



13TH PRIORITY PROJECT LIST REPORT (APPENDICES)

PREPARED BY:

LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION

TASK FORCE

JULY 2004

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

13th Priority Project List Report

Appendix A

Summary and Complete Text of the CWPPRA

COASTAL WETLANDS PLANNING, PROTECTION & RESTORATION ACT

Public Law 101-646, Title III

SECTION 303. Priority Louisiana Coastal Wetlands Restoration Projects.

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

SECTION 304. Louisiana Coastal Wetlands Conservation Planning.

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

SECTION 305. National Coastal Wetlands Conservation Grants.

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

SECTION 306. Distribution of Appropriations.

- 70% of annual appropriations not to exceed (NTE) \$70 million used as follows:
 - NTE \$15 million to fund Task Force completion of Priority List and Restoration Plan—Secretary disburses the funds.

- NTE \$10 million to fund 75% of Louisiana’s cost to complete Conservation Plan—Administrator disburses funds.
- Balance to fund wetland restoration projects at 75% Federal/25% Louisiana-Secretary disburses funds.
- 15% of annual appropriations, NTE \$15 million for Wetland Conservation Grants—Director, USFWS disburses funds.
- 15% of annual appropriations, NTE \$15 million for projects authorized by the North American Wetlands Conservation Act—Secretary, Interior disburses funds.

SECTION 307. Additional Authority for the Corps of Engineers.

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

TITLE III--WETLANDS

Sec. 301. SHORT TITLE.

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

Sec. 302. DEFINITIONS.

As used in this title, the term--

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

SEC. 303. PRIORITY LOUISIANA COASTAL WETLANDS RESTORATION PROJECTS.

(a) PRIORITY PROJECT LIST.--

(1) PREPARATION OF LIST.--Within forty-five days after the date of enactment of this title, the Secretary shall convene the Task Force to initiate a process to identify and prepare a list of coastal wetlands restoration projects in Louisiana to provide for the long-term conservation of such wetlands and dependent fish and wildlife populations in order of priority, based on the cost-effectiveness of such projects in creating, restoring, protecting, or enhancing coastal wetlands, taking into account the quality of such coastal wetlands, with due allowance for small-scale projects necessary to demonstrate the use of new techniques or materials for coastal wetlands restoration.

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

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

(4) LIST OF CONTENTS.--

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

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

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

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

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

(5) FUNDING.--The Secretary shall, with the funds made available in accordance with section 306 of this title, allocate funds among the members of the Task Force based on the

need for such funds and such other factors as the Task Force deems appropriate to carry out the purposes of this subsection.

(b) FEDERAL AND STATE PROJECT PLANNING.--

(1) PLAN PREPARATION.--The Task Force shall prepare a plan to identify coastal wetlands restoration projects, in order of priority, based on the cost-effectiveness of such projects in creating, restoring, protecting, or enhancing the long-term conservation of coastal wetlands, taking into account the quality of such coastal wetlands, with due allowance for small-scale projects necessary to demonstrate the use of new techniques or materials for coastal wetlands restoration. Such restoration plan shall be completed within three years from the date of enactment of this title.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(f) COST-SHARING.--

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

(2) FEDERAL SHARE UPON CONSERVATION PLAN APPROVAL.--Notwithstanding the previous paragraph, if the State develops a Coastal Wetlands Conservation Plan pursuant to this title, and such conservation plan is approved pursuant to section 304 of this title, amounts made available in accordance with section 306 of this title for any coastal wetlands restoration project under this section shall be 85 percent of the cost of the project. In the event that the Secretary, the Director, and the Administrator jointly determine that the State is not taking reasonable steps to implement and administer a conservation plan developed and approved pursuant to this title, amounts made available in accordance with section 306 of this title for any coastal wetlands restoration project shall revert to 75 percent of the cost of the project: Provided, however, that such reversion to the lower cost share level shall not occur until the Governor, has been provided notice of, and opportunity for hearing on, any such determination by the Secretary, the Director, and Administrator, and the State has been given ninety days from such notice or hearing to take corrective action.

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

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

SEC. 304. LOUISIANA COASTAL WETLANDS CONSERVATION PLANNING.

(a) DEVELOPMENT OF CONSERVATION PLAN.--

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

(2) TERMS OF AGREEMENT.--

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

(B) The agreement shall--

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(d) APPROVAL OF CONSERVATION PLAN.--

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

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

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

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

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

(e) MODIFICATION OF CONSERVATION PLAN.--

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

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

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

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

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

(h) FEDERAL OVERSIGHT.--

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

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

SEC. 305 NATIONAL COASTAL WETLANDS CONSERVATION GRANTS.

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

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

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

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

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

(d) COST-SHARING.--

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

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

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

(e) PARTIAL PAYMENTS.--

(1) The Director may from time to time make matching payments to carry out coastal wetlands conservation projects as such projects progress, but such payments, including

previous payments, if any, shall not be more than the Federal pro rata share of any such project in conformity with subsection (d) of this section.

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

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

SEC. 306. DISTRIBUTION OF APPROPRIATIONS.

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

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

(A) preliminary assessments;

(B) general or site-specific inventories;

(C) reconnaissance, engineering or other studies;

(D) preliminary design work; and

(E) such other studies as may be necessary to identify and evaluate the feasibility of coastal wetlands restoration projects;

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

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

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

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

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

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

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

SEC. 307. GENERAL PROVISIONS.

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

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

SEC.308. CONFORMING AMENDMENT.

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

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

SENATE REPORTS: No. 101-523 accompanying S. 2244 (Comm. On Environmental and

Public Works).

CONGRESSIONAL RECORD, Vol. 136 (1990):

Oct. 1, considered and passed House.

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

Oct. 27, House concurred in Senate amendment.

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

Nov. 29, Presidential statement.

Statement on signing the Bill on Wetland and Coastal Inland Waters Protection and Restoration Programs, November 29, 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 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 wetland restoration and formulate Federal conservation 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**

13th Priority Project List Report

Appendix B

Wetland Value Assessment Methodology and Community Models

Appendix B

Wetland Value Assessment Methodology and Community Models

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Wetland Value Assessment Methodology

I. Barrier Headland Community Model

INTRODUCTION

The barrier headland model was developed to determine the wetland benefits of headland restoration projects and was developed by an interagency/academic workgroup consisting of individuals with backgrounds in wildlife ecology, fisheries ecology, geomorphology, and plant ecology. The barrier headland model has been developed for determining the suitability of barrier headland habitat along the Louisiana coast in providing resting, foraging, breeding, and nursery habitat to a diverse assemblage of fish and wildlife species.

The barrier island model was developed to evaluate traditional barrier island habitat along the Louisiana coast; those containing emergent habitat surrounded by open water. However, non-barrier island shorelines (i.e., headlands) also contain barrier island-type habitats such as beach, dune, and supratidal habitats but do not provide the same functions as barrier islands. Application of the barrier island model to those areas was not practical because many of the variables contained within the barrier island model do not apply to headland areas. Therefore, this model was developed to complement the barrier island model.

The barrier headland model should be applied to shoreline areas along the coast which consist of beach, dune, and supratidal habitat and which naturally decrease in elevation to an intertidal marsh. By nature, barrier headlands are contiguous with the mainland marsh and have not yet detached and begun formation of a barrier island. Conversely, the barrier island model is applied to detached headlands which have formed barrier islands and are gulfward of bay or lake systems. This model has been designed to function at a community level and therefore attempts to define an optimal combination of habitat conditions for all fish and wildlife species utilizing barrier headlands.

VARIABLE SELECTION

As with barrier islands, headlands consist of many different habitat components including surf zone, beach, dune, supratidal marsh (i.e., swale), and unvegetated flats or washover areas. A key assumption in model development was that for a barrier headland to provide optimal conditions for fish and wildlife, all of the above habitat components should exist. Unlike the barrier island model which encompasses intertidal and subtidal habitats, this model does not. Those habitat types exist landward of the headland and should be evaluated using the appropriate marsh model.

The variables selected for this model were those variables within the barrier island model which could be applied to barrier headland habitat. The model development group agreed that barrier headlands provide many of the same functions as barrier islands such as nesting and resting sites for birds and other wildlife, storm surge protection of interior marshes, and proximity to gulf/marine foraging habitat. Furthermore, barrier headlands

consist of many of the same habitat components as barrier islands such as surf zone, beach, dune, swale, and woody areas. Therefore, the group agreed that those variables within the barrier island model which address dune and supratidal habitats, vegetative cover, woody vegetation, and beach zone features should be included in the barrier headland model. The final list of variables included in this model are: 1) percent of the subaerial area that is classified as dune habitat; 2) percent of the subaerial area that is classified as supratidal habitat; 3) percent vegetative cover of dune and supratidal habitats; 4) percent vegetative cover by woody species; and 5) beach/surf zone features.

SUITABILITY INDEX GRAPH DEVELOPMENT

Suitability Index graph development was very similar to the process used for other community models developed for CWPPRA. The suitability index graphs from the barrier island community model were modified so that the variable-habitat quality relationships corresponded to barrier headland habitat. The process of SI graph development is one of constant evolution, feedback, and refinement; the form of each SI graph was decided upon through consensus among EnvWG members.

The Suitability Index graphs were developed according to the following assumptions.

Variable V₁ - Percent of the total project area that is classified as dune habitat.

Dune habitat is defined as subaerial habitat \geq 5 ft. NAVD88 and encompasses foredune, dune, and reardune. Although dune habitat occurs at elevations below 5 ft. NAVD88, lower-elevation dunes are more ephemeral and more frequently overwashed, which reduces their habitat value. Lower-elevation dunes often consist of vegetation more commonly associated with swale habitat and lack a high percentage of “typical” dune species.

Suitability index graph relationships for this variable were determined by: 1) reviewing profiles and cross-sections of existing barrier islands along the Louisiana coast, 2) field investigations which provided ocular estimates of habitat distribution on the islands, and 3) field knowledge of those involved in development of the model.

Variable V₂ - Percent of the total project area that is classified as supratidal habitat.

Supratidal habitat occurs from 2.0 ft. NAVD88 to 4.9 ft. NAVD88. This habitat type primarily encompasses swale and may include low-elevation dune and beach habitat.

Suitability index graph relationships for this variable were determined by: 1) reviewing profiles and cross-sections of existing barrier islands along the Louisiana coast, 2) field investigations which provided ocular estimates of habitat distribution on the islands, and 3) field knowledge of those involved in development of the model.

Variable V₃ - Percent vegetative cover of dune and supratidal habitats. Common dune species include beach tea (*Croton punctatus*), bitter panicum (*Panicum amarum*), morningglory (*Ipomoea sp.*), marshhay cordgrass (*Spartina patens*), and *Heterotheca subaxillaris*. Common foredune/high beach species include sea rocket (*Cakile fusiformis*), sea purslane (*Sesuvium portulacastrum*), and seaside heliotrope (*Heliotropium curassavicum*).

Common supratidal species include goldenrod (*Solidago sempervirens*), marshhay cordgrass (*Spartina patens*), saltgrass (*Distichlis spicata*), deerpea (*Vigna luteola*), eastern baccharis (*Baccharis halimifolia*), marshelder (*Iva frutescens*), sea ox-eye (*Borrichia*

frutescens), glasswort (*Salicornia bigelovii*, *S. virginica*), saltwort (*Batis maritima*), black mangrove (*Avicennia germinans*), beach pea (*Strophostyles helvola*), seashore paspalum (*Paspalum vaginatum*), *Heterotheca subaxillaris*, *Fimbristylis castanea*, *Suaeda linearis*, smooth cordgrass (*Spartina alterniflora*), *Sabatia stellaris* and seaside gerardia (*Agalinis maritima*).

Suitability index graph relationships for this variable were determined by: 1) reviewing vegetative cover transects of existing barrier islands along the Louisiana coast, 2) field investigations which provided ocular estimates of vegetative cover, and 3) field knowledge of those involved in development of the model.

Variable V₄ - Percent vegetative cover by woody species. This variable is intended to capture the habitat value of areas vegetated by woody species. Common woody species include black mangrove (*Avicennia germinans*), eastern baccharis (*Baccharis halimifolia*), wax myrtle (*Myrica cerifera*), and marshelder (*Iva frutescens*). This variable is defined as the percent of the subaerial vegetated area consisting of at least two woody species. The suitability index is divided by two for islands with only one woody species.

The suitability index graph for this variable was primarily based on the best professional judgment and personal field knowledge of those involved in model development. It was agreed that cover by woody species should be a small percentage (10% to 20%) of the vegetative cover on an island.

Variable V₅ - Beach/surf zone features. This variable is intended to capture the habitat value of the beach/surf zone. The suitability index graph for this variable is based on the assumption that a natural beach/surf zone slope or profile provides optimal habitat conditions for fish and wildlife. Man-made features such as breakwaters, containment dikes, and shoreline protection provide sub-optimal conditions. The suitability index value for each beach zone feature was based on the best professional judgment and field knowledge of those involved in model development.

HABITAT SUITABILITY INDEX FORMULA

As with the barrier island model, the EnvWG agreed that the primary habitat variables (i.e., those pertaining to dune and supratidal habitats) were the most important variables in characterizing the habitat quality of a barrier island. Therefore, those variables were given greater influence (i.e., 64% of the model weight) in the model than the remaining variables. Within the HSI formula, variable influence is only determined by the weight (i.e., multiplier) assigned to each variable.

BENEFIT ASSESSMENT

One HSI formula is used for the barrier headland model to calculate net benefits in the project area. Calculation of HUs, AAHUs, and net AAHUs follow the procedure described in the Wetland Value Assessment Methodology Introduction.

Wetland Value Assessment Community Model

Barrier Headland Community Model

Dune Habitat

Variable V_1 Percent of the total project area that is classified as dune habitat.

Supratidal Habitat

Variable V_2 Percent of the total project area that is classified as supratidal habitat.

Vegetative Cover

Variable V_3 Percent vegetative cover of dune and supratidal habitats.

Woody Species

Variable V_4 Percent vegetative cover by woody species.

Beach Zone Habitat

Variable V_5 Beach/surf zone features.

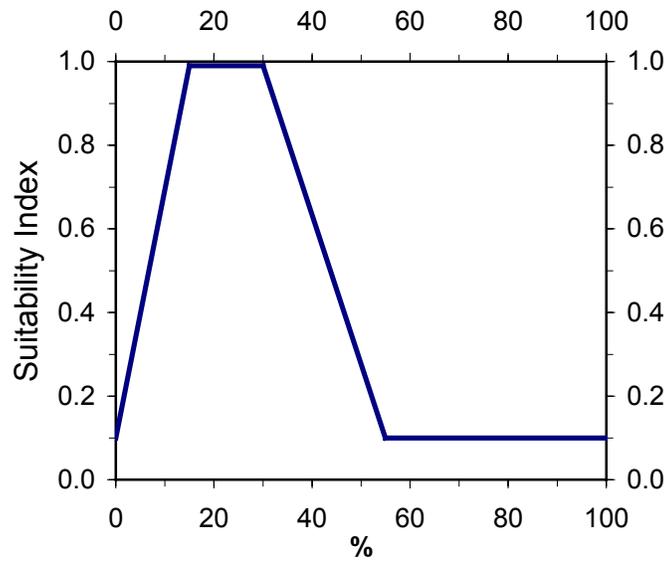
HSI Calculation:

$$\text{HSI} = 0.23(V_1) + 0.23(V_2) + 0.18(V_3) + 0.18(V_4) + 0.18(V_5)$$

Barrier Headland

Variable V₁ Percent of the total project area that is classified as dune habitat.

Suitability Graph



Line Formulas

If $\% < 15$, then $SI = (0.06*\%) + 0.1$

If $15 \leq \% \leq 30$, then $SI = 1.0$

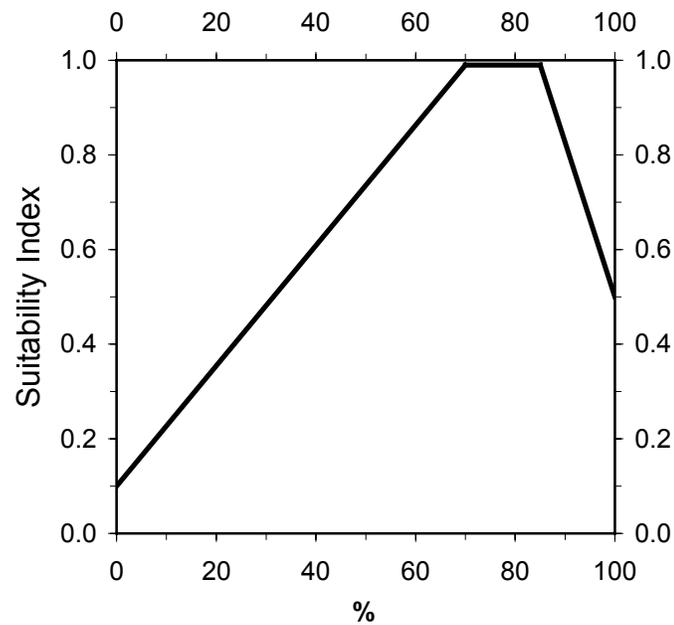
If $30 < \% \leq 55$, then $SI = (-0.036*\%) + 2.08$

If $\% > 55$, then $SI = 0.1$

Barrier Headland

Variable V₂ Percent of the total project area that is classified as supratidal habitat.

Suitability Graph



Line Formulas

If $\% < 70$, then $SI = (0.013 * \%) + 0.1$

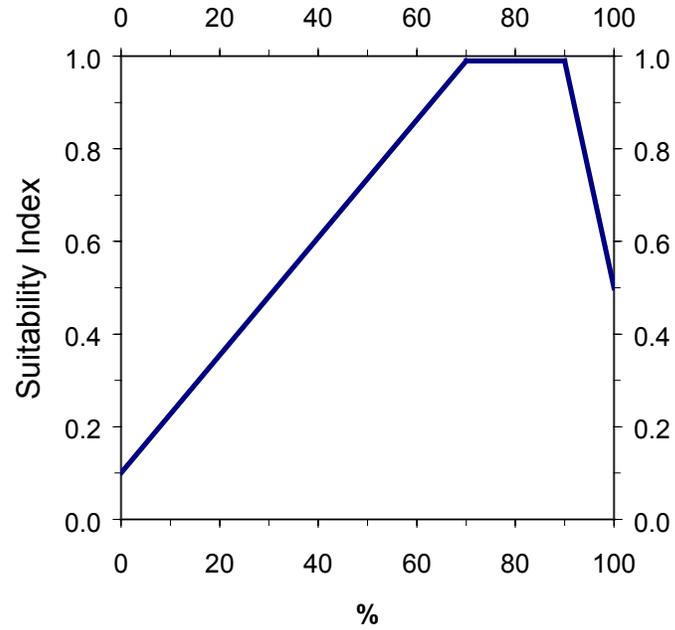
If $70 \leq \% \leq 85$, then $SI = 1.0$

If $\% > 85$, then $SI = (-0.0333 * \%) + 3.83$

Barrier Headland

Variable V₃ Percent vegetative cover of dune and supratidal habitats.

Suitability Graph



Line Formulas

If $\% < 70$, then $SI = (0.013 * \%) + 0.1$

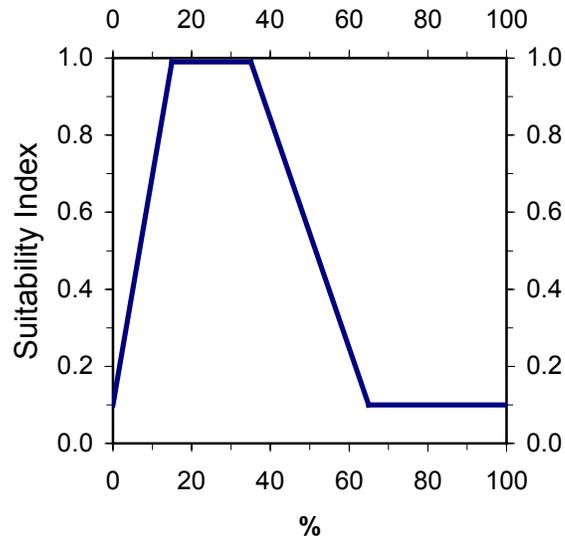
If $70 \leq \% \leq 90$, then $SI = 1.0$

If $\% > 90$, then $SI = (-0.05 * \%) + 5.5$

Barrier Headland

Variable V₄ Percent vegetative cover by woody species.

Suitability Graph



Line Formulas

If $\% < 15$, then $SI = (0.06 * \%) + 0.1$

If $15 \leq \% \leq 35$, then $SI = 1.0$

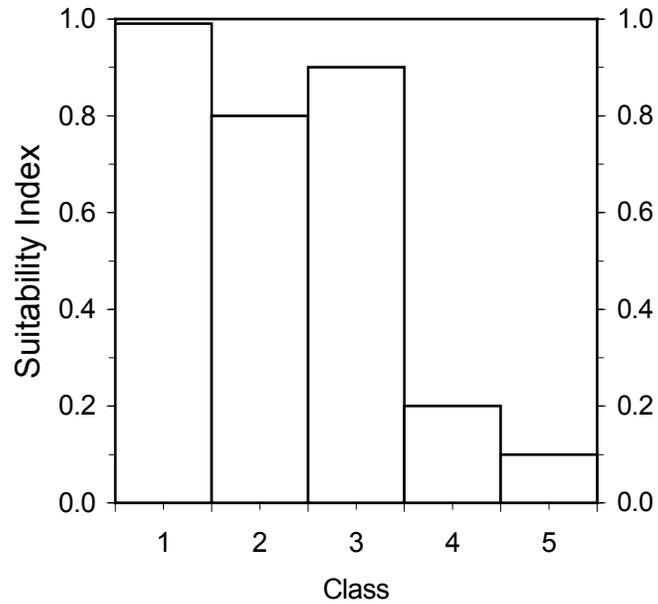
If $35 < \% \leq 65$, then $SI = (-0.03 * \%) + 2.05$

If $\% > 65$, then $SI = 0.1$

Barrier Headland

Variable V₅ Beach/surf zone features.

Suitability Graph



Class 1 = Natural Beach/Unconfined Disposal

Class 2 = Confined Disposal

Class 3 = Breakwaters

Class 4 = Rock on Beach

Class 5 = Seawall/No emergent habitat

II. Barrier Island Community Model

INTRODUCTION

Development of the barrier island model began in 2000 when the Environmental Work Group (EnvWG) requested Drs. Shea Penland and Mark Hester of the University of New Orleans to develop a barrier island model which could be used to determine the wetland benefits of barrier island restoration projects. Historically, the EnvWG utilized the saline emergent marsh model (Attachment 1) to evaluate barrier island restoration projects. For several years, it was recognized that the saline marsh model was inadequate in determining barrier island habitat quality and projecting barrier island restoration project benefits. Barrier islands provide many functions not provided by interior saline marsh and a unique assessment model was necessary to characterize those functions.

A draft barrier island model was presented in May, 2001 and was reviewed and further developed by the EnvWG and Academic Advisory Subcommittee (AAS). Also participating in model development was an interagency group involved in the Barataria Barrier Shoreline Feasibility Study being conducted by the Corps of Engineers (COE) and the Louisiana Department of Natural Resources (LDNR). That group was also in need of a barrier island assessment model to evaluate restoration alternatives proposed along the Barataria Basin gulf shoreline. Both groups, the EnvWG and the feasibility study group, worked together in reviewing and refining several drafts to reach consensus on a final assessment model. The model was developed by an interagency/academic workgroup consisting of individuals with backgrounds in wildlife ecology, fisheries ecology, geomorphology, and plant ecology. As with all habitat assessment models, this model has undergone several revisions since development began in 2000. Model refinement will continue as the model is applied to various restoration projects in different environmental settings. Model refinement can only occur after practical application through which model shortcomings are identified.

This model was developed for determining the suitability of Louisiana coastal barrier islands in providing resting, foraging, breeding, and nursery habitat to a diverse assemblage of fish and wildlife species. Specifically, this model should be applied to barrier islands which consist of emergent habitats and which are gulfward of bay or lake systems. This model was developed to evaluate restoration projects on barrier islands in the Terrebonne and Barataria Basins (e.g., Isles Dernieres, Timbalier, Grand Terre). Application to the Chandeleur Islands, which contain extensive seagrass beds on the bayside, may require model revisions as the value of those seagrass beds is not specifically captured by this model. This model has been designed to function at a community level and therefore attempts to define an optimal combination of habitat conditions for all fish and wildlife species utilizing barrier islands.

VARIABLE SELECTION

The initial list of variables proposed for the barrier island model included; 1) percent of the area classified as supratidal habitat, 2) percent of the supratidal habitat that is vegetated, 3) percent of the area classified as intertidal habitat, 4) percent of the intertidal habitat that is vegetated, 5) marsh edge and interspersions, 6) percent of the area classified as subtidal habitat (relative to subaerial), 7) percent of the subtidal habitat that is vegetated, 8) percent of the project area width that equals or exceeds the 20-year erosion rate, 9) dune height, and 10) percent of project length that protects interior marshes.

Barrier islands consist of many different habitat components including surf zone, beach, dune, supratidal marsh (i.e., swale), intertidal marsh, ponds, lagoons, tidal creeks, unvegetated flats, and subtidal habitat. A key assumption in model development was that for a barrier island to provide optimal conditions for fish and wildlife, all of the above habitat components should exist. Therefore, model variables characterize those key habitat components to provide an index of habitat quality.

The barrier island model development group initially agreed that model variables should address barrier island habitat components (e.g., dune, supratidal, intertidal, vegetative cover, etc.), island integrity/longevity (e.g., island width), and back-barrier/wave shadow benefits. Published Habitat Suitability Index (HSI) models provided little help in developing a potential list of variables as very few HSI models address species-specific habitat needs on barrier islands.

Variables which addressed island integrity (i.e., island width and dune height) were omitted from the model because they do not specifically address fish and wildlife habitat quality. However, those variables are important in determining island longevity and the loss of habitat over the project life. Therefore, they are necessary to determine the quantity of habitat at any given point during the analysis but are not needed to characterize habitat quality.

Woody habitat on barrier islands provides the important functions of nesting habitat for certain species such as the brown pelican and stopover habitat for neotropical migratory birds. Therefore, it was agreed to include a variable addressing that habitat component. In addition, the importance of beach and surf zone habitat was addressed by including a variable which describes the features, if any, located in the beach/surf zone. That zone is especially important as foraging habitat for shorebirds and wading birds and provides habitat for unique nekton assemblages.

The final list of variables included in this model are: 1) percent of the subaerial area that is classified as dune habitat; 2) percent of the dune habitat that is vegetated; 3) percent of the subaerial area that is classified as supratidal habitat; 4) percent of the supratidal habitat that is vegetated; 5) percent of the subaerial area that is classified as intertidal habitat; 6) percent of the intertidal habitat that is vegetated; 7) percent of the area that is classified as subtidal habitat (relative to subaerial); 8) percent vegetative cover by woody species; 9) marsh edge and interspersions; and 10) beach/surf zone features.

SUITABILITY INDEX GRAPH DEVELOPMENT

A key assumption in developing the suitability index graphs was that existing, stable barrier islands which contain the three key habitat components (i.e., dune, supratidal, and intertidal habitats) should serve as the optimum to which all other islands should be compared. The model development group agreed that the model should not use, as its optimum, an island which would not have existed nor presently exists along the Louisiana coast. For example, the optimal island (i.e., HSI = 1.0) should not be described as one 3 miles wide, with dunes 20 feet high and 1,000 feet wide, and with extensive forested habitat. Islands of that type have never existed along the Louisiana coast and restoration efforts are not aimed at creating islands of that sort. Although, “super” barrier islands could be constructed and would provide the same functions as typical barrier islands, it was agreed that creation of such islands is not likely and a comparison of a typical barrier island to a “super” island would be unrealistic. In essence, the group agreed that optimal barrier island habitat once existed along the Louisiana coast and that a naturally-formed, stable barrier island should serve as the optimal condition in this model. Therefore,

historical data and other information from existing barrier islands served as the primary basis for suitability index graph development.

Suitability Index graph development was very similar to the process used for other habitat assessment models developed for CWPPRA (e.g., marsh community models). A variety of resources were utilized to construct each SI graph, including personal knowledge of the barrier island model development group and EnvWG, consultation with other professionals and researchers outside the model development group, and published and unpublished data and studies. The process of SI graph development is one of constant evolution, feedback, and refinement; the form of each SI graph was decided upon through consensus among EnvWG members.

The Suitability Index graphs were developed according to the following assumptions.

Variable V_{1a} - Percent of the total subaerial area that is classified as dune habitat. Dune habitat is defined as subaerial habitat \geq 5 ft. NAVD88 and encompasses foredune, dune, and reardune. Although dune habitat occurs at elevations below 5 ft. NAVD88, lower-elevation dunes are more ephemeral and more frequently overwashed, which reduces their habitat value. Lower-elevation dunes often consist of vegetation more commonly associated with swale habitat and lack a high percentage of “typical” dune species.

Suitability index graph relationships for this variable were determined by: 1) reviewing profiles and cross-sections of existing barrier islands along the Louisiana coast, 2) field investigations which provided ocular estimates of habitat distribution on the islands, and 3) field knowledge of those involved in development of the model.

Variable V_{1b} - Percent of dune habitat that is vegetated. Common dune species include beach tea (*Croton punctatus*), bitter panicum (*Panicum amarum*), morningglory (*Ipomoea sp.*), marshhay cordgrass (*Spartina patens*), and *Heterotheca subaxillaris*. Common foredune/high beach species include sea rocket (*Cakile fusiformis*), sea purslane (*Sesuvium portulacastrum*), and seaside heliotrope (*Heliotropium curassavicum*).

Suitability index graph relationships for this variable were determined by: 1) reviewing vegetative cover transects of existing barrier islands along the Louisiana coast, 2) field investigations which provided ocular estimates of vegetative cover, and 3) field knowledge of those involved in development of the model.

Variable V_{2a} - Percent of the total subaerial area that is classified as supratidal habitat. Supratidal habitat occurs from 2.0 ft. NAVD88 to 4.9 ft. NAVD88. This habitat type primarily encompasses swale and may include low-elevation dune and beach habitat.

Suitability index graph relationships for this variable were determined by: 1) reviewing profiles and cross-sections of existing barrier islands along the Louisiana coast, 2) field investigations which provided ocular estimates of habitat distribution on the islands, and 3) field knowledge of those involved in development of the model.

Variable V_{2b} - Percent of supratidal habitat that is vegetated. Common supratidal species include goldenrod (*Solidago sempervirens*), marshhay cordgrass (*Spartina patens*), saltgrass (*Distichlis spicata*), deerpea (*Vigna luteola*), eastern baccharis (*Baccharis halimifolia*), marshelder (*Iva frutescens*), sea ox-eye (*Borrchia frutescens*), glasswort (*Salicornia bigelovii*, *S. virginica*), saltwort (*Batis maritima*), black mangrove (*Avicennia germinans*), beach pea (*Strophostyles helvola*), seashore paspalum (*Paspalum vaginatum*),

Heterotheca subaxillaris, *Fimbristylis castanea*, *Suaeda linearis*, smooth cordgrass (*Spartina alterniflora*), *Sabatia stellaris* and seaside gerardia (*Agalinis maritima*).

Suitability index graph relationships for this variable were determined by: 1) reviewing vegetative cover transects of existing barrier islands along the Louisiana coast, 2) field investigations which provided ocular estimates of vegetative cover, and 3) field knowledge of those involved in development of the model.

Variable V_{3a} - Percent of the total subaerial area that is classified as intertidal habitat. Intertidal habitat occurs from 0.0 ft. NAVD88 to 1.9 ft. NAVD88. This habitat type encompasses intertidal marsh, mudflats, beach, and any other habitats within that elevation range on the gulfside and bayside of the barrier island.

Suitability index graph relationships for this variable were determined by: 1) reviewing profiles and cross-sections of existing barrier islands along the Louisiana coast, 2) field investigations which provided ocular estimates of habitat distribution on the islands, and 3) field knowledge of those involved in development of the model.

Variable V_{3b} - Percent of intertidal habitat that is vegetated (bayside only). Common intertidal, back-barrier marsh species include smooth cordgrass (*Spartina alterniflora*) and black mangrove (*Avicennia germinans*). Intertidal habitat on the gulfside of an island is typically an unvegetated wash zone or low beach.

Suitability index graph relationships for this variable were determined by: 1) reviewing vegetative cover transects of existing barrier islands along the Louisiana coast, 2) field investigations which provided ocular estimates of vegetative cover, and 3) field knowledge of those involved in development of the model.

