56,974 93.33% 53,174 56,974 93.26% 53,174 56,974 93.19% 53,094 56,974 93.12% 53,094 56,974 93.12% 53,014 56,974 93.05% 53,014 56,974 93.05% 53,014 56,974 92.98% 52,974 56,974 92.91% 52,934 56,974 92.91% 52,934 56,974 92.91% 52,894 56,974 92.01% 52,894 56,974 92.03% 52,814 56,974 92.63% 52,814		
56,974 93.26% 53,134 56,974 93.19% 53,094 56,974 93.12% 53,094 56,974 93.05% 53,014 56,974 92.98% 52,974 56,974 92.91% 52,934 56,974 92.91% 52,934 56,974 92.91% 52,894 56,974 92.63% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,814		1211
56,974 93.19% 53,094 56,974 93.12% 53,094 56,974 93.05% 53,014 56,974 92.98% 52,974 56,974 92.91% 52,934 56,974 92.91% 52,934 56,974 92.91% 52,934 56,974 92.84% 52,834 56,974 92.70% 52,814 56,974 92.63% 52,814 56,974 92.63% 52,814	90.92% 51,803	1.55,1
56,974 93,12% 53,054 56,974 93,05% 53,014 56,974 92,98% 52,974 56,974 92,91% 52,934 56,974 92,91% 52,934 56,974 92,91% 52,934 56,974 92,91% 52,894 56,974 92,97% 52,894 56,974 92,97% 52,894 56,974 92,07% 52,894 56,974 92,07% 52,814 56,974 92,63% 52,174	90.64% 51,642	1,452
56,9/4 93,12% 93,05% 53,014 56,974 93,05% 53,014 56,974 92,91% 52,934 56,974 92,91% 52,894 56,974 92,84% 52,894 56,974 92,77% 52,894 56,974 92,63% 52,814 56,974 92,63% 52,814 56,974 92,63% 52,774	90.36% 51,481	1,573
56,974 93,05% 53,014 56,974 92,98% 52,974 56,974 92,91% 52,934 56,974 92,84% 52,894 56,974 92,77% 52,894 56,974 92,77% 52,814 56,974 92,63% 52,774		1,694
56,974 92.98% 52,974 56,974 92.91% 52,934 56,974 92.84% 52,894 56,974 92.77% 52,894 56,974 92.70% 52,814 56,974 92.63% 52,814		1.81
56,974 92.91% 52,934 56,974 92.84% 52,894 56,974 92.77% 52,854 56,974 92.70% 52,814 56,974 92.63% 52,814		9001
56,974 92,84% 52,894 56,974 92,77% 52,854 56,974 92,70% 52,814 56,974 92,63% 52,774		0.057
56,974 92.77% 52,854 56,974 92.70% 52,814 56,974 92.63% 52,774	89.23% 50,837	
56,974 92.63% 52,814 56,974 92.63% 52,774	88.95% 50,676	2,1/8
56,974 92.63% 52,774 56,974 92.63% 52,774	AR 66% 50.515	2,299
56,974 92.63% 52,174		2 420
	10°.00 00'00'	Ī
Total Years 1-20 1,063,080	1,037,670	
53,154	51,884	1,271

Costs amortized over 20 year operation life

18-- Sept-92

D-114

Sawmill Canal/Little Pecan Bayou Water Control Structures (PME-14)

Total First Cost	\$435,600
Total Fully Funded Cost	\$1,018,900

Annual Charges	Present Worth	Average <u>Annual*</u>
Interest & Amortization	\$576,900	\$61,000
Monitoring	102,300	10,800
cost	63,500	6,700
Other Costs	0	0_
Total	\$742,700	\$78,500
Average Annual Habitat Units		166
Cost per Habitat Unit		\$473
Average Annual Acres of Emer	gent Marsh	196

*Interest rate of 8.5 percent over a 20-year project life

D-115

Sawmill Canal/Little Pecan Bayou (PME-14)

First Costs and Annual Charges

Total First Cost	S 0	8 0	\$53.250	5330 514	461 836		\$435,600																							
First Cost Construction	50	50	8 0	C 1 1 2 C	C 18 354		\$268,480																							
Contingency	205	\$ 0		6 67 631	40 680	con'st	\$67,120																							
Supervision & Inspection Contingency	20	05	5	C10 857	4 12 173	CHI 76	\$15,000																							
Supervision & Administration	50	0.5	412 250	C 1 000	421,000	007'14	\$35,000	Other	Costs	\$ 0	2 0	9	2 0	9	\$ 0	2 0	\$ 0	\$ 0	\$ 0	2 0	\$ 0	9 5	0 \$	9	9	\$ 0	0 \$	9	9	0\$
Easements & Land Rights	05	99				•	\$20,000	O&M	Costs	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$6,712	\$134,240
Engineering & Destan	20		CO1 000				\$30,000	Monitorina	Costs	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$10,813	\$216,265
Fiscal Year			1993	1001	3001	CRE	TOTAL	Fiscal	Үөаг	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Year	5 Compound	4 Compound				I Compound Base Year			Үөаг	1 Discount	2 Discount	3 Discount	4 Discount	5 Discount	6 Discount	7 Discount	8 Discount	9 Discount	10 Discount	11 Discount	12 Discount	13 Discount	14 Discount	15 Discount	16 Discount	17 Discount	18 Discount	19 Discount	20 Discount	

D-116

Costs amortized over 20 year operation life

Coastal Wetlands Planning, Protection, and Restoration Act	st II
Protectio	Project List II
Planning,	Priority Project
Wetlands	
Coastal	

- _- ا

Sawmill Canal/Little Pecan Bayou (PME-14)

-

eser	Present Valued Costs		Total Discounted Costs	ed Costs	\$576,865		Amortized Costs	sts	\$60,957
Coar (Compound Bates	Fiscal Year	Engineering & Dasian	Easements & Land Riohts	Supervision & Supervision Elitst Cost Administration & Inspection Contingency Construction	Supervision & Inspection	Contingency	First Cost Construction	Total First Cost
5	1 504	0	0\$. \$0	\$0	\$ 0	0\$	0 5	\$0 \$
4	1.386	0	\$ 0	0 \$	\$ 0	\$ 0	0 5		
e	1.277	1993	\$26,823	\$25,546	\$15,647				\$00'010 \$000 000
2	1.177	1994	\$10,595	\$0	\$24,722	~		10/25	060'697¢
-	1.085	1995	\$ 0	\$ 0	\$1,899		\$10,404		747'000
·		Total	\$37.418	\$25,546	•••	\$17,461	••		\$513,347

		3	9	Ş	9	;;	3	8	9	8	Ş	Ş	3	3	Ş	3	8	8	%	3	3	3	3
	Costs																						
OGM	Costs	\$6,186	\$5,702	\$5,255	54 ,843	\$4,464	\$4,114	\$3,792	\$3,495	\$3,221	\$ 2,969	\$ 2,736	\$2,522	\$2,324	\$2,142	\$1,974	\$1,820	\$1,677	\$1,546	\$1,425	\$1,313	\$63,518	\$6,712
Monitoring	Costs	\$ 9'966	\$ 9,185	\$ 8,466	\$7,803	\$7,191	\$6,628	\$ 6,109	\$5,630	\$5,189	\$4,783	\$4,408	\$4,063	\$3,744	\$3,451	\$3,181	\$2,931	\$2,702	\$2,490	\$2,295	\$2,115	\$102,329	\$10,813
Fiscal	Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total	
Discount	tes	0.922	0.849	0.783	0 722	0.665	0.613	0.565	0.521	0.480	0 442	0.408	0.376	0.346	0.319	0.294	0.271	0.250	0.230	0.212	0 196		Average Annual
Dis	Year Rates		- 2 -	1	1		9 1	- 4-	. 60 	1	- 10	2 =	: 1-	1	14	- 15	- 16	- 17	- 18	- 19	- 20	2	A V

D-117

Costs amortized over 20 year operation life

.

Sawmill Canal/Little Pecan Bayou (PME-14)

\$107,662	Total First Cost	9	3	\$55,487	\$355,417	\$57,525	\$468,428
sts	First Cost Construction	9 0	\$ 0	\$ 0	\$247,464	\$42,564	\$290,028
Amortized Costs	Supervision First Cost Inspection Contingency Construction	3	\$ 0	\$ 0	\$61,866	\$10,641	
	Supervision & Inspection			\$0	\$13,826	\$2,378	\$16,204
\$1,018,853	Supervision & Supervision Administration & Inspectior	°\$	\$0	\$12,765	\$22,582	\$1,942	\$37,289
led Costs	Easements Land Rights	\$ 0	9	\$20,840	0\$	9	\$20,840
Total Fully Funded Costs	Engineering & Design	0	3	\$21,882	\$9.678	95	\$31,560
	Fiscal Year	0	0	1993	1994	1995	TOTAL
Fully Funded Costs	Inflation Factor	•	•	1.042	1.075	1.110	
Fully Fu	Year		4	Ś	~		

••

Other	Costs	0 \$	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	9	9	\$ 0	9	\$ 0	\$0	\$ 0	\$ 0	\$0	9				
O&M	Costs	\$7,687	\$7,933	\$8,187	\$8,449	\$8,719	\$8,998	\$9,286	\$9,583	\$ 9,890	\$10,206	\$10,533	\$10,870	\$11,218	\$11,577	\$11,947	\$12,330	\$12,724	\$13,131	\$13,552	\$13,985	\$210,807
Monitoring	Costs	\$12,384	\$12,780	\$13,189	\$13,611	\$14,047	\$14,496	\$14,960	\$15,439	\$15,933	\$16,443	\$16,969	\$17,512	\$18,073	\$18,651	\$19,248	\$19,864	\$20,499	\$21,155	\$21,832	\$22,531	\$339,618
Fiscal	Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Inflation	Factor	1.145	1.182	1.220	1.259	1.299	1.341	1.384	1.428	1.473	1.521	1 569	1.620	1.671	1.725	1.780	1.837	1.896	1.956	2.019	2.084	
	Year	-	-2	ເ	4 1	-5	9 1	- 7	80 I	6 	- 10	==	- 12	13	14	- 15	- 16	- 17	- 18	- 19	~ 20	

D-118

Costs amortized over 20 year operation life

Sawmill Canal/Little Pecan Bayou (PME-14)

Marsh Type: Fresh/Intermediate

Acres Vegetated Acres Vegetated Acres Vegetated Acres Vegetated Acres Acres Acres Vegetated Acres Ac			With Project % Acreage	Vegetated	Without Project % Acreage	Vegetated	Net
1,908 91.98% 1,755 90.99% 1,755 1,908 91.36% 1,755 90.99% 1,721 1,908 91.37% 1,751 90.19% 1,721 1,908 91.35% 1,747 89.40% 1,721 1,908 91.14% 1,735 90.19% 1,721 1,908 91.14% 1,733 88.61% 1,706 1,908 90.51% 1,733 88.61% 1,601 1,908 90.51% 1,733 86.623% 1,615 1,908 90.51% 1,713 86.23% 1,615 1,908 90.51% 1,713 86.23% 1,615 1,908 90.51% 1,713 86.23% 1,615 1,908 89.68% 1,711 82.29% 1,515 1,908 89.68% 1,713 81.50% 1,555 1,908 89.66% 1,713 82.55% 1,495 1,908 89.66% 1,713 82.55% 1,495 1,908 89.66% 1,713 82.55% 1,495 <t< th=""><th>Years</th><th>Acres</th><th>Vegetated</th><th>Acres</th><th>Vegetated</th><th>Acres</th><th>Acres</th></t<>	Years	Acres	Vegetated	Acres	Vegetated	Acres	Acres
1,908 91.98% 1,755 90.99% 1,736 1,908 91.77% 1,751 90.19% 1,721 1,908 91.35% 1,747 89.40% 1,766 1,908 91.35% 1,747 89.40% 1,706 1,908 91.14% 1,733 88.61% 1,691 1,908 90.33% 1,733 87.03% 1,616 1,908 90.30% 1,733 87.03% 1,645 1,908 90.30% 1,713 86.23% 1,615 1,908 90.30% 1,721 85.44% 1,650 1,908 90.30% 1,723 84.65% 1,615 1,908 90.30% 1,713 86.23% 1,615 1,908 89.68% 1,711 81.50% 1,570 1,908 89.68% 1,711 81.50% 1,555 1,908 89.68% 1,711 81.50% 1,555 1,908 89.65% 1,693 79.33% 1,660 1,908 89.65% 1,7107 81.50% 1,555 <t< td=""><td>0</td><td>1,908</td><td>91.98%</td><td>1,755</td><td>91.98%</td><td>1,755</td><td>0</td></t<>	0	1,908	91.98%	1,755	91.98%	1,755	0
1,71% 1,751 90.19% 1,721 1,908 91.77% 1,747 89.40% 1,721 1,908 91.14% 1,743 89.40% 1,706 1,908 91.14% 1,743 89.40% 1,706 1,908 91.14% 1,733 81.61% 1,691 1,908 91.14% 1,733 81.65% 1,616 1,908 90.30% 1,727 85.44% 1,630 1,908 90.30% 1,727 84.65% 1,616 1,908 90.30% 1,719 81.65% 1,600 1,908 89.88% 1,711 82.29% 1,600 1,908 89.68% 1,711 82.29% 1,555 1,908 89.68% 1,711 82.29% 1,555 1,908 89.68% 1,707 81.56% 1,555 1,908 89.65% 1,717 81.56% 1,555 1,908 89.68% 1,707 81.56% 1,555 1,908 89.68% 1,600 71.57% 1,555 1,908	-	1 908	91.98%	1.755	80.99%	1,736	19
1,908 91.56% 1,747 89.40% 1,706 1,908 91.14% 1,733 88.61% 1,691 1,908 91.14% 1,733 88.61% 1,616 1,908 90.51% 1,733 88.61% 1,616 1,908 90.51% 1,731 86.23% 1,616 1,908 90.51% 1,727 85.44% 1,615 1,908 90.51% 1,773 84.65% 1,615 1,908 89.88% 1,771 85.44% 1,616 1,908 89.68% 1,771 82.29% 1,515 1,908 89.68% 1,771 82.29% 1,516 1,908 89.68% 1,771 82.29% 1,555 1,908 89.68% 1,771 82.29% 1,516 1,908 89.68% 1,771 82.29% 1,515 1,908 89.66% 1,771 82.59% 1,516 1,908 88.63 1,607 81.66% 1,555 1,908 88.63 1,693 79.93% 1,510 1	- ~	1 908	91.77%	1,751	90.19%	1,721	ĕ
1,908 91.35% 1,743 88.61% 1,691 1,908 91.14% 1,733 88.61% 1,691 1,908 90.51% 1,733 88.61% 1,616 1,908 90.51% 1,731 86.23% 1,616 1,908 90.51% 1,727 85.44% 1,616 1,908 90.51% 1,727 85.44% 1,615 1,908 90.30% 1,719 83.86% 1,615 1,908 89.68% 1,719 83.86% 1,616 1,908 89.68% 1,711 82.29% 1,515 1,908 89.47% 1,707 81.50% 1,555 1,908 89.68% 1,711 82.29% 1,555 1,908 89.66% 1,707 81.50% 1,555 1,908 89.65% 1,703 80.71% 1,555 1,908 88.63% 1,600 73.555 1,495 1,908 88.63% 1,603 79.33% 1,555 1,908 88.63 1,693 79.33% 1,510	1 01	1 908	91.56%	1,747	89.40%	1,706	4
1,908 91,14% 1,739 87,82% 1,676 1,908 90,51% 1,735 87,03% 1,660 1,908 90,51% 1,727 85,44% 1,630 1,908 90,51% 1,727 85,44% 1,630 1,908 90,51% 1,727 85,44% 1,630 1,908 90,51% 1,719 85,44% 1,615 1,908 89,68% 1,711 82,29% 1,615 1,908 89,68% 1,711 82,29% 1,510 1,908 89,68% 1,711 82,29% 1,555 1,908 89,68% 1,707 81,50% 1,555 1,908 89,68% 1,707 81,50% 1,555 1,908 89,68% 1,707 81,50% 1,555 1,908 88,63% 1,693 79,33% 1,555 1,908 88,63% 1,663 79,33% 1,555 1,908 88,63% 1,693 79,33% 1,510 1,908 88,637% 1,693 79,33% 1,510 <t< td=""><td>•</td><td>1 908</td><td>91.35%</td><td>1,743</td><td>88.61%</td><td>1,691</td><td>5</td></t<>	•	1 908	91.35%	1,743	88.61%	1,691	5
1,908 90,93% 1,735 87.03% 1,660 1,908 90,51% 1,727 86.23% 1,660 1,908 90,51% 1,727 85.44% 1,630 1,908 90,51% 1,727 85.44% 1,630 1,908 90,30% 1,719 86.23% 1,615 1,908 89.68% 1,711 82.29% 1,515 1,908 89.68% 1,711 82.29% 1,570 1,908 89.68% 1,711 82.29% 1,555 1,908 89.68% 1,707 81.50% 1,555 1,908 89.26% 1,703 80.71% 1,555 1,908 89.65% 1,703 80.71% 1,555 1,908 89.65% 1,699 79.35% 1,495 1,908 88.63% 1,699 79.35% 1,495 1,908 88.63% 1,693 79.35% 1,495 1,908 88.63 1,693 79.35% 1,495 1,908 88.63 1,693 76.06% 1,495 1	r ua	8061	91.14%	1,739	87.82%	1,676	ö
1,908 90,72% 1,731 86,23% 1,645 1,908 90,51% 1,727 85,44% 1,630 1,908 90,30% 1,723 84,65% 1,615 1,908 90,30% 1,719 83,86% 1,615 1,908 99,68% 1,715 83,07% 1,585 1,908 89,68% 1,711 82,29% 1,570 1,908 89,66% 1,707 81,50% 1,555 1,908 89,05% 1,707 81,50% 1,555 1,908 89,05% 1,703 80,71% 1,555 1,908 89,05% 1,703 80,71% 1,555 1,908 89,05% 1,703 80,71% 1,555 1,908 88,63% 1,699 79,93% 1,555 1,908 88,63% 1,699 79,93% 1,555 1,908 88,63% 1,693 79,35% 1,495 1,908 88,63% 1,693 76,06% 1,495 1,908 88,63% 1,683 76,78% 1,495 1,908 88,63% 1,683 76,78% 1,495 1,908 88,63% 1,683 76,57% 1,495 1,908) (C	1.908	90.93%	1,735	87.03%	1,660	2
1,908 90.51% 1,727 85.44% 1,630 1,908 90.30% 1,719 83.86% 1,615 1,908 90.30% 1,719 83.86% 1,615 1,908 89.88% 1,715 83.07% 1,565 1,908 89.47% 1,711 82.29% 1,570 1,908 89.47% 1,707 81.50% 1,570 1,908 89.26% 1,707 81.50% 1,555 1,908 89.26% 1,703 80.71% 1,555 1,908 89.65% 1,703 80.71% 1,555 1,908 89.65% 1,695 79.14% 1,510 1,908 88.63% 1,695 79.14% 1,510 1,908 88.63% 1,695 79.14% 1,510 1,908 88.42% 1,695 76.00% 1,465 1,908 88.21% 1,613 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 <td< td=""><td>• •</td><td>1 908</td><td>90.72%</td><td>1,731</td><td>86.23%</td><td>1,645</td><td>æ</td></td<>	• •	1 908	90.72%	1,731	86.23%	1,645	æ
1,908 90.30% 1,723 84.65% 1,615 1,908 90.09% 1,719 83.86% 1,610 1,908 89.88% 1,715 83.07% 1,565 1,908 89.48% 1,711 82.29% 1,570 1,908 89.47% 1,707 81.50% 1,555 1,908 89.26% 1,703 80.71% 1,555 1,908 89.26% 1,703 80.71% 1,555 1,908 89.26% 1,703 80.71% 1,555 1,908 89.65% 1,695 79.14% 1,510 1,908 88.63% 1,695 79.14% 1,510 1,908 88.63% 1,695 79.14% 1,510 1,908 88.42% 1,695 77.57% 1,480 1,908 88.00% 1,679 76.00% 1,465 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 <td< td=""><td>. cc</td><td>1 908</td><td>90.51%</td><td>1.727</td><td>85.44%</td><td>1,630</td><td>6</td></td<>	. cc	1 908	90.51%	1.727	85.44%	1,630	6
1,908 90,09% 1,719 83.86% 1,600 1,908 89.88% 1,711 82.29% 1,570 1,908 89.47% 1,707 81.50% 1,555 1,908 89.47% 1,707 81.50% 1,555 1,908 89.26% 1,707 81.50% 1,555 1,908 89.26% 1,703 80.71% 1,555 1,908 89.05% 1,699 79.93% 1,510 1,908 89.65% 1,695 79.14% 1,510 1,908 88.42% 1,695 79.14% 1,510 1,908 88.42% 1,695 79.14% 1,510 1,908 88.42% 1,683 77.57% 1,480 1,908 88.21% 1,683 76.00% 1,465 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 <td< td=""><td></td><td>1 908</td><td>90.30%</td><td>1.723</td><td>84.65%</td><td>1,615</td><td>5</td></td<>		1 908	90.30%	1.723	84.65%	1,615	5
1,908 89,88% 1,715 83,07% 1,585 1,908 89,47% 1,711 82,29% 1,570 1,908 89,47% 1,707 81,50% 1,555 1,908 89,26% 1,707 81,50% 1,555 1,908 89,26% 1,703 80,71% 1,555 1,908 89,05% 1,699 79,93% 1,510 1,908 89,05% 1,695 79,14% 1,510 1,908 88,63% 1,695 79,14% 1,510 1,908 88,42% 1,695 79,14% 1,510 1,908 88,42% 1,683 76,77% 1,480 1,908 88,21% 1,683 76,70% 1,465 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 <td< td=""><td>, c</td><td>1 908</td><td>%60'06</td><td>1,719</td><td>83.86%</td><td>1,600</td><td>11</td></td<>	, c	1 908	%60'06	1,719	83.86%	1,600	11
1,908 89,68% 1,711 82,29% 1,570 1,908 89,47% 1,707 81,50% 1,555 1,908 89,26% 1,703 80,71% 1,555 1,908 89,05% 1,699 79,93% 1,556 1,908 89,05% 1,695 79,14% 1,510 1,908 89,65% 1,695 79,14% 1,510 1,908 88,63% 1,695 79,14% 1,510 1,908 88,63% 1,695 79,14% 1,510 1,908 88,42% 1,687 77,57% 1,480 1,908 88,42% 1,683 76,78% 1,480 1,908 88,21% 1,683 76,78% 1,480 1,908 88,00% 1,679 76,00% 1,455 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908	2 =	1 908	89.88%	1,715	83.07%	1,585	13
1,908 89,47% 1,707 81,50% 1,555 1,908 89,26% 1,703 80,71% 1,555 1,908 89,05% 1,703 80,71% 1,554 1,908 89,05% 1,695 79,93% 1,525 1,908 89,65% 1,695 79,14% 1,510 1,908 88,63% 1,695 79,14% 1,510 1,908 88,42% 1,687 77,57% 1,480 1,908 88,42% 1,683 76,77% 1,480 1,908 88,21% 1,683 76,78% 1,465 1,908 88,20% 1,679 76,70% 1,480 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450	: 2	1 908	89.68%	1.711	82.29%	1,570	14
1,908 89,26% 1,703 80,71% 1,540 1,908 89,05% 1,699 79,93% 1,525 1,908 88,84% 1,695 79,14% 1,510 1,908 88,84% 1,695 79,14% 1,510 1,908 88,63% 1,695 79,14% 1,510 1,908 88,42% 1,687 77,57% 1,480 1,908 88,42% 1,683 76,77% 1,480 1,908 88,21% 1,683 76,78% 1,465 1,908 88,21% 1,663 76,70% 1,450 1,908 88,00% 1,679 76,70% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450	i t	1 908	89.47%	1.707	81.50%	1,555	15
1,908 89,05% 1,699 79,93% 1,525 1,908 88,84% 1,695 79,14% 1,510 1,908 88,63% 1,695 79,14% 1,510 1,908 88,42% 1,687 77,57% 1,480 1,908 88,42% 1,683 76,77% 1,480 1,908 88,21% 1,663 76,77% 1,480 1,908 88,21% 1,663 76,77% 1,480 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450 1,908 88,00% 1,679 76,00% 1,450	2 T	1 908	89.26%	1.703	80.71%	1,540	16
1,908 88.84% 1,695 79.14% 1,510 1,908 88.63% 1,691 78.35% 1,495 1,908 88.42% 1,687 77.57% 1,480 1,908 88.42% 1,663 76.77% 1,480 1,908 88.21% 1,663 76.78% 1,465 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450	<u> </u>	1 908	89.05%	1.699	79.93%	1,525	17
1,908 88.63% 1,691 78.35% 1,495 1,908 88.42% 1,687 77.57% 1,480 1,908 88.42% 1,683 76.78% 1,465 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450 1,908 88.00% 1,679 76.00% 1,450	91	1 908	88.84%	1,695	79.14%	1,510	18
1,908 88.42% 1,687 77.57% 1,480 2 1,908 88.21% 1,683 76.7% 1,480 2 1,908 88.21% 1,663 76.7% 1,465 2 1,908 88.00% 1,679 76.00% 1,450 2 1,908 88.00% 1,679 76.00% 1,450 2 1,908 88.00% 1,679 76.00% 1,450 2 Total Years 1-20 34,340 31,855 1,593 1,593 1,593	2 1	1 908	88.63%	1.691	78.35%	1,495	19
1,908 88.21% 1,683 76.78% 1,465 2 1,908 88.00% 1,679 76.00% 1,450 2 Total Years 1-20 34,340 31,855 1,593		1,908	88.42%	1.687	77.57%	1,480	20
1,908 88.00% 1,679 76.00% 1,450 2 Total Years 1 - 20 34,340 31,855 1,593	5	1 908	88.21%	1,683	76.78%	1,465	21
34,340 31,855 1 717 1.593	50	1,908	88.00%	1,679	76.00%	1,450	52
1 717 1.593	·	Total Years 1-	20	34,340		31,855	
		Average Annus	al Acros	1 717		1.593	12