Variable V₄ - Percent subtidal habitat expressed as a percent relative to subaerial habitat.

Subtidal habitat occurs from -1.5 ft. NAVD88 to 0.0 NAVD88 and encompasses vegetated and unvegetated, open-water habitat.

The suitability index graph for this variable was primarily based on the best professional judgment and personal field knowledge of those involved in model development.

Variable V₅ - Percent vegetative cover by woody species. This variable is intended to capture the habitat value of areas vegetated by woody species. Common woody species include black mangrove (*Avicennia germinans*), eastern baccharis (*Baccharis halimifolia*), wax myrtle (*Myrica cerifera*), and marshelder (*Iva frutescens*). This variable is defined as the percent of the subaerial vegetated area consisting of at least two woody species. The suitability index is divided by two for islands with only one woody species.

The suitability index graph for this variable was primarily based on the best professional judgment and personal field knowledge of those involved in model development. It was agreed that cover by woody species should be a small percentage (10% to 20%) of the vegetative cover on an island.

Variable V₆ - Edge and interspersions. This variable is intended to capture the relative juxtaposition of intertidal, subaerial habitat (vegetated and unvegetated) and intra-island aquatic habitats such as ponds, lagoons, and tidal creeks associated with barrier islands. The degree of interspersions is determined by comparing the project area to sample

illustrations (Appendix A) depicting different degrees of interspersions. Interspersions including ponds, lagoons, and tidal creeks is of specific importance in assessing the foraging and nursery habitat functions of barrier islands to marine and estuarine fish and shellfish and associated avian predators. These habitats are characterized by specific physical attributes and thus unique fish and shellfish assemblages exhibit greater selection and utilization of these back barrier habitats as residents and transients over other barrier island, bay, and mainland aquatic habitats. However, interspersions can be indicative of degradation of back-barrier marsh from subsidence, a factor taken into secondary consideration in assigning suitability indices to the various interspersions classes.

A high degree of interspersions is assumed to be optimal (SI = 1.0), and the lowest expression of interspersions (e.g., all marsh/unvegetated flat, all open water, or all marsh/unvegetated flat clumped together) is assumed to be less desirable in terms of community-based function and quality. Class 1 is representative of unvegetated flats and healthy back-barrier marsh with a high degree of at least two of the following: tidal creeks, tidal channels, ponds, and/or lagoons. Numerous small ponds (Class 2) offer a high degree of interspersions, but are also usually indicative of the beginning of marsh break-up and degradation, and are therefore assigned a lower SI of 0.8. Class 3 represents the development of larger open water areas from coalescence of aquatic habitats, due to overwash, subsidence, or impacts from oil and gas exploration which provide less interspersions. Once these larger open water areas develop, they no longer have the physicochemical factors (e.g., area, edge, temperature, salinity, and hydroperiod) that make them functionally distinct and of high quality and would be assigned a SI = 0.6. Carpet marsh or projects designed to create intertidal marsh without construction of aquatic habitats would lack functionally distinct interspersions and provide basically one intertidal habitat type; therefore, natural and created carpet marsh should also be classified as Class 3. Class 4 represents extreme stages of subsidence or oil and gas induced loss of back barrier marshes or dominance of breaching with unstable overwash flats (SI = 0.4). Although habitats represented by this classification are predominantly subtidal, unvegetated flats still provide valuable habitat for many fish and shellfish and provide loafing areas targeted by waterbirds. The lowest expression of interspersions, Class 5, consists of no emergent, intertidal land and is assumed to be least optimal from a community basis (SI = 0.1). However, this class can represent the development of inlets which in themselves are important spawning and foraging habitat for economically important marine fishery species.

The suitability index graph for this variable was determined by reviewing aerial photographs of back-barrier habitats and determining which degree of interspersions provided optimal habitat conditions for fish and wildlife. It was determined that five classes of interspersions would best depict the range of interspersions on barrier islands. The suitability index value for each interspersions class was based on fisheries studies by the Louisiana State University, Coastal Fisheries Institute and the National Marine Fisheries Service; avian surveys by the Louisiana Department of Wildlife and Fisheries; wetland studies by LUMCON and the Louisiana State University, Wetland Biogeochemistry Institute; best professional judgment; and field knowledge of those involved in model development.

Variable V₇ - Beach/surf zone features. This variable is intended to capture the habitat value of the beach/surf zone. The suitability index graph for this variable is based on the assumption that a natural beach/surf zone slope or profile provides optimal habitat conditions for fish and wildlife. Man-made features such as breakwaters, containment

dikes, and shoreline protection provide sub-optimal conditions. The suitability index value for each beach zone feature was based on the best professional judgment and field knowledge of those involved in model development.

HABITAT SUITABILITY INDEX FORMULA

The EnvWG agreed that the primary habitat variables (i.e., those pertaining to dune, supratidal, and intertidal habitats) were the most important variables in characterizing the habitat quality of a barrier island. Therefore, those variables were given greater influence (i.e., 60% of the model weight) in the model than the remaining variables. Within the HSI formula, variable influence is determined only by the weight (i.e., multiplier) assigned to each variable.

BENEFIT ASSESSMENT

One HSI formula is used for the barrier island model to calculate net benefits in the project area. Calculation of HUs, AAHUs, and net AAHUs follow the procedure described in the Wetland Value Assessment Methodology Introduction.

Wetland Value Assessment Community Model

Barrier Island

Dune Habitat

Variable V_{1a} Percent of the total subaerial area that is classified as dune habitat.

Variable V_{1b} Percent of dune habitat that is vegetated.

Supratidal Habitat

Variable V_{2a} Percent of the total subaerial area that is classified as supratidal habitat.

Variable V_{2b} Percent of supratidal habitat that is vegetated.

Intertidal Habitat

Variable V_{3a} Percent of the total subaerial area that is classified as intertidal habitat.

Variable V_{3b} Percent of intertidal habitat that is vegetated.

Subtidal Habitat

Variable V_4 Percent subtidal habitat expressed as a percent relative to subaerial habitat.

Woody Species

Variable V_5 Percent vegetative cover by woody species.

Interspersion

Variable V_6 Edge and Interspersion.

Beach Zone Habitat

Variable V_7 Beach/surf zone features.

EXAMPLE for calculating V_{1a} , V_{2a} , V_{3a} and V_{4a} : If island cross section has an average dune width=50 m, supratidal width=150 m, intertidal width=400 m, and subtidal width=150 m, then assume subaerial width =600m.

$V_{1a}=(50/600)=8\%$, $V_{2a}=(150/600)=25\%$, $V_{3a}=(400/600)=67\%$, $V_4=(150/600)=25\%$.

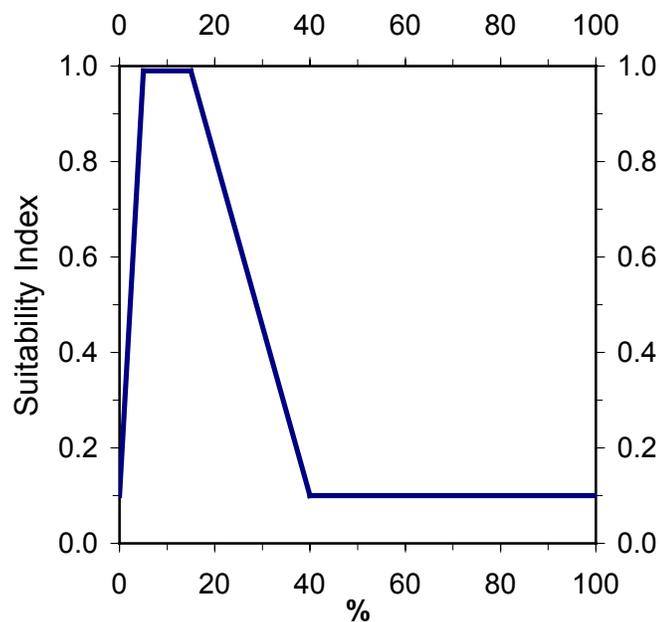
HSI Calculation:

$$\text{HSI} = 0.125(V_{1a}) + 0.05(V_{1b}) + 0.125(V_{2a}) + 0.05(V_{2b}) + 0.15(V_{3a}) + 0.10(V_{3b}) + 0.05(V_4) + 0.10(V_5) + 0.15(V_6) + 0.10(V_7)$$

Barrier Island

Variable V_{1a} Percent of the total subaerial area that is classified as dune habitat.

Suitability Graph



Line Formulas

If $\% < 5$, then $SI = (0.18 * \%) + 0.1$

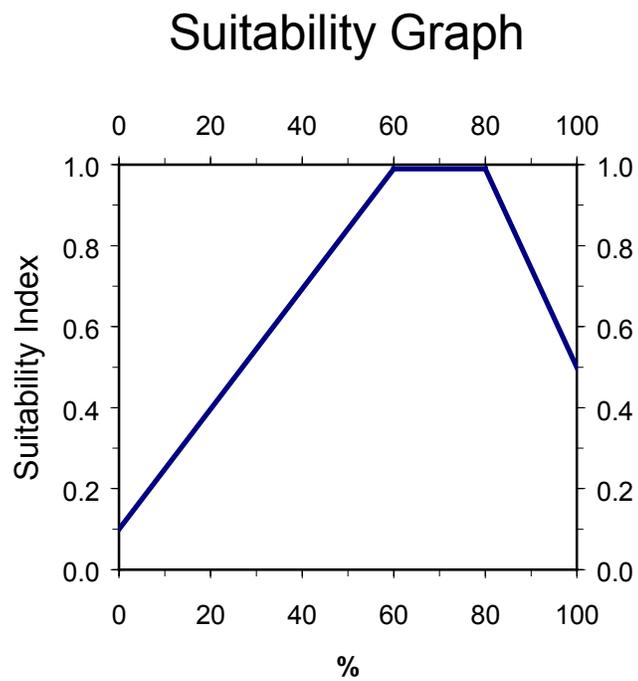
If $5 \leq \% \leq 15$, then $SI = 1.0$

If $15 < \% \leq 40$, then $SI = (-0.036 * \%) + 1.54$

If $\% > 40$, then $SI = 0.1$

Barrier Island

Variable V_{1b} Percent of dune habitat that is vegetated.



Line Formulas

If $\% < 60$, then $SI = (0.015 * \%) + 0.1$

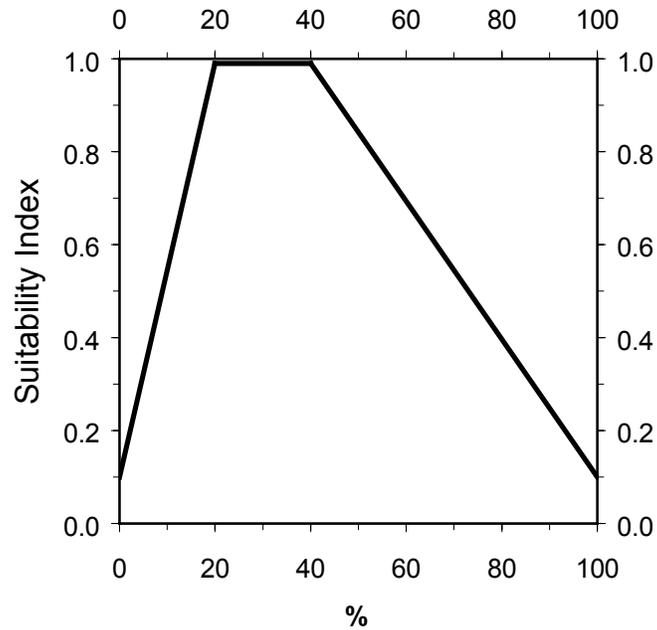
If $60 \leq \% \leq 80$, then $SI = 1.0$

If $\% > 80$, then $SI = (-0.045 * \%) + 4.6$

Barrier Island

Variable V_{2a} Percent of the total subaerial area that is classified as supratidal habitat.

Suitability Graph



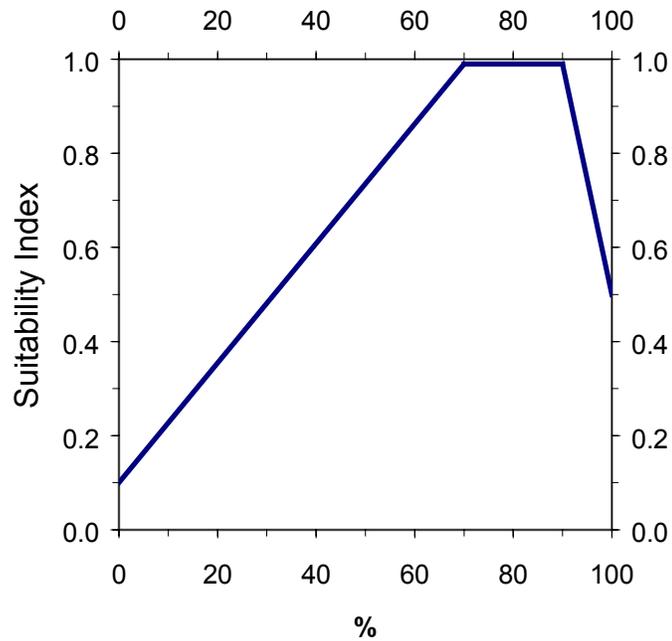
Line Formulas

- If $\% < 20$, then $SI = (0.045 * \%) + 0.1$
- If $20 \leq \% \leq 40$, then $SI = 1.0$
- If $\% > 40$, then $SI = (-0.015 * \%) + 1.6$

Barrier Island

Variable V_{2b} Percent of supratidal habitat that is vegetated.

Suitability Graph



Line Formulas

If $\% < 70$, then $SI = (0.013 * \%) + 0.1$

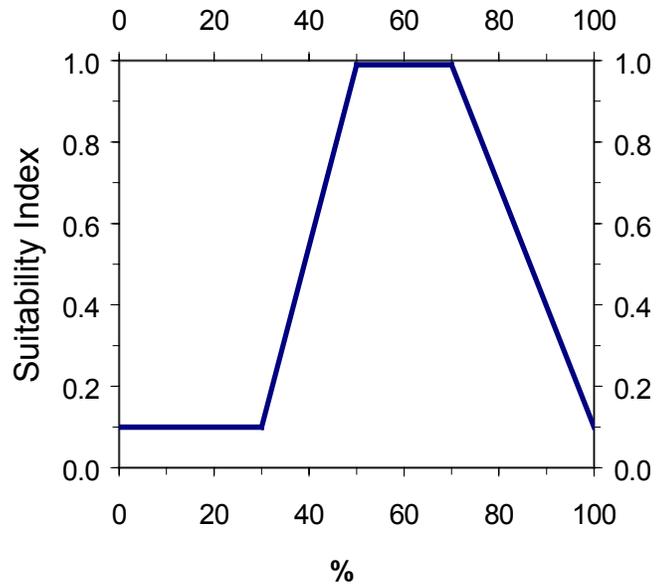
If $70 \leq \% \leq 90$, then $SI = 1.0$

If $\% > 90$, then $SI = (-0.05 * \%) + 5.5$

Barrier Island

Variable V_{3a} Percent of the total subaerial area that is classified as intertidal habitat.

Suitability Graph



Line Formulas

If $\% < 30$, then $SI = 0.1$

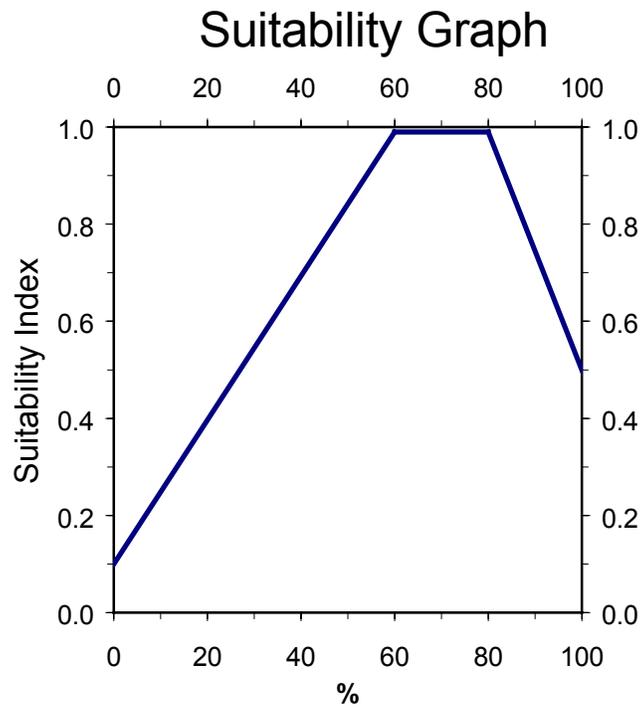
If $30 \leq \% < 50$, then $SI = (0.045 * \%) - 1.25$

If $50 \leq \% \leq 70$, then $SI = 1.0$

If $\% > 70$, then $SI = (-0.03 * \%) + 3.1$

Barrier Island

Variable V_{3b} Percent of intertidal habitat that is vegetated (bayside only).



Line Formulas

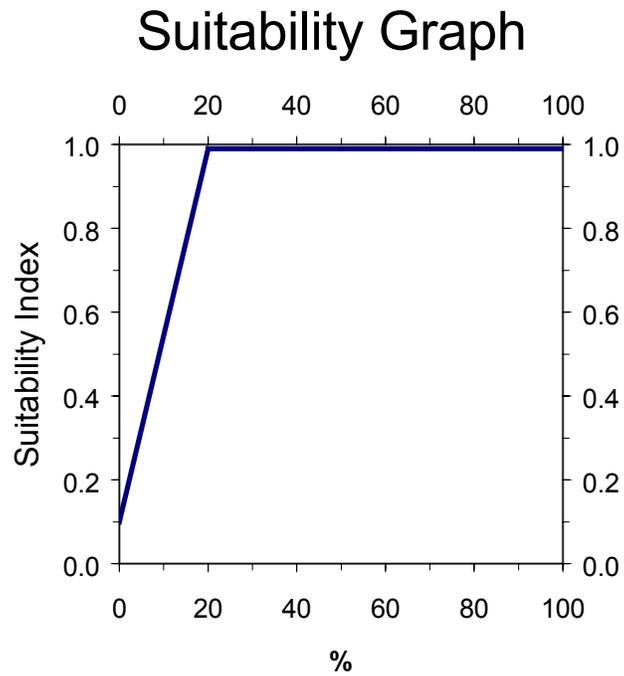
If $\% < 60$, then $SI = (0.015 * \%) + 0.1$

If $60 \leq \% \leq 80$, then $SI = 1.0$

If $\% > 80$, then $SI = (-0.025 * \%) + 3$

Barrier Island

Variable V₄ Percent subtidal habitat expressed as a percent relative to subaerial habitat.



Line Formulas

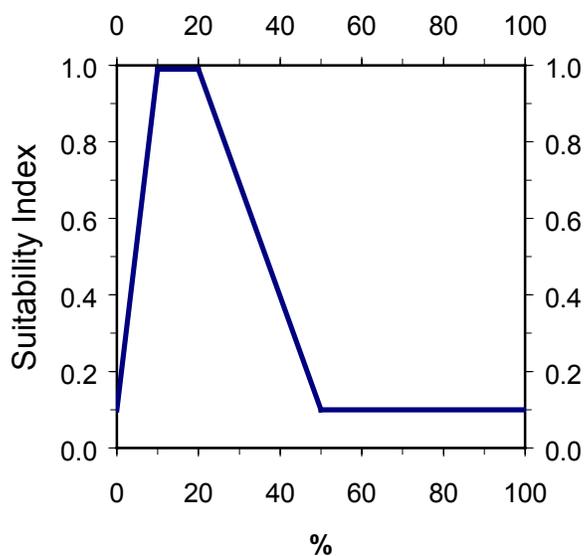
If $\% < 20$, then $SI = (0.045 * \%) + 0.1$

If $\% \geq 20$, then $SI = 1.0$

Barrier Island

Variable V₅ Percent vegetative cover by woody species.

Suitability Graph



Line Formulas

If $\% < 10$, then $SI = (0.09*\%) + 0.1$

If $10 \leq \% \leq 20$, then $SI = 1.0$

If $20 < \% \leq 50$, then $SI = (-0.03*\%) + 1.6$

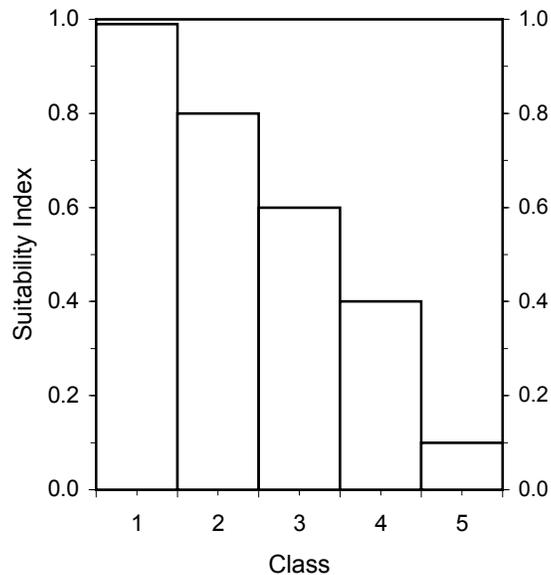
If $\% > 50$, then $SI = 0.1$

The suitability index is divided by two for islands with only one woody species.

Barrier Island

Variable V₆ Edge and Interspersion.

Suitability Graph



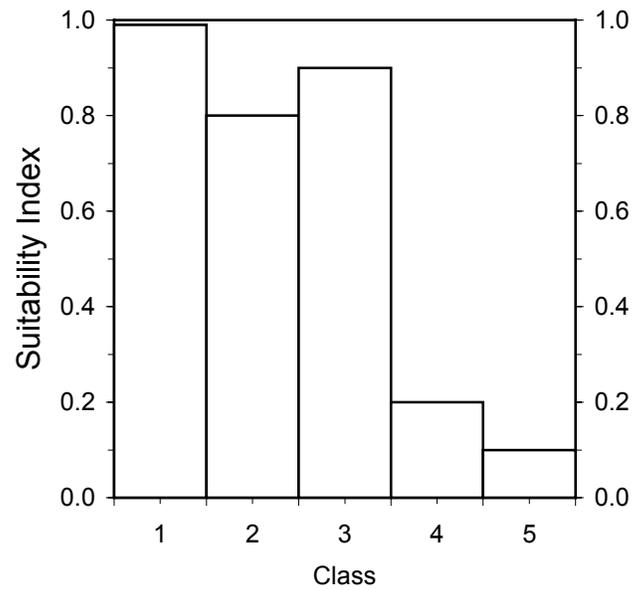
Instructions for Calculating SI for Variable V₆:

1. Refer to Appendix A for examples of the different interspersion classes.
2. Estimate the percent of project area in each class. If the entire project area is open water, assign interspersion Class 5.

Barrier Island

Variable V₇ Beach/surf zone features.

Suitability Graph



Class 1 = Natural Beach/Unconfined Disposal

Class 2 = Confined Disposal

Class 3 = Breakwaters

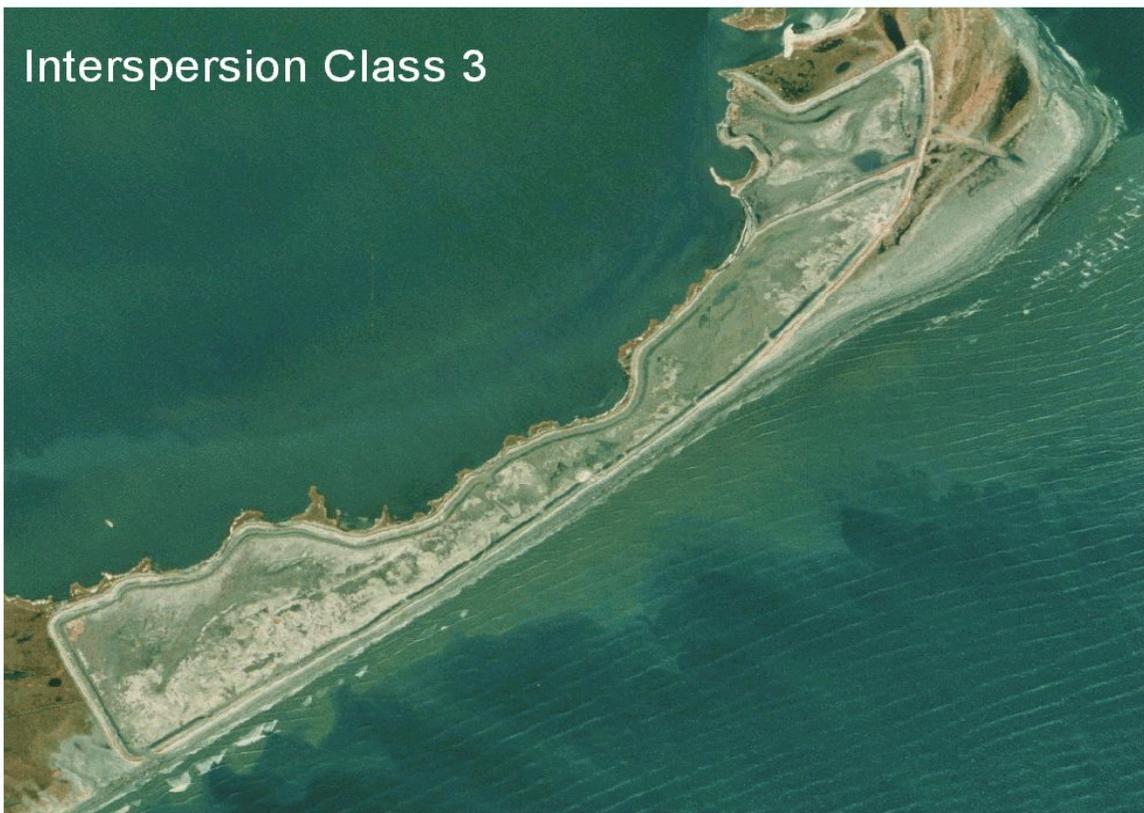
Class 4 = Rock on Beach

Class 5 = Seawall/No emergent habitat

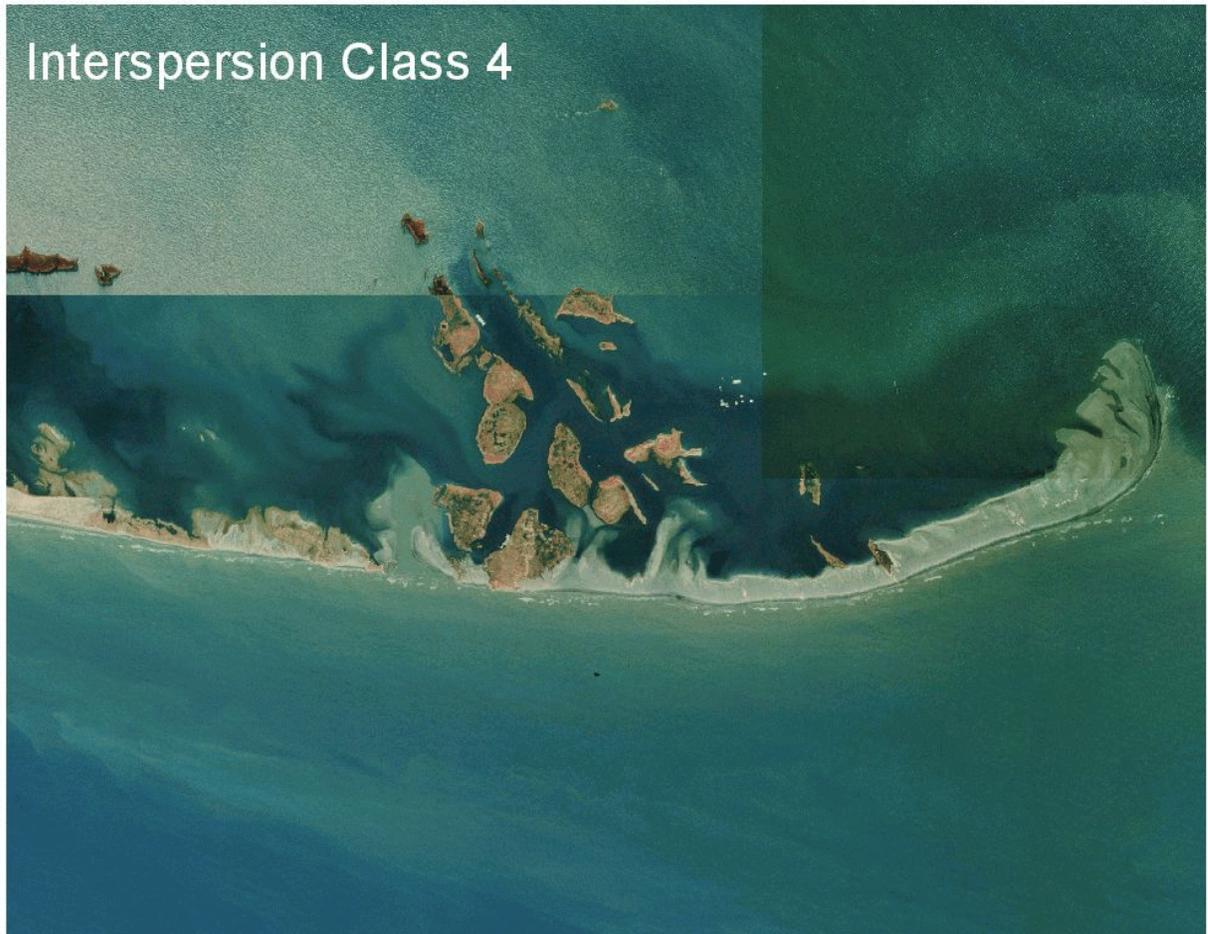
Attachment A – Marsh Edge and Interspersion Classes



Attachment A - Marsh Edge and Interspersion Classes



Attachment A - Marsh Edge and Interspersion Classes



III. Coastal Chenier/Ridge Community Model

INTRODUCTION

The habitat assessment model presented in this document is a modification of the U. S. Fish and Wildlife Service's Habitat Evaluation Procedures (HEP). It utilizes a set of variables considered important in determining the suitability of non-grazed barrier headland ridges, cheniers, and spoil areas in Louisiana that are, or are proposed to be, vegetated in primarily non-obligate wetland plant species, to provide the habitat necessary to support transient migratory landbirds in the spring and fall. The area of the state to which this model is applicable to includes the portions of Cameron, Vermilion, Iberia, St. Mary, Terrebonne, Lafourche, Jefferson, Plaquemines and St. Bernard Parishes south of the Intracoastal Waterway. The model attempts to assess the suitability of habitat for providing foraging and resting requirements to a diverse assemblage of migratory landbirds. This model has not been validated with field data.

VARIABLE SELECTION

Several existing Habitat Suitability Index (HSI) models were considered for use in determining migratory landbird stopover habitat quality, including the models for roseate spoonbill, great egret, brown thrasher, swamp rabbit, veery and yellow warbler. However, the emphasis for all these models was breeding habitat requirements. None addressed the set of variables that were determined to be most pertinent to assessment of stopover habitat quality, where a variety of species with differing foraging strategies occupy the habitat for a relatively brief time period. Selection of the variables used for this model was based upon a review of available literature, interviews with specialists who have studied various aspects of migratory landbird ecology in coastal stopover habitats, and the field knowledge of those involved with development of this model.

More than 80 species of neotropical migratory landbirds from at least eleven Families pass through Louisiana during the spring and fall (Sauer et al. 2000). At the peak of spring migration, it is estimated that as many as 50,000 birds per day per mile of coastline enter the state (Conner and Day 1987). During favorable weather conditions, the majority of these birds will bypass small wooded areas embedded in coastal marsh and land in extensive forested areas north of the marshes, but during thunderstorms or other unfavorable conditions, a large percentage of these individuals may stop in these small coastal wood patches (Gauthreaux 1971). Identifying the optimal stopover habitat characteristics for such a varied group of birds is challenging. Martin (1980) stated that migrants often select habitats en route that superficially resemble their breeding habitat. Moore et al. (1995) concluded that spring migrants on the northern Gulf of Mexico coast preferentially select structurally diverse stopover sites, consisting of forested areas with mixed shrub layers, and that maintenance of plant species and structural diversity should be a goal at migratory landbird stopover sites. Similarly, Martin (1980) found that habitat structure in shelterbelt "island" habitat in the Great Plains influences migrant diversity and abundance. Robinson and Holmes (1984) determined that the diversity of bird species in terrestrial habitats is correlated with factors associated with vegetation structure or composition, including diversity of foliage height, and stated that, in general, the number

of bird species increases with the addition of vertical vegetation layers. Based upon the findings above and upon prior field investigations, we proposed three habitat assessment variables: 1) percent tree canopy cover, 2) percent shrub/midstory canopy cover, and 3) the number of native woody species planted/present on the site. We also identified some tentative variables, including percent herbaceous ground cover, minimum patch size, average tree height, and proximity of the site to other forested patches.