D-119

18--Sept-92

Sawmili Canal/Little Pecan Bayou (PME-14)

Marsh Type: Brackish

		With Project	-	Without Project		Por N
Years	Acres	Vegetated	Acres	vegetated	Acres	Acres
0	743	78.73%	585	78.73%	585	0
-	743	78.20%	581	77.79%	578	e
0	743	77.66%	577	76.93%	572	ŝ
e	743	77.12%	573	76.06%	565	80
4	743	76.58%	569	75.19%	559	10
ŝ	743	76.04%	565	74.32%	552	13
9	743	75.50%	561	73.46%	546	15
7	743	74.97%	557	72.59%	539	18
80	743	74.43%	553	71.72%	533	20
6	743	73.89%	549	70.85%	526	23
10	743	73.35%	545	69.99%	520	25
Ξ	743	72.81%	541	69.11%	514	28
12	743	72.27%	537	68.24%	507	30
13	743	71.74%	533	67.36%	501	33
4	743	71.20%	529	66.49%	494	35
15	743	70.66%	525	65.61%	488	38
16	743	70.12%	521	64.74%	481	4
17	743	69.58%	517	63.86%	475	43
18	743	69.04%	513	62.99%	468	45
19	743	68.51%	509	62.11%	462	48
20	743	67.97%	505	61.24%	455	20
Ţ	Total Years 1–20	0	10,860		10,333	
•			e L			ů

18-Sept-92

Costs amortized over 20 year operation life

D-120

Sawmill Canal/Little Pecan Bayou (PME--14)

Marsh Type: Cypress Swamp

Ited Acres Vegetated Acres 91 100.00% 91 91 00.00% 91 100.00% 91 91 91 91 91 00.00% 91 100.00% 91 94.74% 86 91 00.00% 91 89.47% 81 84.21% 77 00.00% 91 78.95% 77 91 72 00.00% 91 73.68% 67 77 00.00% 91 73.68% 67 73 00.00% 91 73.68% 67 74 00.00% 91 73.68% 67 73 00.00% 91 57.89% 57 83 34 00.00% 91 47.37% 43 34 34 00.00% 91 42.11% 73 34 34 00.00% 91 42.11% 73 34 34 00.00% 91 42.11% 73			With Project % Acreade	Vegetated	Without Project % Acreage	Vegetated	Net
0 91 100.00% 91 100.00% 9 2 91 100.00% 91 100.00% 9 91 100.00% 2 91 100.00% 91 100.00% 91 91.74% 9 2 91 100.00% 91 100.00% 91 91.74% 9 3 91 100.00% 91 100.00% 91 78.95% 7 5 91 100.00% 91 73.68% 91 73.68% 91 91 100.00% 91 100.00% 91 73.68% 91 73.68% 91 100.00% 91 100.00% 91 47.37% 74 91 100.00% 91 91 31.58% 91 31.58% 117 91 100.00% 91 21.05% 91 105.79% 12 91 100.00% 91 21.05% 91 21.05% 12 91 100.00% 91 21.05% 91 21.05% 13 91	Years .	Acres	Vegetated	Acres	Vegetated	Acres	ACLES
91 100.00% 91 94.74% 91 91 100.00% 91 94.74% 91 91 100.00% 91 94.74% 91 91 100.00% 91 100.00% 91 84.21% 91 100.00% 91 100.00% 91 84.21% 74 91 100.00% 91 100.00% 91 78.95% 74 74 91 100.00% 91 100.00% 91 73.68% 66.42% 67 74 74 91 100.00% 91 100.00% 91 57.88% 57.89% 57.63% 57.63% 57.63% 57.63% 57.65% <td>. 0</td> <td>91</td> <td>100.00%</td> <td>91</td> <td>100.00%</td> <td>16</td> <td>0</td>	. 0	91	100.00%	91	100.00%	16	0
91 94.74% 91 100.00% 91 10.00% 91 10.00% 91 10.00% 91 10.75%	Ŧ	19	100.00%	91	100.00%	91	•
91 100.00% 91 89.47% 91 100.00% 91 78.95% 7 91 100.00% 91 78.95% 7 91 100.00% 91 73.68% 6 91 100.00% 91 73.68% 6 91 100.00% 91 73.68% 6 91 100.00% 91 68.42% 6 91 100.00% 91 57.89% 6 91 100.00% 91 57.89% 6 91 100.00% 91 57.89% 6 91 100.00% 91 57.89% 5 91 100.00% 91 47.37% 5 91 100.00% 91 31.58% 5 91 100.00% 91 21.05% 91 91 100.00% 91 10.53% 5 91 100.00% 91 5.26% 5 91 100.00% 91 15.79% 91 100.00% 91 5.26% 91 100.00% 91 5.26% 91 100.00% 91 5.26% 91 100.00% 91	- ‹	5 5		16	94.74%	86	
91 100.00% 91 84.21% 91 100.00% 91 78.95% 7 91 100.00% 91 73.68% 6 91 100.00% 91 73.68% 6 91 100.00% 91 68.42% 6 91 100.00% 91 63.16% 6 91 100.00% 91 63.16% 6 91 100.00% 91 57.89% 6 91 100.00% 91 57.89% 5 91 100.00% 91 57.89% 5 91 100.00% 91 57.89% 5 91 100.00% 91 47.37% 5 91 100.00% 91 31.58% 5 91 100.00% 91 21.05% 5 91 100.00% 91 10.53% 5 91 100.00% 91 10.53% 5 91 100.00% 91 5 5 91 100.00% 91 5 5 91 100.00% 91 5 5 91 100.00% 91 5 91 100	N 0	9	100.001	91	89.47%	81	7
91 100.00% 91 78.95% 91 100.00% 91 73.68% 6 91 100.00% 91 73.68% 6 91 100.00% 91 63.16% 6 91 100.00% 91 63.16% 6 91 100.00% 91 57.89% 6 91 100.00% 91 57.89% 5 91 100.00% 91 47.37% 5 91 100.00% 91 47.37% 5 91 100.00% 91 47.37% 5 91 100.00% 91 31.58% 5 91 100.00% 91 21.05% 5 91 100.00% 91 21.05% 5 91 100.00% 91 10.53% 5 91 100.00% 91 10.53% 5 91 100.00% 91 5.26% 5 91 100.00% 91 5.26% 5 91 100.00% 91 5.26% 5 91 100.00% 91 5.26% 5 91 100.00% 91 5.26% 5 <t< td=""><td>0 •</td><td>6</td><td>100.00%</td><td>91</td><td>84.21%</td><td>11</td><td>-</td></t<>	0 •	6	100.00%	91	84.21%	11	-
91 100.00% 91 73.68% 6 91 100.00% 91 63.42% 6 91 100.00% 91 63.42% 6 91 100.00% 91 57.89% 5 91 100.00% 91 57.89% 5 91 100.00% 91 57.89% 5 91 100.00% 91 47.37% 91 100.00% 91 47.37% 91 100.00% 91 42.11% 91 100.00% 91 36.84% 91 100.00% 91 21.05% 91 100.00% 91 26.32% 91 100.00% 91 10.53% 91 100.00% 91 10.53% 91 100.00% 91 10.53% 91 100.00% 91 5.26% 91 100.00% 91 5.26% 91 100.00% 91 5.26%	r u	6 6	100.001	- 1 6	78.95%	72	19
91 100.00% 91 68.42% 91 100.00% 91 63.16% 91 100.00% 91 57.89% 91 100.00% 91 57.89% 91 100.00% 91 57.89% 91 100.00% 91 57.89% 91 100.00% 91 47.37% 91 100.00% 91 47.37% 91 100.00% 91 47.37% 91 100.00% 91 47.37% 91 100.00% 91 26.34% 91 100.00% 91 21.5% 91 100.00% 91 15.79% 91 100.00% 91 10.53% 91 100.00% 91 10.53% 91 100.00% 91 5.26% 91 100.00% 91 10.53% 91 100.00% 91 5.26% 91 100.00% 91 5.26%	с 4	5 5		91	73.68%	67	24
91 63 16% 91 100.00% 91 57.89% 91 100.00% 91 57.89% 91 100.00% 91 52.63% 91 100.00% 91 47.37% 91 100.00% 91 47.37% 91 100.00% 91 42.11% 91 100.00% 91 31.58% 91 100.00% 91 26.32% 91 100.00% 91 26.32% 91 100.00% 91 15.79% 91 100.00% 91 15.79% 91 100.00% 91 5.26% 91 100.00% 91 5.26% 91 100.00% 91 5.26% 91 100.00% 91 5.26% 91 100.00% 91 5.26%	0 P	5		91	68.42%	62	Ň
91 100.00% 91 57.89% 91 100.00% 91 57.89% 91 100.00% 91 47.37% 91 100.00% 91 47.37% 91 100.00% 91 47.37% 91 100.00% 91 47.37% 91 100.00% 91 42.11% 91 100.00% 91 36.84% 91 100.00% 91 31.58% 91 100.00% 91 26.32% 91 100.00% 91 15.79% 91 100.00% 91 15.79% 91 100.00% 91 15.79% 91 100.00% 91 10.53% 91 100.00% 91 5.26% 91 100.00% 91 5.26%	~ a	5	100.00%	91	63.16%	57	34
91 100.00% 91 52.63% 91 100.00% 91 47.37% 91 100.00% 91 42.11% 91 100.00% 91 42.11% 91 100.00% 91 31.58% 91 100.00% 91 31.58% 91 100.00% 91 26.32% 91 100.00% 91 21.6% 91 100.00% 91 26.32% 91 100.00% 91 15.79% 91 100.00% 91 15.79% 91 100.00% 91 10.5% 91 100.00% 91 5.26% 91 100.00% 91 5.26% 91 100.00% 91 0.00%		5 8	100.00%	91	57.89%	53	38
91 47.37% 91 100.00% 91 100.00% 91 100.00% 91 101.00% 91 101.00% 91 101.00% 91 101.00% 91 101.00% 91 100.00% 91 100.00% 91 100.00% 91 100.00% 91 100.00% 91 10.05% 91 10.05% 91 10.00% 91 10.00% 91 10.00% 91 10.00% 91 10.00% 91 10.00% 91 10.00% 91 10.00% 91 10.00% 91 10.00% 91 10.00% 91 100.00% 91 100.00% 91 1.820 91 1.820		5	100.00%	91	52.63%	48	64
91 100.00% 91 42.11% 91 100.00% 91 36.84% 91 100.00% 91 31.58% 91 100.00% 91 26.32% 91 100.00% 91 21.05% 91 100.00% 91 21.58% 91 100.00% 91 26.32% 91 100.00% 91 15.79% 91 100.00% 91 15.79% 91 100.00% 91 10.53% 91 100.00% 91 10.53% 91 100.00% 91 0.00% 91 100.00% 91 0.00%	⊇;	5	100.00%	91	47.37%	43	4 8
91 100.00% 91 36.84% 91 100.00% 91 31.58% 91 100.00% 91 26.32% 91 100.00% 91 21.05% 91 100.00% 91 15.79% 91 100.00% 91 15.79% 91 100.00% 91 15.79% 91 100.00% 91 15.73% 91 100.00% 91 10.53% 91 100.00% 91 0.00% 91 10.00% 91 0.00%	= \$	5 5	100.00%	91	42.11%	8 8	53
91 31.58% 91 31.58% 91 100.00% 91 26.32% 91 100.00% 91 21.05% 91 100.00% 91 15.79% 91 10.00% 91 10.00% 91 15.79% 91 10.00% 91 10.53% 91 10.53% 91 10.53% 91 10.00% 91 10.00% 91 0.00% 91 0.00% 91 100.00% 91 0.00%	<u>4</u> ;	5 5		91	36.84%	34	57
91 100.00% 91 26.32% 91 100.00% 91 21.05% 91 100.00% 91 15.79% 91 100.00% 91 15.73% 91 100.00% 91 10.53% 91 100.00% 91 10.53% 91 100.00% 91 10.53% 91 100.00% 91 0.00% 91 100.00% 91 0.00% 91 100.00% 91 0.00%	2:	5 5		16	31.58%	53	62
91 100.00% 91 21.05% 91 100.00% 91 15.79% 91 100.00% 91 15.73% 91 100.00% 91 10.53% 91 100.00% 91 5.26% 91 100.00% 91 0.00% 91 100.00% 91 0.00% 91 100.00% 91 0.00% 91 100.00% 91 0.00%	* ¥	6	100.001	91	26.32%	24	67
91 100.00% 91 15.79% 91 100.00% 91 15.3% 91 100.00% 91 5.26% 91 100.00% 91 5.26% 91 0.00% 91 0.00% Total Years 1–20 1,820 9	<u>c</u> å	5 5	100.00%	91	21.05%	19	72
91 100.00% 91 10.53% 91 100.00% 91 5.26% 91 100.00% 91 5.26% 91 0.00% Total Years 1–20 1,820 9	2 Ç	5 5	100.00%	91	15.79%	14	11
91 100.00% 91 5.26% 91 100.00% 91 0.00% Total Years 1–20 1,820 9	2		100.00%	91	10.53%	10	81
91 0.00% 91 0.00% 91 Total Years 1–20 1,820 9	•	5 6	100.00%	16	5.26%		86
1,820 9	20	919	100.00%	91	%00.0		91
č	·	Total Years 1–	-20	1,820		910	
		Ачегале Аллий	el Acres	91		46	•