We asked three specialists with expertise in the arena of migratory landbird habitat requirements to comment on our proposed habitat variables: William C. Hunter, U.S. Fish and Wildlife Service, Atlanta, GA; Mark Woodrey, U.S. Fish and Wildlife Service, Jackson, MS; and Wylie Barrow, U.S.G.S., National Wetlands Research Center, Lafayette, LA. Their comments have been incorporated into the model and referenced as personal communications.

All specialists queried concurred that structural and floristic diversity were key factors to consider. Additionally, they all stressed the importance of fresh water sources for spring trans-Gulf migrants. However, we did not develop a variable to capture this factor, as the model was being designed for created habitat in an area where fresh water input would probably be limited to precipitation. A variable to measure fresh water proximity should probably be created for assessing extant stopover sites. We decided not to use a variable for percent herbaceous ground cover because for the majority of birds that would be likely to use forested coastal areas, the amount of herbaceous ground cover would not be as critical a habitat need as would tree and shrub cover (Moore et al. 1995). Neotropical migratory landbirds dependent upon grasslands would not typically use forested cheniers, spoil banks, etc., instead gravitating towards marshes, pastures, and agricultural fields. No minimum patch size for sites was established, because while larger patches are accepted to be more valuable to birds than small patches, a small patch surrounded by non-forested habitat could be very important at times to migrants (Barrow, pers. comm.). The same basic rationale was used in determining that a variable to rank sites on the basis of their proximity to other forested patches was not practical. Sites adjacent to other forested sites are assumed to facilitate migration of forest birds by reducing the distance needed to travel through open and potentially inhospitable terrain, but an isolated woodland could be important during periods of inclement weather (Barrow, pers. comm.). Canopy height was ruled out as a variable because no data was discovered that addressed minimum canopy heights at stopover sites. The developers of this model assumed that percent canopy cover was a more pertinent variable to consider.

SUITABILITY INDEX GRAPH DEVELOPMENT

Variable V1 – Percent tree canopy cover. Neotropical migratory landbirds preferentially use stopover sites exhibiting high structural and floristic diversity (Moore et al. 1995). To achieve the desired vertical plant diversity (i.e., a mix of trees, tree saplings, shrubs, vines, and herbaceous plants), a moderately closed tree canopy would be preferred to over a totally closed canopy (Hunter, pers. comm.; Barrow, pers. comm.; Woodrey, pers. comm.). Tree canopy coverage ranging from 65 - 85% is assumed to provide optimal conditions to allow for establishment of midstory trees, shrubs, vines, and herbaceous plants, provided that the site is not grazed. Tree species that may occur at coastal stopover sites include sugarberry (*Celtis laevigata*), toothache tree (*Zanthoxylum clava-herculis*), live oak (*Quercus virginiana*), water oak (*Q. nigra*), honey locust (*Gleditsia triacanthos*), red

mulberry (*Morus rubra*), and green haw (*Crataegus viridis*) (Louisiana Natural Heritage Program 1988, Materne 2000, Gosselink et al. 1979, Thomas and Allen 1996, Thomas and Allen 1998).

Variable V2 – Percent shrub/midstory cover. Shrub-scrub habitats provide important foraging and resting areas for migrant landbirds (Moore et al. 1995). Shrub-scrub habitats are also presumed to be important to migratory passerine birds as refuges from raptor predators (Moore et al. 1990). For the purposes of this model, shrub/midstory means multi-stemmed shrubs, single-stemmed midstory trees, single-stemmed saplings of overstory tree species, and woody vines. Shrub/midstory canopy coverage ranging from 35 - 65% is assumed to represent optimal conditions at a forested site. Species of shrubs, small trees, and woody vines that may be found at stopover sites include Small's acacia (*Acacia minuta*), wax myrtle (*Morella cerifera*), dwarf palmetto (*Sabal minor*), yaupon holly (*Ilex vomitoria*), saltbush (*Baccharis halimifolia*), greenbriars (*Smilax spp.*), grapes (*Vitis spp.*), prickly pear cactus (*Opuntia spp.*), Virginia creeper (*Parthenocissus quinquefolia*), pepper vine (*Ampelopsis arborea*), blackberries (*Rubus spp.*), rattlebox (*Sesbania drummondii*), marshelder (*Iva frutescens*), poison ivy (*Toxicodendron radicans*), Carolina wolf-berry (*Lycium carolinianum*), marine vine (*Cissus incisa*) and elderberry (*Sambucus canadensis*) (Louisiana Natural Heritage Program 1988, Materne 2000, Gosselink et al. 1979, Thomas and Allen 1996, Thomas and Allen 1998).

Variable V3 – Native woody species diversity. A wide variety of fruits, flowers, nectars, and animals, primarily invertebrates, are consumed by migrant landbirds (Moore et al. 1995, Fontenot 1999, Barrow, pers. comm.). Robinson and Holmes (1984) concluded that vegetation provides birds with foraging opportunities and constraints depending upon the structure of individual plants, aggregations of plants, and the arthropods that these plants host. The resulting foraging conditions define the diversity of bird species in the habitat. While some exotic plant species provide foraging opportunities to migrant landbirds, others are of limited value to spring and fall migrant birds (Barrow and Renne, 2001, Barrow, pers. comm.). It is assumed that a variety of native shrubs, midstory trees, woody vines and overstory trees will provide sufficiently diverse foraging and resting habitat to enable spring and fall transient birds to continue their migration. Woody plant species composition and diversity in stopover habitat is influenced by elevation, soil type, and salinity levels (Materne 2000, Louisiana Natural Heritage Program 1988), and the capacity of sites to support certain species will depend upon these and other factors. Based upon a review of available written information and upon the field knowledge of those involved in development of this model, and upon the range of conditions likely to be encountered in stopover habitat in the area the model addresses, presence of ≥ 10 species of native trees, shrubs, and woody vines is assumed to represent optimal conditions. It is also assumed that the parameters defining optimal conditions for variables V1 and V2 will moderate the potential for variable V3 to exert a false reading of habitat value for migrant landbirds, should the diversity of plant species be confined only to trees, or to shrubs, or to woody vines.

HABITAT SUITABILITY INDEX FORMULA

The final step in model development was to construct a mathematical formula that combines all Suitability Indices into a single Habitat Suitability Index (HSI) value. Because the Suitability Indices range from 0.1 to 1.0, the HSI also ranges from 0.1 to 1.0, and is a numerical representation of the overall or "composite" habitat quality of the area

being evaluated. Within the HSI formula, any Suitability Index can be weighted by various means to increase the power or "importance" of that variable relative to the other variables in determining the HSI. For this model, it was assumed that the variables are of equal weight in determining the habitat quality of a coastal chenier/ridge.

To combine the variables into an HSI formula, a geometric mean was chosen, as opposed to an arithmetic mean, to convey the weak compensatory relationship between the three variables. An arithmetic mean is often used when it is assumed that the model variables have a strong compensatory relationship (i.e., a high value for one variable can compensate for the low value of another variable). The geometric mean is used to discourage a variable with a marginal or low suitability from being offset by the high suitability of the other variables (U.S. Fish and Wildlife Service 1981). It was assumed that the three variables in this model do not have a strong compensatory relationship.

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

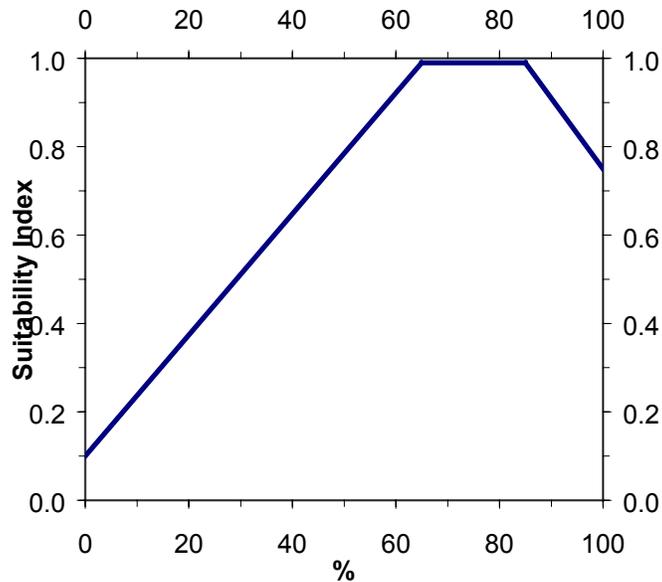
BENEFIT ASSESSMENT

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

Coastal Chenier/Ridge

Variable V₁ Percent Tree Canopy Cover

Suitability Graph



Line Formulas

If $\% < 65$, then $SI = (0.014 * \%) + 0.1$

If $65 \leq \% \leq 85$, then $SI = 1.0$

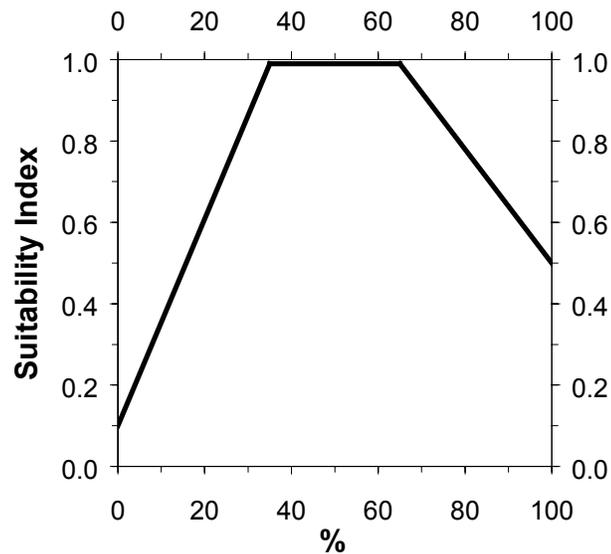
If $\% > 85$, then $SI = (-0.017 * \%) + 2.445$

Suitability index graph relationships for Variable V1 were determined by: 1) reviewing available literature, 2) interviewing specialists who have studied various aspects of migratory landbird ecology in coastal stopover habitats, and 3) field knowledge of those involved with development of this model.

Coastal Chenier/Ridge

Variable V₂ Percent Shrub/Midstory Cover

Suitability Graph



Line Formulas

If $\% < 35$, then $SI = (0.026 * \%) + 0.1$

If $35 \leq \% \leq 65$, then $SI = 1.0$

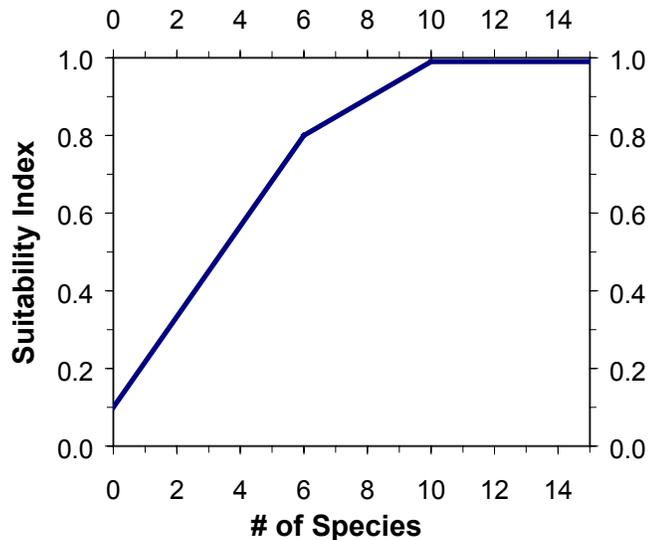
If $\% > 65$, then $SI = (-0.014 * \%) + 1.9$

Suitability index graph relationships for Variable V₂ were determined by: 1) reviewing available literature, 2) interviewing specialists who have studied various aspects of migratory landbird ecology in coastal stopover habitats, and 3) field knowledge of those involved with development of this model.

Coastal Chenier/Ridge

Variable V₃ Native Woody Species Diversity

Suitability Graph



Line Formulas

If $\% < 6$, then $SI = (0.117 * \%) + 0.1$

If $6 \leq \% < 10$, then $SI = (0.05 * \%) + 0.5$

If $\% \geq 10$, then $SI = 1.0$

Suitability index graph relationships for Variable V₃ were determined by: 1) reviewing available literature, 2) interviewing specialists who have studied various aspects of migratory landbird ecology in coastal stopover habitats, and 3) field knowledge of those involved with development of this model.

IV. Emergent Marsh Community Models

INTRODUCTION

The emergent marsh models were initially developed after passage of the CWPPRA during 1990 and were first used for evaluating candidate projects in 1991. The following sections describe the process and assumptions used in the initial development of those models. Since their initial development, these models have undergone several revisions including the omission of certain variables, modifications to the Suitability Index graphs, and modifications to the Habitat Suitability Index formulas.

These models were developed to determine the suitability of emergent marsh and open water habitats in the Louisiana coastal zone. These models were designed to function at a community level and therefore attempt to define an optimal combination of habitat conditions for all fish and wildlife species utilizing coastal marsh ecosystems.

VARIABLE SELECTION

Variables for the emergent marsh models were selected through a two-part procedure. The first involved a listing of environmental variables thought to be important in characterizing fish and wildlife habitat in coastal marsh ecosystems. The second part of the selection procedure involved reviewing variables used in species-specific HSI models published by the U.S. Fish and Wildlife Service. Review was limited to HSI models for those fish and wildlife species known to inhabit Louisiana coastal wetlands, and included models for 10 estuarine fish and shellfish, 4 freshwater fish, 12 birds, 3 reptiles and amphibians, and 3 mammals (Table 1). The number of models included from each species group was dictated by model availability.

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

Table B-1. HSI Models Consulted for Variables for Possible Use in the Emergent Marsh Models

<u>Estuarine Fish and Shellfish</u>	<u>Birds</u>	<u>Mammals</u>
pink shrimp	white-fronted goose	mink
white shrimp	clapper rail	muskrat
brown shrimp	great egret	swamp rabbit
spotted seatrout	northern pintail	
Gulf flounder	mottled duck	<u>Freshwater Fish</u>
southern flounder	American coot	channel catfish
Gulf menhaden	marsh wren	largemouth bass
juvenile spot	snow goose	red ear sunfish
juvenile Atlantic croaker	great blue heron	bluegill
red drum	laughing gull	
	red-winged blackbird	
<u>Reptiles and Amphibians</u>	roseate spoonbill	
bullfrog		
slider turtle		
American alligator		

Variables selected from the HSI models were then compared to those identified in the first part of the selection procedure to arrive at a final list of variables to describe wetland habitat quality. That list includes six variables for each marsh type; 1) percent of the wetland covered by emergent vegetation, 2) percent of the open water covered by aquatic vegetation, 3) marsh edge and interspersions, 4) percent of the open water area ≤ 1.5 feet deep, 5) salinity, 6) aquatic organism access.

SUITABILITY INDEX GRAPH DEVELOPMENT

A variety of resources was utilized to construct each SI graph, including the HSI models from which the final list of variables was partially derived, consultation with other professionals and researchers outside the EnvWG, published and unpublished data and studies, and personal knowledge of EnvWG members. An important "non-biological" constraint on SI graph development was the need to insure that graph relationships were not counter to the purpose of the CWPPRA, that is, the long term creation, restoration, protection, or enhancement of coastal vegetated wetlands. That constraint was most operative in defining SI graphs for Variable V_1 (percent emergent marsh). The process of SI graph development was one of constant evolution, feedback, and refinement; the form of each SI graph was decided upon through consensus among EnvWG members.

The Suitability Index graphs were developed according to the following assumptions.

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

Optimal vegetative coverage is assumed to occur at 100 percent (SI=1.0). That assumption is dictated primarily by the constraint of not having graph relationships conflict with the CWPPRA's purpose of long term creation, restoration, protection, or enhancement of vegetated wetlands. The EnvWG had originally developed a strictly biologically-based graph defining optimal habitat conditions at marsh cover values between 60 and 80 percent, and sub-optimal habitat conditions outside that range. However, application of that graph, in combination with the time analysis used in the evaluation process (i.e., 20-year project life), often reduced project benefits or generated a net loss of habitat quality through time with the project. Those situations arose primarily when: existing (baseline) emergent vegetation cover exceeded the optimum (> 80 percent); the project was predicted to maintain baseline cover values; and without the project the marsh was predicted to degrade, with a concurrent decline in percent emergent vegetation into the optimal range (60-80 percent). The time factor aggravated the situation when the without-project degradation was not rapid enough to reduce marsh cover values significantly below the optimal range, or below the baseline SI, within the 20-year evaluation period. In those cases, the analysis would show net negative benefits for the project, and positive benefits for letting the marsh degrade rather than maintaining the existing marsh. Coupling that situation with the presumption that marsh conditions are not static, and that Louisiana will continue to lose coastal emergent marsh; and taking into account the purpose of the CWPPRA, the EnvWG decided that, all other factors being equal, the models should favor projects that maximize emergent marsh creation, maintenance, and protection. Therefore, the EnvWG agreed to deviate from a strictly biologically-based habitat suitability index graph for V_1 and established optimal habitat conditions at 100 percent marsh cover.

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

Brackish marshes also have the potential to support aquatic plants that serve as important sources of food and cover for several species of fish and wildlife. Although brackish marshes generally do not support the amounts and kinds of aquatic plants that occur in fresh/intermediate marshes, certain species, such as widgeon-grass, and coontail and milfoil in lower salinity brackish marshes, can occur abundantly under certain conditions. Those species, particularly widgeon-grass, provide important food and cover for many species of fish and wildlife. Therefore, the V_2 Suitability Index graph in the brackish marsh model is identical to that in the fresh/intermediate model.

Some low-salinity saline marshes may contain beds of widgeon-grass and open water areas behind some barrier islands may contain dense stands of seagrasses (e.g., *Halodule wrightii* and *Thalassia testudinum*). However, saline marshes typically do not contain an abundance of aquatic vegetation as often found in fresh/intermediate and brackish marshes. Open water areas in saline marshes typically contain sparse aquatic vegetation and are primarily important as nursery areas for marine organisms. Therefore, in order to reflect the importance of those open water areas to marine organisms, a saline marsh lacking aquatic vegetation is assigned a SI=0.3. It is assumed that optimal coverage of aquatic plants occurs at 100 percent.

Variable V₃ - Marsh edge and interspersion. This variable takes into account the relative juxtaposition of marsh and open water for a given marsh:open water ratio, and is measured by comparing the project area to sample illustrations (Appendix A) depicting different degrees of interspersion. Interspersion is assumed to be especially important when considering the value of an area as foraging and nursery habitat for freshwater and estuarine fish and shellfish; the marsh/open water interface represents an ecotone where prey species often concentrate, and where post-larval and juvenile organisms can find cover. Isolated marsh ponds are often more productive in terms of aquatic vegetation than are larger ponds due to decreased turbidity, and, thus, may provide more suitable waterfowl habitat. However, interspersion can be indicative of marsh degradation, a factor taken into consideration in assigning suitability indices to the various interspersion classes.

A relatively high degree of interspersion in the form of stream courses and tidal channels (Interspersion Class 1) is assumed to be optimal (SI=1.0); streams and channels offer interspersion, yet are not indicative of active marsh deterioration. Areas exhibiting a high degree of marsh cover are also ranked as optimal, even though interspersion may be low, to avoid conflicts with the premises underlying the SI graph for variable V₁. Without such an allowance, areas of relatively healthy, solid marsh, or projects designed to create marsh, would be penalized with respect to interspersion. Numerous small marsh ponds (Interspersion Class 2) offer a high degree of interspersion, but are also usually indicative of the beginnings of marsh break-up and degradation, and are therefore assigned a more moderate SI of 0.6. Large open water areas (Interspersion Classes 3 and 4) offer lower interspersion values and usually indicate advanced stages of marsh loss, and are thus assigned SI's of 0.4 and 0.2, respectively. The lowest expression of interspersion, Class 5 (i.e., no emergent marsh at all within the project area), is assumed to be least desirable and is assigned an SI=0.1.

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

Shallow water areas in brackish marsh habitat are also important. However, brackish marsh generally exhibits deeper open water areas than fresh marsh due to tidal scouring. Therefore, the SI graph is constructed so that lower percentages of shallow water receive higher SI values relative to fresh/intermediate marsh. Optimal open water

conditions in a brackish marsh are assumed to occur when 70 to 80 percent of the open water area is less than or equal to 1.5 feet deep.

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

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

For the brackish and saline marsh models, average annual salinity is used as the salinity parameter. The SI graph for brackish marsh is constructed to represent optimal conditions when salinities are between 0 ppt and 10 ppt. The EnvWG acknowledges that average annual salinities below 5 ppt will effectively define a marsh as fresh or intermediate, not brackish. However, the SI graph makes allowances for lower salinities to account for occasions when there is a trend of decreasing salinities through time toward a more intermediate condition. Implicit in keeping the graph at optimum for salinities less than 5 ppt is the assumption that lower salinities are not detrimental to a brackish marsh. However, average annual salinities greater than 10 ppt are assumed to be progressively more harmful to brackish marsh vegetation. Average annual salinities greater than 16 ppt are assumed to be representative of those found in a saline marsh, and thus are not considered in the brackish marsh model.

The SI graph for the saline marsh model is constructed to represent optimal salinity conditions at between 0 ppt and 21 ppt. The EnvWG acknowledges that average annual salinities below 10 ppt will effectively define a marsh as brackish, not saline. However, the suitability index graph makes allowances for lower salinities to account for occasions when there is a trend of decreasing salinities through time toward a more brackish condition. Implicit in keeping the graph at optimum for salinities less than 10 ppt is the assumption that lower salinities are not detrimental to a saline marsh. Average annual salinities greater than 21 ppt are assumed to be slightly stressful to saline marsh vegetation.

Variable V₆ - Aquatic organism access. Access by aquatic organisms, particularly estuarine-dependent fishes and shellfishes, is considered to be a critical component in assessing the quality of a given marsh system. Additionally, a marsh with a relatively high degree of access by default also exhibits a relatively high degree of hydrologic connectivity with adjacent systems, and therefore may be considered to contribute more to nutrient exchange than would a marsh exhibiting a lesser degree of access. The SI for V₆ is determined by calculating an "access value" based on the interaction between the percentage of the project area wetlands considered accessible by aquatic organisms during normal tidal fluctuations, and the type of man-made structures (if any) across identified points of ingress/egress (bayous, canals, etc.). Standardized procedures for calculating the

Access Value have been established (Appendix B). It should be noted that access ratings for man-made structures were determined by consensus among EnvWG members and that scientific research has not been conducted to determine the actual access value for each of those structures. Optimal conditions are assumed to exist when all of the study area is accessible and the access points are entirely open and unobstructed.

A fresh marsh with no access is assigned an SI=0.3, reflecting the assumption that, while fresh marshes are important to some species of estuarine-dependent fishes and shellfish, such a marsh lacking access continues to provide benefits to a wide variety of other wildlife and fish species, and is not without habitat value. An intermediate marsh with no access is assigned an SI=0.2, reflecting that intermediate marshes are somewhat more important to estuarine-dependent organisms than fresh marshes. The general rationale and procedure behind the V₆ Suitability Index graph for the brackish marsh model is identical to that established for the fresh/intermediate model. However, brackish marshes are assumed to be more important as habitat for estuarine-dependent fish and shellfish than fresh/intermediate marshes. Therefore, a brackish marsh providing no access is assigned an SI of 0.1. The Suitability Index graph for aquatic organism access in the saline marsh model is the same as that in the brackish marsh model.

HABITAT SUITABILITY INDEX FORMULAS

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

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

For several years, 1991 through 1996, the EnvWG utilized one HSI formula specific to each marsh type. However, it was noted that variables V₂ and V₄, which characterize open water areas only, often resulted in an “artificially inflated” HSI when those variable values were optimal (i.e., SI = 1.0) and open water comprised a very small portion of the project area. For example, Project Area A contains 90 percent emergent marsh and 10 percent open water. Project Area B contains 10 percent emergent marsh and 90 percent open water. Assume the open water in each project area is completely covered by submerged aquatic vegetation and is entirely less than 1.5 feet in depth. Under those conditions, the Suitability Index values for V₂ and V₄ would equal 1.0 for both project areas even though open water only accounts for 10 percent of Project Area A. The EnvWG has commonly referred to this as a “scaling” problem; the Suitability Index values

for V_2 and V_4 are not “scaled” in respect to the proportion of the project area they describe. This allows those variables to contribute disproportionately to the HSI in instances when open water constitutes a small portion of the project area.

The EnvWG acknowledged that the scaling problem presented a flaw in the WVA methodology resulting in unrealistic HSI values for certain project areas and eventually resulting in inflated wetland benefits for those projects. During 1996 and 1997, Dr. Gary Shaffer assisted the EnvWG in developing potential solutions to the scaling problem. After several unsuccessful attempts to develop a single HSI formula for each marsh type which scaled the Suitability Index values for V_2 and V_4 based on the ratio of emergent marsh to open water, the EnvWG decided to develop a “split” model for each marsh type. The split model utilizes two HSI formulas for each marsh type; one HSI formula characterizes the emergent habitat within the project area and another HSI formula characterizes the open water habitat. The HSI formula for the emergent habitat contains only those variables important in assessing habitat quality for emergent marsh (i.e., V_1 , V_3 , V_5 , and V_6). Likewise, the open water HSI formula contains only those variables important in characterizing the open water habitat (i.e., V_2 , V_3 , V_4 , V_5 , and V_6). Individual HSI formulas were developed for emergent marsh and open water habitats for each marsh type.

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

BENEFIT ASSESSMENT

As previously discussed, the marsh models are split into emergent marsh and open water components and an HSI is determined for both. Subsequently, net AAHUs are also determined for the emergent marsh and open water habitats within the project area. Net AAHUs for the emergent marsh and open water habitat components must be combined to determine total net benefits for the project.

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

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

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

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

Wetland Value Assessment Community Model

Fresh/Intermediate Marsh

Vegetation:

Variable V₁ Percent of wetland area covered by emergent vegetation.

Variable V₂ Percent of open water area covered by aquatic vegetation.

Interspersion:

Variable V₃ Marsh edge and interspersion.

Water Depth:

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

Water Quality:

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

Aquatic Organism Access:

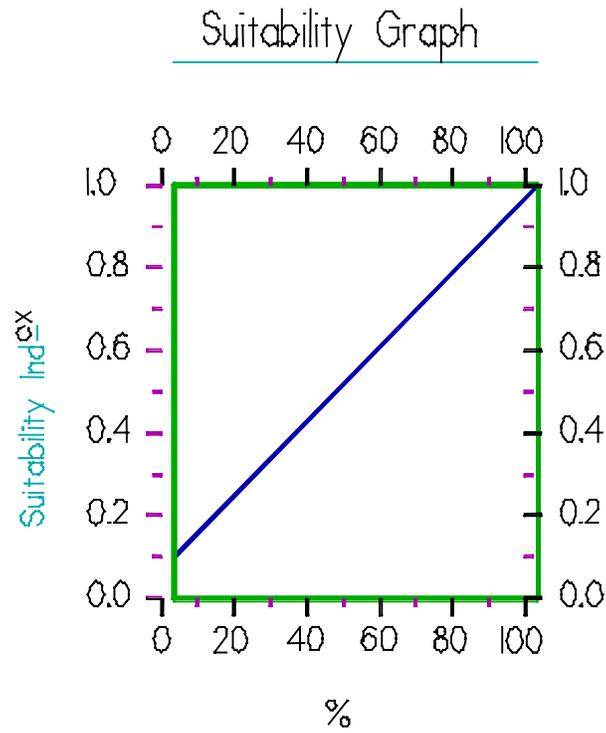
Variable V₆ Aquatic organism access.

HSI Calculations:

Fresh / Intermediate H S I	
Emergent Marsh H S I =	$\frac{(3.5 \times (SIV_1^5 \times SIV_6^1)^{(1/6)}) + (SIV_3 + SIV_5) / 2}{4.5}$
Open Water H S I =	$\frac{(3.5 \times (SIV_2^3 \times SIV_6^1)^{(1/4)}) + (SIV_3 + SIV_4 + SIV_5) / 3}{4.5}$

Fresh/Intermediate Marsh

Variable V₁ Percent of wetland area covered by emergent vegetation.

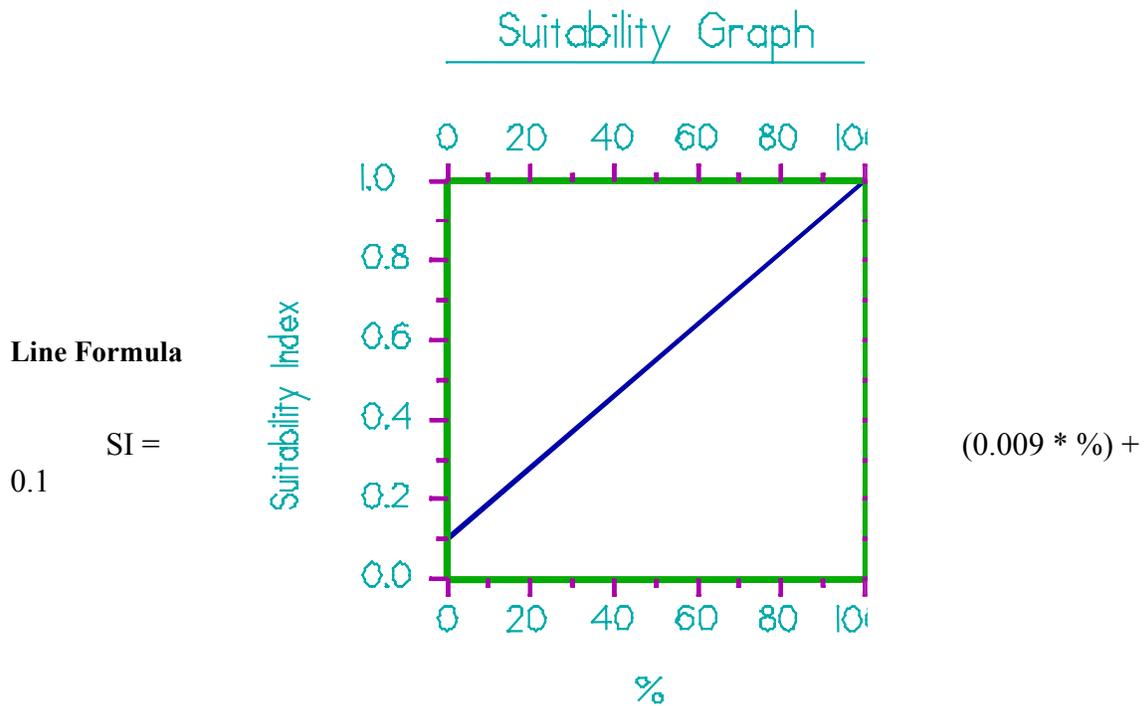


Line Formula

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

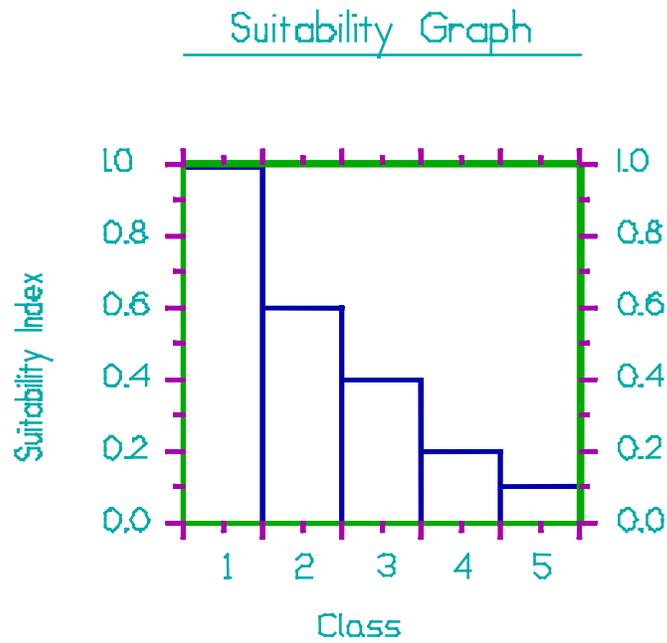
Fresh/Intermediate Marsh

Variable V₂ Percent of open water area covered by aquatic vegetation.



Fresh/Intermediate Marsh

Variable V₃ Marsh edge and interspersion.