Costs amortized over 20 year operation life

18-Sept-92

D-121

Sawmill Canal/Little Pecan Bayou (PME-14)

Summation of Emergent Marsh Acreages

Acres Vegetated 2,742 88.51% 2,742 89.51% 2,742 89.51% 2,742 89.51% 2,742 89.55% 2,742 89.55% 2,742 89.56% 2,742 87.05% 2,742 87.05% 2,742 86.76% 2,742 86.18% 2,742 86.18% 2,742 86.18% 2,742 86.18% 2,742 86.18% 2,742 86.18% 2,742 86.18% 2,742 85.99% 2,742 85.01% 2,742 85.01% 2,742 85.01% 2,742 84.43% 2,742 83.55% 2,742 83.55% 2,742 83.55%	Vegetated	% Acreate	Vegetated	Net
2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2	Acres	Vegetated	Acres	Acres
2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2	2,431	88.66%	2,431	0
2,2 2,7,2,7,	2,427	87.71%	2,405	22
2, 2 2, 7 2, 7 2, 7 2, 7 2, 7 2, 7 2, 7	2,419	86.75%	2,379	7
2, 2 47, 2 4	2,411	85.79%	2,352	59
2,2 2,7 2,7 2,7 2,7 2,7 2,7 2,7 2,7 2,7	2,403	84.83%	2,326	
2, 2 2, 7 2, 7 2, 7 2, 7 2, 7 2, 7 2, 7	2,395	83.87%	2,300	95
2,722 2,722	2,387	82.91%	2,273	411
2,742 2,742	2,379	81.94%	2,247	132
2,742 2,742 2,742 2,742 2,742 2,742 2,742 2,742 2,742 2,742 2,742	2,371	80.98%	2,221	150
2,742 2,742 2,742 2,742 2,742 2,742 2,742 2,742 2,742	2,363	80.02%	2,194	169
2,742 2,742 2,742 2,742 2,742 2,742 2,742	2,355	79.06%	2,168	187
2,742 2,742 2,742 2,742 2,742 2,742	2,347	78.10%	2,142	205
2,742 2,742 2,742 2,742 2,742 2,742	2,339	77.14%	2,115	224
2,742 2,742 2,742 2,742 2,742 2,742	2,331	76.19%	2,089	242
2,742 2,742 2,742 2,742	2,323	75.23%	2,063	260
2,742 2,742 2,742	2,315	74.27%	2,036	279
2,742 2,742	2,307	73.31%	2,010	297
2,742	2,299	72.35%	1,984	315
•	2,291	71.39%	1,958	333
19 2,742 83.26%	2,283	70.43%	1,931	352
	2,275	69.47%	1,905	370
Total Years 1-20	47,020		43,098	
Average Annual Acres	2.351		2,155	196

D-122

18-Sept-92

Pass-a-Loutre Sediment Mining (PMR-8)

Total First Cost	\$1,160,500
Total Fully Funded Cost	\$1371,500

Annual Charges	Present Wor th	Average <u>Annual*</u>
Interest & Amortization	\$1,281,500	\$135,400
Monitoring	40,900	4,300
O& M cost	0	0
Other Costs	0	0_
Total	\$1,322,400	\$139,700
Average Annual Habitat Uni	ts	127
Cost per Habitat Unit		\$1,099
Average Annual Acres of Er	nergent Marsh	160

*Interest rate of 8.5 percent over a 20-year project life

Pass-a-Loutre Sediment Mininy (PMR-8)

First Costs and Annual Charges

567 50 570,0 5667 50 50 500 563,000 5167,500 5670,0 50 50 5670,0 50 563,000 5167,500 5670,0 50 50 5670,0 5670,0 50 50 5670,0 5670,0 50 50 5670,0 5670,0 50 50 5670,0 5670,0 50 50 5670,0 5670,0 50 50 5670,0 5670,0 50 50 5670,0 5670,0 50 50 5670,0 5670,0 50 563,000 5670,0 5670,0 50 563,000 5670,0 5670,0 50 563,000 5670,0 5670,0 50 563,000 5670,0 5670,0 50 563,000 5670,0 5670,0 50 563,000 5670,0 5670,0 50 563,000 5670,0 5670,0 50 563,000 5670,0	Easements & Land Righ	/isi	1	Supervision & Inspection C	Supervision & Inspection Contingency	First Cost Construction	Total First Cost
50 50 50 667 50 50 500 563,000 5167,500 50 563,000 5167,500 50 563,000 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500	· \$0 \$0		\$ 0	\$ 0	9		À
50 50 50 50 567 50 50 50 50 563,000 563,000 567,500 50 50 563,000 567,500 50 50 563,000 567,500 50 50 56 50 50 50 56 50 50 50 56 50 50 50 56 50 50 50 56 50 50 50 56 50 50 50 56 50 50 50 56 50 50 50 56 50 50 50 56 50 50 50 56 50 50 56 56 56 50 56 56 56 50 56 56 56 50 56 56 56 50 56 56 56 50 56 56 56 </td <td>. 20 \$0</td> <td></td> <td>\$0</td> <td>3</td> <td>\$0</td> <td>3</td> <td>\$0</td>	. 2 0 \$0		\$ 0	3	\$ 0	3	\$ 0
667 50 50 50 333 563,000 5167,500 300 563,000 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 5167,500 50 50 50 50 50 5167,500 50	\$0 \$0		\$ 0	\$ 0	\$ 0	\$0	\$ 0
\$63,000 \$167,500 \$63,000 \$167,500	\$ 120.000 \$ 62.000	9 \$	0,667	\$ 0	\$0	\$ 0	\$242,667
000 \$63,000 \$167,500 \$100,500 \$100,500 \$100,500 \$100,500 \$100,500 \$100,500 \$100,500 \$100,500		5	7,333	\$63,000	\$167,500	\$670,000	\$917,833
	\$120,000 \$62,000	25	8,000	\$63,000	\$167,500	\$670,000	\$1,160,500
	Monitoring O&M C	Ithei	_				
\$ \$ \$ \$ \$ \$ 5 \$ \$ 5 5 5 5 5 5 5 5 5 5	Costs	Cost					
* * * * * * * * * * * * * * * * * * * *	\$4,325 \$0		\$ 0				
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$4 ,325 \$0		\$ 0				
2 2 2 2 2 3 2 3 2 3 2 3 3 3 3 3 3 3 3 3	\$ 4,325 \$ 0		\$ 0				
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 4,325 \$ 0		\$ 0				
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	\$ 4,325 \$ 0	,	\$ 0				
* * * * * * * * * * * * * * * * *	•.		0 \$				
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			9 0				
2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3			\$ 0				
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			\$ 0				
3 3 3 3 3 3 3 3 3 3 3 3 3	\$4 ,325 \$0		\$ 0				
3 3 3 3 3 3 3 3 3 3 3	\$4 ,325 \$0		\$ 0				
2 2 2 2 2 2 2 2 2	\$4 ,325 \$0		0 \$				
2 2 2 2 2 3 3 2 3	\$4 ,325 \$0		\$ 0				
2222222	\$4 ,325 \$0		\$ 0				
ç, ç, ç, ç, ç,	\$4 ,325 \$0		\$ 0				
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			\$ 0				
2 2 2 2 2 2 3 2 3	\$4 ,325 \$0		\$ 0				
\$0 \$0	\$4 ,325 \$0		\$ 0				
0 \$			\$ 0				
\$0	\$ 4,325 \$ 0		\$ 0				
	\$86,500 \$0		3				

D-124

Costs amortized over 20 year operation life

18-Sept-92

Pass-a-Loutre Sediment Mining (PMR-8)

			•						
Present Valued Costs	ued Cost		Total Discounted Costs	d Costs	\$1,281,522		Amortized Costs	sts	\$135,418
Comp	Compound	Fiscal	Engineering	Easent ats	Supervision &	Supervision	First Cost	First Cost Construction	Total First Cost
Year Rat	Rates	Үөаг	& Design	& Land Hights	Administration		05	9 5	0 \$
2	1 504	ð	2 0					50	3 0
•	1 386	0	9	3					95
• •	770 1	C	S 0	9					C385 673
•		,	6141 967	\$72 988	\$71,418	\$ 0			
7	1.177	5661 1994		50		\$68,355		\$726,950	\$992,649
-	1.085	4661	720 1110	\$70 QAR		\$68,355	\$181,738	\$726,950	27C'18Z'1
	Total	tal	107'1414	000'7.4					
Discound	ţ	Fiscal	Monitoring	0&M	Other				
Vear Bates		Year	Costs	Costs	Costs				
	0.922	1995	\$3,986	9	••				
- 6	0.849	1996		3					
4 C 1	0.783	1991		3					
7 7	0.700	1998		9					
e 4 	0.665	1999							
5 42 	0.613	2000							
)	0.565	2001							
- at	0.521	2002							
5 0	0.480	2003							
	0.442	2004							
2 =-	0.408	2005							
	0.376	2006							
101	0.346	2007							
1	0.319	2008			•				
15	0.294	2009							
- 16	0.271	2010							
2	0.250	2011							
	0.230	2012	2 \$996			_			
	0.212	2013	3 \$918		-				
	0.196	2014	4 \$846						
N7 -		Total	\$40,929		\$ 0 \$ 0	_			
AVA	Average Annua	ual	\$4,325		\$0 \$0	~			

Costs amortized over 20 year operation life

Average Annual

18-Sept-92

D-125

Pass-a-Loutre Sediment Mining (PMR-8)

\$1,371,471

Total Fully Funded Costs

Fully Funded Costs

\$144,923

Amortized Costs

Inflation Eactor	Fiscal	Engineering	Easements 2.1 and Binhts	Supervision &	Supervision & Inspection	Supervision & Inspection Contingency	First Cost Construction	Total First Cost
	1 4 4 1		05 · · · · · · · · · · · · · · · · · · ·		20	0\$	0\$	0 \$
	0	2 0			\$0	\$0		9
	0	05	\$0	\$ 0	\$ 0	\$ 0	3 0	9 5
1.042	1993	\$125,040	\$64,604	\$63,215	\$0			\$252,859
1.075		0\$	\$0		\$67,747	\$180,120		\$986,987
	TOTAL	\$125,040	\$64,604	\$81,854	\$67,747	\$180,120	\$720,480	\$1, 239,845
Inflation	Fiscal	Monitoring	O&M	Other				
Factor	Year	Costs	Costs	Costs				
1.110	1995	\$4,800						
1.145		\$4,953	9	3				
1.182	•	\$5,112	\$0	S 0				
1.220	-	\$5,275	\$ 0					
1.259	·	\$5,444	\$					
1.299		\$5,618	\$					
1.341	2001	\$5,798	\$ 0					
1.384		\$5,984	\$0	\$0				
1.426		\$6,175	\$ 0					
1.475		\$6,373	3 0					
1.52		\$6,577	\$ 0					
1.56		\$6,787	3 0	%				
1.62(\$7,004	\$0	\$0				
1.67		\$7,229	\$ 0	3				
1.72		\$7,460						
1.78	0 2010	\$7,699	3	3				
1.83		\$7,945	9	8				
1.89			\$ 0	S				
1.95(
2.019		\$8,732	9 5	\$ 0				
	Total	\$131,626	\$ 0					

D-126

Costs amortized over 20 year operation life

18-Sept-92

Pass-a-Loutre Sediment Mining (PMR-8)

Marsh Type: Fresh/Intermediate

Acres Vegetaled Acres Vegetaled Acres 33 1 650 5.08% 33 34 31 33 34 31 <t< th=""><th></th><th></th><th>With Project % Acreade</th><th>Vegetated</th><th>Without Project % Acreage</th><th>Vegetated</th><th>Net</th></t<>			With Project % Acreade	Vegetated	Without Project % Acreage	Vegetated	Net
650 5.08% 33.65% 33.65% 33.50% 650 35.85% 233 5.08% 650 35.85% 233 5.08% 650 35.85% 233 5.08% 650 35.23% 229 4.92% 650 34.51% 229 4.92% 650 33.08% 215 4.79% 650 30.92% 216 4.71% 650 30.21% 196 4.5% 650 30.21% 192 4.5% 650 30.21% 192 4.5% 650 201 4.6% 4.5% 650 28.05% 187 4.5% 650 28.05% 187 4.5% 650 25.90% 168 4.37% 650 25.90% 166 4.2% 650 23.74% 159 4.1% 650 23.74% 156 4.1% 650 23.74% 156 4.2% 650 23.74% 156 4.5% 650	Years	Acres	Vegetated	Acres	Vegetated	Acres	ACIES .
650 35.85% 233 5.08% 650 35.23% 229 4.92% 650 34.51% 224 4.88% 650 34.51% 220 4.84% 650 34.51% 220 4.84% 650 33.08% 215 4.79% 650 30.08% 216 4.71% 650 30.92% 216 4.71% 650 30.92% 216 4.71% 650 30.92% 216 4.55% 650 30.21% 196 4.67% 650 29.49% 192 4.5% 650 29.49% 192 4.5% 650 28.77% 187 4.5% 650 28.05% 187 4.5% 650 25.90% 168 4.37% 650 25.18% 173 4.41% 650 23.74% 159 4.2% 650 23.74% 156 4.2% 650 23.14% 156 4.1% 650 23.	0	650	5.08%	33		33	0
650 35.23% 229 4.92% 650 34.51% 224 4.88% 650 33.79% 220 4.84% 650 33.79% 220 4.84% 650 33.08% 215 4.79% 650 32.36% 210 4.75% 650 32.36% 201 4.67% 650 30.92% 201 4.67% 650 30.21% 196 4.67% 650 30.21% 196 4.67% 650 28.77% 187 4.54% 650 28.05% 178 4.45% 650 28.05% 173 4.45% 650 25.18% 164 4.37% 650 23.733% 173 4.45% 650 23.03% 164 4.37% 650 23.74% 159 4.15% 650 23.14% 156 4.24% 650 22.31% 156 4.15% 650 23.13% 156 4.15% 650	-	650	35.85%	233	5.08%	33	200
650 34.51% 224 4.88% 650 33.79% 220 4.84% 650 33.08% 215 4.79% 650 32.36% 210 4.75% 650 32.36% 210 4.75% 650 32.36% 201 4.67% 650 30.92% 201 4.67% 650 30.92% 201 4.67% 650 30.21% 196 4.62% 650 28.77% 187 4.67% 650 28.77% 187 4.56% 650 28.05% 173 4.41% 650 26.62% 173 4.41% 650 25.18% 164 4.37% 650 23.74% 159 4.1% 650 23.74% 154 4.37% 650 23.03% 154 4.24% 650 22.31% 155 4.15% 650 22.31% 156 4.50% 650 22.31% 156 4.15% 650 22.31% 156 4.15% 650 22.31% 156 4.15% 650 22.31% 156 4.15%	- ~	650	35.23%	229	4.92%	32	197
650 33.79% 220 4.84% 650 33.08% 215 4.79% 650 32.36% 210 4.75% 650 32.36% 210 4.75% 650 31.64% 206 4.71% 650 30.92% 201 4.67% 650 30.92% 201 4.67% 650 30.21% 196 4.67% 650 28.77% 187 4.56% 650 28.77% 187 4.56% 650 28.05% 173 4.41% 650 25.90% 168 4.37% 650 25.18% 164 4.37% 650 23.74% 159 4.1% 650 23.03% 154 4.24% 650 22.31% 150 4.15% 650 22.31% 156 4.15% 650 22.31% 156 4.15% 650 22.31% 156 4.15% 650 23.03% 156 4.15% 650 <	1 07	650	34.51%	224	4.88%	32	193
650 33.08% 215 4.79% 650 32.36% 210 4.75% 650 31.64% 206 4.71% 650 30.92% 201 4.67% 650 30.92% 201 4.67% 650 30.21% 196 4.67% 650 30.21% 187 4.67% 650 29.49% 187 4.54% 650 28.77% 187 4.54% 650 28.05% 187 4.54% 650 28.05% 173 4.45% 650 25.90% 168 4.37% 650 23.14% 159 4.37% 650 23.14% 159 4.15% 650 23.03% 154 4.24% 650 22.31% 150 4.15% 650 22.31% 156 4.15% 650 22.31% 156 4.15% 650 22.31% 156 4.15% 650 22.31% 156 4.15% 650	•	650	33.79%	220	4.84%	31	18(
650 32.36% 210 4.75% 650 31.64% 206 4.71% 650 30.92% 201 4.67% 650 30.92% 201 4.67% 650 30.21% 196 4.67% 650 29.49% 192 4.54% 650 29.49% 187 4.54% 650 28.77% 187 4.54% 650 28.05% 187 4.54% 650 28.05% 178 4.45% 650 27.33% 178 4.45% 650 25.18% 168 4.37% 650 23.18% 164 4.32% 650 23.14% 159 4.15% 650 23.03% 156 4.24% 650 22.31% 150 4.15% 650 22.31% 150 4.15% 650 22.31% 155 4.15% 650 22.31% 155 4.15% 650 22.31% 155 4.15% 650	r 4	650	33.08%	215	•	31	18-
650 31.64% 206 4.71% 650 30.92% 201 4.67% 650 30.92% 201 4.67% 650 30.21% 196 4.67% 650 29.49% 192 4.58% 650 29.49% 192 4.58% 650 28.77% 187 4.54% 650 28.05% 182 4.54% 650 28.05% 187 4.54% 650 28.05% 173 4.41% 650 25.18% 168 4.37% 650 23.73% 168 4.37% 650 23.14% 159 4.24% 650 23.13% 150 4.15% 650 23.03% 150 4.24% 650 22.31% 150 4.15% 650 22.31% 150 4.15% 650 22.31% 150 4.15% 650 22.31% 155 4.15% 650 22.31% 155 4.15%	с (650	32.36%	210		31	179
650 30.92% 201 4.67% 650 30.21% 196 4.67% 650 29.49% 192 4.56% 650 29.49% 192 4.56% 650 29.49% 192 4.56% 650 28.05% 187 4.54% 650 27.33% 178 4.45% 650 22.90% 168 4.37% 650 25.90% 168 4.37% 650 25.90% 164 4.32% 650 23.73% 164 4.28% 650 23.03% 159 4.28% 650 23.03% 150 4.20% 650 23.03% 150 4.20% 650 22.31% 145 4.15% 650 22.31% 145 4.15% 650 22.31% 145 4.15% 650 22.31% 145 4.15% 650 22.31% 145 4.15% 650 22.31% 145 4.15%	, , ,	650	31.64%	206		31	17:
650 30.21% 196 4.62% 650 29.49% 192 4.56% 650 28.77% 187 4.54% 650 28.05% 187 4.56% 650 28.05% 187 4.56% 650 27.33% 178 4.45% 650 26.62% 173 4.41% 650 25.90% 168 4.37% 650 25.90% 168 4.37% 650 25.90% 164 4.32% 650 23.74% 159 4.24% 650 23.03% 159 4.24% 650 23.03% 150 4.20% 650 22.31% 145 4.15% 650 22.31% 145 4.15% 650 22.31% 145 4.15% 650 22.31% 150 4.15% 650 22.31% 150 4.15% 650 22.31% 145 4.15%	- 04	650	30.92%	201		8	-21
650 29.49% 192 4.58% 650 28.77% 187 4.54% 650 28.05% 187 4.54% 650 28.05% 182 4.50% 650 27.33% 178 4.45% 650 25.90% 168 4.37% 650 25.90% 164 4.32% 650 24.46% 159 4.28% 650 23.74% 154 4.24% 650 23.03% 150 4.20% 650 22.31% 145 4.15% 70tal Years 1-20 3.786		650	30.21%	196	4	30	166
650 28.77% 187 4.54% 650 28.05% 182 4.50% 650 28.05% 182 4.50% 650 22.33% 173 4.41% 650 25.90% 168 4.37% 650 24.46% 159 4.32% 650 23.74% 154 4.24% 650 23.03% 150 4.20% 650 22.31% 145 4.15% 70tal Years 1-20 3.786	, t	650	29.49%	192	*	30	162
650 28.05% 182 4.50% 650 27.33% 178 4.45% 650 26.62% 173 4.41% 650 25.90% 168 4.37% 650 24.46% 159 4.28% 650 23.74% 154 4.24% 650 23.03% 150 4.20% 650 22.31% 145 4.15% 70tal Years 1–20 3.786	2 =	650	28.77%	187	4	30	157
650 27.33% 178 4.45% 650 26.62% 173 4.41% 650 25.90% 168 4.37% 650 25.18% 164 4.32% 650 24.46% 159 4.28% 650 23.74% 154 4.24% 650 23.03% 150 4.20% 650 22.31% 145 4.15% 70tal Years 1–20 3.786	: :	650	28.05%	182	4	29	153
650 26.62% 173 4.41% 650 25.90% 168 4.37% 650 25.18% 164 4.32% 650 24.46% 159 4.28% 650 23.74% 154 4.24% 650 23.03% 150 4.20% 650 22.31% 145 4.15% 70tal Years 1–20 3.786	4 Ç	650	27.33%	178	•	29	149
650 25.90% 168 4.37% 650 25.18% 164 4.32% 650 24.46% 159 4.28% 650 23.74% 154 4.24% 650 23.03% 150 4.20% 650 22.31% 145 4.15% 70tal Years 1–20 3.786	2 7	650	26.62%	173	•	29	144
650 25.18% 164 4.32% 650 24.46% 159 4.28% 650 23.74% 154 4.24% 650 23.03% 150 4.20% 650 22.31% 145 4.15% 70tal Years 1–20 3.786	5	650	25.90%	168	4	28	140
650 24.46% 159 4.28% 650 23.74% 154 4.24% 650 23.03% 150 4.20% 650 22.31% 145 4.15% Total Years 1–20 3.786	9	650	25.18%	164	4	28	136
650 23.74% 154 4.24% 650 23.03% 150 4.20% 650 22.31% 145 4.15% Total Years 1–20 3.786	5 5	650	24.46%	159	4	28	131
650 23.03% 150 4.20% 650 22.31% 145 4.15% Total Years 1–20 3,786	, Ç	650	23.74%	154	4	28	127
650 22.31% 145 4.15% Total Years 1–20 3,786	2 4	650	23.03%	150	*	27	122
3,786	20	650	22.31%	145	4	27	118
	To	ital Years 1–	20	3,786		594	
Accord Accurd Acres 189 30			Acres	189		30	160

18-Sept-92

Costs amortized over 20 year operation life

D-127

Pass-a-Loutre Sediment Mining (PMR-8)

Summation of Emergent Marsh Acrea

		With Project	_	Without Project		
		% Acreage	D	% Acreage	Vegetated	Net
•	Acres	Vegetated	ACIES	Vegetated	. ACIES	ACIES
•	650	5.08%	33	5.08%	33	0
-	650	35.85%	233	5.08%	33	200
- ^	650	35.23%	229	4.92%	32	197
1 0	650	34.51%	224	4.88%	32	193
•	650	33.79%	220	4.84%	31	188
r va	650	33.08%	215	4.79%	31	184
, (650	32.36%	210	4.75%	31	179
	650	31.64%	206	4.71%	31	175
. a	650	30.92%	201	4.67%	30	171
с –	650	30.21%	196	4.62%	30	166
• •	650	29.49%	192	4.58%	30	162
: =	650	28.77%	187	4.54%	ଚ	157
: 2	650	28.05%	182	4.50%	59	153
: <u>°</u>	650	27.33%	178	4.45%	29	149
2	650	26.62%	173	*14.4	83	144
: 12	650	25.90%	168	4.37%	28	140
16	650	25.18%	164	4.32%	28	136
: 1	650	24.46%	159	4.28%	28	131
18	650	23.74%	154	4.24%	28	127
6	650	23.03%	150	4.20%	27	122
50	650	22.31%	145	4.15%	27	118
H	Total Years 1–20	20	3,786		594	
•		1 40000	180		99	160
₹	Average Annual Agres		221		;;	

D-128

.

18-Sept-92

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

2ND PRIORITY PROJECT LIST

APPENDIX E

LIST OF PROPOSED PROJECT'S

\smile	Record®	SASIN ATCH	CATEBORY FREMITE DIV	DESCRIPT ANDCA ISLAND EXTENSION WITH FRESHMATER DIVERSION AND SEDIMENT DIVERSION (12)
	-	ATON	HYDRO REST	
	-	ATCH	SED DIV	DIVERSION STRUCTURE IN BAYOU SCHAFFER WITH AUI, STRUCTURE THRU LEVEE AT AVOCA I. TO DIVERT FRESH WATER INTO TERREBONE PARISH BARRIER ISLANDS ARE HORE INFORTANT TO INTERIOR WETLANDS THAN TO THE WETLANDS ON THE ISLAND (1)
		BANA . Bana		BARRY COLUMN AND SHORE INE RESTORATION NEEDED BETWEEN BELLE PASS AND SANDY POINT (3)
	-	BARA	NAME ISL REST	NOLATION GRAND ISLE AND GRAND TERRE ISLAND WITH SEDIMENTS DISEDERD FROM SEARCHY WATERWAYS & WATER BUTTOPS (10)
		BARA		IT IS ESSENTIAL TO PRESERVE BRAND ISLE FOR THE MANY FUNCTIONS IT SERVES (2A) FUND WITIGATION REQUIRED BY HIS PERMIT "MARSH CREATION WITH OREDGED MATERIAL) WITH CHIPPRA FUNDS
	•	Bara Bara	oredged "At	HAND THE GATE WE WE WE WE AT ALL PERTY AND THE CONTRACTAL BOAT WARBOR ON GRAND ISLE (PERTIT- CATINADA BAY 52) (b)
		BARA	CHEDGED MAT	SE MATERIA, DREDBED FROM BAYOU DUPONT TO BUILD MARSH (11)
		BARA	OREDGED MAT	PUMP DREDGED MATERIAL BEHIND FORT LIVINGSTON TO CREATE MARSH AND CREATE SHOREBIRD FEEDING HABITAT USE DREDGED MATERIAL FROM THE BARATARIA BAY WATERWAY TO BUILD AND PRITECT MARSH ON GRAND TERRE ISLAND
		Bara Bara	oredged hat Erosion contr	EROSION CONTROL VEEDED ALCHG LAKE SALVAOOR SHORELINE FROM BALE DU CABANAGE TO BAYOU DES ALLEMANOS
		SARA	EROSION CONTR	shoreline erosion control needed along eastern shore of lake salvador especially near bayou sequente
		39 8 4		BANK STABLIZATION ALONG BAYOU LAFOURCHE AND AT THE INTERSECTION OF BAYOU LAFOUNCHE AND THE SIMM (2) BANK STABLIZATION NEEDED ALONG BAYOU LAFOURCHE FROM SOUTH OF LAROSE TO SOUTH OF LEEVILLE (5)
		BARA BARA	EROSION CONTR	STABILIZE THE LAKE SALVADOR SHORELINE FROM BALE CHACTAS SHELL BANK TO BAYOU DES ALLEMANDS WITH ROCK OR GADION
	:8	BARA	EROSION CONTR	CONSTRUCT & DEMONSTRATION BREAKWATER OF TIRES TO SLOW EROSION ON THE BANKS OF GRAND BAYOU
		3ara Bara		USE TIRE STRUCTURE TO STABLIZE BANKS OF GRAND BAYOU BETWEEN WEST POINT A LA HACHE & PORT SULPHUR (2) EROSION IS OCCURRING ALL ALONG THE BARATARIA BAY WATERMAY (1)
		3484		EPOSION (S. XCLURRING ALONG THE SIMM IN THE CROWN POINT AREA (2)
	22	34RA		SHORELINE STABILIZATION OF GRAND ISLE ESPECIALLY IN APEAS WERE MARSH DESTRUCTION IS EVIDENT
		Bara Bara	EROSION CONTR	THE GIME BANKS ARE EXODING FROM FLEMING CANAL WEST TO THE PARISH LINE, BANK PROTECTION IS NEEDED. The NORTHEASTERN SHORELINE OF THE PEN NEEDS A SAMRIER TO ABSORD WAVE ENERGY TO PREVENT FURTHER ENDSION AND TWAY SEDIMENTS.
		BARA	EROSION CONTR	THE WEST BANK OF THE BARATARIA M. AT LAFTITE HAS SEVERE BANK EROSION. WEED TO PROTECT HOMES, DOCKS, ROAD, CENETERY, CULTURAL SITES, ETC
		BARA	FPSHITE DIV	SEDIMENT DIVERSION INTO THE UPPER BARATARIA BASIN, POSSIBLY HERO CANAL (8)
		Bara Bara	FRSHUTR DIV	STOPH WATER RUNDFF TREATHENT FOR THE LIKE CATOUATONE PUMPING STATION (16) DIJERT WATER FROM THE HISSISSIPPI RIVER DOWN BAYOU LAFOURCHE (1)
		BARA	WYDRO PEST	MARSH MANAGEMENT FOR THE AREA NORTH OF THE PENT NEAR LAFITTE, THE IN WITH LARELSSITE OR HERO CONNIL DIVERSION PROJECTS (11)
		SARA	HYDRO REST	REDUCE TIDAL FLUSHING ACTION IN THE BARATARIA BASIN BY CLOSING NAM-MADE CANALS, RE-ESTABLISHING N. TO S. FLUB (17)
		3ARA	HYDRO REST	LAFOLACHE PARISH SUPPORTS WAR'S PROPOSED SPOIL INPOLADHENT RESTORATION FOURDHON (15) WIDEN WAD DEEPEN SAYOU LAFOURCHE AND CONSTRUCT LOCKS TO STOP SALT WATER INTRUSION (1A)
		Bara Bara	HYDRO REST	MANAGE WATER UND SEDIMENT OUTFLOW FROM DAVIS POND FRESHMATER DIVERSION TO MAXIMIZE BENEFITS
		BARA	HYDRO PEST	LIVE SALVADOR WATERSHED PROJECT - LARGE SCALE PROJECT TO MANAGE AN ENTIRE WATERSHED
		Bara Bara	HTORD REST	CONSTRUCT A LOCK ON THE BARATARIA BAY WATERWAY AND FLOODGATES ON CARINADA PAGE TO PREVENT SALTWATER INTRUSION, TIDAL SCOLR, ETC (8) RESTORE A CANAL PLUS OFF OF SCOFIELD BAYOU TO PREVENT TIDAL SCOLR. (5)
~		SARA	HYDRO REST	IDNSTRUCT "LON" LEVEES ALCHG CANALS RUNNING BETHEEN PROTECTION LEVEES TO REDUCE SEDINENT LOSS AND SALTNATER INTRUSION IN THE BANA. BASIN
		DARA	HARSH INGINT	HANAGE THE AREA BETWEEN THE PEN AND HERD CANNE TO TRAP SEDIMENTS AND MAINTAIN THE INTEGRITY OF THE MARSH
		BARA BARA	"Hapsh " Ngin t" Oth er	MATER MANAGEMENT AND FRESHMATER DIV. FOR THE AREA BETHEEN THE BARATARIA RIDGE AND THE AISS. AIVER AND NORTH OF BAYOUS DUPONT AND TRAVERSE ELEVATED WATER LEVELS ARE A PROBLEM IN THE WOHERIE AREA (3)
	•	BARA	ETLAND LUSS	EAST OF SOOSE BAYOU IN LAFITTE AROUND BAYOU DUPOINT IS ERODING. CONSIDER USING DREDGED MATERIAL
	42	3ARA	INTLANO LOSS	THE MARSH SOUTHEAST OF LEEVILLE IS BEING LOST TO SALTMATER INTRUSION AND SOIL COMPACTION (4)
			EROSION CONTR. FRSHMTR DIV	SEE "R. PETROVICH'S PROJECTS THAT WERE PREPARED BY BROWN AND ROOT: THE TIRE SEDIMENT TRAP AND THE BRENDMATER ALDIG SHAND BAYOU PROVIDE FOR EVALUATE SEDIMENT DIVERSION INTO SHAND PAGE, TIGER PAGE, AND BAYTISTE COLLETTE (9)
		BRET	FRSHITR DIV	INTRODUCE FRESHMATER TO PREVENT SALTMATER INTRUSION AT FLOODGATES AT BAYOU BLEWENCE & BAYOU DUPNE (SA)
		BRET	FPSATR DIV	Restore rever flow through onk rever (15) Freshwater :N'roduction and distribution system to distribute water from the violet signon into the central metlands and lake lery metlands
		9ret Bret	FRSHITE DIV	RULLD COUBLE LOCKS AT BAYOU BIENKENDTON SYSTEM TO DISTRIBUTE WHEN FREM THE TOLET STRUCTURE THE DATE AND A STRUCTURE A BAYOU DUPRE FLOODGATES TO REDUCE SALTWATER INTRUSION IN CENTRAL WETLANDS (3)
	-	HET	HYDRO REST	Instruct a low-level barrier between point a la hache and the freq to reduce saltmater intrusion and fidal scour (7)
		BRET	HYDRO PEST	STABILIZE AND RESTORE THE MARSHES MORTH OF LAKE LERY (17)
		SRET	HYDRO REST	BUILD A LOCK AT BAYOU BLEWENUE AND BAYOU DUPRE USING EXISTING FLOODGATES TO STOP SALTMATER FROM AFFECTING THE CENTRAL METLANDS BUILD LARGE-SCALE DIVERSIONS AT MYRILE GROVE AND BOHEMIA TO REPLENISH MARSHES, ALSO, INCLUDE MYDROELEUTRIC FACILLITIES TO PAY FOR PROJECT
		BPET BPETON	SED DIV CTHER	SULD CHART-SULE STVERSIONS AT ATTACE SHORE HE DEFENT TO ACT AS BARRIERS TO MARSH EROSION AND PROVIDE WILDLIFE HADITAT
	-	CALC		DASTRUCT "SOMETHING" TO PREVENT EROSION ALONG GIM FROM CALCASIEU TO THE SABINE RIVER
		CALC CALC	EPOSION CONTR.	REAKWATER OR ARTIFICAL REEF TO SLOW SHORELINE EROSION AT LOUISIANA POINT (12) EROSION OF A RENNINT DREDGED MATERIAL BANK WOLD ALLOW AN INCREASE OF EROSION ALONG MOSS LANCE, SUGGEST DREDGED MATERIAL OR ROCK DIKE (14)
		240	EROSION CONTR	shoreling protection along the mest side of the calcasieu ship change, in long point large (2)
		CALC	EPOSION CONTR	EROSION IS OCCURRING ALONG THE CALCASIEU SHIP OWNNEL, ESPECIALLY BETWEEN CALCASIEU LAKE AND THE GIMI (4)
		CALC		EROSION IS OCCURRING ALONG THE GIMM FROM CALCASIEU TO SADINE RIVER, MOBTLY ON THE NORTH SIDE (SA) EROSION IS OCCURRING ALONG THE GIMM W. OF THE SALT (ALKALI) DITCH (S)
		CALC CALC	EROSION CONTR	erosion is occurring along the mermental river horth of the glim (15)
		CALC	EROSION CONTR	MARE HOLES IN CALCASIEU JETTIES OR BAFFLES TO THE WEST OF THE JETTIES TO REDUCE EROSION ALDIG THE LA COAST (8) PLACE AN EARTHEN LEVEE OR HON-ERODABLE BREAKMATER AND VEGETATIVE PLANTINGS ALDIG PRIORITIZED SECTIONS OF THE HORTH GIM BANK
		CALC	CONSIGN CONTR	PLACE EARTHER LEVEE OR NON-ERODABLE BREAKMATER AND VEGETATIVE PLANTINGS ALDING FACULATIVES SETTIONS OF THE NAME TO PREVENT EROSION
		CALC	EPOSION CONTR	RIP-RAP EXISTING STRUCTURES ON HEBERT-PRECHT CANAL AND AT WELFARE BRIDGE TO PROTECT STRUCTURES
		CALC	EPOSION CONTR	919-RAP EXISTING WATER CONTROL STRUCTURES FOR THE CAMERON-CREDLE WATERSHED PROJECT TO PREVENT UNDERVINING
		CALC	FPSHITE DIV	Reroute Plimped Storm water (NTO THE CAMERON CREDLE WATERSHED PROJECT(1A) Divert water from the sabine river into black bayou
		CALC TALC	FRSHITE DEV HYDRD RESTI	H und anny lighted unders suchange points allong black sayou between similand sabing river
		CALC	-+ORD REST	ILOSURE OF PETPOLEUM ACCESS CANALS ALONG SABINE LAKE AND IN ADJACENT MARSHES TO REESTABLISM HISTORIC HYDROLOGY AND REDUCE NETLAND LOSS (20)
		CALC	HYDRO REST	DECREASE TIDAL FLUCTUATIONS AND SCOUR BY DECREASING THE CROSS SECTION OF DYSTER BAYOU (15) FEDUCE IPOSS SECTION OF DALCASIEU PASS TO AUTHORIZED WIDTH TO FEDUCE TIDAL EXCHANGE AND SALTWATER INTRUSION
~		CALC CALC	-YORO REST	SCHUCE THE THESTORS ARETICAL OF REVENT FIDEL SCOUR AND SALT WATER INTRUSION (3)
		IALI	HTORO REST	IN THATED INCOMENTAL AND TO ANY 17 IND FAST OF ALKALT (SHLT) DITCH TO REDUCE SALT WATER INTRUSION AND TIDAL SCOUR (23)
	15	CALC .	HYORG REST	THE THATER CHIPLESIEN UNDER HAT 134 (S THREATENING FRESH MARSH, PLICS OR MATER CONTROL STRUCTURES NEEDED (22)

.