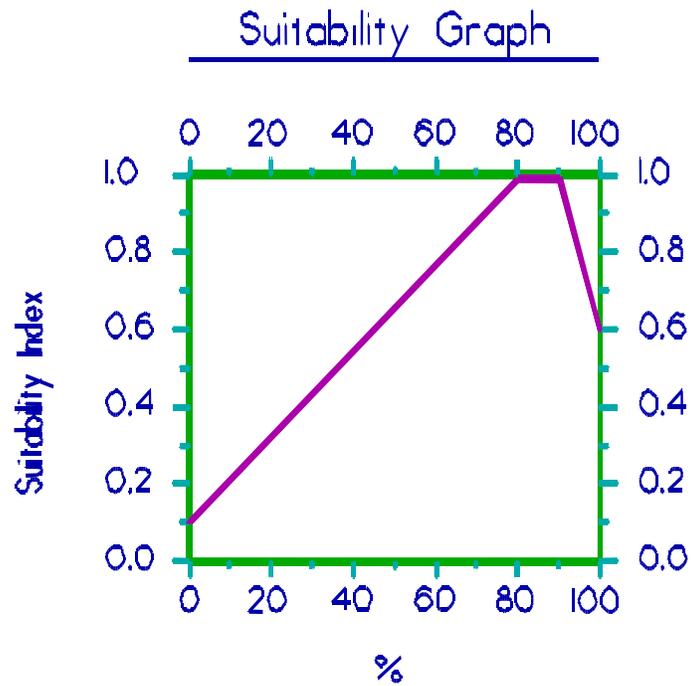


Instructions for Calculating the SI for Variable V₃:

1. Refer to Appendix A for examples of the different interspersion classes.
2. Estimate percent of project area in each class. If the entire project area is solid marsh, assign interspersion Class 1. Conversely, if the entire project area is open water, assign interspersion Class 5.

Fresh/Intermediate Marsh

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



Line Formulas

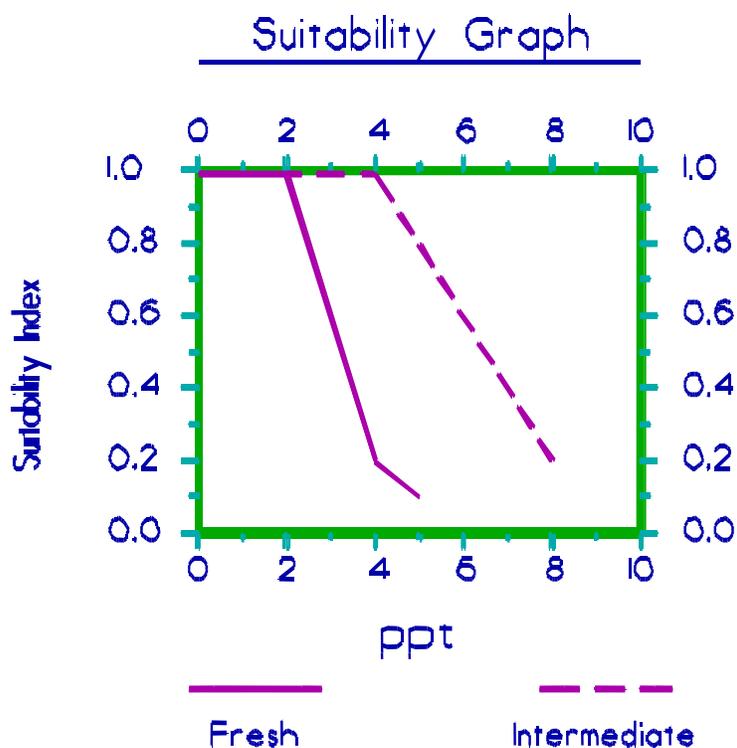
If $0 \leq \% < 80$, then $SI = (0.01125 * \%) + 0.1$

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

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

Fresh/Intermediate Marsh

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



Line Formulas

Fresh Marsh:

- If $0 \leq \text{ppt} \leq 2$, then $SI = 1.0$
- If $2 < \text{ppt} \leq 4$, then $SI = (-0.4 * \text{ppt}) + 1.8$
- If $4 < \text{ppt} \leq 5$, then $SI = (-0.1 * \text{ppt}) + 0.6$

Intermediate Marsh:

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

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

Wetland Value Assessment Community Model

Brackish Marsh

Vegetation:

Variable V₁ Percent of wetland area covered by emergent vegetation.

Variable V₂ Percent of open water area covered by aquatic vegetation.

Interspersion:

Variable V₃ Marsh edge and interspersion.

Water Depth:

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

Water Quality:

Variable V₅ Average annual salinity.

Aquatic Organism Access:

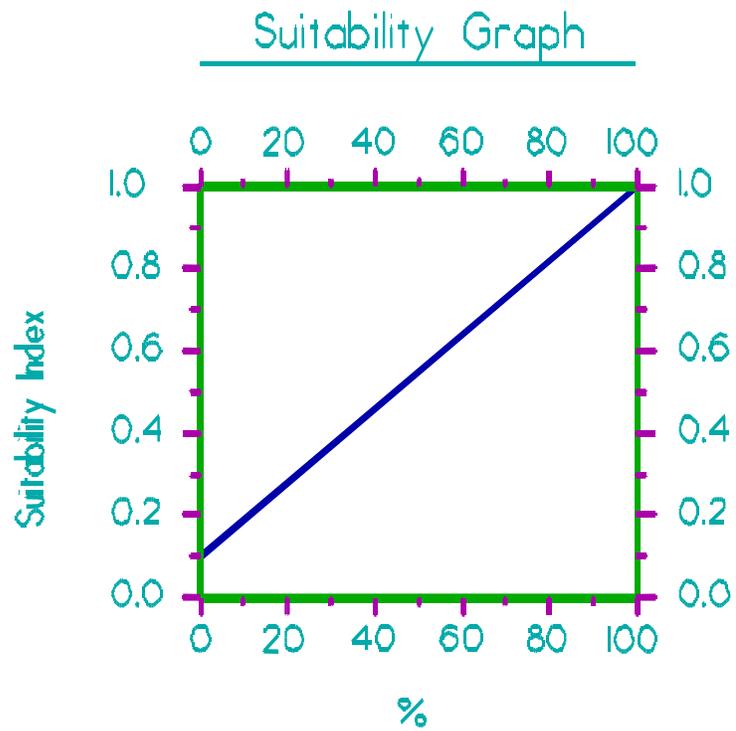
Variable V₆ Aquatic organism access.

HSI Calculations:

Brackish Marsh H S I	
Emergent Marsh H S I =	$\frac{(3.5 \times (SIV_1^5 \times SIV_6^{1.5})^{(1/6.5)}) + (SIV_3 + SIV_5) / 2}{4.5}$
Open Water H S I =	$\frac{(3.5 \times (SIV_2^3 \times SIV_6^2)^{(1/5)}) + (SIV_3 + SIV_4 + SIV_5) / 3}{4.5}$

Brackish Marsh

Variable V₁ Percent of wetland area covered by emergent vegetation.

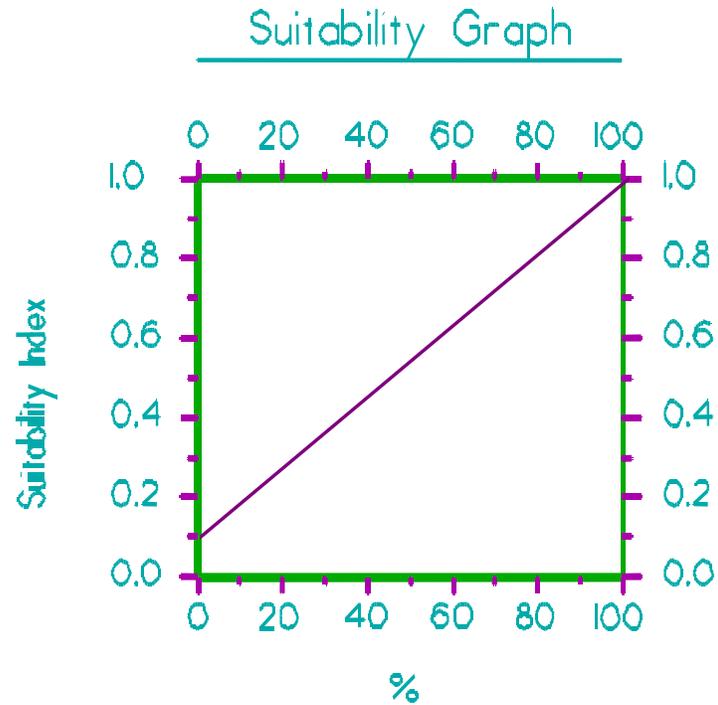


Line Formula

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

Brackish Marsh

Variable V₂ Percent of open water area covered by aquatic vegetation.

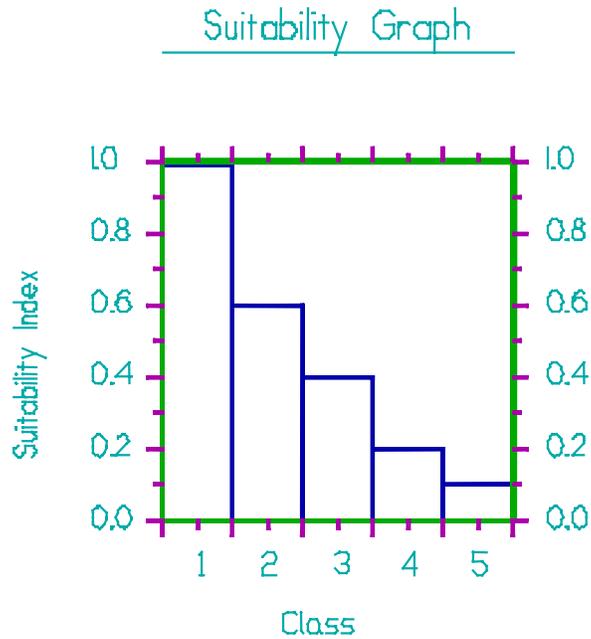


Line Formula

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

Brackish Marsh

Variable V₃ Marsh edge and interspersion.

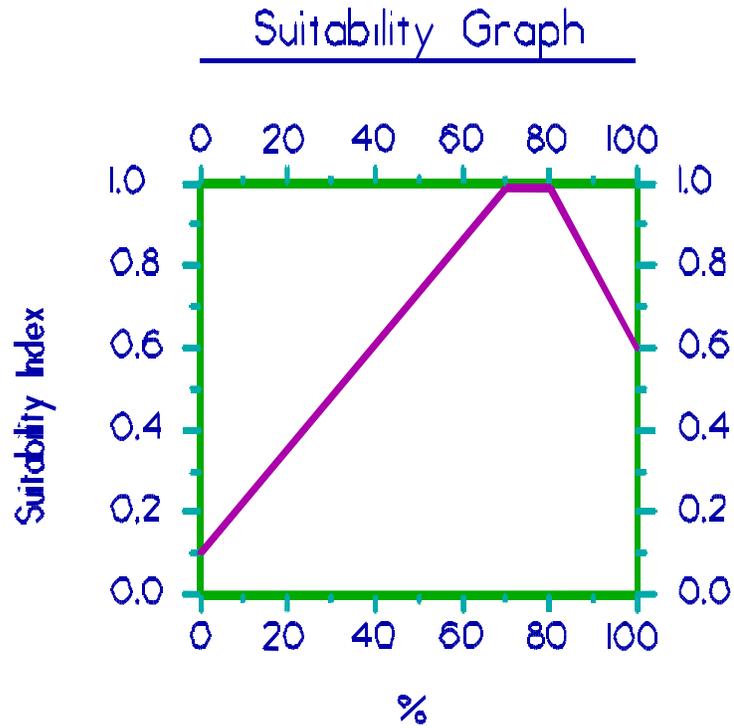


Instructions for Calculating SI for Variable V₃:

1. Refer to Appendix A for examples of the different interspersion classes.
2. Estimate the percent of project area in each class. If the entire project area is solid marsh, assign interspersion Class 1. Conversely, if the entire project area is open water, assign interspersion Class 5.

Brackish Marsh

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



Line Formulas

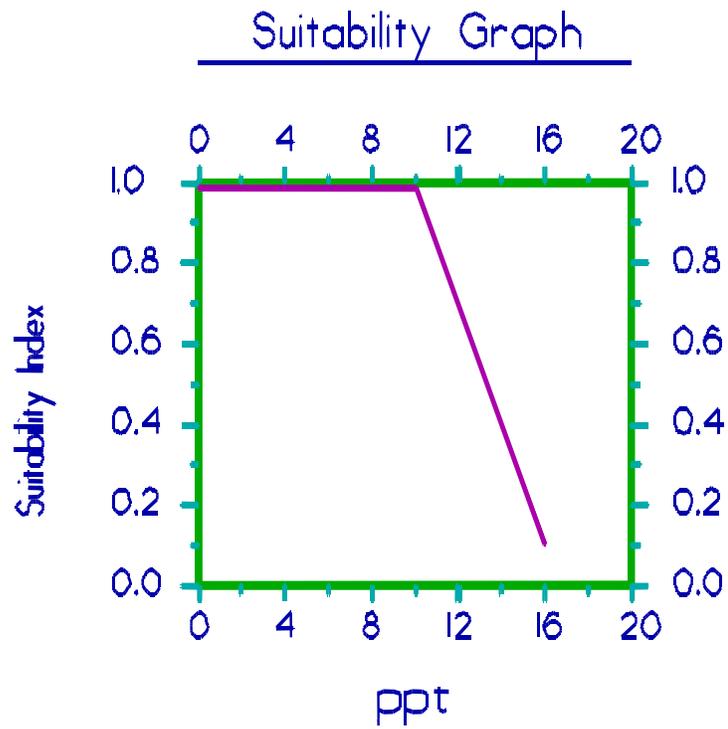
If $0 \leq \% < 70$, then $SI = (0.01286 * \%) + 0.1$

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

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

Brackish Marsh

Variable V_5 Average annual salinity.



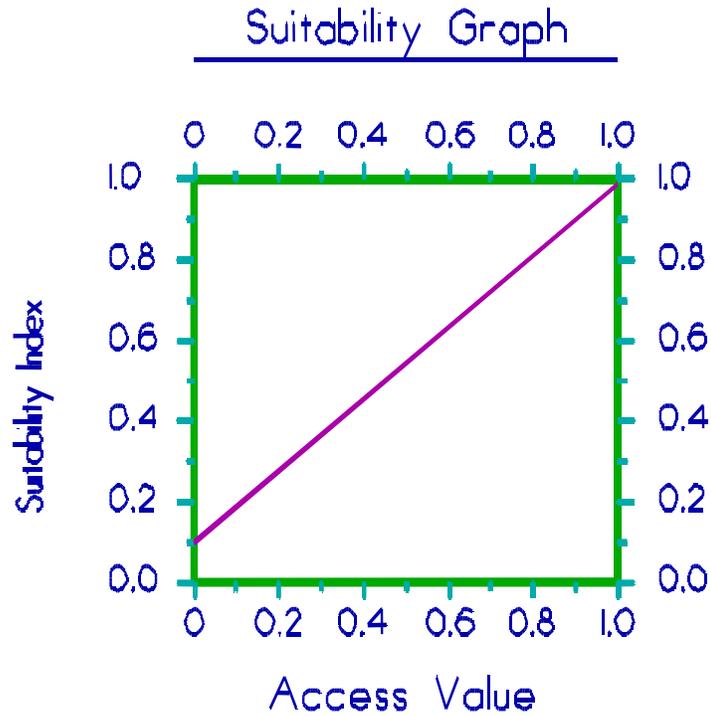
Line Formulas

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

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

Brackish Marsh

Variable V₆ Aquatic organism access.



Line Formula

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

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

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

Wetland Value Assessment Community Model

Saline Marsh

Vegetation:

Variable V₁ Percent of wetland area covered by emergent vegetation.

Variable V₂ Percent of open water area covered by aquatic vegetation.

Interspersion:

Variable V₃ Marsh edge and interspersion.

Water Depth:

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

Water Quality:

Variable V₅ Average annual salinity.

Aquatic Organism Access:

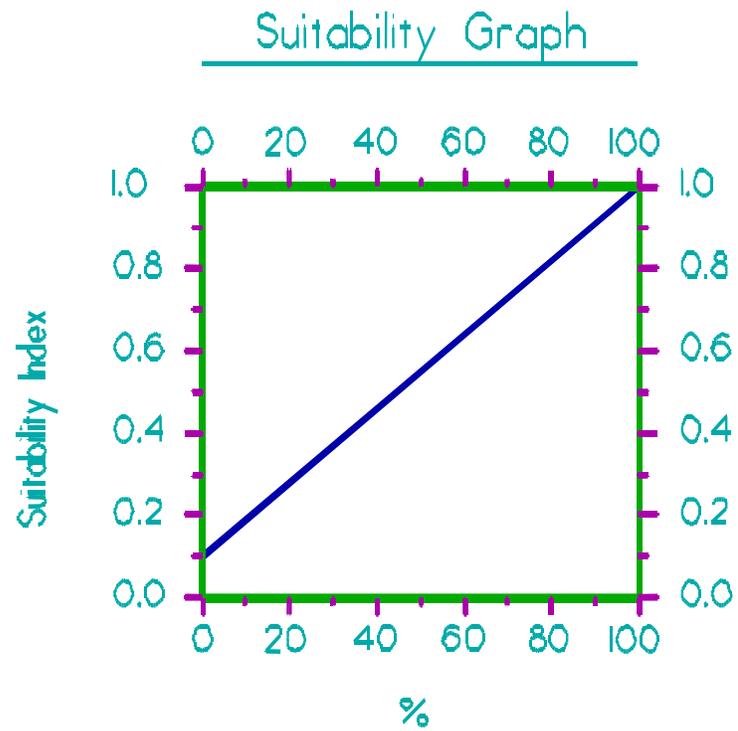
Variable V₆ Aquatic organism access.

HSI Calculation:

Saline Marsh H S I	
Emergent Marsh H S I =	$\frac{(3.5 \times (\text{SIV}_1^3 \times \text{SIV}_6^1)^{(1/4)}) + (\text{SIV}_3 + \text{SIV}_5) / 2}{4.5}$
Open Water H S I =	$\frac{(3.5 \times (\text{SIV}_2^1 \times \text{SIV}_6^{2.5})^{(1/3.5)}) + (\text{SIV}_3 + \text{SIV}_4 + \text{SIV}_5) / 3}{4.5}$

Saline Marsh

Variable V₁ Percent of wetland area covered by emergent vegetation.

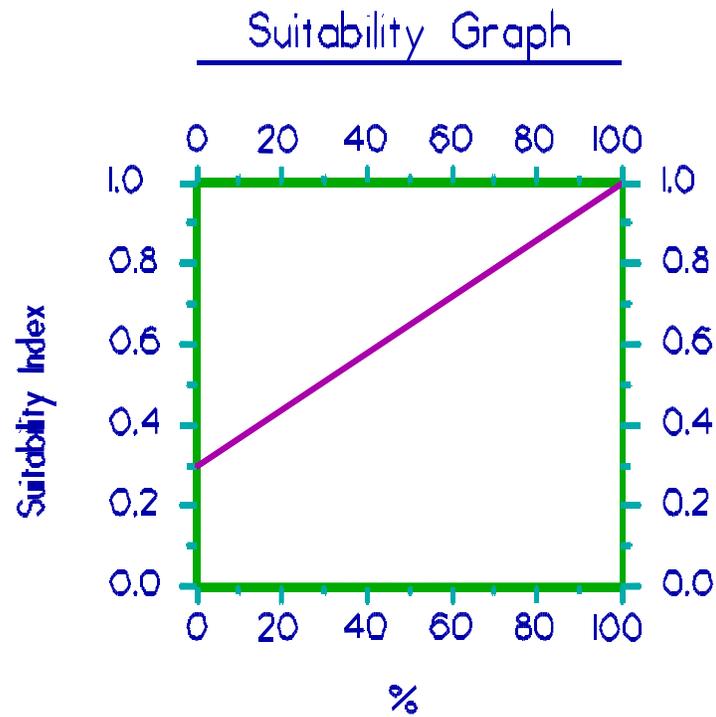


Line Formula

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

Saline Marsh

Variable V₂ Percent of open water area covered by aquatic vegetation.

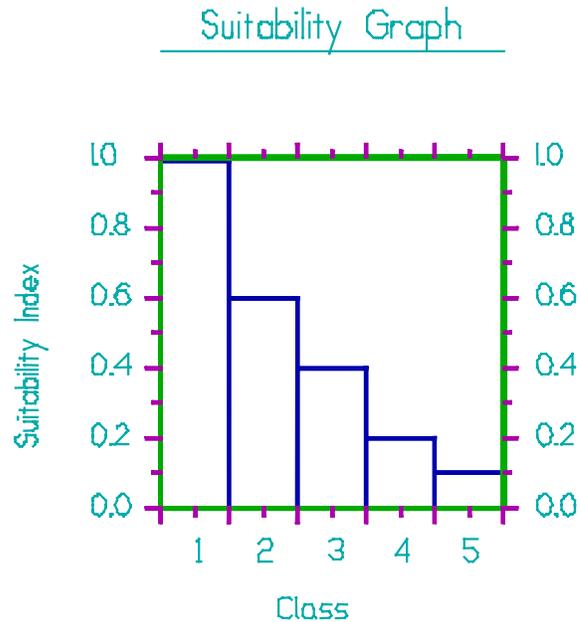


Line Formula

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

Saline Marsh

Variable V₃ Marsh edge and interspersion.

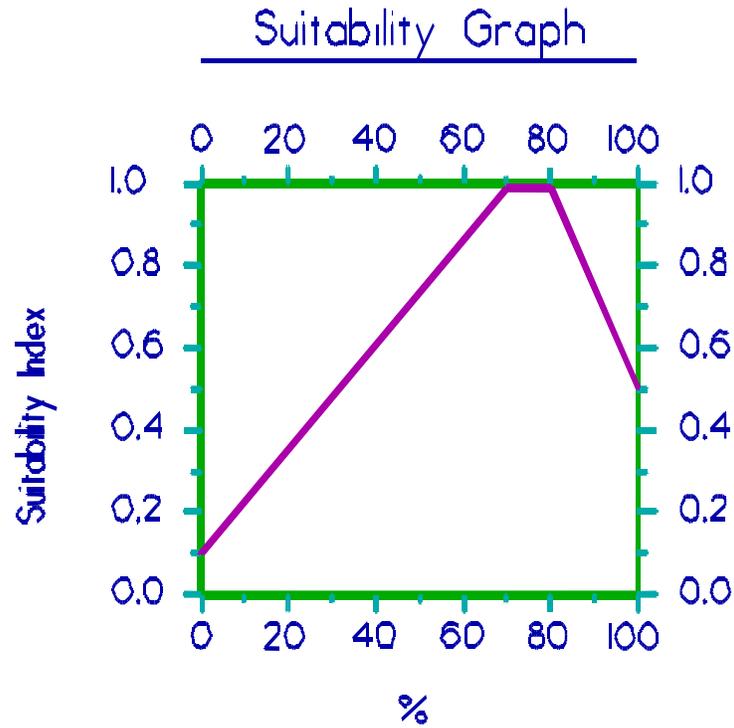


Instructions for Calculating SI for Variable V₃:

1. Refer to Appendix A for examples of the different interspersion classes.
2. Estimate percent of project area in each class. If the entire project area is solid marsh, assign an interspersion Class 1. Conversely, if the entire project area is open water, assign an interspersion Class 5.

Saline Marsh

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



Line Formulas

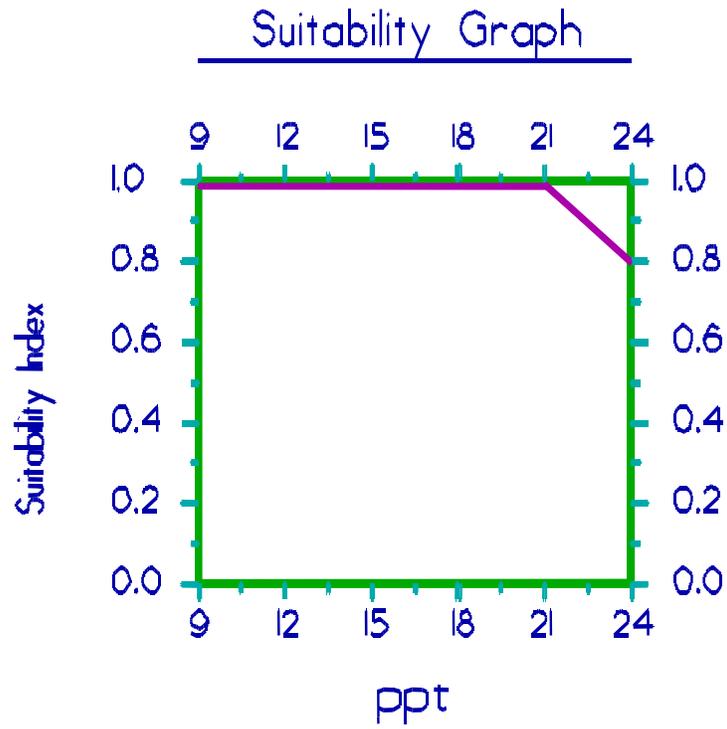
If $0 \leq \% < 70$, then $SI = (0.01286 * \%) + 0.1$

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

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

Saline Marsh

Variable V₅ Average annual salinity.



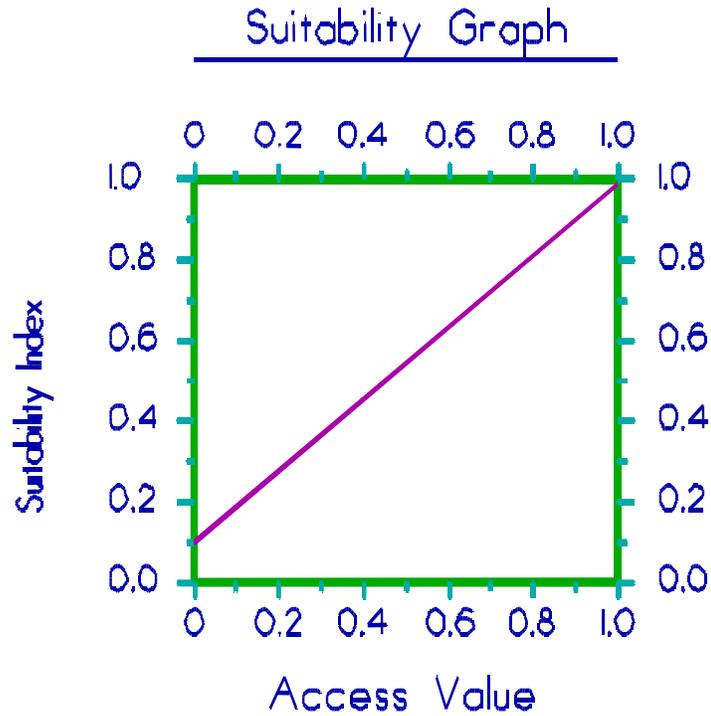
Line Formulas

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

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

Saline Marsh

Variable V₆ Aquatic organism access.



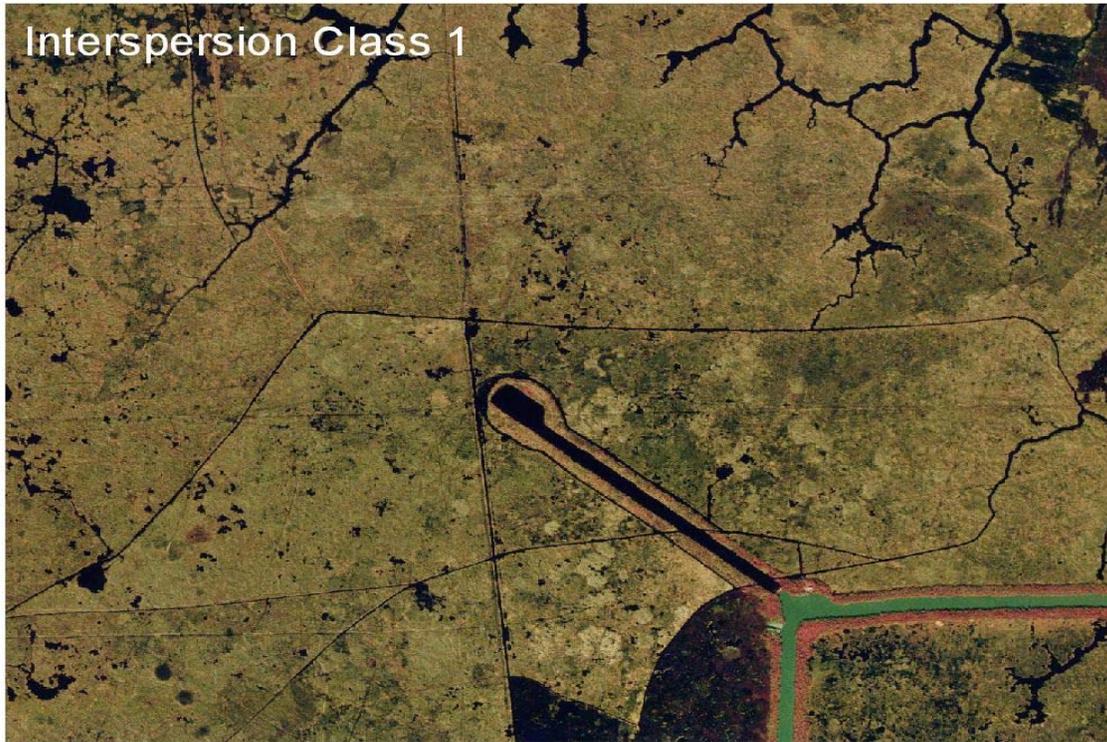
Line Formula

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

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

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

Attachment B - Marsh Edge and Interspersion Classes







Attachment C - Procedure for Calculating Access Value

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

Structure Type	Structure Rating
Open system	1.0
Rock weir set at 1 ft BML ¹ , w/ boat bay	0.8
Rock weir with boat bay	0.6
Rock weir set at \geq 1 ft BML	0.6
Slotted weir with boat bay	0.6
Open culverts	0.5
Weir with boat bay	0.5
Weir set at \geq 1 ft BML	0.5
Slotted weir	0.4
Flap-gated culvert with slotted weir	0.35
Variable crest weir	0.3
Flap-gated variable crest weir	0.25
Flap-gated culvert	0.2
Rock weir	0.15
Fixed crest weir	0.1
Solid plug	0.0001

For each structure type, the rating listed above pertains only to the standard structure configuration and assumes that the structure is operated according to common operating schedules consistent with the purpose for which that structure is designed. In the case of a "hybrid" structure or a unique application of one of the above-listed types (including unique or "non-standard" operational schemes), the WVA analyst(s) may assign an appropriate Structure Rating between 0.0001 and 1.0 that most closely

¹ Below Marsh Level

approximates the relative degree to which the structure in question would allow ingress/egress of estuarine organisms. In those cases, the rationale used in developing the new Structure Rating shall be documented.

3. Determine the Access Value. Where multiple openings equally affect a common "accessible unit", the Structure Rating (R) of the structure proposed for the "major" access point for the unit will be used to calculate the Access Value. The designation of "major" will be made by the Environmental Work Group. An "accessible unit" is defined as a portion of the total accessible area that is served by one or more access routes (canals, bayous, etc.), yet is isolated in terms of estuarine organism access to or from other units of the project area. Isolation factors include physical barriers that prohibit further movement of estuarine organisms, such as natural levee ridges, and spoil banks; and dense marsh that lacks channels, trenasses, and similar small connections that would, if present, provide access and intertidal refugia for estuarine organisms.

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

- a. One opening into area; no structure.

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

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

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

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

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

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

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

$$\begin{aligned}
\text{Access Value} &= \text{weighted avg. of Access Values of the two accessible units} \\
&= ([P_1 * R_1] + [P_2 * R_2]) / (P_1 + P_2) \\
&= ([.30 * 0.35] + [.60 * 1.0]) / (.30 + .60) \\
&= (.11 + .60) / .90 \\
&= .71 / .90 \\
&= .79
\end{aligned}$$

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

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

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

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

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

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

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

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

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

$$\begin{aligned}
 &= (.10 + .25)/.90 \\
 &= .35/.90 \\
 &= .39
 \end{aligned}$$

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

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

V. Swamp Community Model

INTRODUCTION

The CWPPRA Environmental Work Group (EnvWG) developed a fresh swamp community model in 1991. However, the Environmental Work Group abandoned use of that model and began using a swamp community model developed by the Louisiana Department of Natural Resources (LDNR). The LDNR model was developed to quantify the impacts of permitted activities and compensatory mitigation proposals in the Louisiana coastal zone and contained a more complete list of variables to characterize habitat quality of swamp in the coastal zone. Because that model was developed for regulatory purposes, it contained some variables which were not being impacted by candidate CWPPRA restoration projects. Therefore, in 2001, the EnvWG decided to modify that model so that it would be more sensitive to the impacts of proposed restoration projects. The following sections describe the process and assumptions used in the initial development of the swamp model.