	_		LATEBORY	
Recor		BASIN	HYDRO REST	A THE IN THE STAR AT A THE STAR AND AN THE THE AND AND AN A THE FALLED BY AND AN A THE AND A THE
	-		HYDRO NEST	THETALL ALLONG AT THE MELTIN OF THE CHECKERS SHAP CHANNEL TO RECOVE SECTION FOR INTRUSION, ETC (1)
			HYDRO REST	NUMBER IN NUMBER IT IS NEEDED IN THE ALL LAKE MEA PENALT; CANERON PARISH HETLANDS 923 (12)
	-	240	HYONO REST	HARD STATES IS ASSENT IN THE OVERTHE MAYER AND AREA (11)
		CALC	HYDRO HEET	ADDX VEIRS SHOLLD BE CONSTRUCTED ACHORS GAPS ALONG BLACK SAYOU FORM THE SABINE RIVER TO THE SIMM (22)
			HYDRO REST	SALTINITER INTRUSION IS OCCURRENCE IN THE NETLANDS EAST OF HAY 384 (3)
		CALC	HYDRO REST	STAD HAINTAINING THE CALCARIEL CHANNEL TO SAVE THE HETLANDS (2)
		CALC	HYDRO REST	THERE IS A LACK OF WATER FLOW ALONG HAY 27 AT LITTLE CHEMIER (4)
		CALC	HYDRO REST	
		CALC	HYDRO REST	PLACE A GALT WATER BARRIER THAT ALLOW NAVIBATION IN CALCASIED PAGE THAT A HIGH RISE BRIDE COULD R. BUILT UN.
		CALC	HYDRO REST	DEACH A CALDATER RANDIFE AT THE NOLTH OF BRANDON DITCH TO ALLOW RAINFALL RUNOFF FROM THE N. AND PREVENT SALDATER FROM THE S.
		CALC	HYDRO REST	CONSTRUCT A WATER CONTROL STRUCTURE IN BLACK SAYOU ADJACENT TO CALCAGIEU LOCKS TO HELP RELIEVE HENRENTAU SAGIN FLOOD FLONG
	88	CALC	HYDRO REST	CONSTRUCT LODG ON THE SIME IN THE VICINITY OF ALXALI DITCH TO PREVENT SALTMATER CIRCULATION
	89	CALC	hy ord rest	BUILD LEVEE ON SOUTH SIDE OF MIANI CORP. LAND TO ALLON MARCH TO RECEIVE OVERSMAK FLOW FROM THE NORTH AND PROTECT RESIDENTS
	90	CALC	OTHER	ASSUMPTION OF OWN COSTS OF CAMENON-CREDIE WATERSHED PROJECT (17)
	91	CRLC	OTHER	DEAUTHORIZE THE LAKE CHARLES DEEPMATER CHARGEL SO THAT SALT WATER MARIER OR FRESH WATER DIVERSION COLLD BE BUILT INTO CHARGEL 1234
	92	CALC	OTHER	FLOODING OCCURS IN HOCKDERRY AS A RESULT OF HYDROLOGIC RESTORATION (1)
	-	CALC	OTHER	RESTORE BLACK LAKE'S SHORELINE TO PROTECT ADJACENT MARSHES AND RESTORE HYDROLOGY (4) USE HAY BALES AND ROLLS TO ENCOURAGE VEBETATION COLONIZATION OF AREA AND ACT AS WAVE DAMPENING DEVICES IN LAKE BOUDREAUX (27)
	94	CALC	OTHER	USE MAY BALES AND MULLS TO EXCLUSIVE VEREINTIAL OF MACHINE OF MACHINE MAY BALE ANY COMPANY AND ANY COMPANY ANY ANY COMPANY ANY ANY COMPANY ANY ANY ANY ANY ANY ANY ANY ANY ANY
	95	CALC	OTHER	FLOODING IS OCCUPRING IN MACKBERRY AREA, REAGONS SUBBESTED IN MARSH HANNGENENT PROJECT (14)
•	46	CALC	VETLAND LOSS	RESTORE HYDROLOGY IN HUD LAKE HARSH TO REDUCE WETLAND LOGS (13) PLACE AN EARTHEN LEVEE OR HON-ERODABLE BREAKMATER AND VEGETATIVE PLANTINGS ALONG THE SIMM IN CALCASIED, CAMENON, AND VERHILION PARISHES
	97	CALC/HERH	EROSION CONTR	PLACE AN EARTHER LEVEL OF NUM-ERCOMPLE DEVICEMENTER AND VECENTIATE FORTH AND THE GAME IN COMPLETE CARTER OF AND
	98	CALC/HERM	HARSH MEMIT	WARSH NAWAGE/EDIT WITH STRUCTURES FOR THE COTTENU PLATEAU MARSH BETWEEN EAST CHEDLE AND LITTLE CHEDIER CHEDIERS
		CALC/HEINH		REINTRODUCE PRAIRIE BISON AND RED NOLVES TO BENEFIT THE ENTIRE PLANETARY ECOSYSTEM EROSION IS OCCURRING ALONG THE GIMM FROM THE CALLASIEU RIVER TO LELAND-BOMMAN LOCK
			NETLAND LOSS	EROSION IS OCCUPENING ALLING THE SILIN THE VELOCITED ATTER TO LEDUC BURNEL COM
		-ERH		THE ALL AND AND A TENTAL MANUE IS ALL MAINE INFOCASED HAVE FRENCY IN ALLANDRY (2)
		HENN	EROSION CONTR	ENSION OF STATUTED AND ALL LATION FROM FRESHATER BAYOU LOCK TO INTRACOMETAL CITY. ANEAS HAVE BEEN PRIORITIZED & PENHIT ISSUED (10)
		HEIRH	ENDERION CONTR	INLAND WATERWAY'S (OLD GIMM) SHORELINE IS ERODING THREATENING ADJACENT MARSHES (9)
		PERM.	SUSTON CONTR	LOWERING OF WATER LEVELS WOLLD REDUCE WAVE INDUCED EROSION ALONG GRAND LAKE (6)
			COORTON CONTR	CHARTER HATTER I SUID S (HI COMMO) ANT WILL D RETURN SHORE (HA FROSTON (HA)
		#€91 ≪€91		PEDUCE WATER LEVELS IN WHITE LAKE BY DIVERTING WATER UNDER MAY 82. WILL REDUCE EROSION ANOUND WHITE LAKE & BENEFIT REDERVING ANEA
		-C-11 -E-11		LIVESTONE RIP-RAP ENTIRE SOUTH BANK OF SAND LAKE NO PLANT WITH SHOOTH CORDENANS
		1200 A	FROSTON CONTR	LINESTONE RIP-RAP ENTIRE SOUTH BANK OF WHITE LAKE AND PLANT WITH SHOOTH CONDENAGE
		HERN	FROSTON CONTR	EROSION IS DOCLARING ALONG THE OLD GIVE BETWEEN GRAND AND WHITE LANCES (13)
		-ERM	CONSTRUCTION CONTR	Sumper the of antite lake is erodine (12)
		-27	SPOSION CONTR.	AUTIO AND A PILING PRANCHENTS ALONG THE GLLF SHORE TO TRAP SILT AND SAND TO PROTECT AUDREPELLER REPARE
		HERN.	EROSION CONTR	O ANT CARTIES IN STAL COMMAN & SECANDATERS AND VERFIAITIVE PLANTING ALONG CRITICAL SOCIELISES OF SHARE AND WHITE UNLES
		ERM	FRSHITR DIV	FRESHMATER DIVERSION FROM SHAND AND WHITE LAKE DAGING UNDER MAY BZ TO DEDREAME SALT WATER INTRUSION TO MARSHER S. AND E. OF MAY BZ (7)
	115	PERM	HYDRO REST	THE HAVE ADEA NETTER & REMARTMENT PLAN (20)
		HERM	HYDRO REST	BUILD A LEVEE ON SOUTH BORDER OF MIANE COMP. LANS TO ALLON OVERSMAK FLOODING TO ENTER DIS BURN MARSH AND PROTECT NEARBY ASSIDENTS
	117	HERM	HYDRO REST	CONSOLIDATE SAMILL CAME WATER CONTROL STRUCTURES THTO DIE UNIT AT INTERSECTION OF SAMILL CAME AND LITTLE PERMI DAVOU TO MAINTAIN NARSH
	::9	HERM	HYDRO REST	REPLACE EXISTING FLOODWATER CONTROL STRUCTURE ON HUBBLE CANAL TO ANNAEE WATER LEVELS IN THE ANEA OF \$10 AUR
	119	-€R¶	WRSH INGINT	A COPPREMENSIVE HYDROLOGIC PLAN TO PRESERVE AND RESTORE MARK BETHERIN THE MEMORITAL RIVER AND ADDEPELLER REFLEE
	: 20	-EXH	VES PLANTINGS	PLANT SHOUTH CORDENSES ALONG ENTIRE BANKS AND HANSH EDGE OF LITTLE PECAN BAYOU WATER SHED TO PREVENT ENDIION FROM SALTWATER INTRUSION
		-E3H		PLANT BALD CYPRESS SEEDLINGS ALONG THE SIMI FROM CALCAGIEU LOCKS TO GRAND LAKE
	122	-ERH	KETLAND LOSS	EROSION IS OCCURRING IN THE BRAND & WHITE LAKE AFEA (16)
				PLACE AN EARTHEN LEVEE AND/OR NON-ENDABLE IMPACIANTER AND VEBETATIVE PLANTINGS ALONG FRESHMATER DAVID TO PREVENT ENDSIDE
		HERH/VERH		-CREICIDE USE IN GIVING & WHITE LAKE BASIN MAY BE HAMPING CTUAND VEGETATION (9)
			ETLAND LOSS	
			ETLAND LOSS	MARSHES BETWEEN FRESHMATER BAYOU AND WHITE LAKE ARE BEING LOST (7) CREATE MARSH ISLANDS USING MATERIAL DREDGED FORM THE MISS. RIVER AND S.R.E.D. 'S CONSTRUCTED WITH TIRES
		#ISS	OREDGED MAT	SEALE TREET CONTROL FROSTON ALONG FRAND BAYOU (13)
		*ISS		INVESTIGATE WAYS TO LET WATURE HOME HEAVY SEDIMENTS INTO THE WEST DELTA (4)
		MISS MISS	FPSHUR DIV	DIVERT WEARY SERVICES FROM SOUTHWEST PAGE INTO WEST DELTA (14)
		155	OTHER	USE OLD TIRES TO TRAP AND RETAIN DISPOSED DREDGED NATERIAL FROM THE HISSISSIPPI RIVER & COMPLEMENT THE HEST DAY SEDIMENT DIVERSION (CCE) (1)
		-155	OTHER	use a in there to trade sediments in the riverside bay area of the mest delta (12)
		211-68	HETLAND ACR	BLY AND PROTECT A VET BATTURE AREA ALONG THE HISSISSIPPI RIVER IN THE VICINITY OF HANNAUN, LA
		PONT	DREDGED MAT	STABLE LZE AND REBUILD THE BANKS OF THE SIMM BYPASS BY USING MATERIAL BORROMED FROM THE CHANNEL
		PONT	DREDGED HAT	NARSH CREATION WITH DREDGED HATERIAL NORTH OF INTERSTATE 10 IN ST. CHARLES PARISH (S)
		PONT	DREDGED MAT	AND AND A THE ADDRESS ADDRESS AND AND ADDRESS ON THE FIRST PROJECT LIST
		PONT	THE DEFT MAT	ISE NATERIAL DREDGED FROM LAKE PONTOWRTNAIN TO BUILD WARM IN LADAWOOLE METLANDS IN ADDITION TO THE FIRST PROVIDE LIST
		PONT		HAMMY STABILIZATION ALONG THE LAKE PONTCHARTRAIN SHORELINE IN ST. CHARLES PARISH (4)
		PONT	FROSTON CONTR	PROTECT LAKE PONTCHARTRAIN SHORELINE WITH ROCK OR SABION IN AREA OF LABORIDE WEILINGS
		PONT	CODE LON CONTR	a server sons ink is not some fr and k. OF THE BOLITH OF THE ICHEFUNCTE RIVER (4)
		PONT	FROSION CONTR	NEED TO PROTECT CHEMIER NEAR BAYOU CHINCHUBA TO PREVENT LAKE PONTCHARTRAIN FROM BREAKING THROUGH INTO PRESHEM ARKSH (1)
		PONT	EPOSION CONTR	PROTECT THE SHORELINE OF LAKE BORGNE FROM EROSION (18)
		PONT	COOCTON CONTR	A CLODE THE SOUTETTION NEEDED NEAR THE WILTH OF THE TONEFUNCTE RIVER
		PONT	EROSION CONTR	PLACE STRUCTURES ALONG THE SOUTH SHORE OF LAKE POINT. TO REDUCE WAVE ENERGY TO ALLUM FOR SEDIMENTS TO ALLUMULATE AND BUILD ANKSH
		PONT	HYDRO REST .	CONTROL FACTION AND IS FILMED IN FILMED
		PONT	HYDRO REST	DECTORE THE ADDUCT OF TAM ADDES ON THE FASTERN SIDE OF EDEN (SLES ON THE NUMBER OF LIKE FURLUMER AND
		PONT	HYDRO REST	WASHING TO SUCCEEDED THE AND BY LAKE BORGE, LAKE ST. CATHERINE, CHEF HENTELR PASS, AND ST. CATHERINE PASS, USING ROCK HEIRS, PLASS, ETC.
	: 49	PONT	HYDRO PEST	CULVERTS UNDER HAY SL & POSSIBLY THE RATILROAD ARE PREVENT WATER EXCHANGE BETWEEN UNFUNCE HAV FORCEWINDLE (1)
	149	PONT	HYDRO REST	THE WEIR AT THE WHITE PIVER DIVERSION CHANNEL MEEDS TO BE MAINTAINED (2)
	150	PONT	HYDRO REST	CEAD END CANALS AT PORT LOUIS AREA CAUSING PROBLEMS. THE PORT IS NEARLY DEFUNCT AND NO MAINTENANCE IS BEING DONE. (2)

E-2

Record	MAIN	CATEBORY	descript Formulate and implement a comprehensive avoidlosic plan to preserve and return involgence flow to the longr multering inside
	PONT	hydro rest	FORMLATE AND INFLORMENT A COMPLEXEMENT AND ADDRESS OF A DESCRIPTION AND ADDRESS AND ADDRESS AD
152	PONT	TREAS HERE	CHEATE NAMEN SYSTEMS AND MARIER ISLANDS TO RETAIN AND TREAT STORY WHITER RANGEF
153	PONT	(THER	LOOK AT ACQUIRING AND PRESERVING EDEN ISLE PROPERTY SAGT OF INTERSTATE HIGHMAY 10 (3) NORSN CHEATION FOR TREATMENT OF STORN WATER RUNCHF IN EAGT JEFFERSON (15)
	POINT		NVEN OFATION FOR TREATENT OF STORE WHEN TO BE TO
	2001	OTHER	FUND PROJECT SMALLON WITH CUPPINA FUNDS (7) PRESERVE INVENES SUPPONDING LAKE POINTOWRITRAIN, POSSBILLY PURCHAGE OF LARD, (6)
	PONT		RE-ESTAIL ISH BRASS BEDS IN LACE PONTCHARTRAIN (5)
	PONT	OTHER	RE-ESTABLISH BREAS BELS IN DRE FUNCTIONARTIAN TO THE NORTH SHORE THEN OPEN UP LEVEES ALONG THE RIVER TO REPLEXISH WARSH
	pont Pont	OTHER	RESTORE THE AREA OF EDEN ISLES TO THE EAST OF INTERSTATE 10 (10)
	PONT	11.57	ANALYZE THE BONNAMEL CANNAL CREATED WETLANDS TO DETERMINE THEIR OFFECTIVENESS IN TREATING STORMMATER RUNCH
	PONT	07469	AND VIE THE EFFETTIVENERS OF THE DIALCAN CANAL CREATED WETLANDS IN TREATING STORMATER RUNDEF
	PONT	ETLANO LOSS	NETLAND LOSS ANEAGE A.600SE POINT MARSH, B.FRITCHIE MARSH C.BETNEEN MACISONVILLE AND MANDEVILLE, D.EUM OF TCHEPUNCTE RIVER (SHUMELINE) (4)
163	PONT		EROSION OF SWAMP AND MARSH BETHEEN BAYOU CHINCHUBA AND TCHEFUNCTE RIVER
164	PONT		INTERIOR EROSION OF HORTH SHORE AND FRITCHIE MARSHES
165	PONT	NETLAND LUSS	INTERIOR MARSH GOSS BETHEEN CANE BAYOU AND BAYOU LACONDE
166	PONT/BARA		BANK STABILIZATION AND HYDROLOGIC RESTONATION IS NEEDED ALONG THE GIMM IN ORLEANS AND JEFFERSON PARISH (2)
			PROTECT THE SHORELINE OF LAKE BORSHE FROM EROSION (23)
			BANK STABILIZATION ALONG MABO (1) CLOSE THE MABO AND USE CHIPPRA FUNDS TO RELOCATE CONTAINER CARBO FACILITIES TO THE HISSISSIPPI RIVER
	PONT/BRET		INSTALL A GATE OR LOOK ON THE HARGO TO REDUCE SALTMATER INTRUSION
• •	PONT/BRET	HYDRO HEST	INSTALL & GATE DA LEGA AN THE THE ACTOR ACCOUNTS AND
	PONT/BRET		PUT & NAVIGABLE LOCK ON THE PROD (19)
	PONT/BRET	WINDON OFET	RESTORE MARSHES IN CENTRAL METLAND UNITS OF ST. BERNARD PARISH (16)
	STATE	BARR ISL REST	ESTATE INTERES IN CONTROL REPORTED IN HOW TO USE OLD TIRES, BOUND TOBETHER WITH WYLON COND, FOR EROSION CONTROL, AND CAPTURING SEDIMENTS
175	STATE	BARR 191, REST	FAILURE TO PRESERVE BARRIER ISLANDS WILL MAKE EFFORTS TO SAME INTERIOR NETLANDS FUTILE (3)
176	STATE	oredged hat	USE DREDBED MATERIAL WERE EVER POSSIBLE :19)
	STATE	DREDGED MAT	USE DREDRED MATERIAL RENEFICALLY WHEN AND WHERE EVER MOSSIBLE (10)
	STATE	EROSION CONTR	THIS NON'S COMPANY HAS A PRODUCT CALLED "BEACH BLOCKS" THAT THEY MARKET FOR EROSION CONTROL
	STATE		EROSION ALONG TYNE SIMM IS AFFECTING METLANOS OUTSIDE OF THE PROJECT RIGHT-OF-MAYS (4) PUMP RIVER SEDIMENTS INTO THE INFLOM CHANNELS OF THE FRESHMATER DIVERSION PROJECTS (9)
	STATE	FRSHNTR DIV HYDRO REST	PEDAVERT SEDIMENTS TATU THE INFLUE CONVERTS OF THE PRESENTED OFFICES OF THE PROPOSAL FOR THE STATE FLAN
	STATE	HYDRO REST	REDUCE TION, FLISHING AND SCOLR BY FILLING OR PLUGSING UNDERD CANALS (20)
	STATE	HYDRO REST	CONSIDER PLOSEING AND BACKFILLING CUTS INTO MARSHES ANDE BY GIL COMPANIES, THEY SHOLLD BEAR THIS CONT
	STATE	HYDRO REST	REDUCE THE SIZE OF TIDAL PASSES ALON THE SULF SHORELINE TO REDUCE SALTWATER INTRUSION AND TIDAL SCOUR (7)
	STATE	OTHER	UDISTRUCTION AND VEGETATION OF BERNS ALONG NAVIGATION CHANNELS TO PREVENT BANKLINE EROBION (24)
:36	STATE	JTHER	HAVE CAPPENING AND VEGETATIVE PLANTINGS IN OPEN WATER AREAS (20). ALSO OTHER HETLAND PROTECTION/RESTONATION TYPE PROJECTS (21)
187	STATE	OTHER	ALLOCATE OR DEDICATE WATER IN THE MISS. RIVER FOR USE IN LA. (22)
199	STATE	gther	EIAMINE ALL WAVIGATION CHANNELS FOR SALTMATER INTRUSION AND EROSION PROBLEMS (12)
	STATE	OTHER	SUBSIDENCE AND MARSH DETERIORATION HAS OCCURRED FROM PETROLEUM EXTINCTION. EXMINE REINTRODUCTION OF PRODUCED WATER (13)
	STATE	JTHER	JSE YARD WASTE TO CREATE A BASE FOR WETLAND GROWTH IN FRESHMATER COULS (21)
	STATE	OTHER	SUPPORT PROJECTS LIKE EPA'S FALGOUT CANNE, SOUTH WETLAND CREATION DEHONGTRATION (7) CONSIDER SEA LEVEL RISE WHEN PLANNING PROJECTS ALONG THE CONGT (9)
	STATE	other Other	PERITTING PROCESS 19 TO LONG AND COMPLICATED (10)
	STATE	DTHER	SIVE WARSH DWEERS THE RIGHT AND PERMITS TO LEVEE THEIR LANDS WITH FIVE FOOT LEVEES
	STATE	JTHER	SE POQUETS DEVELOPED FROM DISCARDED TIRES TO PROTECT AND REBUILD MARKES AND MARIER ISLANDS
	STATE	OTHER	""P ALL PREDGING AND ENCOURAGE LAND AND DIL COMPANIES TO RESTORE LAND
	STATE	OTHER	- ROJECT TO DETERMINE THE FEASIBILITY OF USING BEACH CONES SHOULD BE FUNDED (3)
: 98	STATE	JTHER	PLW RESTORATION BY HYDROLOBIC BASING INSTEAD OF BY UNASSOCIATED INDIVIDUAL PROJECTS (4)
: 20	STATE		DEMOLISH CATTLE MALKMAYS THAT INTERNUPT SHEET FLOW USING HILLITMAY EQUIPHENT TO BLOW THEN UP
	STATE	VEG PLANTINGS	PLANTING OF DEEPWATER AQUATICS TO REDUCE EROSION AND WAVE FETCH (26)
201	STATE	VEG PLANTINGS	REGETATIVE PLANTING EFFORTS SHOLD BE EXPANCED
	STATE		PLANT NATURAL VEGETATION ALONG THE CONSTLINE TO RESTORE AND MAINTAIN SEACHES & SAND BANKS, 10 TURTLE GRASS, MANGROVES, WILDFLIDHERES, COCCINUT
	ERR	BARR ISL PEST	COMPLETE BARRIER ISLAND RESTORATION PLAN FOR TERREDONCE PARISH (1) PEBUILD BARRIER ISLANDS, PLANT VEBETATION, INSTALL ROCK JETTIES, AND STABILIZE NATURAL PASSES
	ERR		PESUILD BANKIER ISLANDS, PLAN VERCHTUM, INSTALL HUR VETTIS, HAS STATCTLE UNDER THE STATE ISLE DERNIERES CHAIN WITH MATERIAL FROM BAY SIDE, STRUCTURES TO SEDIMENTS ON BLLF SIDE, AND REPAIRS TO BREAKS IN ISLANDS
	TERR	DREDGED MAT	
	"ERR Terr		WASH CREATION AND BANK STABILIZATION ON THE WEST SIDE OF BAYOU LAFOLACHE AND AT BELLE PAGE (4)
	TERR		STABILIZATION OF HOUMA NAVIGATION CANAL BANKS (4)
	TERR	EROSION CONTR	CONSTRUCT ARTIFICAL REEF IN GULF OF MEXICO TO SLOW WAVE ACTION USING OLD CANS
210	TERR	EROSION CONTR	CONSTRUCTION OF LEVEES ALONG BAYOU PETIT CALLIOU & BAYOU TERREBOINGE & UPSINGE ROAD SIDE ALONG HAY 56 S. OF BOLDREAUX CANAL
	TERR	FROSTON CONTR	PARISH WANTS BARRIER ISLAND PROJECTS
212	TERM	EROSION CONTRO	A LARGE BREACH HAS OCCURRED IN THE BANK OF THE SIM ABOUT 3 HILES WEST OF BAYOU LAFOUNCHE AND IS CAUSING WIDESPREAD LOSS OF FRESH MARSH
213	TERR	FRSHITE DIV	DIVERT SEDIMENT AND FRESHMATER FROM THE ATCHINGALAYA RIVER AND OFFER FLOOD PROTECTION TO TERREBONE PARISH (3)
214	TERM	HYDRO REST	IN POINT AU FER ISLAND, CLOSE AN EXISTING CANAL SYSTEM WITH PLUES, AND FILL WITH DREDGED PATERIAL TO KEEP THE GULF FROM BREAKING THROUGH
	TERR	HYDRO REST	ON POINT AU FER ISLAND, INSTALL THREE BULKHEADS IN ABANDONED ACCESS CANALS, SPECIFICALLY, IN THE AMEA OF LOCIET BAYOU AND LAKE CHAPTAU
	TERR	HYDRO REST	IN POINT AU FER ISLAND, REINSTALL THO BULKHEADS THE HAVE FAILED IN A CANNE SYSTEM CONNECTING MOSSULTO BAY AND BAY CASTAGNIER
	TEAR	HYDRO REST	PLACE A LOCK IN THE HOUMA VAVIGATION CANAL TO REDUCE HYDROLOGIC EXCHANGE AND PREVENT SALTMATER INTRUSION (12)
	TERR	HYDRO REST	RESTORE LAKE HOUMA TO CYPRESS SWAPP (3) 2.055 HOUMA NAVIGATION CANAL OR INSTALL LOCKS JUST NORTH OF FALGOUT CANAL
	TERR	HYDRO REST	1.055 Houma Navigation Canal un thetall lucks just runth of falguot char. The fall the salinity feduction cells in houma navigation canal just N. Of soccorie and in dulac area
	TERR	HYDRO REST	I VE ALL THE SALINET VEDUCTION CELLS IN "COMMINIVERITION DAVID SEEN IN OF SUCCEMENT AND IN COMMINICATION CALLY MARSH CREATION NEST OF HOUMA AND NORTH OF SIMI (8)
	TERR	JTHER	RE-ROUTE SIME SOUTH OF HOUMA AND USE DREDGED MATERIAL TO BUILD A HURRICAME PROTECTION LEVEE (7)
	TERR	17-678	SELOCATE THE STIM SOUTH OF COODORIE
~1	1000	ATT 340 1055	SESTING MARSH ON POINT ALL FER ISLAND, UND DIMERS HAVE DIFFICULTY BETTING PERMITS AND FINANCING PROJECTS (8)
225	TERR/ATCH	EROSION CONTR	STABILITE BANKS OF AVOCA ISLAND CUTOFF BATOU DRAINAGE CANAL AND THE SIMI IN TERREBONE PARISH

E-3

Record®		CATEBONY	DESCRIPT
274	TENR/ATCH	HYDRO NEST	USERING OFF THE NORTHERN SERVENT OF SWOLD OFFICE (2) CLORE OFF THE NORTHERN SERVENT OF SWOLD OFFICE (2) INVESTIGATE SITH NETLAND RESTONATION AND PROTECTION. NO PLOOD PROTECTION. (SAMPLER PLAN - SAYOLG OFFICE, SOLEF, AND BLACK) (10) INVESTIGATE SITH NETLAND RESTONATION AND PROTECTION. NO PLOOD PROTECTION. (SAMPLER PLAN - SAYOLG OFFICE, SOLEF, AND BLACK) (10)
727	TENR/ATCH		
	11110 / 9464	MAR IS. REAT	NESTONE ANEAS VEST OF INTUI LIFUNEDONE AND BANATARIA INGING (6) NESTONE MANIER ISLANDS IN BOTH TERNEDONE AND BANATARIA INGING (6)
229	TERR/MA		
230	TENR/SAMA .	WHR IS. HEIT	RESTORE MARIER ISLANDS IN NOTH TENERLOVE AND DEVICITIES OF THE RESTORE AND PREVENT ENDSION (13) PLACE NON-NODE REFTS HEAR OR OUTSIDE MARIER ISLANDS TO REDUCE WAVE ENERGY AND PREVENT ENDSION (13) PLACE ROCKS IN PREACHES OF MARIER ISLANDS TO PREVENT FURTHER ENDSION (9)
231	TERR/BANA	MAR ISL REAT	PLACE NOCIS IN MEACHES OF MORIER ISLANDS TO PREVEN FORMER CONTINUE CONTINUES ON THE SULFSIDE OF THE ISLANDS FOR PROTECTION USE OVSTER SHELL AND SAND TO NOURISH BEACH AND BUILD STRUCTURES ON THE SULFSIDE OF THE ISLANDS FOR PROTECTION
232	TENR/BANK		USE OVSTER SHELL AND SHE TO ADALIS IS DREDGED MATERIAL TO CREATE MARSH
255	TERR/ SAMA	DREDGED MAT	
254	TERR/BARA	EROSION CONTR	STUDY USE OF BEACH CORES TO SLUB POSITION LAFOUNCHE AND TERREBOINE BASIN DIVERT WATER FROM BAYOU LAFOURCHE INTO MESTERN LAFOUNCHE AND TERREBOINE BASIN
2:	TERR/BARA	FRSHITE DIV	DIVERT WHEN FAUL WATER THROUGH ADJACENT MARSHES
236	TERR/BARA	FRSHITE DIV	REPORTE PUPPED WITHAL WITH TO REDUCE SALINITY PLACE 3-4 SILLS IN BAYOU LAFOURDE TO REDUCE SALINITY
237	TERR/ BARA	hydro rest	
239	TERR/BANA	OTHER	CONNECT BAYOU TENNESHINE AND MAND MITH SEDIMENT RETENTION DIKES AND DREDGED MATERIAL. STABILIZE EASTERN END OF MARSH ISLAND MITH SEDIMENT RETENTION DIKES AND DREDGED MATERIAL.
239	VERM	EROSION CONTR	
240	VERM	EROSION CONTR	THE REPORT OF A DESCRIPTION OF A DESCRIP
241	VERM	EROSION CONTR	
	VERM	EROSION CONTR	POSSIBLE BREACHATER E/OR APPIPED ALL WAYE STILLING FENCES OR VEBETATIVE PLANTING (19) BANKS OF BAYOU CARLIN ARE ERODING. POSSIBLE WAYE STILLING FENCES (18)
	VERM	EROSION CONTR	BANKS OF BAYOU CARLIN ARE ERODING. POSSIBLE WAVE STILLING FENCES ON VEBERATIVE FUNCTION (17) BANKS OF BAYOU CARLIN ARE ERODING FROM VERHILION BAY TO AVERY ISLAND POSSIBLE VEBETATIVE PLANTINGS AND WAVE STILLING FENCES (18) BANKS OF BAYOU PETIT ANDE ERODING FROM VERHILION BAY TO AVERY ISLAND POSSIBLE VEBETATIVE PLANTINGS AND WAVE STILLING FENCES (18)
	VERM	EROSION CONTR	
	VERM	EROSION CONTR	
	VENN	EROSION CONTR	CONSTRUCTS ANTIBULE NORTH OF LITTLE VERHILLON LARE IN THE AREA NALLED ALL SHOLD CALL THE
	VERM	CONCERNING CONCERNING	CRUDLATIC OUT NEEDS ENDING WRITE OF THE REAL STOCK OF
	VERM		FOUR-HILE OUT NEEDS EROSION CONTROL ON THE REST SIDE (2) VERNILION BAY- HUD POINT TO CYPRENDIT POINT NEEDS EROSION PROTECTION POBSIBLE VEBETATIVE PLANTINGS (3) I NE WITH STRUCTURES, LEVEE REPAIRS, AND PLANTINGS. AREA IS S. OF SIMM, N. OF VERNILION BAY, E. OF 4 HILE OUT & M. OF SOBTON BAYOU I NE WITH STRUCTURES, LEVEE REPAIRS, AND PLANTINGS. AREA IS S. OF SIMM, N. OF VERNILION BAY, E. OF 4 HILE OUT & M. OF SOBTON BAYOU
-	VENN		
	VERM		EROSION ALONG GIMM IN VERWILLION AND IDERIA PARISHES (40)
	VERM		
	vern Vern	FROSTON CONT	TOW ATE COCOMMITE RAVIE FREM VENTILIAN BUT ATTA AT CANNER CAN AT A CAN
-			AND THE ALLER ADDIED VERILLIER BY U PREVEN BUILDED VERI
	, VERM	FE PLANTINE	E OCCETATIVE PLANTINES ALONE SHORELINE OF EAST AND NEST CUTE BLANCHE BATS THE
	VERM	ETLAND LOSS	FROM VERHILLION RIVER EAST TO IDERIA PARISH LINE MARSHES ARE BEING LOST (11)
	VERM	ETLAND LOSS	FROM VERVILION RIVER EAST TO IDERIA PARISH LINE MARSHES AND BEING LOST (1) FROM VERVILION RIVER LINE ON THE H., MAD BEING ON THE S., METLAND LOSS BETHEEN VERV. PAR. LINE ON THE H., NEW IDERIA OMAINABE CANAL ON THE E., TRUDALINE PIPELINE ON THE H., MAD BEING ON THE S.
	VERH	ETLAND LOSS	AT MARS AT ING LIGT TETREDA PEUMI ISLAM AND SUP. TUSTING TO AT AT A AN AT AN
	VERM	ETLING LOSS	WARSH IS BEING LOST BELAUSE OF SALTWATER INTRUSION NORTH OF GIMM IN THE VICINITY OF HEL CELLINE AND MEET COTE BLANCHE DAYS (10) REPORT OUTFALL WATER THROUGH ADJACENT WARSHES TO ENWACE WARSHES AND IMPROVE WATER QUALITY IN EAST AND MEET COTE BLANCHE DAYS (10)
	ERM/ATO	H FRSHITE OLV	REPOUTE OUTFALL WATER THROUGH HURLEN INFORMED TO CONTACT THE OUTFALL WATER THROUGH IN CONTACT

E-4

.

.

COASTAL WETLANDS PLANNING PROTECTION AND RESTORATD N ACT

2ND PRIORITY PROJECT LIST

APPENDIX F

MONITORING PROGRAM

MONITORING PROGRAM

Background:

Monitoring of projects implemented from the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) restoration plan must provide:

- 1) "an evaluation of the effectiveness of each coastal wetlands restoration project in achieving long-term solutions to arresting coastal wetlands loss in Louisiana" PL 101-646 Sec. 303 (b)(4)(L); and
- 2) "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" PL 101-646 Sec. 303 (b) (7).

In order for the above mandates to be achieved, the monitoring efforts must generate results that can aid in determining the success or failure of existing projects, in the beneficial modification of existing projects, in the design of future projects, and most importantly, support future decisions on selection of projects proposed for creating, restoring, protecting and enhancing Louisiana's coastal wetlands. Comparisons of results among projects of similar type is the only way to determine which projects are most effective in achieving long-term solutions to arresting coastal wetlands loss in Louisiana.

The Monitoring Work Group was tasked by the P & E Subcommittee to resolve two issues essential to achieving the above mandates. The first issue was to develop a standardized monitoring protocol, and the second issue was to determine how this protocol would be implemented in a monitoring, program, e.g., who would develop monitoring plans, collect field data, write reports, etc. The protocol was developed and reviewed by representatives from agencies, academia, and consulting firms, and their recommendations were incorporated into a final Monitoring Program Document. This document is attached as Appendix A to this proposal.

Once the Monitoring Program Document was complete, the representatives of the various committees of the Task Force and the Monitoring Work Group discussed who would implement the monitoring program. Several options presented themselves as follows: 1) all monitoring would be the responsibility of the project sponsor; 2) all monitoring would be the responsibility of a single agency; 3) divide the monitoring among all the sponsoring agencies based upon expertise; 4) contract all monitoring with universities; and 5) contract all monitoring with a private consulting firm. The Monitoring Work Group discussed which options would meet the goals of consistency and technical credibility while at the same time being cost-effective and able to integrate with on-going data collection programs. The result of this discussion was that none of the options fit all of the requirements; therefore, they were all rejected.

During these discussions, the Louisiana Department of Natural Resources proposed that they be responsible for managing the monitoring program. After review and comments by the Monitoring Work Group and P & E Subcommittee, this proposal was refined to insure that the goals of consistency, credibility, and cost would be met. It was accepted and is presented here as-a recommendation of the P & E Subcommittee.