The swamp model was developed to determine the suitability of swamp habitat in providing resting, foraging, and nesting habitat for a diverse assemblage of wildlife species. The model is generally applied to areas supporting or capable of supporting a canopy of woody vegetation which covers at least 33 percent of the area's surface, and with at least 60 percent of that canopy consisting of any combination of baldcypress, tupelogram, red maple, buttonbush, and/or planertree. The LDNR model stated that if woody canopy cover is less than 33 percent, then a fresh marsh model should be applied. However, the EnvWG recognized that some areas with less than 33% canopy cover provide functions and values more closely associated with a swamp than a fresh marsh. Therefore, the EnvWG agreed that the 33% canopy cover criterion should be treated as a general "rule of thumb" for model application, with some exceptions. If greater than 40 percent of the woody vegetation canopy consists of species such as oaks, hickories, American elm, green ash, sweetgum, sugarberry, boxelder, persimmon, honeylocust, red mulberry, eastern cottonwood, American sycamore, etc., then a bottomland hardwood model should be applied.

VARIABLE SELECTION

Variable selection for the original swamp model developed by the LDNR was based on a review of; 1) Habitat Suitability Index (HSI) models, published by the U.S. Fish and Wildlife Service, for wood duck, barred owl, swamp rabbit, mink, downy woodpecker, and gray squirrel, 2) a community model for forest birds, published by the U.S. Fish and Wildlife Service, 3) "A Habitat Evaluation System for Water Resources Planning", published by the U.S. Army Corps of Engineers, and 4) a draft version of "A Community Habitat Evaluation Model for Bottomland Hardwood Forests in the Southeastern United States", coauthored by the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service.

Several habitat variables appeared repeatedly in the various models. In general, it was concluded that those variables which occurred most frequently in the various models were the most important for assessing habitat quality. The species-specific (i.e., HSI)

models concentrated on assessment of site-specific habitat quality features such as tree species composition, forest stand structure (understory, midstory, overstory conditions), stand maturity, and hydrology. Other models reviewed concentrated on how a site fits into the overall "landscape". The original swamp model incorporated variables which addressed habitat quality (e.g., stand structure) and landscape function (e.g., the size of the contiguous forested area). The final variables selected were reviewed by representatives of the LDNR, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the Louisiana Department of Wildlife and Fisheries. The final list of variables included; 1) stand structure, 2) stand maturity, 3) hydrology, 4) size of contiguous forested area, 5) suitability and traversability of surrounding land use, and 6) disturbance.

After using the LDNR model for several years, the EnvWg recognized that several of the model variables were not being impacted, thus model sensitivity and project benefits were being compromised. Values for the non-impacted variables (i.e., size of the contiguous forested area, suitability and traversability of surrounding land uses, and disturbance) were the same under future without-project and future with-project conditions. In an effort to improve model sensitivity, those variables were omitted. In addition, the stand structure, stand maturity, and hydrology variables were revised and a salinity variable was included in the model. A salinity variable was included in the original swamp model developed by the CWPPRA EnvWG and was recognized as an important variable in characterizing the habitat quality of swamp ecosystems. Therefore, the final list of variables includes; 1) stand structure, 2) stand maturity, 3) water regime, and 4) mean high salinity during the growing season.

SUITABILITY INDEX GRAPH DEVELOPMENT

Suitability Index (SI) graph development was very similar to the process used for other community models such as the emergent marsh community models. A variety of resources was utilized to construct each SI graph, including the HSI models from which the final list of variables was partially derived, consultation with other professionals and researchers outside the EnvWG, published and unpublished data and studies, and personal knowledge of EnvWG members. An important "non-biological" constraint on SI graph development was the need to insure that graph relationships were not counter to the purpose of the CWPPRA, that is, the long term creation, restoration, protection, or enhancement of coastal vegetated wetlands. The process of SI graph development was one of constant evolution, feedback, and refinement; the form of each SI graph was decided upon through consensus among EnvWG members.

The Suitability Index graphs were developed according to the following assumptions:

Variable V₁ - Stand structure. Most swamp tree species do not produce hard mast; consequently, wildlife foods predominantly consist of soft mast, other edible seeds, invertebrates, and vegetation. Because most swamp tree species produce some soft mast or other edible seeds, the actual tree species composition is not usually a limiting factor. More limiting is the presence of stand structure to provide resting, foraging, breeding, nesting, and nursery habitat and the medium for invertebrate production. This medium can exist as herbaceous vegetation, scrub-shrub/midstory cover, or overstory canopy and preferably as a combination of all three. This variable assigns the lowest suitability to sites

with a limited amount of all three stand structure components, the highest suitability to sites with a significant amount of all three stand structure components, and mid-range suitability to various combinations when one or two stand structure components are present.

Variable V₂ - Stand maturity. Because of man's historical conversion of swamp, the loss of swamp to saltwater intrusion, historical and ongoing timber harvesting, and a reduced tree growth rate in the subsiding coastal zone, swamps with mature sizeable trees are a unique but ecologically important feature. Older trees provide important wildlife requisites such as snags and nesting cavities and the medium for invertebrate production. Additionally, as the stronger trees establish themselves in the canopy, weaker trees are out-competed and eventually die, forming additional snags and downed treetops that would not be present in younger stands. The suitability graph for this variable assumes that snags, cavities, downed treetops, and invertebrate production are present in suitable amounts when the average diameter-at-breast height (DBH) of canopy-dominant and canopy-codominant trees is above 16 inches for baldcypress and above 12 inches for tupelogram and other species. Therefore, stands with those characteristics are considered optimal for this variable (SI = 1.0).

Another important consideration for this variable is stand density, measured in terms of basal area. A scenario sometimes encountered in mature swamp ecosystems is an overstory consisting of a very few, widely-scattered, mature baldcypress. If stand density was not considered, and average DBH only, then those stands would receive a high SI for this variable without providing many of the important habitat components of a mature swamp ecosystem, specifically a suitable number of trees for nesting, foraging, and other habitat functions. Therefore, the SI for this variable is dependent on average DBH and basal area which is used as a measure of stand density.

Variable V₃ - Water regime. This variable considers the duration and amount of water flow/exchange. Four flow/exchange and four flooding duration categories are described to characterize the water regime. The optimal water regime is assumed to be seasonal flooding with abundant and consistent riverine/tidal input and water flow-through (SI=1.0). Seasonal flooding with periodic drying cycles is assumed to contribute to increased nutrient cycling (primarily through oxidation and decomposition of accumulated detritus), increased vertical structure complexity (due to growth of other plants on the swamp floor), and increased recruitment of dominant overstory trees. In addition, abundant and consistent input and water flow-through is optimal, because under that regime the full functions and values of a swamp in providing fish and wildlife habitat are assumed to be maximized. Temporary flooding is also assumed to be desirable. Habitat suitability is assumed to decrease as water exchange between the swamp and adjacent systems is reduced. The combination of permanently flooded conditions and no water exchange (e.g., an impounded swamp where the only water input is through rainfall and the only water loss is through evapotranspiration and ground seepage) is assumed to be the least desirable (SI=0.1). Those conditions can produce poor water quality during warm weather, reducing fish use and crawfish production.

Variable V₄ - Mean high salinity during the growing season. Mean high salinity during the growing season (March 1 to October 31) is defined as the average of the upper 33 percent of salinity measurements taken during the specified period of record. Although baldcypress is able to tolerate higher salinities than other swamp species, species such as tupelogram and many herbaceous species are salinity-sensitive. Optimal conditions are assumed to occur at mean high salinities less than 1.0 ppt. Habitat suitability is assumed to decrease rapidly at mean high salinities in excess of 1.0 ppt.

HABITAT SUITABILITY INDEX FORMULA

In developing the HSI formula for this model, the EnvWG agreed that variables V₁ and V₃, stand structure and water regime, were the most important variables in characterizing the habitat quality of a swamp. Therefore, those variables were given greater influence in the model than the remaining variables. Variable V₂, stand maturity, was given slightly less weight than stand structure and water regime. Variable V₄, salinity, was deemed the least important. All variables are grouped to produce a geometric mean and variable influence is only controlled by the weight (i.e., exponent) assigned to each variable.

HSI Calculation: $HSI = (SIV_1^3 \times SIV_2^{2.5} \times SIV_3^3 \times SIV_4^{1.5})^{1/10}$

BENEFIT ASSESSMENT

Calculation of HUs, AAHUs, and net AAHUs follows the same procedure as indicated in the Wetland Value Assessment Methodology Introduction.

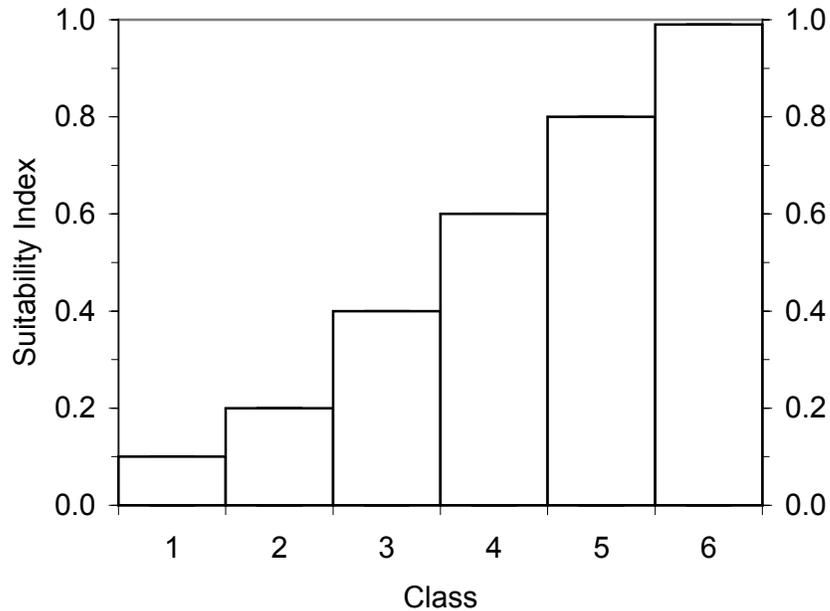
Swamp

Variable V₁ Stand structure.

Each component of stand structure should be viewed independently to determine the percent closure or coverage.

	Overstory Closure		Scrub- shrub/ Midstory Cover		Herbaceous Cover
Class 1.	<33%				
Class 2.	33%<50%	and	<33%	and	<33%
Class 3.	33%<50%	and	>33%	or	>33%
Class 4.	50%-75%	and	>33%	or	>33%
Class 5.	33%<50%	and	>33%	and	>33%
Class 6.	≥50%	and	>33%	and	>33%
			OR		
	≥75%	and	>33%	or	>33%

Suitability Graph



Swamp

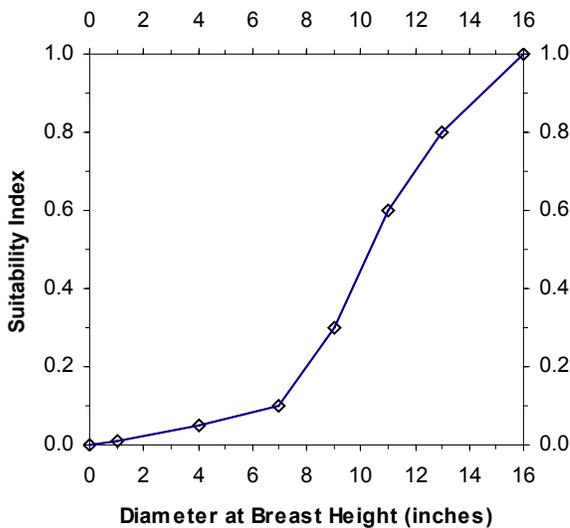
Variable V₂ Stand maturity.

Average dbh of canopy-dominant and canopy-codominant trees.

Notes:

1. Canopy-dominant and codominant trees are those whose crown rises above or is an integral part of the overstory.
2. For trees with buttress swell, dbh is the diameter measured at 12" above the swell.
3. The SI for this variable is multiplied by the factors in the table below depending on stand density.

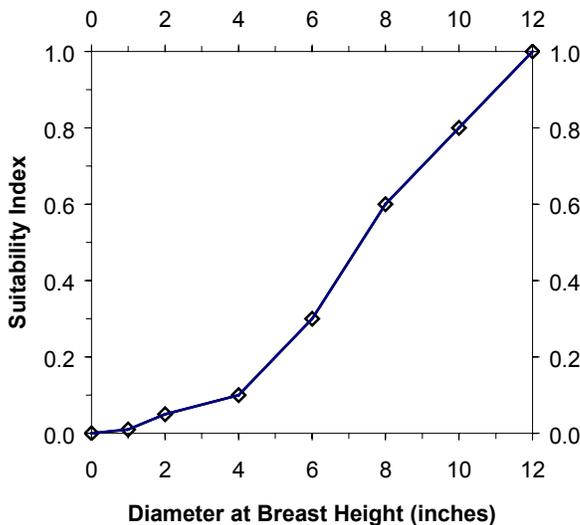
Suitability Graph



Suitability Index Line Formulas for baldcypress:

- If dbh = 0 then SI = 0
- If $0 < dbh \leq 1$ then $SI = .01 * dbh$
- If $1 < dbh \leq 4$ then $SI = (.013 * dbh) - .003$
- If $4 < dbh \leq 7$ then $SI = (.017 * dbh) - .017$
- If $7 < dbh \leq 9$ then $SI = (.1 * dbh) - .6$
- If $9 < dbh \leq 11$ then $SI = (.15 * dbh) - 1.05$
- If $11 < dbh \leq 13$ then $SI = (.1 * dbh) - .5$
- If $13 < dbh \leq 16$ then $SI = (.067 * dbh) -$

Suitability Graph



Suitability Index Line Formulas for tupelugum et al.:

- If $0 < dbh \leq 1$ then $SI = .01 * dbh$
- If $1 < dbh \leq 2$ then $SI = (.04 * dbh) - .03$
- If $2 < dbh \leq 4$ then $SI = .025 * dbh$
- If $4 < dbh \leq 6$ then $SI = (.1 * dbh) - .3$
- If $6 < dbh \leq 8$ then $SI = (.15 * dbh) - .6$
- If $8 < dbh \leq 12$ then $SI = (.1 * dbh) - .2$
- If $dbh > 12$ then $SI = 1.0$

Swamp

Variable V₃ Water regime.

Density	Basal Area	Factor
Open	<40ft ²	0.2
Moderately Open	40ft ² ≤BA≤80ft ²	0.4
Moderate	81ft ² ≤BA≤120ft ²	0.6
Moderately Dense	121ft ² ≤BA≤160ft ²	0.8
Dense	>161ft ²	1.0

		Flow/Exchange			
		High	Moderate	Low	None
Flooding Duration	Seasonal	1.00	0.85	0.70	0.50
	Temporary	0.9	0.75	0.65	0.40
	Semi-Permanent	0.75	0.65	0.45	0.25
	Permanent	0.65	0.45	0.30	0.10

Flooding Duration

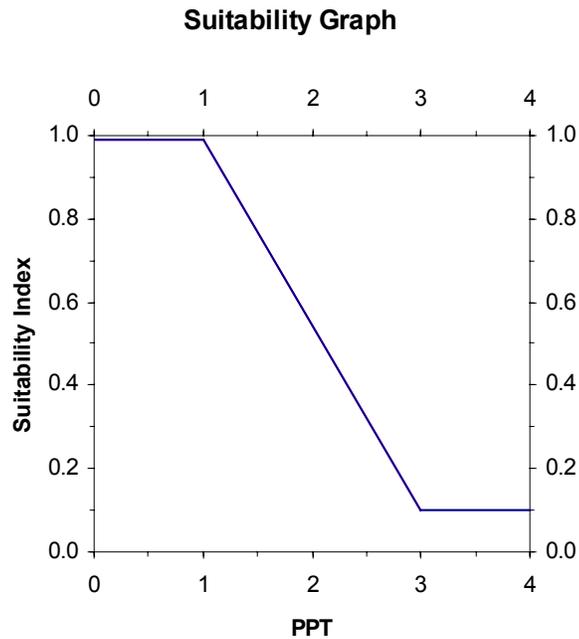
1. Permanently Flooded: Water covers the substrate throughout the year in all years.
2. Semipermanently Flooded: Surface water is present throughout the growing season in most years.
3. Seasonally Flooded: Surface water is present for extended periods, especially in the growing season, but is absent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

Flow/Exchange

1. High: Receives abundant and consistent riverine input and through-flow.
2. Moderate: Moderate water exchange, through riverine and/or tidal input.
3. Low: Limited water exchange, through riverine and/or tidal input.
4. None: No water exchange (stagnant, impounded).

Swamp

Variable V₄ Mean high salinity during the growing season.



Line Formulas

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

If $1.0 < \text{ppt} < 3.0$, then $\text{SI} = (-0.45 * \text{ppt}) + 1.45$

If $\text{ppt} \geq 3.0$, then $\text{SI} = 0.1$

Mean high salinity during the growing season is defined as the average of the highest 33 percent of consecutive salinity readings taken during the period of record (March 1 through October 31).

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

13th Priority Project List Report

Appendix C

Engineering Cost Estimates For Candidate Projects

Appendix C
Engineering Cost Estimates for Candidate Projects

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APPENDIX C

LEGEND

LF = Linear Foot

SF = Square Foot

EA = Each

CY = Cubic Yard

SY = Square Yard

TN = Ton

LS = Lump Sum

LB = Pound

ST = 100 ft station

AC = Acre

Project: Goose Point/Point Platte Marsh Creation Project		Date: 27-Aug-03		Revised: 22-Sep-03	
Computed by Martha Segura FWS		Project Priority List 13			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	2	LS	\$350,000	\$700,000
2	Marsh Creation and Nourishment	3,977,270	CY	\$2.75	\$10,937,000
3	Containment Dikes	77,011	CY	\$2	\$154,000
4	Vegetate Created Marsh	437	AC	\$3,500	\$1,530,000
5					
6					
7					
8					

ESTIMATED CONSTRUCTION COST \$13,321,000
ESTIMATED CONSTRUCTION + 25% CONTINGENCY \$16,651,000

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	\$986,000
Geotechnical Investigation	\$65,000
Hydrologic Modeling	
Data Collection	\$100,000
Cultural Resources	\$10,000
NEPA Compliance	\$30,000

SubTotal: \$1,191,000

<i>Supervision and Administration</i>	<u>NMFS</u> \$300,000	<u>NRCS</u> \$250,000	<u>Other</u> \$333,000	<u>Actual</u> \$333,000
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State Costs

<i>Supervision and Administration</i>	\$300,000
<i>Ecological Review Costs</i>	\$16,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0	
Land Rights		\$10,000	
		<i>SubTotal:</i>	\$10,000

Monitoring

Monitoring Plan Development	\$0
Monitoring Protocol Cost *	\$0

SubTotal: \$0

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Total Phase I Cost Estimate: \$1,850,000

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>		\$16,651,000	
Oyster Issues (# of Leased Acres)	0 Leased AC	\$0	
		<i>SubTotal:</i>	\$16,651,000

<i>Supervision and Inspection</i>	435 days @	\$876.00 per day	\$381,000
<i>Supervision and Administration</i>			\$333,000

State Costs

<i>Supervision and Administration</i>	\$300,000
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Total Phase II Cost Estimate: \$17,665,000

TOTAL ESTIMATED PROJECT FIRST COST \$19,515,000

**Goose Point/Point Platte Marsh Creation Project
Operation & Maintenance and Monitoring**

Project Priority List 13

O&M Cost Considerations:

Annual Costs:

Annual Inspections	\$4,700
Annual Cost for Operations	
Preventive Maintenance	

Specific Intermittent Costs:

Construction Items **Year 3**

Replant 10% of Project Area	\$154,000
Half-day Marsh Buggy for Trenasse Creation	\$50,000

Subtotal	<u>\$204,000</u>
Subtotal w/ 25% contingenc:	\$255,000

State Costs

Engineering and Design Cost	\$20,000
Administrative Cost	\$5,000

Inspection	11 days @	\$876 per day	\$10,000
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Subtotal	\$35,000
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Federal Costs

Administrative Cost	\$5,000
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Total	<u>\$295,000</u>
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Annual Project Costs:

Corps Administration	\$665	
Monitoring *	\$0	<i>(Dependent upon type of project)</i>

** Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.*

Construction Schedule:

Planning & Design Start	March-04	
Planning & Design End	March-06	<i>(Minimum of one year to complete this phase)</i>
Const. Start	March-07	<i>(Requires 4 months for contracting and advertising)</i>
Const. End	November-08	

Project:	Caernarvon Diversion Outfall Management East	Date:	27-Aug-03	Revised:	07-Oct-03
Computed by:	USACE, Chris Monnerjahn	<i>Project Priority List 13</i>			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	\$250,000.00	\$250,000
2	Access Road	8,667	CY	\$7.50	\$65,000
3	Discharge Channel Excavation	111,111	CY	\$3.75	\$417,000
4	Intake Channel Excavation	56,626	CY	\$3.75	\$212,000
5	Confinement Levee (semi-comp)	118,333	CY	\$3.00	\$355,000
6	Riprap (wet)	2,647	TON	\$30.00	\$79,000
7	Crushed Stone	1,324	CY	\$45.00	\$60,000
8	Concrete Slab	461	CY	\$350.00	\$161,000
9	Concrete Walls	294	CY	\$500.00	\$147,000
10	Pumping Station (1,200 cfs)	1,200	CFS	\$11,000.00	\$13,200,000
11	3 - 84" Diameter, 3/8" WT Pipe	1,425	LF	\$1,000.00	\$1,425,000
12	12" Diameter Concrete Piles	3,200	LF	\$25.00	\$80,000
13	Concrete Bents	110	CY	\$575.00	\$63,000
14	12" Diameter Timber Piles (Dolphins)	2,000	LF	\$20.00	\$40,000
15	PZ 27 Sheetpile Retaining Wall (Discharge Basin)	12,500	SF	\$20.00	\$250,000
16	Earthen Canal Plugs in Receiving Area	4	EA	\$25,000.00	\$100,000
17	Channel Training	1	LS	\$200,000.00	\$200,000

ESTIMATED CONSTRUCTION COST **\$17,104,000**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY **\$21,380,000**

TOTAL ESTIMATED PROJECT COSTS

Federal Costs

Engineering and Design:

Engineering	\$1,488,000			
Geotechnical Investigation	\$150,000			
Hydrologic Modeling	\$300,000			
Data Collection	\$200,000			
Cultural Resources	\$53,000			
HTRW	\$15,000			
NEPA Compliance	\$103,000			
			<i>SubTotal:</i>	\$2,309,000

Supervision and Administration

	NMFS	NRCS	Other	Actual
				\$428,000

State Costs

<i>Supervision and Administration</i>	\$370,500
<i>Ecological Review Costs</i>	\$21,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0	
Land Rights		\$188,000	From COE RE staff
		<i>SubTotal:</i>	\$188,000

Monitoring

Monitoring Plan Development	\$0		
Monitoring Protocol Cost *	\$0		
		<i>SubTotal:</i>	\$0

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Total Phase I Cost Estimate: **\$3,317,000**

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>	\$21,380,000		
Oyster Issues (# of Leased Acres)	0 Leased AC	\$0	
Land Acquisition		\$2,669,000	From COE RE staff
		<i>SubTotal:</i>	\$24,049,000

<i>Supervision and Inspection</i>	730 days @	\$876.00 per day	\$639,000
<i>Supervision and Administration</i>			\$1,072,000

State Costs

<i>Supervision and Administration</i>	\$370,500
Total Phase II Cost Estimate:	\$26,131,000

TOTAL ESTIMATED PROJECT FIRST COST **\$29,448,000**

**Caernarvon Diversion Outfall Management East
Operation & Maintenance and Monitoring**

Project Priority List 13

O&M Cost Considerations:

Annual Costs:

Annual Inspections	\$4,700	
Annual Engineering Monitoring		
Annual Cost for Operations and Maintenance	\$438,000	Based on operating it
Preventive Maintenance		9 months out of the year.

Specific Intermittent Costs:

<u>Construction Items</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Year 5</u>	<u>Year 10</u>	<u>Year 15</u>
Mob & Demob			\$50,000	\$75,000	\$50,000
Channel Dredging (50% original qty)	55,600 cy	\$2.00 /cy	\$111,200	\$111,200	\$111,200
	Subtotal		\$161,200	\$236,200	\$161,200
	Subtotal w/ 25% contingency		\$202,000	\$295,000	\$202,000

State Costs

Engineering and Design Cost			\$16,000	\$23,000	\$16,000
Administrative Cost			\$4,000	\$6,000	\$4,000
Eng Survey					
	5 days @	\$1,460 per day	\$7,000	\$7,000	\$7,000
	45 days @	\$876 per day	\$39,000	\$39,000	\$39,000
		Subtotal	\$66,000	\$75,000	\$66,000

Federal Costs

Administrative Cost			\$4,000	\$6,000	\$4,000
		Total	\$272,000	\$376,000	\$272,000

Annual Project Costs:

Corps Administration	\$665	
Monitoring *	\$0	<i>(Dependent upon type of project)</i>

** Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.*

Construction Schedule:

Planning & Design Start	March-04	
Planning & Design End	March-06	<i>(Minimum of one year to complete this phase)</i>
Const. Start	June-06	<i>(Requires 4 months for contracting and advertising)</i>
Const. End	June-08	

Project: Naomi Siphon Area Marsh Creation/Nourishment		Date: 26-Aug-03		Revised: 07-Oct-03	
Computed by Crawford		<i>Project Priority List 13</i>			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	\$1,000,000	\$1,000,000
2	Jack & Bore Hwy	160	LF	\$1,000	\$160,000
3	Jack & Bore RR	50	LF	\$2,000	\$100,000
4	Hydraulic Fill (Marsh Creation)	1,470,150	CY	\$2.50	\$3,675,000
5	Hydraulic Fill (Marsh Nourishment)	140,360	CY	\$2.75	\$386,000
6	Jacking Pits	2	EA	\$18,000	\$36,000
7	Vegetative Plantings	114	AC	\$2,500	\$285,000
8	Temporary Containment	2,000	LF	\$6	\$12,000
9					\$0
ESTIMATED CONSTRUCTION COST					\$5,654,000
ESTIMATED CONSTRUCTION + 25% CONTINGENCY					\$7,068,000

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	\$441,000
Geotechnical Investigation	\$75,000
Hydrologic Modeling	\$0
Data Collection	\$100,000
Cultural Resources	\$10,000
NEPA Compliance	\$30,000

SubTotal: \$656,000

Other	Actual
\$141,500	\$141,500

Supervision and Administration

State Costs

Supervision and Administration

Ecological Review Costs

\$141,500

\$16,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0
Land Rights		\$200,000

SubTotal: \$216,000

Monitoring

Monitoring Plan Development	\$0
Monitoring Protocol Cost *	\$0

SubTotal: \$0

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Total Phase I Cost Estimate: \$1,171,000

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>	\$7,068,000	
Oyster Issues (# of Leased Acres)	0 Leased AC	\$0

SubTotal: \$7,068,000

Supervision and Inspection

Supervision and Administration

132 days @ \$876.00 per day \$116,000

\$141,500

State Costs

Supervision and Administration

\$141,500

Total Phase II Cost Estimate: \$7,467,000

TOTAL ESTIMATED PROJECT FIRST COST

\$8,638,000

**Naomi Siphon Area Marsh Creation/Nourishment
Operation & Maintenance and Monitoring**

Project Priority List 13

O&M Cost Considerations:

Annual Costs:

Annual Inspections	\$4,700
Annual Cost for Operations	\$0
Preventive Maintenance	\$0

Specific Intermittent Costs:

Construction Items	Quantity in Year 10	Unit Cost	<u>Year 3</u>	<u>Year 14</u>
			\$0	\$0
			\$0	\$0
			\$0	\$0
			\$0	\$0
Subtotal			\$0	\$0
Subtotal w/ 25% contingency			\$0	\$0

State Costs

Engineering and Design Cost			\$0	\$0
Administrative Cost			\$0	\$0
Eng Survey				
	0 days	@		
			\$1,460 per day	\$0
Inspection				
	0 days	@		
			\$876 per day	\$0
Subtotal			\$0	\$0

Federal Costs

Administrative Cost			\$0	\$0
Total			\$0	\$0

Annual Project Costs:

Corps Administration	\$665	
Monitoring *	\$0	<i>(Dependent upon type of project)</i>

** Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.*

Construction Schedule:

Planning & Design Start	March-04	
Planning & Design End	March-05	<i>(Minimum of one year to complete this phase)</i>
Const. Start	July-05	<i>(Requires 4 months for contracting and advertising)</i>
Const. End	December-05	

Project: Spanish Pass Diversion		Date: 27-Aug-03		Revised: 07-Oct-03	
Computed by USACE, Chris Monnerjahn		Project Priority List 13			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	\$300,000.00	\$300,000
2	Channel Excavation	53,733	CY	\$3.00	\$161,000
3	Confinement Levee	12,037	CY	\$2.00	\$24,000
4	Riprap	12,133	TON	\$45.00	\$546,000
5	Bedding Material	5,200	CY	\$65.00	\$338,000
6	2-Lane Bridge	400	LF	\$7,000.00	\$2,800,000
7	New Temp Detour 2-Lane Hwy	500	LF	\$175.00	\$88,000
8	Demolish Existing 2 Lane Hwy	400	LF	\$25.00	\$10,000
9	Demolish Bulkhead	1	LS	\$50,000.00	\$50,000
10	Intake Harbor Widening Excavation	7,500	CY	\$3.00	\$23,000
11	Riprap (for intake harbor scour protection)	18,667	TON	\$30.00	\$560,000
12	Relocation Utiltity Poles	10	EA	\$4,000.00	\$40,000
13	12" Diameter Timber Piles (Pile Clusters)	2,500	LF	\$20.00	\$50,000

ESTIMATED CONSTRUCTION COST **\$4,990,000**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY **\$6,238,000**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	\$324,000				
Geotechnical Investigation	\$100,000				
Hydrologic Modeling	\$100,000				
Data Collection	\$100,000				
Cultural Resources	\$33,000				
HTRW	\$13,000				
NEPA Compliance	\$89,000				
				SubTotal:	\$759,000

	NMFS	NRCS	Other	Actual
<i>Supervision and Administration</i>				\$125,000

State Costs

<i>Supervision and Administration</i>	\$125,000
<i>Ecological Review Costs</i>	\$18,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0	
Land Rights		\$60,000	from COE RE staff.
		SubTotal:	\$60,000

Monitoring

Monitoring Plan Development	\$0		
Monitoring Protocol Cost *	\$0		
		SubTotal:	\$0

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Total Phase I Cost Estimate: \$1,087,000

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>	\$6,238,000	
Oyster Issues (# of Leased Acres)	0 Leased AC	\$0
Land Acquisition	\$3,500,000	from COE RE staff.
	SubTotal:	\$9,738,000

<i>Supervision and Inspection</i>	365 days @	\$876.00 per day	\$320,000
<i>Supervision and Administration</i>			\$180,000

State Costs

<i>Supervision and Administration</i>	\$125,000
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Total Phase II Cost Estimate: \$10,363,000

TOTAL ESTIMATED PROJECT FIRST COST \$11,450,000

**Spanish Pass Diversion
Operation & Maintenance and Monitoring**

Project Priority List 13

O&M Cost Considerations:

Annual Costs:

Annual Inspections	\$4,700
Annual Engineering Monitoring	
Annual Cost for Operations	\$0
Preventive Maintenance	\$0

Specific Intermittent Costs:

Construction Items	Quantity	Unit	<u>Year 7</u>	<u>Year 14</u>	<u>Year 15</u>
Mob & Demob			\$75,000	\$75,000	\$0
Rock (25% in year 7 and 25% in year 14)			\$276,500	\$276,500	\$0
Pile Cluster Replacement (50% in year 7 and 50% in year 14)			\$25,000	\$25,000	\$0
		Subtotal	\$376,500	\$376,500	\$0

State Costs

Engineering and Design Cost			\$35,000	\$35,000	\$0
Administrative Cost			\$9,500	\$9,500	\$0
Eng Survey	5 days	@			
			\$1,460 per day	\$7,000	\$7,000
Inspection	60 days	@			
			\$876 per day	\$53,000	\$53,000

Federal Costs

Administrative Cost			\$9,500	\$9,500	\$0
		Total	\$585,500	\$585,500	\$0

Annual Project Costs:

Corps Administration	\$665	
Monitoring *	\$0	<i>(Dependent upon type of project)</i>

** Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.*

Construction Schedule:

Planning & Design Start	March-04	
Planning & Design End	March-06	<i>(Minimum of one year to complete this phase)</i>
Const. Start	June-06	<i>(Requires 4 months for contracting and advertising)</i>
Const. End	June-07	

Project: Bayou Sale Ridge Protection		Date: 25-Aug-03		Revised: 06-Oct-03	
Computed by: L Broussard		<i>Project Priority List 13</i>			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	\$300,000	\$300,000
2	Rock Riprap	336,965	TNS	\$30.00	\$10,109,000
3	Geotextile	185,105	SY	\$5.00	\$926,000
4	Excavation for Flotation	733,881	CY	\$4.00	\$2,936,000
5	Permanent Navaids	49	Each	\$1,500	\$74,000
6	Settlement Plates	37	Each	\$1,000	\$37,000
7	Critical Area Plantings	1	LS	\$33,000	\$33,000
8					

ESTIMATED CONSTRUCTION COST **\$14,415,000**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY **\$18,019,000**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	\$962,000
Geotechnical Investigation	\$205,000
Hydrologic Modeling	\$0
Data Collection	\$100,000
Cultural Resources	\$60,000
NEPA Compliance	\$30,000

SubTotal: \$1,357,000

	<u>NMFS</u>	<u>NRCS</u>	<u>Other</u>	<u>Actual</u>
<i>Supervision and Administration</i>	\$320,500	\$270,500	\$360,500	\$270,500

State Costs

<i>Supervision and Administration</i>	\$320,500
<i>Ecological Review Costs</i>	\$13,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0
Land Rights		\$200,000

SubTotal: \$200,000

Monitoring

Monitoring Plan Development	\$0
Monitoring Protocol Cost *	\$0

SubTotal: \$0

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Total Phase I Cost Estimate: **\$2,161,000**

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>	\$18,019,000	
Oyster Issues (# of Leased Acres)	0 Leased AC	\$0
		SubTotal: \$18,019,000

<i>Supervision and Inspection</i>	625 days @	\$876.00 per day	\$548,000
<i>Supervision and Administration</i>			\$270,500

State Costs

<i>Supervision and Administration</i>	\$320,500
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Total Phase II Cost Estimate: **\$19,158,000**

TOTAL ESTIMATED PROJECT FIRST COST **\$21,319,000**

**Bayou Sale Ridge Protection
Operation & Maintenance and Monitoring**

06-Oct-03

Project Priority List 13

O&M Cost Considerations:

Annual Costs:

Annual Inspections	\$4,700
Annual Cost for Operations	\$0
Preventive Maintenance	\$0
Engineering Monitoring @ TY1-5, 10, 15, 19	

Specific Intermittent Costs:

Construction Items	<u>Year 3</u>	<u>Year 14</u>
Contractor Mobilization/Demobilization	\$100,000	\$100,000
Repair Foreshore Rock Dike (25% replace @ TY3 / 10% Replace @ TY14)	\$2,864,500	\$1,145,800
Excavation for Access (33% of original @ \$2.00/cy)	\$484,400	\$484,400
Navaid Replacement (100% @ \$500/ea)	\$24,500	\$24,500
	<hr/>	<hr/>
Subtotal w/ 25% contingency	\$4,342,000	\$2,193,000

State Costs

Engineering and Design Cost		\$280,000	\$148,000
Eng Survey			
	20 days @	\$1,460 per day	
		\$29,000	\$29,000
Inspection			
	80 days @	\$876 per day	
		\$70,000	\$70,000
		Subtotal	\$466,000
			\$291,000

Federal Costs

Administrative Cost	\$87,000	\$44,000
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Annual Project Costs:

Corps Administration	\$665	
Monitoring *	\$0	<i>(Dependent upon type of project)</i>

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Construction Schedule:

Planning & Design Start	March-04	
Planning & Design End	March-06	<i>(Minimum of one year to complete this phase)</i>
Const. Start	August-06	<i>(Requires 4 months for contracting and advertising)</i>
Const. End	October-07	

Project: Shark Island Shoreline Protection		Date: 28-Aug-03	Revised: 06-Oct-03		
Computed by Patrick Williams		Project Priority List 13			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization*	1	LS	\$300,000	\$300,000
2	Concrete Precast Prestressed Panels (20 ft)	1,188	Each	\$3,000	\$3,564,000
3	Concrete Precast Prestressed Piles (80 ft)	1,220	Each	\$2,700	\$3,294,000
4	Flotation Excavation (including backfilling)	207,604	CY	\$3	\$623,000
5	Surface Coarse Aggregate (scour pad)	68,875	Tons	\$40	\$2,755,000
6	Surface Coarse Aggregate (in gaps)	3,200	Tons	\$40	\$128,000
7	Temporary Nav aids (every 1000 ft)	25	Each	\$1,000	\$25,000
8	Permanent Nav aids (daytime)	54	Each	\$1,500	\$81,000

*" includes contractor quality and pollution control

ESTIMATED CONSTRUCTION COST	\$10,770,000
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	\$13,463,000

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	\$807,000
Geotechnical Investigation (boring every 500 ft pl)	\$207,440
Hydrologic Modeling	\$0
Data Collection (design, mag., and as-builts survey)	\$100,000
Cultural Resources	\$10,000
NEPA Compliance (covered in NMFS S&A)	\$0

SubTotal: \$1,124,000

NMFS

Supervision and Administration

\$252,000

Actual

\$252,000

State Costs

Supervision and Administration

\$252,000

Ecological Review Costs

\$13,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0
Land Rights (per emailed quoted from Helen)		\$50,000

SubTotal: \$50,000

Monitoring

Monitoring Plan Development	\$0
Monitoring Protocal Cost *	\$0

SubTotal: \$0

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Total Phase I Cost Estimate: \$1,691,000

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency \$13,463,000

Oyster Issues (# of Leased Acres) 0 Leased AC \$0

SubTotal: \$13,463,000

Supervision and Inspection (6 panels/day; 175 cy/10 hr da) 317 days @ \$876.00 per day \$278,000

Supervision and Administration \$252,000

State Costs

Supervision and Administration \$252,000

Total Phase II Cost Estimate: \$14,245,000

TOTAL ESTIMATED PROJECT FIRST COST \$15,936,000

**Shark Island Shoreline Protection
Operation & Maintenance and Monitoring**

Project Priority List 13

O&M Cost Considerations:

Annual Costs:

Annual Inspections		\$4,700
Annual Engineering Monitoring	Pending	
Annual Cost for Operations		
Preventive Maintenance		

Specific Intermittent Costs:

Construction Items	<u>Year 7</u>	<u>Year 10</u>	<u>Year 15</u>
Contractor Mobilization/Demobilization	\$80,000	\$0	\$80,000
Permanent Nav aids (100% replacement @ \$500 EA)	\$27,000	\$0	\$27,000
Concrete Precast Prestressed Panels (5% replacement)	\$178,200	\$0	\$178,200
Concrete Precast Prestressed Piles (5% replacement)	\$164,700	\$0	\$164,700
	Subtotal	\$543,321	\$543,321
	Subtotal w/ 25% contingency	\$679,000	\$679,000

State Costs

Engineering and Design Cost		\$50,000	\$0	\$50,000
Administrative Cost		\$13,500	\$0	\$13,500
Eng Survey				
TY 5 - 5 days, TY15 - 5 days				
5 days each @	\$1,460 per day	\$7,300	\$0	\$7,300
Inspection				
11 days each @	\$876 per day	\$9,636	\$0	\$9,636
	Subtotal	\$80,000	\$0	\$80,000
Administrative Cost		\$13,500	\$0	\$13,500
	Total	\$772,500	\$0	\$772,500

Annual Project Costs:

Corps Administration	\$665	
Monitoring *	\$0	<i>(Dependent upon type of project)</i>

** Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.*

Construction Schedule:

Planning & Design Start	March-04	
Planning & Design End	March-06	<i>(Minimum of one year to complete this phase)</i>
Const. Start	August-06	<i>(Requires 4 months for contracting and advertising)</i>
Const. End	June-07	

Project:	Whiskey Island Back Barrier Marsh Creation	Date:	25-Aug-03	Revised:	08-Oct-03
Computed by:	<i>Project Priority List 13</i>				
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	\$500,000	\$500,000
2	Dredging and Marsh Creation (in place)	2,000,000	CY	\$5.50	\$11,000,000
3	Containment Allowance	5,000	LF	\$200	\$1,000,000
4	Tidal Creeks	7,000	CY	\$3.00	\$21,000
5	Tidal Ponds	19,000	CY	\$3.00	\$57,000
6	Plantings	300	AC	\$3,500	\$1,050,000
7					
8					
ESTIMATED CONSTRUCTION COST					\$13,628,000
ESTIMATED CONSTRUCTION + 25% CONTINGENCY					\$17,035,000

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	\$1,007,000
Geotechnical Investigation	\$120,000
Hydrologic Modeling	\$100,000
Data Collection	\$200,000
Cultural Resources	\$75,000
NEPA Compliance	\$30,000

SubTotal: \$1,532,000

Supervision and Administration

Other	Actual
\$340,500	\$340,500

State Costs

Supervision and Administration

\$305,500

Ecological Review Costs

\$16,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0
Land Rights		\$15,000

SubTotal: \$31,000

Monitoring

Monitoring Plan Development	\$0
Monitoring Protocol Cost *	\$0

SubTotal: \$0

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Total Phase I Cost Estimate: \$2,225,000

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency

\$17,035,000

Oyster Issues (# of Leased Acres) 0 Leased AC

\$0

SubTotal: \$17,035,000

Supervision and Inspection

256 days @ \$1,752.00 per day

\$448,000

Supervision and Administration

\$340,500

State Costs

Supervision and Administration

\$305,500

Total Phase II Cost Estimate: \$18,129,000

TOTAL ESTIMATED PROJECT FIRST COST \$20,354,000

**Whiskey Island Back Barrier Marsh Creation
Operation & Maintenance and Monitoring**

Project Priority List 13

O&M Cost Considerations:

Annual Costs:

Annual Inspections	\$4,700
Engineering Monitoring	\$0
Preventive Maintenance	\$0

Specific Intermittent Costs

Construction Items	Quantity in Year 10	Unit Cost	<u>Year 7</u>	<u>Year 14</u>
			\$0	\$0
			\$0	\$0
			\$0	\$0
			\$0	\$0
Subtotal			\$0	\$0
Subtotal w/ 25% contingency			\$0	\$0

State Costs

Engineering and Design Cost			\$0	\$0
Administrative Cost			\$0	\$0
Eng Survey				
	0 days	@		
			\$1,460 per day	\$0
Inspection				
	0 days	@		
			\$876 per day	\$0
Subtotal			\$0	\$0

Federal Costs

Administrative Cost			\$0	\$0
Total			\$0	\$0

Annual Project Costs:

Corps Administration	\$665	
Monitoring *	\$0	<i>(Dependent upon type of project)</i>

** Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.*

Construction Schedule:

Planning & Design Start	March-04	
Planning & Design End	October-05	<i>(Minimum of one year to complete this phase)</i>
Const. Start	April-06	<i>(Requires 4 months for contracting and advertising)</i>
Const. End	January-07	

Project: Oyster Bayou Terracing		Date: 29-Aug-03		Revised: 06-Oct-03	
Computed by Patrick Williams		<i>Project Priority List 13</i>			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	\$100,000	\$100,000
2	Terrace Construction (see appended for section)	124,967	LF	\$10	\$1,250,000
3	Planting (smooth cordgrass plugs w/fertilizer)	74,980	Each	\$3.5	\$262,000
ESTIMATED CONSTRUCTION COST					\$1,612,000
ESTIMATED CONSTRUCTION + 25% CONTINGENCY					\$2,015,000

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	\$137,000			
Geotechnical Investigation (10 subareas; min 4 ea)	\$120,000			
Data Collection (design, as-built, & mag survey)	\$100,000			
Cultural Resources	\$10,000			
NEPA Compliance (covered in NMFS admin)	\$30,000			
			SubTotal:	\$397,000

	<u>NMFS</u>	<u>NRCS</u>	<u>Other</u>	<u>Actual</u>
<i>Supervision and Administration</i>	\$40,500	\$40,500	\$40,500	\$40,500

State Costs

<i>Supervision and Administration</i>	\$40,500
<i>Ecological Review Costs</i>	\$16,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0	
Land Rights		\$70,000	
			SubTotal: \$70,000

Monitoring

Monitoring Plan Development	\$0	
Monitoring Protocol Cost *	\$0	
		SubTotal: \$0

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Total Phase I Cost Estimate: \$564,000

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>	\$2,015,000
Oyster Issues (# of Leased Acres) 0 Leased AC	\$0
	SubTotal: \$2,015,000

<i>Supervision and Inspection</i>	185 days @ \$876.00 per day	\$162,000
<i>Supervision and Administration</i>		\$40,500

State Costs

<i>Supervision and Administration</i>	\$40,500
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Total Phase II Cost Estimate: \$2,258,000

TOTAL ESTIMATED PROJECT FIRST COST \$2,822,000

**Oyster Bayou Terracing
Operation & Maintenance and Monitoring**

Project Priority List 13

O&M Cost Considerations:

Annual Costs:

Annual Inspections		\$4,700
Annual Engineering Monitoring	Pending	
Annual Cost for Operations		
Preventive Maintenance		

Specific Intermittent Costs:

Construction Items	<u>Year 5</u>	<u>Year 10</u>	<u>Year 15</u>
Contractor Mobilization/Demobilization	\$0	\$0	\$50,000
Terrace Construction (rebuild ~25% or 31,242)	\$0	\$0	\$312,420
Planting (50% or 37,490 plants)	\$0	\$0	\$131,215
	Subtotal	\$0	\$493,635
	Subtotal w/ 25% contingency	\$0	\$617,000

State Costs

Engineering and Design Cost			\$46,000
Administrative Cost		\$0	\$12,500
Eng Survey			
Inspection	3 days @	\$1,460 per day	\$4,000
		Subtotal	\$0
		\$0	\$109,000

Federal Costs

Administrative Cost		\$0	\$0	\$12,500
	Total	\$0	\$0	\$738,500

Annual Project Costs:

Corps Administration	\$665	
Monitoring *	\$0	<i>(Dependent upon type of project)</i>

** Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.*

Planning & Design Start	March-04	
Planning & Design End	March-05	<i>(Minimum of one year to complete this phase)</i>
Const. Start	February-06	
Const. End	July-06	<i>(Requires 4 months for contracting and advertising- rolled to 2006 to avoid construction during waterfowl season)</i>

Project: Shoreline Protection Foundation Improvements Demo		Date: 17-Sep-03	Revised: 08-Oct-03		
Computed by USACE, Julie Oliphant & Chris Monnerjahn		Project Priority List 13			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mob & Demob of Instrumentation Equipment/Crew	1	LS	\$38,100.00	\$38,100
2	Settlement Plates	72	each	\$540.00	\$39,000
3	Inclinometers	1,920	ft	\$19.00	\$36,000
4	Extensometers	960	ft	\$19.00	\$18,000
5	Drill Rig/Barg (Marsh Buggy)	1	LS	\$45,000.00	\$45,000
6	Boat	64	Days	\$125.00	\$8,000
7	Per Diem	160	Days	\$77.02	\$12,000
9	Test Section #2 (1-900' section): Sand (diff in estimate)	2,110	CY	\$27.00	\$17,000
10	Test Section #2 (1-900' section): Excavation/Dredging	1,917	CY	\$4.00	\$8,000
11	Test Section #2 (1-900' section): Geotextile	2,800	SY	\$3.00	\$8,000
12	Test Section #3 (1-900' section): Sand (diff in estimate)	2,110	CY	\$27.00	\$17,000
13	Test Section #3 (1-900' section): Geotextile	2,800	SY	\$3.00	\$8,000
Note:					\$0
1. This demo is to be piggy-backed on an approved CWPPRA rock project. The costs for mob& demob of the equipment to excavate the poor soil and to install the sand is already covered in the piggy-backed rock project.					\$0
					\$0
					\$0
					\$0
ESTIMATED CONSTRUCTION COST					\$254,000
ESTIMATED CONSTRUCTION + 25% CONTINGEN					\$318,000

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	\$175,000
Geotechnical Investigation	\$115,000
Hydrologic Modeling	\$0
Data Collection	\$0
Cultural Resources	\$0
HTRW	\$0
NEPA Compliance	\$0

SubTotal: \$290,000

Supervision and Administration

	<u>NMFS</u>	<u>NRCS</u>	<u>Other</u>	<u>Actual</u>
<i>Supervision and Administration</i>	\$7,000	\$11,000	\$7,000	\$25,000

State Costs

Supervision and Administration

\$9,000

Ecological Review Costs

\$0

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0
Land Rights		\$0

SubTotal: \$0

Monitoring

Monitoring Plan Development	\$0
Monitoring Protocol Cost *	\$0

SubTotal: \$0

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Total Phase I Cost Estimate: \$324,000

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency

\$318,000

Oyster Issues (# of Leased Acres) 0 Leased AC \$0

Land Rights \$0

SubTotal: \$318,000

Supervision and Inspection

60 days @ \$876.00 per day \$53,000

Supervision and Administration

\$15,200

State Costs

Supervision and Administration

\$9,000

Total Phase II Cost Estimate: \$395,000

TOTAL ESTIMATED PROJECT FIRST COST

\$719,000

**Shoreline Protection Foundation Improvements Demo
Operation & Maintenance and Monitoring**

Project Priority List 13

O&M Cost Considerations:

Annual Costs:

Annual Inspections	\$0
Annual Cost for Operations	\$0
Preventive Maintenance	\$0

Monitoring Plan & Costs:

In Year 1: The instruments will be monitored 1 week for 1st month, then 1 month for remaining 11 months. (15 times/year)
In Year 2: The instruments will be monitored twice a year. (2 times/year)
In Years 3-5: The instruments will be monitored once a year. (1 time/year)

Year 1:

1	Manpower (3	15	Trips	\$5,700.00	\$85,500
2	Boat	15	Trips	\$875.00	\$13,100
3	Car	15	Trips	\$750.00	\$11,300
4	Per Diem	15	Trips	\$1,180.00	\$17,700
Year 1 subtotal:					\$127,600

Year 2:

Item No.	Item Descripti	Quantity	Unit	Unit Cost	Amount
1	Manpower (3	2	Trips	\$5,700.00	\$11,400
2	Boat	2	Trips	\$875.00	\$1,800
3	Car	2	Trips	\$750.00	\$1,500
Year 2 subtotal:					\$17,100

Years 3-5:

Item No.	Item Descripti	Quantity	Unit	Unit Cost	Amount
1	Manpower (3	1	Trips	\$5,700.00	\$5,700
2	Boat	1	Trips	\$875.00	\$900
3	Car	1	Trips	\$750.00	\$800
4	Per Diem	1	Trips	\$1,180.00	\$1,200
Year 3 subtotal:					\$8,600
Year 4 subtotal:					\$8,600
Year 5 subtotal:					\$8,600

Federal Costs

	Year 1	Year 2	Year 3	Year 4	Year 5
Administrative Cost	\$30,000	\$5,000	\$5,000	\$5,000	\$15,000

Annual Project Costs:

Corps Administration	\$665	
Monitoring *	\$0	<i>(Dependent upon type of project)</i>

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Construction Schedule:

Planning & Design Start	March-04	
Planning & Design End	March-05	<i>(Minimum of one year to complete this phase)</i>
Const. Start	June-05	<i>(Requires 4 months for contracting and advertising)</i>
Const. End	September-05	

Project: Flowable Fill Demonstration Project		Date: 24-Sep-03		Revised: 06-Oct-03	
Computed by L. Broussard		Project Priority List 13			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	\$216,000	\$216,000
2	Material Costs	1	LS	\$103,500	\$104,000
3	Labor/Equipment	1	LS	\$278,700	\$279,000
4					
5					
6					
7					
8					

ESTIMATED CONSTRUCTION COST	<u>\$599,000</u>
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	<u><u>\$749,000</u></u>

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	\$75,000
Geotechnical Investigation	\$0
Hydrologic Modeling	\$0
Data Collection	\$30,000
Cultural Resources	\$0
NEPA Compliance	\$25,000
HTRW	\$50,000

SubTotal: \$130,000

Actual

Supervision and Administration

\$22,500

State Costs

Supervision and Administration

\$15,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0
Land Rights		\$20,000

SubTotal: \$20,000

Monitoring

Monitoring Plan Development	\$25,000
Monitoring Protocal Cost *	\$0

SubTotal: \$25,000

* Monitoring is now done through CRMS and is a line item in overall planning budget and not included in individual projects.

Total Phase I Cost Estimate: \$213,000

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency	\$749,000	
Oyster Issues (# of Leased Acres)	0 Leased AC	\$0

SubTotal: \$749,000

Supervision and Inspection

90 days @ \$876.00 per day \$79,000

Supervision and Administration

\$22,500

State Costs

Supervision and Administration

\$15,000

Total Phase II Cost Estimate: \$866,000

TOTAL ESTIMATED PROJECT FIRST COST \$1,079,000

**Flowable Fill Demonstration Project
Operation & Maintenance and Monitoring**

Project Priority List 13

O&M Cost Considerations:

Annual Costs:

Annual Inspections
Annual Cost for Operations
Preventive Maintenance

Specific Intermittent Costs:

Construction Items		<u>Year 5</u>	<u>Year 10</u>	<u>Year 15</u>
	Subtotal	\$0	\$0	\$0
	Subtotal w/ 25% contingency	\$0	\$0	\$0

State Costs

Administrative Cost		\$0	\$0	\$0
Eng Survey				
	days @	\$1,460 per day	\$0	\$0
Inspection				
	days @	\$876 per day	\$0	\$0

Federal Costs

Administrative Cost		\$0	\$0	\$0
	Total	\$0	\$0	\$0

Annual Project Costs:

Corps Administration	\$665
Monitoring for TY2, 3, 4, &5	\$40,000

Construction Schedule:

Planning & Design Start	March-04	
Planning & Design End	March-05	<i>(Minimum of one year to complete this phase)</i>
Const. Start	August-05	<i>(Requires 4 months for contracting and advertising)</i>
Const. End	November-05	

Project: Interior Shoreline Protection		Date: 03-Sep-03		Revised: 08-Oct-03	
Computed by John D. Foret		Project Priority List 13 - Demonstration Projects			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	\$50,000	\$50,000
2	Material	2,640	LF	\$115	\$304,000
3	Installation	2,640	LF	\$92	\$243,000

ESTIMATED CONSTRUCTION COST	\$597,000
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	\$746,000

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	\$54,000
Geotechnical Investigation (6 cores @ \$2,000 each, plus \$25,000 for report)	\$37,000
Data Collection (bathymetry and magnetometer)	\$20,000
Cultural Resources	\$10,000
NEPA Compliance	\$20,000
SubTotal:	\$141,000

	<u>NMFS</u>	<u>NRCS</u>	<u>Other</u>	<u>Actual</u>
<i>Supervision and Administration</i>	\$15,000	\$22,500	\$15,000	\$15,000

State Costs

<i>Supervision and Administration</i>	\$30,000
---------------------------------------	----------

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0
Land Rights		\$10,000
SubTotal:		\$10,000

Monitoring

Monitoring Plan Development	\$25,000
Monitoring Protocol Cost	\$0
SubTotal:	\$25,000

Total Phase I Cost Estimate: \$221,000

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>	\$746,000	
Oyster Issues (# of Leased Acres)	0 Leased AC	\$0
SubTotal:	\$746,000	

<i>Supervision and Inspection</i>	26 days @	\$876.00 per day	\$23,000
<i>Supervision and Administration</i>			\$15,000

State Costs

<i>Supervision and Administration</i>	<u>\$30,000</u>
---------------------------------------	-----------------

Total Phase II Cost Estimate: \$814,000

TOTAL ESTIMATED PROJECT FIRST COST \$1,035,000

**Interior Shoreline Protection Demo Project
Operation & Maintenance and Monitoring**

Project Priority List 13 - Demonstration Projects

O&M Cost Considerations:

Annual Costs:

Annual Inspections	\$0
Annual Engineering Monitoring	
<i>Annual Cost for Operations</i>	
Preventive Maintenance	

Specific Intermittent Costs:

Construction Items	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Subtotal	\$0	\$0	\$0	\$0	\$0
Subtotal w/ 25% contingency	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

State Costs

Engineering and Design Cost					
Administrative Cost	\$0	\$0	\$0	\$0	\$0
Eng Survey					
0 days @ \$1,460 per day	\$0	\$0	\$0	\$0	\$0
Inspection					
Subtotal	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Federal Costs

Administrative Cost	\$0	\$0	\$0	\$0	\$0
Total	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>

Annual Project Costs:

Corps Administration	\$665	\$665	\$665	\$665	\$665
Monitoring					
<i>Annual Surveys</i>	\$4,800	\$4,800	\$4,800	\$4,800	\$4,800
<i>Shoreline Movement</i>	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000

Planning & Design Start	March-04	
Planning & Design End	June-04	
Const. Start	September-04	<i>(Requires 4 months for contracting and advertising)</i>
Const. End	October-04	

Project: Soil Salinity Remediation Demonstration Project		Date: 02-Sep-03		Revised: 08-Oct-03	
Computed by John D. Foret		Project Priority List 13 - Demonstration Projects			
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Greenhouse/bench study (yr 1)	1	Each	\$63,000	\$63,000
	Year 1 Subtotal				\$63,000
2	Mobilization/Demobilization (yr 2)	1	LS	\$227,000	\$227,000
3	Soil Amendment Materials Application 1 (yr 2)	149,311	GAL	\$1.71	\$255,322
4	Soil Amendment Materials Application 2 (yr 2)	99,541	GAL	\$1.71	\$170,215
5	Application/Installation (yr 2)	1	LS	\$67,000	\$67,000
6	pump equipment/hoses (yr 2)	3	Each	\$6,500	\$20,000
7	Marsh Creation (yr 2)	0	0	\$0.00	\$0
8	Containment Dikes (yr 2)	11,200	LF	\$12.00	\$134,400
9	Planting (yr 2)	2,400	Each	\$9.00	\$22,000
	Year 2 Subtotal				\$895,937

ESTIMATED CONSTRUCTION COST \$958,937
ESTIMATED CONSTRUCTION + 25% CONTINGENCY \$1,198,671

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	\$84,000
Geotechnical Investigation	\$43,000
NEPA Compliance	\$20,000
HTRW	\$25,000
Data Collection (Survey)	\$10,000
soil analysis	\$22,000

SubTotal: \$204,000

	<u>NMFS</u>	<u>NRCS</u>	<u>Other</u>	<u>Actual</u>
<i>Supervision and Administration</i>	\$24,000			\$24,000

State Costs

Supervision and Administration \$30,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	\$0
Land Rights		\$10,000
		<i>SubTotal:</i> \$10,000

Monitoring

Monitoring Plan Development	\$25,000
	<i>SubTotal:</i> \$25,000

Total Phase I Cost Estimate: \$293,000

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>		\$1,198,671
Oyster Issues (# of Leased Acres)	0 Leased AC	\$0
		<i>SubTotal:</i> \$1,198,671

<i>Supervision and Inspection</i>	21 days @	\$876.00 per day	\$18,000
<i>Supervision and Administration</i>			\$24,000

State Costs

Supervision and Administration \$30,000

Total Phase II Cost Estimate: \$1,271,000

TOTAL ESTIMATED PROJECT FIRST COST \$1,564,000

**Soil Salinity Remediation Demonstration Project
Operation & Maintenance and Monitoring**

Project Priority List 13 - Demonstration Projects

O&M Cost Considerations:

Annual Costs:

Annual Inspections	\$0
Annual engineering monitoring	
Annual Cost for Operations	\$0
Preventive Maintenance	\$0

Specific Intermittent Costs:

Construction Items	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Breach Containment Dikes			\$0	\$40,300	
Subtotal	\$0	\$0	\$0	\$40,300	\$0
Subtotal w/ 25% contingency	\$0	\$0	\$0	\$50,000	\$0

Engineering and Design Cost			\$5,000	\$0	\$0
Administrative Cost	\$0	\$0	\$0	\$1,500	\$0
Eng Survey					
0 days @			\$1,460 per day	\$0	\$0
Inspection					
Subtotal	\$0	\$0	\$0	\$6,000	\$0

Federal Costs

Administrative Cost	\$0	\$0	\$0	\$1,500	\$0
Total	\$0	\$0	\$0	\$57,500	\$0

Annual Project Costs:

Corps Administration	\$665	\$665	\$665	\$665	\$665
Monitoring					
Annual Surveys		\$10,000	\$10,000	\$10,000	\$10,000
Soil analyses (8)		\$3,600	\$3,600	\$3,600	\$3,600
Plantings monitoring (4)		\$6,250	\$6,250	\$6,250	\$6,250

Construction Schedule:

Planning & Design Start	March-04
Planning & Design End	March-06
Const. Start	August-06
Const. End	August-07

(Minimum of one year to complete this phase)

(Requires 4 months for contracting and advertising)

Project: Hackberry Bay Oyster Reef Demonstration Project		Date: September 4, 2003		Revised: Oct 9, 2003	
Computed by:		<i>Project Priority List 13</i>			
Item No.	Work or Material (including mob/demob)	Quantity (lf)	Unit	Unit Cost (/lf)	Amount
1	Mobilization and Demobilization	1	LS	\$400,000	\$400,000
2	Oyster Shells	1,800	lf	\$100	\$180,000
3	Geotextile Tubes	1,800	lf	\$30	\$54,000
4	Dredge Material for Geotube (~2CY/lf @ \$5/CY)	1,800	lf	\$10	\$18,000
5	Geotextile	8,500	SY	\$5	\$42,500
6					
7					
8					

ESTIMATED CONSTRUCTION COST	\$695,000
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	\$868,000

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design

Engineering	\$62,000		
Geotechnical Investigation	\$41,000 (8 Borings, and report)		
Hydrologic Modeling			
Data Collection	\$75,000		
Cultural Resources	\$10,000 (records search)		
NEPA Compliance	\$30,000		
		SubTotal	\$218,000

Supervision and Administration \$26,000

State Costs

Supervision and Administration

\$30,000

Easements and Land Rights

Oyster Issues	0	\$0	
Land Rights		\$15,000	
			SubTotal
			\$15,000

Monitoring

Monitoring Plan Development	\$25,000		
Monitoring Protocal Cost			
		SubTotal	\$25,000

Total Phase I Cost Estimate \$314,000

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency

\$868,000

Oyster Issues (# of Leased Acres) 0 \$0

SubTotal \$868,000

Supervision and Inspection 100 days @ 852 per day \$85,000

Supervision and Administration \$26,000

State Costs

Supervision and Administration

\$30,000

Total Phase II Cost Estimate \$1,009,000

TOTAL ESTIMATED PROJECT FIRST COST \$1,323,000

**Hackberry Bay Oyster Reef Demonstration Project
Operation & Maintenance and Monitoring**

Project Priority List 13

O&M Cost Considerations:

Annual Costs

Annual Inspections
Annual Cost for Operations
Preventive Maintenance

Monitoring Plan

* Cost estimated based on Terrebonne Bay Demo project monitoring cost.
(\$56,000/Yr). Terrebonne Bay Project Monitoring Cost is \$438,656 for 8 yrs.
This project monitoring is required only for five years. Terrebonne Bay treatment length is 4,800 lf, whereas this project treatment length is only 1,800.