Monitoring Responsibilities:

Louisiana Department of Natural The Resources, Coastal Restoration Division (LDNR/CRD) will be responsible for management of all monitoring activities of the CWPPRA including monitoring plan development, data collection and storage, analysis, quality control, data interpretation statistical analysis, quality control, data interpretation and report generation. The United States Fish and Wildlife Service/National Wetlands Research Center (USFWS/NWRC) will be responsible for habitat mapping and GIS analysis (geographic information systems support) and other related monitoring as deemed appropriate by LDNR/CRD for each project. The LDNR/CRD and the USFWS/NWRC will jointly prepare reports for each CWPPRA project implemented. These reports will be submitted to the P & E Subcommittee, Technical Committee and Task Force for final approval. The P & E Subcommittee shall direct the Monitoring Work Group to provide a technical review of the project reports. The implementation of all monitoring plans will follow the protocols developed in the CWPPRA Monitoring Program Document. A Technical Advisory Group consisting of a federal project sponsor representative, state (LDNR/CRD) project sponsor representative, USFWS/NWRC representative, wetland ecologist and biostatistician will assist in the development of project specific monitoring plans. The P & E Subcommittee will be advised of all Technical Advisory Group meetings. Assistance by the other sponsoring agencies in the development of the monitoring plans will be available on a voluntary basis. These plans will be reviewed by the Monitoring Work Group and submitted to the P & E

subcommittee, Technical Committee and Task Force for final approval (see attached flowchart). The independent wetland ecologist and biostatistician will also provide quality assurance and verification of data interpretations to ensure unbiased determinations of results.

Justification:

- 0 As a 25% cost-share partner on all CWPPRA projects, the State of Louisiana is the common denominator across all projects. The LDNR/CRD can provide the consistency needed to evaluate and compare similar project types across the entire coastal zone of Louisiana. In addition, the natural resources affected by CWPPRA projects fall under the domain of the State of Louisiana and, therefore, these resources should be monitored and managed by the State of Louisiana.
- 0 A program within the LDNR/CRD is already established to monitor projects developed within the State of Louisiana's Coastal Wetlands Conservation and Restoration Plans. This monitoring program was used as a template for the development of the CWPPRA Monitoring Program Document and, therefore, would be compatible or easily adaptable to any CWPPRA requirements.
- 0 The USFWS/NWRC currently provides GIS support and mapping assistance to the CWPPRA Task Force and the LDNR/CRD for planning and monitoring. The USFWS/NWRC program provides a mechanism for organizing and distributing GIS data generated for CWPPRA activities. This program, combined with the LDNR/CRD monitoring program will establish a long term mechanism to- properly manage, archive, transfer, and distribute information.
- 0 The LDNR/CRD currently develops reports for the Louisiana Legislature one year after project completion and updates these reports yearly. This coincides with the requirement of the Task Force to report to the United States Congress on the effectiveness of all implemented projects not less than three years after the completion and submission of the restoration plan, and at least every three years thereafter. Combined with the graphical, editorial and technical support of the USFWS/NWRC, the LDNR/CRD can complete all reporting requirements as specified in the CWPPRA.

Limits on Monitoring Variables:

Monitoring budgets for CWPPRA projects will be developed based on the <u>minimum</u> monitoring variables necessary to provide sufficient information to determine if project goals and objectives are being

met. A mechanism for selecting variables to be monitored is provided in the CWPPRA Monitoring Program Document. However, due to the limited availability of funds, all of the highest priority variables cannot be monitored. The Monitoring Work Group determined by project type which variables were essential in judging project success or failure and which variables may need to be monitored based on project objectives and possible-impacts. They are as follows:

are as lorrows.		
<u>Project Type</u>	Essential <u>Variables</u>	Additional Variables or <u>Substitutions</u>
Freshwater Diversion	Habitat Mapping Salinity Water Level Vegetation	Fisheries Discharge Precipitation Wind Speed/Direction
Marsh Management	Habitat Mapping Salinity Water Level Vegetation Fisheries	Sediment Accretion
Hydrologic Restoration	Habitat Mapping Salinity Water Level Vegetation	Fisheries Sediment Accretion Water/Sediment Quality
Sediment Diversion	Habitat Mapping Bathymetry/ Topography	Vegetation Suspended Sediment Discharge
Vegetative Planting	Vegetation Shoreline Markers	Habitat Mapping Salinity
Beneficial Use of Dredge Material	Habitat Mapping Vegetation Bathymetry/ Topography	Shoreline Markers
Barrier Island Restoration	Habitat Mapping Vegetation Bathymetry/ Topography	Shoreline Markers
Sediment/Nutrient Trapping	Habitat Mapping Vegetation	Suspended Sediment Bathymetry Nutrients
Shoreline Protection	Habitat Mapping Shoreline Markers	Vegetation Bathymetry/ Topography

The essential variables illustrate those variables which generally would be measured for each project type. However, project-specific goals and objectives may dictate that some of these variables may be non-essential. This list does not these variables may be non-essential. preclude other variables from being monitored, if determined necessary by the Technical Advisory Group. To reduce monitoring costs, full use will be made of existing research findings regarding the effects of water control structures.

Limits on Monitoring Costs:

The LDNR/CRD has reviewed the goals and objectives of all 18 first priority list projects and developed monitoring cost estimates for each. The monitoring budgets on 20 completed State of Louisiana wetland restoration projects as well as the monitoring priorities and costs identified within the CWPPRA Monitoring Program Document were also reviewed. This review determined that monitoring costs cannot be set at a fixed percentage of project cost, due to varying project goals and objectives and project sizes. It did, however, provide enough information to estimate an average annual cost (below) necessary to adequately monitor each type of wetland restoration project.

Average annual monitoring costs for each project type will not exceed the following:

<u>Project Type</u>

Average Annual Cost

Freshwater Diversion Marsh Management Hydrologic Restoration	\$ 25,875 25,875 25,875
Sediment Diversion	\$ 8,625
Vegetative Planting	\$ 4,325
Beneficial Use of	
Dredged Material	4,325
Barrier Island Restoration	4,325
Sediment/Nutrient Trapping	\$ 4,325
Shoreline Protection	\$ 2,150

Freshwater diversion, marsh management, and hydrologic restoration project costs can be prorated based on project size as follows:

less than 1,000 acres = 60%1,000 - 5,000 acres = 70% 5,000 - 15,000 acres = 80% 15,000 - 60,000 acres = 100%

In addition, those projects that require continuous data recorders for active management will also be funded at 100%, regardless of project size.

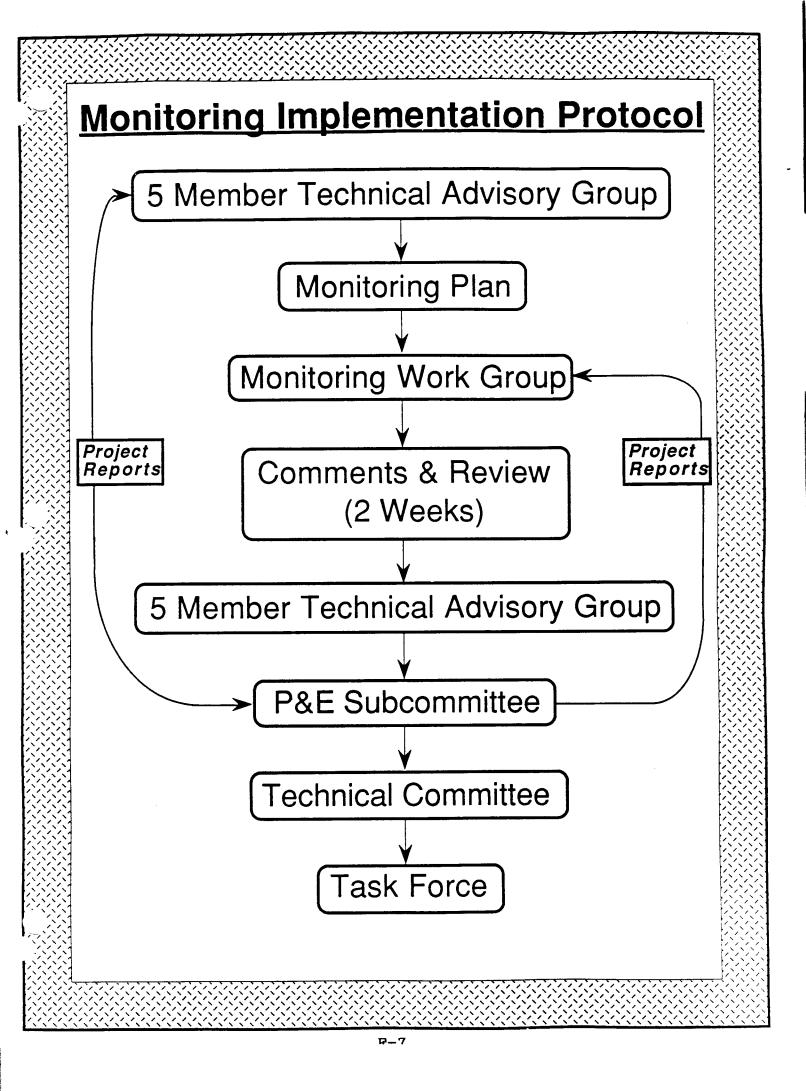
F – 5

Monitoring costs for any given project will not exceed 125% of the original, fully-funded monitoring cost estimate.

Monitoring costs for any given project will not exceed 50% of the' fully-funded project cost.

These costs were derived based on a number of assumptions regarding sample number, sample frequency, project size, and the monitoring protocol utilized. Costs were derived independently and without consideration of existing monitoring stations. Average annual monitoring costs will decrease over time as a greater number of projects are implemented.

Project-specific exemptions to the above monitoring costs will be mutually agreed upon by the State of Louisiana and the Federal cost-share sponsor. Monitoring costs will be included as a component of the fully-funded project cost using the above average annual monitoring cost guidelines. In situations where monitoring costs must be added to a previously approved project, such an addition will not cause the previously approved fully-funded project cost to be exceeded by more than 25%.



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

2ND PRIORITY PROJECT LIST

APPENDIX G

STATUS OF PROJECTS FROM PREVIOUS PRIORITY PROJECT LIST

APPENDIX G STATUS OF PROJECTS FROM PREVIOUS PRIORITY PROJECT LIST

TABLE OF CONTENTS

	PAGE
Fourchon	G-1
BA-2/GIWW-Clovelly	G-2
Cameron Creole	G-3
Bayou Sauvage	G-4
Turtle Cove	G-5
Sabine Refuge	G-6
Vegetative Planting	G-7
West Bay Diversion	G-8
Barataria Bay Waterway	G-9
Lower Bayou LaCache	G-10
Cameron Prairie	G-11
Vermilion River Cutoff	G-12
Easter Isle Dernieres	G-13
Status of Priority Project	G-14
Project Location Map	

Fouchon Hydrologic Restoration Lafourche Parish, LA

FEDERAL LEAD AGENCY: U.S.D.C.- National Marine Fisheries Service

PROJECT LOCATION: The project area is located in lower Lafourche Parish between State Road 3090 and Bayou Lafourche and adjacent to the Port Fourchon facilities. The area encompasses a 2,400 acre impoundment created for spoil containment.

PROJECT PURPOSE: The project intends to return the impoundment to fisheries habitat by restoring tidal exchange and a lower mean water level, providing for ingress and egress and enhancing conditions for growth of vegetation.

PROJECT FEATURES: The project involves the placement of two 48-inch diameter culverts beneath the shell road along the northern perimeter. Culvert length will be approximately 75 ft. Shell armoring of levee faces adjacent to the culverts will be required to prevent scouring.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is \$252,000 of which \$189,000 is Federal Cost, and \$63,000 is non-Federal (State) Cost.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 1992: No Federal expenditures were made in FY 1992. Due to some landowner objections to the project, a cooperative agreement between the State of Louisiana, Department of Natural Resources and NMFS has not yet been signed. Resolution is expected.

FUNDS REQUIRED TO COMPLETE THE PROJECT: \$252,000.

SCHEDULED EXPENDITURES AND WORK PLANNED FOR FY 1993: FY 1993 expenditures are dependant upon the signing of the cooperative agreement. Work will proceed as soon as the agreement is signed and is anticipated to take approximately eighteen months to complete.

ISSUES/PROBLEMS/CONCERNS: Two landowners in the project area have objections to the project. It is anticipated that these objections will be resolved and the project will proceed.

BA-2. GIWW to Clovelly Wetland Lafourche Parish, LA

FEDERAL LEAD AGENCY: U.S.D.A. - Soil Conservation Service

PROJECT LOCATION: The project site is located in the marshes of Lafourche Parish southeast of the Gulf Intracoastal Waterway, east of Bayou Lafourche, and north of the Superior Canal. At about 60,000 acres of fresh and low-salinity wetlands, it is one of the last contiguous coastal wetland tracts within the Barataria estuary.

PROJECT PURPOSE: The project will protect the 60,000 acres of fresh and low-salinity wetlands through the restoration of historical hydrologic conditions. This will promote greater freshwater retention and utilization to prevent rapid salinity increases, and also promote water exchange through sheet flow as opposed to an expanding network of tidal channels. These are the hydrologic conditions that prevailed historically in the area.

PROJECT FEATURES: The project includes canal plugs, rock weirs, fixed crest weirs with boat bays, one variable crest weir, and the rebuilding of low overflow banks that have eroded away.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is \$8,142,000, of which \$6,106,500 is Federal Cost, and \$2,035,500 is non-Federal (State) Cost.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 1992: As of 30 _ September 1992, expenditures for this project totaled \$363,000. With those funds, design was initiated; plans and specifications (P&S) for the first contract were completed; and land rights maps were completed and provided to the parish government.

FUNDS REQUIRED TO COMPLETE THE PROJECT: \$8,03 1,000

SCHEDULED EXPENDITURES AND WORK PLANNED FOR FY 1993: In FY 1993, the scheduled expenditure is \$138,000. With these funds design will be completed; the first contract will be awarded; and plans and specifications on remaining contracts will be completed.

ISSUES/PROBLEMS/CONCERNS: None.

Cameron-Creole Watershed Hydrologic Restoration Cameron Parish, LA

FEDERAL LEAD AGENCY: U.S. Fish and Wildlife Service

PROJECT LOCATION: The project site is located within the Cameron-Creole Watershed Project (CCWP) in the coastal marshes of southwest Louisiana. The CCWP includes Sabine National Wildlife. Refuge, East Cove Unit and adjoining private lands. It consists of 64,000 acres of brackish, intermediate, and freshwater marshes, with water management and salt water intrusion being controlled by five large lakeshore water control structures.

PROJECT PURPOSE: The project would promote the diversification of plant communities and increase marsh restoration gains above those predicted to occur under the CCWP alone; increase submergent vegetation over 4,600 acres of shallow fresh and estuarine open water; reduce rapid movement of saline water through the borrow canal, lowering marsh salinities in the North area; and reduce excessive pooling in southern areas of the watershed.

PROJECT FEATURES: The project consists of the installation of two sheet metal plugs in the lakeshore borrow canal - one south of Mangrove Bayou Water Control Structure and the other south of the Grand Bayou Water Control Structure. The plugs would be set at normal marsh level, allowing water to flow over during high water or flood conditions; and would include a boat bay/water control structure for boat access and flexibility with water flow control.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is \$502,000, of which \$376,500 is Federal Cost, and \$125,500 is non-Federal (State) Cost.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 1992: USFWS has worked out an agreement with the USDA-Soil Conservation Service (SCS) to design, administer and contract for the construction of this project. As of 30 September 1992, expenditures for this project totaled \$35,000. With those funds, planning design and cost estimates were completed by the SCS. Draft plans were circulated and several changes were made in the draft plans.

FUNDS REQUIRED TO COMPLETE THE PROJECT: \$467,000.

SCHEDULED EXPENDITURES AND WORK PLANNED FOR FY 1993: In FY 1993, all remaining funds are expected to be expended. With these funds, project plans and contract administration as well as construction of the project should be completed.

ISSUES/PROBLEMS/CONCERNS: The project was delayed because of Hurricane Andrew. SCS had to handle emergency construction of levee repairs rather than work on CWPPRA projects.

Bayou Sauvage Wildlife Refuge Hydrologic **R&oration Orleans Parish**, LA

FEDERAL LEAD AGENCY: U.S. Fish and Wildlife Service

PROJECT LOCATION: The project site is located in units **3** and 4 of the Bayou Sauvage Wildlife Refuge in Orleans Parish, La. The units are within the Lake Pontchartrain Hurricane Protection Project levee, between U.S. Highway 90 (to the north) and the Gulf Intracoastal Waterway (to the south), and east of the Maxent Canal levee.

PROJECT PURPOSE: The hurricane protection levee isolated Units **3** and 4 from the surrounding marsh complex and established a large freshwater impoundment. The project would establish a means for removing the excess water impounded as a result of the slow drainage of rainfall, providing lower water levels during Spring and Summer, and allowing for the reestablishment of emergent marsh vegetation throughout much of Units **3** and 4. In addition, the mortality rate of rookery-supporting black willow would be reduced and numerous plant and animal species would benefit from the increased production of emergent vegetation.

PROJECT FEATURES: The project includes the purchase, installation and operation and maintenance of two 48" pumps located on the east boundary of the units.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is \$1,105,000, of which \$828,750 is Federal Cost, and \$276,250 is non-Federal (State) Cost.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 1992: USFWS has worked out an agreement with the USDA-Soil Conservation Service (SCS) to design, administer and contract for the construction of this project. As of 30 September 1992, expenditures for this project totaled \$16,000. With those funds, initial design meetings, as well as on site surveys were completed. Draft plans were initiated and a preliminary Corps permit application meeting was accomplished.

FUNDS REQUIRED TO COMPLETE THE PROJECT: \$1,089,000.

SCHEDULED EXPENDITURES AND WORK PLANNED FOR FY 1993: In FY 1993, all remaining funds are expected to be expended. With these funds, project plans and contract administration will be completed in FY 93 as well as initiation of construction.

ISSUES/PROBLEMS/CONCERNS: The project was delayed because of Hurricane Andrew. SCS had to handle emergency construction of levee repairs rather than work on CWPPRA projects.

Sabine Wildlife Refuge Shoreline Erosion Control Cameron Parish, LA

FEDERAL LEAD AGENCY: U.S. Fish and Wildlife Service

PROJECT LOCATION: The project site is located on Sabine National Wildlife Refuge in western Cameron Parish, La. Work would be along five and one-half miles of the existing Burton Canal levee.

PROJECT PURPOSE: The proposed project would protect approximately 13,000 acres of existing fresh marsh in Impoundment 3 from deterioration associated with the anticipated failure of the existing west levee. These marshes provide habitat for numerous species of reptiles, amphibians, fish, and fowl.