Year 1	\$56,000
Year 2	\$56,000
Year 3	\$56,000
Year 4	\$56,000

Federal Costs

Administrative Cost		\$0	\$0	\$0
	Total	\$0	\$0	\$0

Annual Project Costs:

Corps Administration
Monitoring

Construction Schedule:

Planning & Design Start **March-04**
Planning & Design End **March-05**
Const. End **September-05**

(Minimum of one year to complete this phase)

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

13th Priority Project List Report

Appendix D

Economics Computational Summary For Candidate Projects

Appendix D
Economics Computational Summary For Candidate Projects
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Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13
Goose Point/Point Platte Marsh Creation Project

Project Construction Years:	2	Total Project Years	22
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$21,262,500	Total Fully Funded Costs	\$21,747,400

Annual Charges	<u>Present Worth</u>	<u>Average Annual</u>
First Costs	\$23,688,384	\$2,002,836
Monitoring	\$0	\$0
O & M Costs	\$305,924	\$25,866
Other Costs	<u>\$7,865</u>	<u>\$665</u>
Total	\$24,002,200	\$2,029,400
Average Annual Habitat Units	297	
Cost Per Habitat Unit	\$80,815	
Total Net Acres	436	

**Coastal Wetlands Conservation and Restoration Plan
Goose Point/Point Platte Marsh Creation Project**

Project Costs

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I											
	7 Compound	2004	\$347,375	\$2,917	\$97,125	\$92,167	\$388	\$0	-	\$0	\$539,971
	6 Compound	2005	\$595,500	\$5,000	\$166,500	\$158,000	\$665	\$0	-	\$0	\$925,665
	5 Compound	2006	\$248,125	\$2,083	\$69,375	\$65,833	\$277	\$0	-	\$0	\$385,694
	4 Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0
	TOTAL		\$1,191,000	\$10,000	\$333,000	\$316,000	\$1,330	\$0	\$0	\$0	\$1,851,330
Phase II											
	4 Compound	2007	-	\$0	\$111,000	\$100,000	\$388	\$0	\$127,000	\$1,110,083	\$4,440,333
	3 Compound	2008	-	-	\$190,286	\$171,429	\$665	-	\$217,714	\$1,903,000	\$7,612,000
	2 Compound	2009	-	-	\$31,714	\$28,571	\$665	-	\$36,286	\$317,167	\$1,268,667
	1 Compound	2010	-	-	-	-	-	-	-	-	\$0
	TOTAL		\$0	\$0	\$333,000	\$300,000	\$1,718	\$0	\$381,000	\$3,330,250	\$13,321,000
Total First Costs			\$1,191,000	\$10,000	\$666,000	\$616,000	\$3,048	\$0	\$381,000	\$3,330,250	\$13,321,000
Year	FY	Monitoring	O&M	Corps PM	Other						
	1 Discount	2009	\$0	\$4,700	\$665	-					
	2 Discount	2010	\$0	\$4,700	\$665	-					
	3 Discount	2011	\$0	\$299,700	\$665	-					
	4 Discount	2012	\$0	\$4,700	\$665	-					
	5 Discount	2013	\$0	\$4,700	\$665	-					
	6 Discount	2014	\$0	\$4,700	\$665	-					
	7 Discount	2015	\$0	\$4,700	\$665	-					
	8 Discount	2016	\$0	\$4,700	\$665	-					
	9 Discount	2017	\$0	\$4,700	\$665	-					
	10 Discount	2018	\$0	\$4,700	\$665	-					
	11 Discount	2019	\$0	\$4,700	\$665	-					
	12 Discount	2020	\$0	\$4,700	\$665	-					
	13 Discount	2021	\$0	\$4,700	\$665	-					
	14 Discount	2022	\$0	\$4,700	\$665	-					
	15 Discount	2023	\$0	\$4,700	\$665	-					
	16 Discount	2024	\$0	\$4,700	\$665	-					
	17 Discount	2025	\$0	\$4,700	\$665	-					
	18 Discount	2026	\$0	\$4,700	\$665	-					
	19 Discount	2027	\$0	\$4,700	\$665	-					
	20 Discount	2028	\$0	\$4,700	\$665	-					
	Total		\$0	\$389,000	\$13,300	\$0					

**Coastal Wetlands Conservation and Restoration Plan
Goose Point/Point Platte Marsh Creation Project**

Present Valued Costs		Total Discounted Costs						Amortized Costs				\$2,029,367
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man. Monitoring	S&I	Contingency	Construction Costs	Total First Cost		
Phase I												
7	1.467	2004	\$509,525	\$4,278	\$142,462	\$135,189	\$569	\$0	\$0	\$0	\$0	\$792,023
6	1.389	2005	\$826,955	\$6,943	\$231,214	\$219,411	\$923	\$0	\$0	\$0	\$0	\$1,285,447
5	1.315	2006	\$326,215	\$2,739	\$91,209	\$86,552	\$364	\$0	\$0	\$0	\$0	\$507,080
4	1.245	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$1,662,696	\$13,961	\$464,885	\$441,152	\$1,857	\$0	\$0	\$0	\$0	\$2,584,549
Phase II												
4	1.245	2007	\$0	\$0	\$138,162	\$124,471	\$483	\$0	\$158,078	\$1,381,728	\$5,526,911	\$7,329,832
3	1.178	2008	\$0	\$0	\$224,237	\$202,015	\$784	\$0	\$256,559	\$2,242,534	\$8,970,134	\$11,896,262
2	1.116	2009	\$0	\$0	\$35,382	\$31,876	\$742	\$0	\$40,483	\$353,851	\$1,415,406	\$1,877,740
1	1.056	2010	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$0	\$0	\$397,781	\$358,362	\$2,008	\$0	\$455,119	\$3,978,113	\$15,912,451	\$21,103,834
Total First Cost			\$1,662,696	\$13,961	\$862,666	\$799,513	\$3,865	\$0	\$455,119	\$3,978,113	\$15,912,451	\$23,688,384
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	0.947	2009	\$0	\$4,450	\$630							
-2	0.896	2010	\$0	\$4,213	\$596							
-3	0.849	2011	\$0	\$254,324	\$564							
-4	0.803	2012	\$0	\$3,776	\$534							
-5	0.761	2013	\$0	\$3,575	\$506							
-6	0.720	2014	\$0	\$3,385	\$479							
-7	0.682	2015	\$0	\$3,204	\$453							
-8	0.645	2016	\$0	\$3,034	\$429							
-9	0.611	2017	\$0	\$2,872	\$406							
-10	0.579	2018	\$0	\$2,719	\$385							
-11	0.548	2019	\$0	\$2,574	\$364							
-12	0.519	2020	\$0	\$2,437	\$345							
-13	0.491	2021	\$0	\$2,307	\$326							
-14	0.465	2022	\$0	\$2,185	\$309							
-15	0.440	2023	\$0	\$2,068	\$293							
-16	0.417	2024	\$0	\$1,958	\$277							
-17	0.394	2025	\$0	\$1,854	\$262							
-18	0.373	2026	\$0	\$1,755	\$248							
-19	0.354	2027	\$0	\$1,662	\$235							
-20	0.335	2028	\$0	\$1,573	\$223							
Total		\$0	\$305,924	\$7,865	\$0							

Coastal Wetlands Conservation and Restoration Plan
Goose Point/Point Platte Marsh Creation Project

Fully Funded Costs		Total Fully Funded Costs					Amortized Costs					Total First Cost
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
7	1.028	2004	\$357,169	\$2,999	\$99,863	\$94,765	\$399	\$0	\$0	\$0	\$0	\$555,196
6	1.044	2005	\$621,474	\$5,218	\$173,762	\$164,892	\$694	\$0	\$0	\$0	\$0	\$966,041
5	1.061	2006	\$263,350	\$2,211	\$73,632	\$69,873	\$294	\$0	\$0	\$0	\$0	\$409,360
4	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$1,241,994	\$10,428	\$347,258	\$329,530	\$1,387	\$0	\$0	\$0	\$0	\$1,930,596
Phase II												
4	1.079	2007	\$0	\$0	\$119,814	\$107,940	\$419	\$0	\$137,084	\$1,198,227	\$4,792,907	\$6,356,391
3	1.099	2008	\$0	\$0	\$209,092	\$188,371	\$731	\$0	\$239,231	\$2,091,077	\$8,364,308	\$11,092,810
2	1.119	2009	\$0	\$0	\$35,476	\$31,960	\$744	\$0	\$40,590	\$354,786	\$1,419,144	\$1,882,700
1	1.139	2010	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$0	\$0	\$364,382	\$328,272	\$1,893	\$0	\$416,905	\$3,644,090	\$14,576,359	\$19,331,900
Total Cost			\$1,242,000	\$10,400	\$711,600	\$657,800	\$3,300	\$0	\$416,900	\$3,644,100	\$14,576,400	\$21,262,500

Year	FY	Monitoring	O&M	Corps PM	Other	
-1	1.1186	2009	\$0	\$5,257	\$744	
-2	1.1387	2010	\$0	\$5,352	\$757	
-3	1.1592	2011	\$0	\$347,425	\$771	
-4	1.1801	2012	\$0	\$5,547	\$785	
-5	1.2014	2013	\$0	\$5,646	\$799	
-6	1.2230	2014	\$0	\$5,748	\$813	
-7	1.2450	2015	\$0	\$5,851	\$828	
-8	1.2674	2016	\$0	\$5,957	\$843	
-9	1.2902	2017	\$0	\$6,064	\$858	
-10	1.3134	2018	\$0	\$6,173	\$873	
-11	1.3371	2019	\$0	\$6,284	\$889	
-12	1.3611	2020	\$0	\$6,397	\$905	
-13	1.3856	2021	\$0	\$6,513	\$921	
-14	1.4106	2022	\$0	\$6,630	\$938	
-15	1.4360	2023	\$0	\$6,749	\$955	
-16	1.4618	2024	\$0	\$6,871	\$972	
-17	1.4881	2025	\$0	\$6,994	\$990	
-18	1.5149	2026	\$0	\$7,120	\$1,007	
-19	1.5422	2027	\$0	\$7,248	\$1,026	
-20	1.5700	2028	\$0	\$7,379	\$1,044	
Total			\$0	\$467,200	\$17,700	\$0

D-4

O&M Data

Annual Costs

Annual Inspections	\$4,700
Annual Cost for Operations	\$0
Preventive Maintenance	\$0
Engineering Monitoring @ TY 1-5, 10, 15, 19	\$0

Specific Intermittent Costs:

Construction Items

	Year 2	Year 3	Year 8	Year 10
Replant 10% of Project Area	\$0	\$154,000	\$0	\$0
Half-day Marsh Buggy for Trenasse Creation	\$0	\$50,000	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$204,000	\$0	\$0
Subtotal w/ 25% contin.	\$0	\$255,000	\$0	\$0
Engineer, Design & Administrative Costs				
Engineering and Design Cost	\$0	\$20,000	\$0	#NUM!
Administrative Cost	\$0	\$5,000	\$0	\$0
Eng Survey 0 days @ \$1,460 per day	\$0	\$0	\$0	\$0
Construction Insp 11 days @ \$876 per day	\$0	\$10,000	\$0	\$0
Subtotal	\$0	\$35,000	\$0	#NUM!
Federal S&A	\$0	\$5,000	\$0	\$0
Total	\$0	\$295,000	\$0	#NUM!

Annual Project Costs:

Corps Administration	\$665
Monitoring	\$0

Construction Schedule:

	2004	2005	2006	2007	2008	2009	2009	Total
Plan & Design Start	March-04	7	12	5	0	0	0	24
Plan & Design End	March-06							
Const. Start	March-07							
Const. End	November-08	0	0	0	7	12	2	0
								21

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13
Caernarvon Diversion Outfall Management East

Project Construction Years:	2	Total Project Years	22
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$31,717,600	Total Fully Funded Costs	\$44,736,100

Annual Charges	<u>Present Worth</u>	<u>Average Annual</u>
First Costs	\$33,197,872	\$2,806,856
Monitoring	\$0	\$0
O & M Costs	\$5,777,431	\$488,478
Other Costs	<u>\$7,865</u>	<u>\$665</u>
Total	\$38,983,200	\$3,296,000
Average Annual Habitat Units	103	
Cost Per Habitat Unit	\$378,478	
Total Net Acres	320	

**Coastal Wetlands Conservation and Restoration Plan
Caernarvon Diversion Outfall Management East**

Project Costs

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
5	Compound	2004	\$646,520	\$52,640	\$119,840	\$109,620	\$388	\$0	-	\$0	\$929,008	
4	Compound	2005	\$1,108,320	\$90,240	\$205,440	\$187,920	\$665	\$0	-	\$0	\$1,592,585	
3	Compound	2006	\$554,160	\$45,120	\$102,720	\$93,960	\$333	\$0	-	\$0	\$796,293	
2	Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
TOTAL			\$2,309,000	\$188,000	\$428,000	\$391,500	\$1,385	\$0	\$0	\$0	\$3,317,885	
Phase II												
3	Compound	2006	-	\$2,669,000	\$171,520	\$59,280	\$222	\$0	\$102,240	\$684,160	\$2,736,640	\$6,423,062
2	Compound	2007	-	-	\$514,560	\$177,840	\$665	-	\$306,720	\$2,052,480	\$8,209,920	\$11,262,185
1	Compound	2008	-	-	\$385,920	\$133,380	\$665	-	\$230,040	\$1,539,360	\$6,157,440	\$8,446,805
0	Compound	2009	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0	
TOTAL			\$0	\$2,669,000	\$1,072,000	\$370,500	\$1,552	\$0	\$639,000	\$4,276,000	\$17,104,000	\$26,132,052
Total First Costs			\$2,309,000	\$2,857,000	\$1,500,000	\$762,000	\$2,937	\$0	\$639,000	\$4,276,000	\$17,104,000	\$29,449,937
Year	FY	Monitoring	O&M	Corps PM	Other							
1	Discount	2009	\$0	\$442,700	\$665	-						
2	Discount	2010	\$0	\$442,700	\$665	-						
3	Discount	2011	\$0	\$442,700	\$665	-						
4	Discount	2012	\$0	\$442,700	\$665	-						
5	Discount	2013	\$0	\$712,950	\$665	-						
6	Discount	2014	\$0	\$442,700	\$665	-						
7	Discount	2015	\$0	\$442,700	\$665	-						
8	Discount	2016	\$0	\$442,700	\$665	-						
9	Discount	2017	\$0	\$442,700	\$665	-						
10	Discount	2018	\$0	\$817,700	\$665	-						
11	Discount	2019	\$0	\$442,700	\$665	-						
12	Discount	2020	\$0	\$442,700	\$665	-						
13	Discount	2021	\$0	\$442,700	\$665	-						
14	Discount	2022	\$0	\$442,700	\$665	-						
15	Discount	2023	\$0	\$712,950	\$665	-						
16	Discount	2024	\$0	\$442,700	\$665	-						
17	Discount	2025	\$0	\$442,700	\$665	-						
18	Discount	2026	\$0	\$442,700	\$665	-						
19	Discount	2027	\$0	\$442,700	\$665	-						
20	Discount	2028	\$0	\$442,700	\$665	-						
Total			\$0	\$9,769,500	\$13,300	\$0						

**Coastal Wetlands Conservation and Restoration Plan
Caernarvon Diversion Outfall Management East**

Present Valued Costs		Total Discounted Costs					Amortized Costs					\$3,295,999
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
5	1.315	2004	\$849,993	\$69,207	\$157,556	\$144,120	\$510	\$0	\$0	\$0	\$0	\$1,221,386
4	1.245	2005	\$1,379,533	\$112,322	\$255,712	\$233,905	\$828	\$0	\$0	\$0	\$0	\$1,982,301
3	1.178	2006	\$653,033	\$53,170	\$121,047	\$110,724	\$392	\$0	\$0	\$0	\$0	\$938,367
2	1.116	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$2,882,560	\$234,700	\$534,316	\$488,749	\$1,730	\$0	\$0	\$0	\$0	\$4,142,054
Phase II												
3	1.178	2006	\$0	\$3,145,203	\$202,123	\$69,857	\$261	\$0	\$120,482	\$806,228	\$3,224,912	\$7,569,065
2	1.116	2007	\$0	\$0	\$574,076	\$198,410	\$742	\$0	\$342,196	\$2,289,878	\$9,159,513	\$12,564,815
1	1.056	2008	\$0	\$0	\$407,628	\$140,883	\$702	\$0	\$242,980	\$1,625,949	\$6,503,796	\$8,921,938
0	1.000	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$0	\$3,145,203	\$1,183,827	\$409,149	\$1,706	\$0	\$705,658	\$4,722,055	\$18,888,220	\$29,055,818
Total First Cost			\$2,882,560	\$3,379,903	\$1,718,143	\$897,898	\$3,435	\$0	\$705,658	\$4,722,055	\$18,888,220	\$33,197,872
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	0.947	2009	\$0	\$419,124	\$630							
-2	0.896	2010	\$0	\$396,804	\$596							
-3	0.849	2011	\$0	\$375,672	\$564							
-4	0.803	2012	\$0	\$355,666	\$534							
-5	0.761	2013	\$0	\$542,282	\$506							
-6	0.720	2014	\$0	\$318,793	\$479							
-7	0.682	2015	\$0	\$301,816	\$453							
-8	0.645	2016	\$0	\$285,743	\$429							
-9	0.611	2017	\$0	\$270,526	\$406							
-10	0.579	2018	\$0	\$473,071	\$385							
-11	0.548	2019	\$0	\$242,480	\$364							
-12	0.519	2020	\$0	\$229,567	\$345							
-13	0.491	2021	\$0	\$217,341	\$326							
-14	0.465	2022	\$0	\$205,767	\$309							
-15	0.440	2023	\$0	\$313,732	\$293							
-16	0.417	2024	\$0	\$184,434	\$277							
-17	0.394	2025	\$0	\$174,612	\$262							
-18	0.373	2026	\$0	\$165,314	\$248							
-19	0.354	2027	\$0	\$156,510	\$235							
-20	0.335	2028	\$0	\$148,175	\$223							
Total			\$0	\$5,777,431	\$7,865	\$0						

**Coastal Wetlands Conservation and Restoration Plan
Caernarvon Diversion Outfall Management East**

Fully Funded Costs		Total Fully Funded Costs					Amortized Costs					Total First Cost
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
5	1.028	2004	\$664,749	\$54,124	\$123,219	\$112,711	\$399	\$0	\$0	\$0	\$955,201	
4	1.044	2005	\$1,156,663	\$94,176	\$214,401	\$196,117	\$694	\$0	\$0	\$0	\$1,662,050	
3	1.061	2006	\$588,163	\$47,889	\$109,023	\$99,725	\$353	\$0	\$0	\$0	\$845,153	
2	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$2,409,574	\$196,189	\$446,643	\$408,553	\$1,446	\$0	\$0	\$0	\$3,462,404	
Phase II												
3	1.061	2006	\$0	\$2,832,768	\$182,044	\$62,917	\$235	\$0	\$108,513	\$726,140	\$2,904,559	\$6,817,177
2	1.079	2007	\$0	\$0	\$555,417	\$191,961	\$718	\$0	\$331,074	\$2,215,452	\$8,861,809	\$12,156,431
1	1.099	2008	\$0	\$0	\$424,061	\$146,562	\$731	\$0	\$252,775	\$1,691,498	\$6,765,991	\$9,281,618
0	1.119	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$0	\$2,832,768	\$1,161,523	\$401,441	\$1,684	\$0	\$692,363	\$4,633,089	\$18,532,358	\$28,255,226
Total Cost			\$2,409,600	\$3,029,000	\$1,608,200	\$810,000	\$3,100	\$0	\$692,400	\$4,633,100	\$18,532,400	\$31,717,600
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	1.1186	2009	\$0	\$495,209	\$744							
-2	1.1387	2010	\$0	\$504,123	\$757							
-3	1.1592	2011	\$0	\$513,197	\$771							
-4	1.1801	2012	\$0	\$522,434	\$785							
-5	1.2014	2013	\$0	\$856,504	\$799							
-6	1.2230	2014	\$0	\$541,411	\$813							
-7	1.2450	2015	\$0	\$551,157	\$828							
-8	1.2674	2016	\$0	\$561,078	\$843							
-9	1.2902	2017	\$0	\$571,177	\$858							
-10	1.3134	2018	\$0	\$1,073,997	\$873							
-11	1.3371	2019	\$0	\$591,924	\$889							
-12	1.3611	2020	\$0	\$602,579	\$905							
-13	1.3856	2021	\$0	\$613,426	\$921							
-14	1.4106	2022	\$0	\$624,467	\$938							
-15	1.4360	2023	\$0	\$1,023,781	\$955							
-16	1.4618	2024	\$0	\$647,150	\$972							
-17	1.4881	2025	\$0	\$658,799	\$990							
-18	1.5149	2026	\$0	\$670,657	\$1,007							
-19	1.5422	2027	\$0	\$682,729	\$1,026							
-20	1.5700	2028	\$0	\$695,018	\$1,044							
Total			\$0	\$13,000,800	\$17,700	\$0						

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	<u>17,104,000</u>
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	<u>21,380,000</u>

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

<i>Engineering and Design</i>		\$2,309,000
Engineering	\$1,488,000	
Geotechnical Investigation	\$150,000	
Hydrologic Modeling	\$300,000	
Data Collection	\$200,000	
Cultural Resources	\$53,000	
HTRW	\$15,000	
NEPA Compliance	\$103,000	
<i>Supervision and Administration</i>		\$428,000

State Costs

<i>Supervision and Administration</i>		\$370,500
<i>Ecological Review Costs</i>		\$21,000
<i>Easements and Land Rights</i>		\$188,000
<i>Monitoring</i>		\$0
Monitoring Plan Development	\$0	
Monitoring Protocol Cost *	\$0	

Total Phase I Cost Estimate **\$3,317,000**

* Monitoring Protocol requires a minimum of one year pre-construction monitoring at a specified cost based on project type and area.

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>		\$21,380,000
Lands or Oyster Issues	0 lease acres	\$2,669,000
<i>Supervision and Inspection</i>	730 days @ 876 per day	\$639,000
<i>Supervision and Administration</i>		\$1,072,000

State Costs

<i>Supervision and Administration</i>		\$370,500
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Total Phase II Cost Estimate **\$26,131,000**

TOTAL ESTIMATED PROJECT FIRST COST **29,448,000**

O&M Data

Annual Costs

Annual Inspections	\$4,700
Annual Cost for Operations	\$0
Preventive Maintenance	\$438,000
Engineering Monitoring @ TY1-5, 10, 15, 19	\$0

Specific Intermittent Costs:

Construction Items

	Year 2	Year 5	Year 10	Year 15
Mob & Demob	\$0	\$50,000	\$75,000	\$50,000
Channel Dredging (50% original qty)	\$0	\$111,200	\$111,200	\$111,200
Clearing & Snagging	\$0	\$0	\$50,000	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$161,200	\$236,200	\$161,200
Subtotal w/ 25% contin.	\$0	\$202,000	\$295,000	\$202,000
Engineer, Design & Administrative Costs				
Engineering and Design Cost	\$0	\$16,000	\$23,000	\$16,000
Administrative Cost	\$0	\$4,000	\$6,000	\$4,000
Eng Survey 5 days @ \$1,460 per day	\$0	\$7,000	\$7,000	\$7,000
Construction Insp 45 days @ \$876 per day	\$0	\$39,000	\$39,000	\$39,000
Subtotal	\$0	\$66,000	\$75,000	\$66,000
Federal S&A	\$0	\$4,000	\$6,000	\$4,000
Total	\$0	\$272,000	\$376,000	\$272,000

Annual Project Costs:

Corps Administration	\$665
Monitoring	\$0

Construction Schedule:

	2004	2005	2006	2007	2008	2008	2008	Total
Plan & Design Start	March-04	7	12	6	0	0	0	25
Plan & Design End	March-06							
Const. Start	June-06							
Const. End	June-08	0	0	4	12	9	0	25

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13
Naomi Siphon Area Marsh Creation/Nourishment

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$9,054,400	Total Fully Funded Costs	\$9,192,000

Annual Charges	<u>Present Worth</u>	<u>Average Annual</u>
First Costs	\$9,440,299	\$798,171
Monitoring	\$0	\$0
O & M Costs	\$55,589	\$4,700
Other Costs	<u>\$7,865</u>	<u>\$665</u>
Total	\$9,503,800	\$803,500
Average Annual Habitat Units	77	
Cost Per Habitat Unit	\$123,426	
Total Net Acres	135	

**Coastal Wetlands Conservation and Restoration Plan
Naomi Siphon Area Marsh Creation/Nourishment**

Project Costs 0

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
3	Compound	2004	\$382,667	\$116,667	\$82,542	\$91,875	\$388	\$0	-	\$0	\$674,138	
2	Compound	2005	\$273,333	\$83,333	\$58,958	\$65,625	\$277	\$0	-	\$0	\$481,527	
1	Compound	2006	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
0	Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
TOTAL			\$656,000	\$200,000	\$141,500	\$157,500	\$665	\$0	\$0	\$0	\$1,155,665	
Phase II												
2	Compound	2005	-	\$0	\$70,750	\$70,750	\$166	\$0	\$58,000	\$706,750	\$2,827,000	\$3,733,416
1	Compound	2006	-	\$0	\$70,750	\$70,750	\$166	-	\$58,000	\$706,750	\$2,827,000	\$3,733,416
0	Compound	2007	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	
0	Compound	2008	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	
TOTAL			\$0	\$0	\$141,500	\$141,500	\$333	\$0	\$116,000	\$1,413,500	\$5,654,000	\$7,466,833
Total First Costs			\$656,000	\$200,000	\$283,000	\$299,000	\$998	\$0	\$116,000	\$1,413,500	\$5,654,000	\$8,622,498

Year	FY	Monitoring	O&M	Corps PM	Other	
1	Discount	2007	\$0	\$4,700	\$665	-
2	Discount	2008	\$0	\$4,700	\$665	-
3	Discount	2009	\$0	\$4,700	\$665	-
4	Discount	2010	\$0	\$4,700	\$665	-
5	Discount	2011	\$0	\$4,700	\$665	-
6	Discount	2012	\$0	\$4,700	\$665	-
7	Discount	2013	\$0	\$4,700	\$665	-
8	Discount	2014	\$0	\$4,700	\$665	-
9	Discount	2015	\$0	\$4,700	\$665	-
10	Discount	2016	\$0	\$4,700	\$665	-
11	Discount	2017	\$0	\$4,700	\$665	-
12	Discount	2018	\$0	\$4,700	\$665	-
13	Discount	2019	\$0	\$4,700	\$665	-
14	Discount	2020	\$0	\$4,700	\$665	-
15	Discount	2021	\$0	\$4,700	\$665	-
16	Discount	2022	\$0	\$4,700	\$665	-
17	Discount	2023	\$0	\$4,700	\$665	-
18	Discount	2024	\$0	\$4,700	\$665	-
19	Discount	2025	\$0	\$4,700	\$665	-
20	Discount	2026	\$0	\$4,700	\$665	-
Total			\$0	\$94,000	\$13,300	\$0

**Coastal Wetlands Conservation and Restoration Plan
Naomi Siphon Area Marsh Creation/Nourishment**

Present Valued Costs			Total Discounted Costs					Amortized Costs			Total First Cost	
Year	Fiscal Year		E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
3	1.178	2004	\$450,942	\$137,482	\$97,269	\$108,267	\$457	\$0	\$0	\$0	\$0	\$794,418
2	1.116	2005	\$304,948	\$92,972	\$65,778	\$73,215	\$309	\$0	\$0	\$0	\$0	\$537,222
1	1.056	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.000	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$755,890	\$230,454	\$163,046	\$181,483	\$766	\$0	\$0	\$0	\$0	\$1,331,640
Phase II												
2	1.116	2005	\$0	\$0	\$78,933	\$78,933	\$185	\$0	\$64,709	\$788,496	\$3,153,982	\$4,165,238
1	1.056	2006	\$0	\$0	\$74,730	\$74,730	\$176	\$0	\$61,263	\$746,505	\$2,986,019	\$3,943,421
0	1.000	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.000	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$0	\$0	\$153,663	\$153,663	\$361	\$0	\$125,971	\$1,535,000	\$6,140,001	\$8,108,659
Total First Cost			\$755,890	\$230,454	\$316,709	\$335,146	\$1,127	\$0	\$125,971	\$1,535,000	\$6,140,001	\$9,440,299
Year	FY		Monitoring	O&M	Corps PM	Other						
-1	0.947	2006	\$0	\$4,450	\$630							
-2	0.896	2007	\$0	\$4,213	\$596							
-3	0.849	2008	\$0	\$3,988	\$564							
-4	0.803	2009	\$0	\$3,776	\$534							
-5	0.761	2010	\$0	\$3,575	\$506							
-6	0.720	2011	\$0	\$3,385	\$479							
-7	0.682	2012	\$0	\$3,204	\$453							
-8	0.645	2013	\$0	\$3,034	\$429							
-9	0.611	2014	\$0	\$2,872	\$406							
-10	0.579	2015	\$0	\$2,719	\$385							
-11	0.548	2016	\$0	\$2,574	\$364							
-12	0.519	2017	\$0	\$2,437	\$345							
-13	0.491	2018	\$0	\$2,307	\$326							
-14	0.465	2019	\$0	\$2,185	\$309							
-15	0.440	2020	\$0	\$2,068	\$293							
-16	0.417	2021	\$0	\$1,958	\$277							
-17	0.394	2022	\$0	\$1,854	\$262							
-18	0.373	2023	\$0	\$1,755	\$248							
-19	0.354	2024	\$0	\$1,662	\$235							
-20	0.335	2025	\$0	\$1,573	\$223							
Total			\$0	\$55,589	\$7,865	\$0						

**Coastal Wetlands Conservation and Restoration Plan
Naomi Siphon Area Marsh Creation/Nourishment**

Fully Funded Costs		Total Fully Funded Costs					Amortized Costs					\$777,177
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
3	1.028	2004	\$393,456	\$119,956	\$84,869	\$94,465	\$399	\$0	\$0	\$0	\$693,145	
2	1.044	2005	\$285,256	\$86,968	\$61,530	\$68,487	\$289	\$0	\$0	\$0	\$502,530	
1	1.061	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$678,712	\$206,924	\$146,399	\$162,953	\$688	\$0	\$0	\$0	\$1,195,676	
Phase II												
2	1.044	2005	\$0	\$0	\$73,836	\$73,836	\$174	\$0	\$60,530	\$737,577	\$2,950,308	\$3,896,260
1	1.061	2006	\$0	\$0	\$75,091	\$75,091	\$176	\$0	\$61,559	\$750,116	\$3,000,463	\$3,962,497
0	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.099	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$0	\$0	\$148,927	\$148,927	\$350	\$0	\$122,089	\$1,487,693	\$5,950,771	\$7,858,757
Total Cost			\$678,700	\$206,900	\$295,300	\$311,900	\$1,000	\$0	\$122,100	\$1,487,700	\$5,950,800	\$9,054,400
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	1.0614	2006	\$0	\$5,073	\$706							
-2	1.0794	2007	\$0	\$5,165	\$718							
-3	1.0988	2008	\$0	\$5,257	\$731							
-4	1.1186	2009	\$0	\$5,352	\$744							
-5	1.1387	2010	\$0	\$5,448	\$757							
-6	1.1592	2011	\$0	\$5,547	\$771							
-7	1.1801	2012	\$0	\$5,646	\$785							
-8	1.2014	2013	\$0	\$5,748	\$799							
-9	1.2230	2014	\$0	\$5,851	\$813							
-10	1.2450	2015	\$0	\$5,957	\$828							
-11	1.2674	2016	\$0	\$6,064	\$843							
-12	1.2902	2017	\$0	\$6,173	\$858							
-13	1.3134	2018	\$0	\$6,284	\$873							
-14	1.3371	2019	\$0	\$6,397	\$889							
-15	1.3611	2020	\$0	\$6,513	\$905							
-16	1.3856	2021	\$0	\$6,630	\$921							
-17	1.4106	2022	\$0	\$6,749	\$938							
-18	1.4360	2023	\$0	\$6,871	\$955							
-19	1.4618	2024	\$0	\$6,994	\$972							
-20	1.4881	2025	\$0	\$7,120	\$990							
Total			\$0	\$120,800	\$16,800	\$0						

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	<u>5,654,000</u>
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	<u>7,068,000</u>

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

<i>Engineering and Design</i>		\$656,000
Engineering	\$441,000	
Geotechnical Investigation	\$75,000	
Hydrologic Modeling	\$0	
Data Collection	\$100,000	
Cultural Resources	\$10,000	
NEPA Compliance	\$30,000	
0	\$0	
<i>Supervision and Administration</i>		\$141,500

State Costs

<i>Supervision and Administration</i>		\$141,500
<i>Ecological Review Costs</i>		\$16,000
<i>Easements and Land Rights</i>		\$200,000
<i>Monitoring</i>		\$0
Monitoring Plan Development	\$0	
Monitoring Protocol Cost *	\$0	

Total Phase I Cost Estimate **\$1,155,000**

* Monitoring Protocol requires a minimum of one year pre-construction monitoring at a specified cost based on project type and area.