PROJECT FEATURES: The project consists of clearing, rebuilding, and riprapping, as required, about five and one-half miles of existing levee.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is \$4,844,000, of which \$3,633,000 is Federal Cost, and \$1,211,000 is non-Federal (State) Cost. A final project cost estimate has not yet been prepared.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 1992: USFWS has worked out an agreement with the USDA-Soil Conservation Service (SCS) to design, administer and contract for the construction of this project. As of 30 September 1992, expenditures for this project totaled \$61,000. With those funds, initial design meetings and onsite surveys were completed. Draft plans were initiated.

FUNDS REQUIRED TO COMPLETE THE PROJECT:\$4,844,000.

SCHEDULED EXPENDITURES AND WORK PLANNED FOR FY 1993: In FY 1, all remaining funds are expected to be expended. With these funds, project plans and contract administration will be completed in FY 93 as well as initiation of construction.

ISSUES/PROBLEMS/CONCERNS: The project was delayed b urricane Andrew. SCS had to handle emergency construction of levee repairs rather than work on CWPPRA projects.

Vegetative Plantings Demonstration Project Cameron, Vermilion and Terrebonne Parishes, LA

FEDERAL LEAD AGENCY: U.S.D.A. - Soil Conservation Service

PROJECT LOCATION: There are four project sites: (1) in the marshes west of Hackberry, La., in Cameron Parish; (2) on the Gulf of Mexico shoreline in Vermilion Parish between Dewitt Canal and Rollover Bayou; (3) on Timbalier Island in Terrebonne Parish; and (4) along part of Falgout Canal in Terrebonne Parish.

PROJECT PURPOSE: The objectives of the project are to restore wetland productivity through planning, designing and implementing vegetative projects that protect and enhance coastal and inland wetlands; establish a vegetative buffer between the Gulf and coastal wetlands to reduce wave energy and trap sediments; pursue new and innovative vegetative techniques; maintain the integrity of the barrier islands; and incorporate vegetative planting projects in all coastal restorative work when applicable.

PROJECT FEATURES: The project consists of vegetative plantings suited to the particular habitats. The first and second sites mentioned are Chenier Plain, the third is a Barrier Island and the fourth, a Deltaic Plain.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is \$848,000, of which \$636,000 is Federal Cost, and \$202,000 is non-Federal (State) Cost.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 1992: As of 30 September 1992, expenditures for this project totaled \$52,000. With those funds, design was initiated; plans and specifications (P&S) for West Hackberry were completed; and P&S for Dewitt-Rollover were 60% completed.

FUNDS REQUIRED TO COMPLETE THE PROJECT: \$796,000.

SCHEDULED EXPENDITURES AND WORK PLANNED FOR FY 1993: In FY 1993, the scheduled expenditure is \$34,400. With these funds, the contract for West Hackberry will be awarded, and P&S will be completed and the contract awarded for Dewitt-Rollover.

ISSUES/PROBLEMS/CONCERNS: None.

West Bay Sediment Diversion Plaquemines Parish, LA

FEDERAL LEAD AGENCY: U.S. Army Corps of Engineers

PROJECT LOCATION: West Ray is located on the west side of the Mississippi River just above Head of Passes. The project diversion site is located at Mile 4.7 Above Head of Passes (AHP)

PROJECT PURPOSE: The objective of the project is to create vegetated wetland by diversion of sediments from the Mississippi River. Project implementation would create approximately 9,831 acres of fresh to intermediate marsh over the life of the project.

PROJECT FEATURES: The project consists of a conveyance channel and earthen "broadcrested" weir for large-scaled uncontrolled diversion of sediments from the Mississippi River. The sediment diversion channel and weir would be constructed in two phases: First, a 20,000 cubic foot per second (cfs) channel based on the 50% duration stages in the river and marsh development areas; and then, modification of the channel to a 50,000 cfs channel at 50% duration stages on the Mississippi River immediately upon completion of a period of intensive monitoring of the operations.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is \$8,517,000, of which the estimated Federal Cost is \$6,387,750 and the estimated non-Federal (State) Cost is \$2,129,250.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 92: As of 30 September 1992, expenditures for this project totaled \$79,000. With those funds land owners were identified and a Right-of-Entry procured; a survey contract was completed; design was initiated; Real Estate easement title work was initiated; and the Hazardous, Toxic and Radiological Waste (HTRW) investigation was initiated.

SCHEDULED EXPENDITURES AND PLANNED WORK FOR FY 93: In FY 1993, the scheduled Federal expenditures are \$250,000. With these funds, the Cost Sharing Agreement will be negotiated and executed; design and preparation of Plans & Specifications completed; acquisition of Real Estate easements initiated; HTRW and Cultural Resource investigations completed and all environmental clearances obtained; and relocation of a 10" pipeline coordinated and initiated.

ISSUES/CONCERNS SURFACED TO DATE: None.

Barataria Bay Waterway Marsh Creation Jefferson Parish, LA

FEDERAL LEAD AGENCY: U.S. Army Corps of Engineers

PROJECT LOCATION: The Barataria Ray Waterway is a navigable, dredge-maintained waterway located in southeast Louisiana running through Barataria Ray to the Gulf of Mexico. The proposed project site is between Mile 0 (at Barataria Pass) and Mile 16 (near Bayou St. Dennis).

PROJECT PURPOSE: The project would create new marsh and nourish existing marsh using sediments dredged for normal maintenance of the waterway. Approximately 445 acres of saline marsh would be created over th 20-ye raproject life.

PROJECT FEATURES: Sediments dredged for maintenance of the waterway would be deposited in about 18 selective shallow-water areas adjacent to the channel. These areas vary in size from about 15 to about 133 acres. It is estimated that maintenance dredging would occur about 5 times during th 20-yea **project** life, with abou 1,740,00 cotbic yards of material dredged per maintenance cycle. Cutter-head dredges would be used, exclusively, and material would be placed at an elevation conducive to marsh development.

PROJECT COST: Becaus e dredged material would be pumpe great r distances than would be required for normal maintenance, additional costs over present maintenance costs would be incurre. The total project cost estimated in the first Priority Project List Report i \$1,625,000, of whic \$1,218,75 isOFederal Cost, and \$406,250 is non-Federal (State) Cost.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 1992: As of 30 September 1992, expenditures for this project totaled \$5,600. Since maintenance dredging in the waterway is not scheduled to occur until the summer of 1994, and the design effort involved is minimal, work on this project was only recently begun.

FUNDS REQUIRED TO COMPLETE THE PROJECT: \$1,619,000

SCHEDULED EXPENDITURES AND WORK PLANNED FOR FY 1993: In FY 1993, the scheduled expenditures are \$50,000. With these funds a Cost Sharing Agreement will be drafted, negotiated and executed; landowners will be identified and Right-of-Entry to perform surveys on the marsh creation disposal sites will be obtained; and acquisition of Real Estate easements will be initiated.

ISSUES/PROBLEMS/CONCERNS: None.

Lower Bayou La Cache Hydrologic Restoration Terrebonne Parish, LA

FEDERAL LEAD AGENCY: U.S.D.C.- National Marine Fisheries Service

PROJECT LOCATION: The project area surrounds Lower Bayou LaCache in southern Terrebonne Parish. It is bounded by Bayou Petit Caillou to the West, Bayou terrebonne to the east, Bush Canal to the north and Sevin Canal/Bay Lucien to the south. It encompasses 4,200 acres of wetlands.

PROJECT PURPOSE: The project intends to reduce marsh loss rate and improve fish and wildlife habitat quality by restoring natural north-south water exchange with the estuarine water bodies and by reducing flow through the numerous canals dredged in the area Blocking or reducing flows from the major waterways will improve utilization of local freshwater and will reduce rapid saltwater ingress and tidal scour The impacts of high salinity events will be reduced while ingress and egress of aquatic species can occur through the numerous natural interior channels and ponds.

PROJECT FEATURES: The project involves construction of a shell-reinforced plug at nine potential locations (canals) along Bayou Petite Caillo and six potential locations along Bayou Terrebonne. Plugs range from about 80 to 175 linear feet. Some active access canals may have to be ringed, rather than plugged, and provided with water control structures Some plugs may also require a boat bay In addition, the south bank levee of Bush Canal will be reconstructed and reinforced.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is \$1,254,000 An updated estimate of \$1,106,00 has been made of which \$829,500 is Federal Cost, and \$276,500 is non-Federal (State) Cost.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 1992: No Federal expenditures were made i FY 1992nA cooperative agreement between the State of Louisiana, Department of Natural Resources and NMFS was signed on November 6, 1992.

FUNDS REQUIRED TO COMPLETE THE PROJECT: \$1,106,000.

SCHEDULED EXPENDITURES ANTI WORK PLANNED FOR FY 1993: In Fy 1993, \$26,900 is expected to be expended. With thes funds, the State wild complete Phase I for the project including feasibility analysis, planning and land rights coordination Phase II will begin in late FY 1993.

ISSUES/PROBLEMS/CONCERNS: None.

Bayou LaBranche Wetlands Marsh Creation St. Charles Parish, LA

FEDERAL LEAD AGENCY: U.S. Army Corps of Engineers

PROJECT LOCATION: The Bayou La Branche Wetlands consist of fresh and intermediate marshes on the south shore of Lake Pontchartrain in St. Charles Parish, LA.

PROJECT PURPOSE: The project would create approximately 254 acres of intermediate marsh and would nourish an additional 87 existing acres. By the end of the 20-year project life, approximately 296 acres of marsh would remain in the project area.

PROJECT FEATURES: The project involves dedicated dredging of sediments from Lake Pontchartrain to create vegetated wetlands in Bayou La Branche Wetlands area. The work would consist of pumping sediments from a borrow pit in the lake located about 3,000 feet due north of the proposed marsh development site. The dredged material would be pumped to a height conducive to marsh development after settlement and compaction, and would be confined to the marsh development site.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is !\$4,327,000, of which the estimated Federal Cost is \$3,245,250 and the estimated non-Federal (State) Cost is \$1,081,750.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 992: As of 30 September 1992, expenditures for this project totaled \$139,000. With those funds land owners were identified and Rights-of-Entry obtained; soil borings and a survey contract were completed; design and title work for Real Estate easements were initiated; and Hazardous, Toxic and Radiological Waste (HTRW) and Cultural Resource (CR) investigations were initiated.

FUNDS REQUIRED TO COMPLETE THE PROJECT: \$4,188,000

SCHEDULED EXPENDITURES AND PLANNED WORK FOR N 1993: In FY 1993, the scheduled expenditures are \$2,080,000. With these funds the Cost Sharing Agreement will be drafted, negotiated and executed; design and preparation of Plans & Specifications will be completed; acquisition of Real Estate easements will be completed; HTRW and CR investigations will complete and all environmental clearances will be obtained; the contract will be advertised and awarded; and construction will be initiated.

ISSUES/CONCERNS SURFACED TO DATE: None.

Cameron Prairie Wildlife Refuge Erosion Protection Cameron **Parish**, LA

FEDERAL LEAD AGENCY: U.S. Fish and Wildlife Service

PROJECT LOCATION: The project is located within the Cameron Prairie National Wildlife Refuge (NWR) in north central Cameron Parish, about 25 miles southeast of Lake Charles, La. The specific project site is a 2 mile reach along the north bank of the Gulf Intracoastal Waterway (GIWW) extending east from the Gibbstown Bridge on LA 27 to the North Canal.

PROJECT PURPOSE: The project would protect the emergent wetlands of the NWR adjacent to the GIWW, enhance the emergent wetlands protected by the proposed levee, and terminate the encroachment of the GIWW into the NWR. As a result, water quality deterioration in Unit 8 will be halted, approximately 640 acres of emergent fresh marsh will be protected, and 30 acres of coastal wetlands may be restored.

PROJECT FEATURES: The project consists of construction of a rock dike (breakwater) adjacent and parallel to the remaining spoil bank.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is \$1, 111,000, of which \$833,250 is Federal Cost, and \$277,750 is non-Federal (State) Cost.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 1992: USFWS has worked out an agreement with the USDA-Soil Conservation Service (SCS) to design, administer and contract for the construction of this project. As of 30 September 1992, expenditures for this project totaled \$37,000. With these funds, planning design and cost estimates were completed by the SCS. Draft plans were circulated and several changes were made in the draft plans.

FUNDS REQUIRED TO COMPLETE THE PROJECT: \$1,074,000.

SCHEDULED EXPENDITURES AND WORK PLANNED FOR FY 1993: In FY 1993, all remaining funds are expected to be expended. With these funds, project plans and contract administration as well as construction of the project should be completed.

ISSUES PROBLEMS/CONCERNS: The project was delayed because of Hurricane Andrew. SCS had to handle emergency construction of levee repairs rather than work on CWPPRA projects.

Vermilion River Cutoff Shoreline Protection & Restoration Vermilion Parish, LA

FEDERAL LEAD AGENCY: U.S. Army Corps of Engineers

PROJECT LOCATION: The Vermilion River Cutoff, near Intracoastal City, LA, connects the Vermilion River and the Gulf Intracoastal Waterway with Vermilion Bay for navigation purposes. The project area is on the west side of the Cutoff in the vicinity of Onion Lake and Onion Bayou.

PROJECT PURPOSE: The project as proposed would reestablish a section of marsh bank along the west side of the Cutoff through the use of a rock shoreline protection dike on the Cutoff side of the bank, and sediment trapping fences on the Vermilion Ray side of the bank.

PROJECT FEATURES: The project involves the construction of a rock dike along the west bank of the Vermilion River Cutoff, leaving an opening at the intersection of Onion Bayou, and the construction of sediment trapping fences on the Vermilion Bay side of the land bridge.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is \$1,523,000, of which the estimated Federal Cost is \$1,142,250 and the estimated non-Federal (State) Cost is \$380,750.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 92: As of 30 September 1992, expenditures for this project totaled \$79,000. With those funds, a Cost Sharing Agreement (CSA) was drafted; landowners were identified and Right-of-Entry procured; a survey contract was completed; design and title work for Real Estate easements were initiated; and a Hazardous, Toxic and Radiological Waste (HTRW) investigation initiated.

FUNDS REQUIRED TO COMPLETE THE PROJECT: \$1,089,000.

SCHEDULED EXPENDITURES AND PLANNED WORK FOR FY 93: In FY 1993, the scheduled Federal expenditures are \$100,000 With these funds the CSA will be negotiated and executed; design and preparation of Plans & Specifications completed; acquisition of Real Estate easements initiated; and HTRW and Cultural Resource investigations completed and all environmental clearances obtained.

ISSUES/CONCERNS SURFACED TO DATE: Significant design changes are expected for this project in order to accomplish the project purpose. We have discussed these changes with the Local Sponsor (State) and Local Interests and are now proceeding with those design changes. The schedule will be impacted by the design changes, but we still expect to initiate construction in FY 1994.

Eastern Isles Denieres Barrier Island Restoration Terrebonne Parish, LA

FEDERAL LEAD AGENCY: U.S. Environmental Protection Agency

PROJECT LOCATION: The project area is located on Eastern Isles Demieres, a barrier island chain in most southern Terrebonne Parish, La.

PROJECT PURPOSE: The project objectives are to restore the coastal dunes and wetlands of the Eastern Isles Demieres, enhance the physical integrity of the island, and protect the lower Terrebonne estuary and associated vegetated wetlands against direct exposure to the Gulf of Mexico, while increasing technical information on restoration of barrier islands.

PROJECT FEATURES: The project involves a two mile restoration and marsh creation effort at the eastern most end. Overwash sediments will be suction dredged and used to build up dunes; dune height will be approximately 8 feet and dunes will be seeded. Emergent sands will be used to close breaches and build retaining structures to confine pumped dredged material. An estimated 105 acres of saline marsh will be created by this first segment of island restoration.

PROJECT COST: The total project cost estimated in the first Priority Project List Report is \$6,345,000 of which \$4,758,750 is Federal Cost, and \$1,586,250 is non-Federal (State) Cost.

ACTUAL EXPENDITURES AND WORK ACCOMPLISHMENTS IN FY 1992: As of 30 September 1992, expenditures for this project totaled \$30,000. Those funds were used to prepare a draft Environmental Assessment with contractor assistance and for staff work.

FUNDS REQUIRED TO COMPLETE THE PROJECT: \$6,315,000.

SCHEDULED EXPENDITURES AND WORK PLANNED FOR FY 1993: In FY 1993, expenditures will be dependent upon progress made. Plans are that the Cost Sharing Agreement will be finalized, all environmental assessment and permitting requirements completed, and bids for construction initiated.

ISSUES/PROBLEMS/CONCERNS: None.

Coastal Wetlands Planning, Protection and Restoration Act

Status of 1st Priority Project List

20 Nov 92

		IJ	CSA	Design	ign	Pen	Permits	Cor	Construction	
		Scheduled		Scheduled		Scheduled		Sche	Scheduled	Cost
Project	Sponsor	Completion	Status	Completion	Status	Completion	Status	Start	Completion	(x \$1,000)
Fourchon	NMFS	Feb 93	IS,BS,IP							252
BA-2/ GIWW- Clovelly	SCS	Mar 92	TC	Aug 92	TC1st contract	Dec 91	TC	Dec 92	Apr 95	8,145
Cameron Creole	USFWS		<u>-</u>	Aug 92	IP,OS	Apr 92	TC	Dec 92	Mar 93	502
Bayou Sauvage	USFWS	Mar 92	BS,IP	May 93	IP,OS		II	Aug 93	Aug 94	1,105
Turtle Cove	USFWS	Removed from list;	om list;	construction	taken ove	construction taken over by State of Louisiana	Jouisiana			
Sabine Refuge	USFWS		dI	Mar 93	IP,OS	Apr 92	TC	Jun 93	Jun 94	4,844
Vegetative Plantings	SCS	Mar 92	TC	Apr 92	TC	Oct 92	IP,BS	Jan 93	Jan 94	848
West Bay Diversion	COE	Feb 93	IP,BS	Apr 93	IP,BS	Feb 94	IP,BS	Jul 94	Oct 94	8,517
Barataria Bay WW	COE	Oct 93	SO	Feb 94	IP,OS	Oct 93	SO	Jun 94	Aug 94	1,625
Lower Bayou LaCache	NMFS	Nov 92	TC	Jul 93	SO	Jan 94	SO	Nov 94	Jan 95	1,254
Bayou La Branche	COE	Jan 93	IP,BS	Jan 93	IP,OS	Jan 93	IP,BS	Aug 93	Nov 93	4,327
Cameron Prairie	USFWS	Nov 92	IP,BS	Aug 92	IP,05	Aug 92	TC	Jan 93	Oct 93	1/1/
Vemilion River Cutoff	COE	Jan 93	IS,IP,BS	Mar 93	SO' II	Jan 93	SO'AI	Dec 93	Feb 94	1,523
Eastern Isle Dernieres	EPA	May 92	IS,IP,BS	Sep 92	BS	Nov 92	IP ** See notes	Jan 93	Nov 93	6,345
STATUS:	OS = On Schedul	e	EXAMPLE:	OS,IP	NOTES:					
	BS = Behind Schedule IP = In Progress IS = Issue Surfaced TC = Task Commene	Schedule ress rfaced			** NEPA	** NEPA PEA is prepared	red			

G-14

-