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>		\$7,068,000
Lands or Oyster Issues	0 lease acres	\$0
<i>Supervision and Inspection</i>	132 days @ 876 per day	\$116,000
<i>Supervision and Administration</i>		\$141,500

State Costs

<i>Supervision and Administration</i>		\$141,500
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Total Phase II Cost Estimate **\$7,467,000**

TOTAL ESTIMATED PROJECT FIRST COST **8,622,000**

O&M Data

Annual Costs

Annual Inspections	\$4,700
Annual Cost for Operations	\$0
Preventive Maintenance	\$0
Engineering Monitoring @ TY1-5, 10, 15, 19	\$0

Specific Intermittent Costs:

Construction Items

	Year 2	Year 3	Year 8	Year 10
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$0
Subtotal w/ 25% contin.	\$0	\$0	\$0	\$0
Engineer, Design & Administrative Costs				
Engineering and Design Cost	\$0	#NUM!	\$0	#NUM!
Administrative Cost	\$0	\$0	\$0	\$0
Eng Survey 0 days @ \$1,460 per day	\$0	\$0	\$0	\$0
Construction Insp 0 days @ \$876 per day	\$0	\$0	\$0	\$0
Subtotal	\$0	#NUM!	\$0	#NUM!
Federal S&A				
Total	\$0	#NUM!	\$0	#NUM!

Annual Project Costs:

Corps Administration	\$665
Monitoring	\$0

Construction Schedule:

	2004	2005	2006	2007	2008	2009	2010	Total
Plan & Design Start	March-04	7	5	0	0	0	0	12
Plan & Design End	March-05							
Const. Start	July-05							
Const. End	December-05	0	3	3	0	0	0	6

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13
Spanish Pass Diversion

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$12,261,000	Total Fully Funded Costs	\$13,927,800

Annual Charges	Present Worth	Average Annual
First Costs	\$12,432,504	\$1,051,159
Monitoring	\$0	\$0
O & M Costs	\$726,471	\$61,423
Other Costs	\$7,865	\$665
Total	\$13,166,800	\$1,113,200
Average Annual Habitat Units	79	
Cost Per Habitat Unit	\$166,668	
Total Net Acres	433	

**Coastal Wetlands Conservation and Restoration Plan
Spanish Pass Diversion**

Project Costs 0

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I											
4	Compound	2004	\$196,778	\$15,556	\$32,407	\$37,074	\$388	\$0	-	\$0	\$282,203
3	Compound	2005	\$337,333	\$26,667	\$55,556	\$63,556	\$665	\$0	-	\$0	\$483,776
2	Compound	2006	\$224,889	\$17,778	\$37,037	\$42,370	\$443	\$0	-	\$0	\$322,517
1	Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0
TOTAL			\$759,000	\$60,000	\$125,000	\$143,000	\$1,496	\$0	\$0	\$0	\$1,088,496
Phase II											
2	Compound	2006	-	\$1,166,667	\$60,000	\$41,667	\$222	\$0	\$106,667	\$415,833	\$3,454,388
1	Compound	2007	-	\$2,333,333	\$120,000	\$83,333	\$443	-	\$213,333	\$831,667	\$6,908,777
0	Compound	2008	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0
0	Compound	2009	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0
TOTAL			\$0	\$3,500,000	\$180,000	\$125,000	\$665	\$0	\$320,000	\$1,247,500	\$4,990,000
Total First Costs			\$759,000	\$3,560,000	\$305,000	\$268,000	\$2,161	\$0	\$320,000	\$1,247,500	\$4,990,000

Year	FY	Monitoring	O&M	Corps PM	Other
1	Discount	2008	\$0	\$4,700	\$665
2	Discount	2009	\$0	\$4,700	\$665
3	Discount	2010	\$0	\$4,700	\$665
4	Discount	2011	\$0	\$4,700	\$665
5	Discount	2012	\$0	\$4,700	\$665
6	Discount	2013	\$0	\$4,700	\$665
7	Discount	2014	\$0	\$589,825	\$665
8	Discount	2015	\$0	\$4,700	\$665
9	Discount	2016	\$0	\$4,700	\$665
10	Discount	2017	\$0	\$4,700	\$665
11	Discount	2018	\$0	\$4,700	\$665
12	Discount	2019	\$0	\$4,700	\$665
13	Discount	2020	\$0	\$4,700	\$665
14	Discount	2021	\$0	\$589,825	\$665
15	Discount	2022	\$0	\$4,700	\$665
16	Discount	2023	\$0	\$4,700	\$665
17	Discount	2024	\$0	\$4,700	\$665
18	Discount	2025	\$0	\$4,700	\$665
19	Discount	2026	\$0	\$4,700	\$665
20	Discount	2027	\$0	\$4,700	\$665
Total			\$0	\$1,264,250	\$13,300

**Coastal Wetlands Conservation and Restoration Plan
Spanish Pass Diversion**

Present Valued Costs			Total Discounted Costs					Amortized Costs			\$1,113,247	
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man. Monitoring	S&I	Contingency	Construction Costs	Total First Cost		
Phase I												
4	1.245	2004	\$244,931	\$19,362	\$40,338	\$46,146	\$483	\$0	\$0	\$0	\$351,260	
3	1.178	2005	\$397,520	\$31,425	\$65,468	\$74,895	\$784	\$0	\$0	\$0	\$570,092	
2	1.116	2006	\$250,900	\$19,834	\$41,321	\$47,271	\$495	\$0	\$0	\$0	\$359,821	
1	1.056	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total			\$893,351	\$70,621	\$147,126	\$168,313	\$1,761	\$0	\$0	\$0	\$1,281,172	
Phase II												
2	1.116	2006	\$0	\$1,301,608	\$66,940	\$46,486	\$247	\$0	\$119,004	\$463,930	\$1,855,721	\$3,853,937
1	1.056	2007	\$0	\$2,464,583	\$126,750	\$88,021	\$468	\$0	\$225,333	\$878,448	\$3,513,792	\$7,297,395
0	1.000	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.000	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total			\$0	\$3,766,191	\$193,690	\$134,507	\$716	\$0	\$344,338	\$1,342,378	\$5,369,513	\$11,151,332
Total First Cost			\$893,351	\$3,836,812	\$340,816	\$302,819	\$2,477	\$0	\$344,338	\$1,342,378	\$5,369,513	\$12,432,504
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	0.947	2008	\$0	\$4,450	\$630							
-2	0.896	2009	\$0	\$4,213	\$596							
-3	0.849	2010	\$0	\$3,988	\$564							
-4	0.803	2011	\$0	\$3,776	\$534							
-5	0.761	2012	\$0	\$3,575	\$506							
-6	0.720	2013	\$0	\$3,385	\$479							
-7	0.682	2014	\$0	\$402,120	\$453							
-8	0.645	2015	\$0	\$3,034	\$429							
-9	0.611	2016	\$0	\$2,872	\$406							
-10	0.579	2017	\$0	\$2,719	\$385							
-11	0.548	2018	\$0	\$2,574	\$364							
-12	0.519	2019	\$0	\$2,437	\$345							
-13	0.491	2020	\$0	\$2,307	\$326							
-14	0.465	2021	\$0	\$274,151	\$309							
-15	0.440	2022	\$0	\$2,068	\$293							
-16	0.417	2023	\$0	\$1,958	\$277							
-17	0.394	2024	\$0	\$1,854	\$262							
-18	0.373	2025	\$0	\$1,755	\$248							
-19	0.354	2026	\$0	\$1,662	\$235							
-20	0.335	2027	\$0	\$1,573	\$223							
Total			\$0	\$726,471	\$7,865	\$0						

**Coastal Wetlands Conservation and Restoration Plan
Spanish Pass Diversion**

Fully Funded Costs		Total Fully Funded Costs					Amortized Costs					Total First Cost
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	1.028	2004	\$202,326	\$15,994	\$33,321	\$38,119	\$399	\$0	\$0	\$0	\$0	\$290,159
3	1.044	2005	\$352,047	\$27,830	\$57,979	\$66,328	\$694	\$0	\$0	\$0	\$0	\$504,877
2	1.061	2006	\$238,688	\$18,869	\$39,310	\$44,970	\$471	\$0	\$0	\$0	\$0	\$342,307
1	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$793,061	\$62,693	\$130,610	\$149,417	\$1,563	\$0	\$0	\$0	\$0	\$1,137,344
Phase II												
2	1.061	2006	\$0	\$1,238,253	\$63,682	\$44,223	\$235	\$0	\$113,212	\$441,349	\$1,765,395	\$3,666,348
1	1.079	2007	\$0	\$2,518,606	\$129,528	\$89,950	\$479	\$0	\$230,273	\$897,703	\$3,590,812	\$7,457,351
0	1.099	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.119	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$0	\$3,756,859	\$193,210	\$134,174	\$714	\$0	\$343,484	\$1,339,052	\$5,356,207	\$11,123,699
Total Cost			\$793,100	\$3,819,600	\$323,800	\$283,600	\$2,300	\$0	\$343,500	\$1,339,100	\$5,356,200	\$12,261,000
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	1.0988	2008	\$0	\$5,165	\$731							
-2	1.1186	2009	\$0	\$5,257	\$744							
-3	1.1387	2010	\$0	\$5,352	\$757							
-4	1.1592	2011	\$0	\$5,448	\$771							
-5	1.1801	2012	\$0	\$5,547	\$785							
-6	1.2014	2013	\$0	\$5,646	\$799							
-7	1.2230	2014	\$0	\$721,342	\$813							
-8	1.2450	2015	\$0	\$5,851	\$828							
-9	1.2674	2016	\$0	\$5,957	\$843							
-10	1.2902	2017	\$0	\$6,064	\$858							
-11	1.3134	2018	\$0	\$6,173	\$873							
-12	1.3371	2019	\$0	\$6,284	\$889							
-13	1.3611	2020	\$0	\$6,397	\$905							
-14	1.3856	2021	\$0	\$817,289	\$921							
-15	1.4106	2022	\$0	\$6,630	\$938							
-16	1.4360	2023	\$0	\$6,749	\$955							
-17	1.4618	2024	\$0	\$6,871	\$972							
-18	1.4881	2025	\$0	\$6,994	\$990							
-19	1.5149	2026	\$0	\$7,120	\$1,007							
-20	1.5422	2027	\$0	\$7,248	\$1,026							
Total			\$0	\$1,649,400	\$17,400	\$0						

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	<u>4,990,000</u>
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	<u>6,238,000</u>

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

<i>Engineering and Design</i>		\$759,000
Engineering	\$324,000	
Geotechnical Investigation	\$100,000	
Hydrologic Modeling	\$100,000	
Data Collection	\$100,000	
Cultural Resources	\$33,000	
HTRW	\$13,000	
NEPA Compliance	\$89,000	
<i>Supervision and Administration</i>		\$125,000

State Costs

<i>Supervision and Administration</i>		\$125,000
<i>Ecological Review Costs</i>		\$18,000
<i>Easements and Land Rights</i>		\$60,000
<i>Monitoring</i>		\$0
Monitoring Plan Development	\$0	
Monitoring Protocol Cost *	\$0	

Total Phase I Cost Estimate **\$1,087,000**

* Monitoring Protocol requires a minimum of one year pre-construction monitoring at a specified cost based on project type and area.

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>		\$6,238,000
Lands or Oyster Issues	0 lease acres	\$3,500,000
<i>Supervision and Inspection</i>	365 days @ 876 per day	\$320,000
<i>Supervision and Administration</i>		\$180,000

State Costs

<i>Supervision and Administration</i>		\$125,000
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Total Phase II Cost Estimate **\$10,363,000**

TOTAL ESTIMATED PROJECT FIRST COST **11,450,000**

O&M Data

Annual Costs

Annual Inspections	\$4,700
Annual Cost for Operations	\$0
Preventive Maintenance	\$0
Engineering Monitoring @ TY1-5, 10, 15, 19	\$0

Specific Intermittent Costs:

Construction Items

	Year 2	Year 7	\$0	Year 14
Mob & Demob	\$0	\$75,000	\$0	\$75,000
Rock (25% in year 7 and 25% in year 14)	\$0	\$276,500	\$0	\$276,500
Pile Cluster Replacement (50% in year 7 and 50% in year 14)	\$0	\$25,000	\$0	\$25,000
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$376,500	\$0	\$376,500
Subtotal w/ 25% contin.	\$0	\$471,000	\$0	\$471,000
Engineer, Design & Administrative Costs				
Engineering and Design Cost	\$0	\$35,000	\$0	\$35,000
Administrative Cost	\$0	\$9,500	\$0	\$9,500
Eng Survey 5 days @ \$1,460 per day	\$0	\$7,000	\$0	\$7,000
Construction Insp 60 days @ \$876 per day	\$0	\$53,000	\$0	\$53,000
Subtotal	\$0	\$105,000	\$0	\$105,000
Federal S&A	\$0	\$9,500	\$0	\$9,500
Total	\$0	\$585,500	\$0	\$585,500

Annual Project Costs:

Corps Administration	\$665
Monitoring	\$0

Construction Schedule:

		2004	2005	2006	2007	2008	2009	2010	Total
Plan & Design Start	March-04	7	12	8	0	0	0	0	27
Plan & Design End	March-06								
Const. Start	June-06								
Const. End	June-07	0	0	4	8	0	0	0	12

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13
Bayou Sale Ridge Protection

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$22,885,300	Total Fully Funded Costs	\$32,103,000

Annual Charges	<u>Present Worth</u>	<u>Average Annual</u>
First Costs	\$22,960,473	\$1,941,292
Monitoring	\$0	\$0
O & M Costs	\$5,384,431	\$455,250
Other Costs	<u>\$7,865</u>	<u>\$665</u>
Total	\$28,352,800	\$2,397,200
Average Annual Habitat Units	153	
Cost Per Habitat Unit	\$185,312	
Total Net Acres	329	

Coastal Wetlands Conservation and Restoration Plan
Bayou Sale Ridge Protection

Project Costs

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I											
	4 Compound	2004	\$395,792	\$58,333	\$78,896	\$97,271	\$388	\$0	-	\$0	\$630,680
	3 Compound	2005	\$678,500	\$100,000	\$135,250	\$166,750	\$665	\$0	-	\$0	\$1,081,165
	2 Compound	2006	\$282,708	\$41,667	\$56,354	\$69,479	\$277	\$0	-	\$0	\$450,485
	1 Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0
	TOTAL		\$1,357,000	\$200,000	\$270,500	\$333,500	\$1,330	\$0	\$0	\$0	\$2,162,330
Phase II											
	2 Compound	2006	-	\$0	\$38,643	\$45,786	\$111	\$0	\$78,286	\$514,821	\$2,736,932
	1 Compound	2007	-	-	\$231,857	\$274,714	\$665	-	\$469,714	\$3,088,929	\$16,421,594
	0 Compound	2008	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0
	0 Compound	2009	-	-	\$0	\$0	\$0	-	\$0	\$0	\$0
	TOTAL		\$0	\$0	\$270,500	\$320,500	\$776	\$0	\$548,000	\$3,603,750	\$19,158,526
Total First Costs			\$1,357,000	\$200,000	\$541,000	\$654,000	\$2,106	\$0	\$548,000	\$3,603,750	\$21,320,856

Year	FY	Monitoring	O&M	Corps PM	Other
1 Discount	2008	\$0	\$4,700	\$665	-
2 Discount	2009	\$0	\$4,700	\$665	-
3 Discount	2010	\$0	\$4,899,450	\$665	-
4 Discount	2011	\$0	\$4,700	\$665	-
5 Discount	2012	\$0	\$4,700	\$665	-
6 Discount	2013	\$0	\$4,700	\$665	-
7 Discount	2014	\$0	\$4,700	\$665	-
8 Discount	2015	\$0	\$4,700	\$665	-
9 Discount	2016	\$0	\$4,700	\$665	-
10 Discount	2017	\$0	\$4,700	\$665	-
11 Discount	2018	\$0	\$4,700	\$665	-
12 Discount	2019	\$0	\$4,700	\$665	-
13 Discount	2020	\$0	\$4,700	\$665	-
14 Discount	2021	\$0	\$2,533,075	\$665	-
15 Discount	2022	\$0	\$4,700	\$665	-
16 Discount	2023	\$0	\$4,700	\$665	-
17 Discount	2024	\$0	\$4,700	\$665	-
18 Discount	2025	\$0	\$4,700	\$665	-
19 Discount	2026	\$0	\$4,700	\$665	-
20 Discount	2027	\$0	\$4,700	\$665	-
Total		\$0	\$7,517,125	\$13,300	\$0

Coastal Wetlands Conservation and Restoration Plan
Bayou Sale Ridge Protection

Present Valued Costs		Total Discounted Costs					Amortized Costs					\$2,397,206
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man. Monitoring	S&I	Contingency	Construction Costs	Total First Cost		
Phase I												
4	1.245	2004	\$492,644	\$72,608	\$98,202	\$121,074	\$483	\$0	\$0	\$0	\$0	\$785,011
3	1.178	2005	\$799,558	\$117,842	\$159,381	\$196,502	\$784	\$0	\$0	\$0	\$0	\$1,274,067
2	1.116	2006	\$315,408	\$46,486	\$62,872	\$77,515	\$309	\$0	\$0	\$0	\$0	\$502,590
1	1.056	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$1,607,610	\$236,936	\$320,456	\$395,091	\$1,576	\$0	\$0	\$0	\$0	\$2,561,668
Phase II												
2	1.116	2006	\$0	\$0	\$43,112	\$51,081	\$124	\$0	\$87,341	\$574,368	\$2,297,471	\$3,053,497
1	1.056	2007	\$0	\$0	\$244,899	\$290,167	\$702	\$0	\$496,136	\$3,262,681	\$13,050,723	\$17,345,308
0	1.000	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.000	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$0	\$0	\$288,012	\$341,248	\$826	\$0	\$583,476	\$3,837,049	\$15,348,194	\$20,398,805
Total First Cost			\$1,607,610	\$236,936	\$608,467	\$736,339	\$2,402	\$0	\$583,476	\$3,837,049	\$15,348,194	\$22,960,473
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	0.947	2008	\$0	\$4,450	\$630							
-2	0.896	2009	\$0	\$4,213	\$596							
-3	0.849	2010	\$0	\$4,157,643	\$564							
-4	0.803	2011	\$0	\$3,776	\$534							
-5	0.761	2012	\$0	\$3,575	\$506							
-6	0.720	2013	\$0	\$3,385	\$479							
-7	0.682	2014	\$0	\$3,204	\$453							
-8	0.645	2015	\$0	\$3,034	\$429							
-9	0.611	2016	\$0	\$2,872	\$406							
-10	0.579	2017	\$0	\$2,719	\$385							
-11	0.548	2018	\$0	\$2,574	\$364							
-12	0.519	2019	\$0	\$2,437	\$345							
-13	0.491	2020	\$0	\$2,307	\$326							
-14	0.465	2021	\$0	\$1,177,373	\$309							
-15	0.440	2022	\$0	\$2,068	\$293							
-16	0.417	2023	\$0	\$1,958	\$277							
-17	0.394	2024	\$0	\$1,854	\$262							
-18	0.373	2025	\$0	\$1,755	\$248							
-19	0.354	2026	\$0	\$1,662	\$235							
-20	0.335	2027	\$0	\$1,573	\$223							
Total			\$0	\$5,384,431	\$7,865	\$0						

Coastal Wetlands Conservation and Restoration Plan
Bayou Sale Ridge Protection

Fully Funded Costs			Total Fully Funded Costs					Amortized Costs				Total First Cost
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	1.028	2004	\$406,951	\$59,978	\$81,120	\$100,013	\$399	\$0	\$0	\$0	\$648,462	
3	1.044	2005	\$708,095	\$104,362	\$141,149	\$174,023	\$694	\$0	\$0	\$0	\$1,128,323	
2	1.061	2006	\$300,055	\$44,223	\$59,812	\$73,742	\$294	\$0	\$0	\$0	\$478,127	
1	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$1,415,101	\$208,563	\$282,082	\$347,779	\$1,387	\$0	\$0	\$0	\$2,254,912	
Phase II												
2	1.061	2006	\$0	\$0	\$41,014	\$48,595	\$118	\$0	\$83,089	\$546,411	\$2,904,869	
1	1.079	2007	\$0	\$0	\$250,267	\$296,527	\$718	\$0	\$507,011	\$3,334,197	\$17,725,510	
0	1.099	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.119	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$0	\$0	\$291,281	\$345,122	\$835	\$0	\$590,100	\$3,880,608	\$20,630,379	
Total Cost			\$1,415,100	\$208,600	\$573,400	\$692,900	\$2,200	\$0	\$590,100	\$3,880,600	\$15,522,400	\$22,885,300
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	1.0988	2008	\$0	\$5,165	\$731							
-2	1.1186	2009	\$0	\$5,257	\$744							
-3	1.1387	2010	\$0	\$5,579,228	\$757							
-4	1.1592	2011	\$0	\$5,448	\$771							
-5	1.1801	2012	\$0	\$5,547	\$785							
-6	1.2014	2013	\$0	\$5,646	\$799							
-7	1.2230	2014	\$0	\$5,748	\$813							
-8	1.2450	2015	\$0	\$5,851	\$828							
-9	1.2674	2016	\$0	\$5,957	\$843							
-10	1.2902	2017	\$0	\$6,064	\$858							
-11	1.3134	2018	\$0	\$6,173	\$873							
-12	1.3371	2019	\$0	\$6,284	\$889							
-13	1.3611	2020	\$0	\$6,397	\$905							
-14	1.3856	2021	\$0	\$3,509,946	\$921							
-15	1.4106	2022	\$0	\$6,630	\$938							
-16	1.4360	2023	\$0	\$6,749	\$955							
-17	1.4618	2024	\$0	\$6,871	\$972							
-18	1.4881	2025	\$0	\$6,994	\$990							
-19	1.5149	2026	\$0	\$7,120	\$1,007							
-20	1.5422	2027	\$0	\$7,248	\$1,026							
Total			\$0	\$9,200,300	\$17,400	\$0						

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	<u>14,415,000</u>
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	<u>18,019,000</u>

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

<i>Engineering and Design</i>		\$1,357,000
Engineering	\$962,000	
Geotechnical Investigation	\$205,000	
Hydrologic Modeling	\$0	
Data Collection	\$100,000	
Cultural Resources	\$60,000	
NEPA Compliance	\$30,000	
0	\$0	
<i>Supervision and Administration</i>		\$270,500

State Costs

<i>Supervision and Administration</i>		\$320,500
<i>Ecological Review Costs</i>		\$13,000
<i>Easements and Land Rights</i>		\$200,000
<i>Monitoring</i>		\$0
Monitoring Plan Development	\$0	
Monitoring Protocol Cost *	\$0	

Total Phase I Cost Estimate **\$2,161,000**

* Monitoring Protocol requires a minimum of one year pre-construction monitoring at a specified cost based on project type and area.

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>		\$18,019,000
Lands or Oyster Issues	0 lease acres	\$0
<i>Supervision and Inspection</i>	625 days @ 876 per day	\$548,000
<i>Supervision and Administration</i>		\$270,500

State Costs

<i>Supervision and Administration</i>		\$320,500
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Total Phase II Cost Estimate **\$19,158,000**

TOTAL ESTIMATED PROJECT FIRST COST **21,319,000**

O&M Data

Annual Costs

Annual Inspections	\$4,700
Annual Cost for Operations	\$0
Preventive Maintenance	\$0
Engineering Monitoring @ TY1-5, 10, 15, 19	\$0

Specific Intermittent Costs:

Construction Items

	Year 2	Year 3	Year 8	Year 10
Contractor Mobilization/Demobilization	\$0	\$100,000	\$0	\$100,000
Repair Foreshore Rock Dike (25% replace @ TY3 / 10% Replace @ TY14)	\$0	\$2,864,500	\$0	\$1,145,800
Excavation for Access (33% of original @ \$2.00/cy)	\$0	\$484,400	\$0	\$484,400
Navaid Replacement (100% @ \$500/ea)	\$0	\$24,500	\$0	\$24,500
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$3,473,400	\$0	\$1,754,700
Subtotal w/ 25% contin.	\$0	\$4,342,000	\$0	\$2,193,000
Engineer, Design & Administrative Costs				
Engineering and Design Cost	\$0	\$280,000	\$0	\$148,000
Administrative Cost	\$0	\$87,000	\$0	\$44,000
Eng Survey 20 days @ \$1,460 per day	\$0	\$29,000	\$0	\$29,000
Construction Insp 80 days @ \$876 per day	\$0	\$70,000	\$0	\$70,000
Subtotal	\$0	\$466,000	\$0	\$291,000
Federal S&A	\$0	\$87,000	\$0	\$44,000
Total	\$0	\$4,895,000	\$0	\$2,528,000

Annual Project Costs:

Corps Administration	\$665
Monitoring	\$0

Construction Schedule:

		2004	2005	2006	2007	2007	2007	2007	Total
Plan & Design Start	March-04	7	12	5	0	0	0	0	24
Plan & Design End	March-06								
Const. Start	August-06								
Const. End	October-07	0	0	2	12	0	0	0	14

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13
Shark Island Shoreline Protection

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$17,070,900	Total Fully Funded Costs	\$19,246,100

Annual Charges	<u>Present Worth</u>	<u>Average Annual</u>
First Costs	\$17,282,091	\$1,461,188
Monitoring	\$0	\$0
O & M Costs	\$922,356	\$77,985
Other Costs	<u>\$7,865</u>	<u>\$665</u>
Total	\$18,212,300	\$1,539,800
Average Annual Habitat Units	54	
Cost Per Habitat Unit	\$337,265	
Total Net Acres	178	

**Coastal Wetlands Conservation and Restoration Plan
Shark Island Shoreline Protection**

Project Costs 0

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I											
4	Compound	2004	\$327,833	\$14,583	\$73,500	\$77,292	\$388	\$0	-	\$0	\$493,596
3	Compound	2005	\$562,000	\$25,000	\$126,000	\$132,500	\$665	\$0	-	\$0	\$846,165
2	Compound	2006	\$234,167	\$10,417	\$52,500	\$55,208	\$277	\$0	-	\$0	\$352,569
1	Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0
TOTAL			\$1,124,000	\$50,000	\$252,000	\$265,000	\$1,330	\$0	\$0	\$0	\$1,692,330
Phase II											
2	Compound	2006	-	\$0	\$68,727	\$68,727	\$166	\$0	\$75,818	\$734,318	\$2,937,273
1	Compound	2007	-	\$0	\$183,273	\$183,273	\$443	-	\$202,182	\$1,958,182	\$7,832,727
0	Compound	2008	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0
0	Compound	2009	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0
TOTAL			\$0	\$0	\$252,000	\$252,000	\$610	\$0	\$278,000	\$2,692,500	\$10,770,000
Total First Costs			\$1,124,000	\$50,000	\$504,000	\$517,000	\$1,940	\$0	\$278,000	\$2,692,500	\$10,770,000
Discount Schedule											
Year	FY	Monitoring	O&M	Corps PM	Other						
1	Discount	2008	\$0	\$4,700	\$665	-					
2	Discount	2009	\$0	\$4,700	\$665	-					
3	Discount	2010	\$0	\$4,700	\$665	-					
4	Discount	2011	\$0	\$4,700	\$665	-					
5	Discount	2012	\$0	\$4,700	\$665	-					
6	Discount	2013	\$0	\$4,700	\$665	-					
7	Discount	2014	\$0	\$777,351	\$665	-					
8	Discount	2015	\$0	\$4,700	\$665	-					
9	Discount	2016	\$0	\$4,700	\$665	-					
10	Discount	2017	\$0	\$4,700	\$665	-					
11	Discount	2018	\$0	\$4,700	\$665	-					
12	Discount	2019	\$0	\$4,700	\$665	-					
13	Discount	2020	\$0	\$4,700	\$665	-					
14	Discount	2021	\$0	\$4,700	\$665	-					
15	Discount	2022	\$0	\$777,351	\$665	-					
16	Discount	2023	\$0	\$4,700	\$665	-					
17	Discount	2024	\$0	\$4,700	\$665	-					
18	Discount	2025	\$0	\$4,700	\$665	-					
19	Discount	2026	\$0	\$4,700	\$665	-					
20	Discount	2027	\$0	\$4,700	\$665	-					
Total			\$0	\$1,639,303	\$13,300	\$0					

**Coastal Wetlands Conservation and Restoration Plan
Shark Island Shoreline Protection**

Present Valued Costs			Total Discounted Costs					Amortized Costs				\$1,539,838
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	1.245	2004	\$408,056	\$18,152	\$91,486	\$96,205	\$483	\$0	\$0	\$0	\$0	\$614,382
3	1.178	2005	\$662,272	\$29,461	\$148,481	\$156,141	\$784	\$0	\$0	\$0	\$0	\$997,138
2	1.116	2006	\$261,251	\$11,622	\$58,572	\$61,594	\$309	\$0	\$0	\$0	\$0	\$393,348
1	1.056	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$1,331,580	\$59,234	\$298,539	\$313,940	\$1,576	\$0	\$0	\$0	\$0	\$2,004,869
Phase II												
2	1.116	2006	\$0	\$0	\$76,677	\$76,677	\$185	\$0	\$84,588	\$819,252	\$3,277,010	\$4,334,388
1	1.056	2007	\$0	\$0	\$193,582	\$193,582	\$468	\$0	\$213,555	\$2,068,330	\$8,273,318	\$10,942,834
0	1.000	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.000	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$0	\$0	\$270,258	\$270,258	\$654	\$0	\$298,142	\$2,887,582	\$11,550,328	\$15,277,222
Total First Cost			\$1,331,580	\$59,234	\$568,798	\$584,198	\$2,229	\$0	\$298,142	\$2,887,582	\$11,550,328	\$17,282,091

Year	FY	Monitoring	O&M	Corps PM	Other
-1	0.947	2008	\$0	\$4,450	\$630
-2	0.896	2009	\$0	\$4,213	\$596
-3	0.849	2010	\$0	\$3,988	\$564
-4	0.803	2011	\$0	\$3,776	\$534
-5	0.761	2012	\$0	\$3,575	\$506
-6	0.720	2013	\$0	\$3,385	\$479
-7	0.682	2014	\$0	\$529,969	\$453
-8	0.645	2015	\$0	\$3,034	\$429
-9	0.611	2016	\$0	\$2,872	\$406
-10	0.579	2017	\$0	\$2,719	\$385
-11	0.548	2018	\$0	\$2,574	\$364
-12	0.519	2019	\$0	\$2,437	\$345
-13	0.491	2020	\$0	\$2,307	\$326
-14	0.465	2021	\$0	\$2,185	\$309
-15	0.440	2022	\$0	\$342,071	\$293
-16	0.417	2023	\$0	\$1,958	\$277
-17	0.394	2024	\$0	\$1,854	\$262
-18	0.373	2025	\$0	\$1,755	\$248
-19	0.354	2026	\$0	\$1,662	\$235
-20	0.335	2027	\$0	\$1,573	\$223
Total		\$0	\$922,356	\$7,865	\$0

**Coastal Wetlands Conservation and Restoration Plan
Shark Island Shoreline Protection**

Fully Funded Costs			Total Fully Funded Costs					Amortized Costs				Total First Cost
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man. Monitoring	S&I	Contingency	Construction Costs	Total First Cost		
Phase I												
4	1.028	2004	\$337,077	\$14,995	\$75,572	\$79,471	\$399	\$0	\$0	\$0	\$507,513	
3	1.044	2005	\$586,513	\$26,090	\$131,496	\$138,279	\$694	\$0	\$0	\$0	\$883,073	
2	1.061	2006	\$248,535	\$11,056	\$55,721	\$58,596	\$294	\$0	\$0	\$0	\$374,202	
1	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$1,172,125	\$52,141	\$262,790	\$276,346	\$1,387	\$0	\$0	\$0	\$1,764,788	
Phase II												
2	1.061	2006	\$0	\$0	\$72,944	\$72,944	\$176	\$0	\$80,470	\$779,376	\$3,117,502	\$4,123,413
1	1.079	2007	\$0	\$0	\$197,825	\$197,825	\$479	\$0	\$218,236	\$2,113,666	\$8,454,666	\$11,182,696
0	1.099	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.119	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$0	\$0	\$270,769	\$270,769	\$655	\$0	\$298,706	\$2,893,042	\$11,572,168	\$15,306,109
Total Cost			\$1,172,100	\$52,100	\$533,600	\$547,100	\$2,000	\$0	\$298,700	\$2,893,000	\$11,572,200	\$17,070,900
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	1.0988	2008	\$0	\$5,165	\$731							
-2	1.1186	2009	\$0	\$5,257	\$744							
-3	1.1387	2010	\$0	\$5,352	\$757							
-4	1.1592	2011	\$0	\$5,448	\$771							
-5	1.1801	2012	\$0	\$5,547	\$785							
-6	1.2014	2013	\$0	\$5,646	\$799							
-7	1.2230	2014	\$0	\$950,682	\$813							
-8	1.2450	2015	\$0	\$5,851	\$828							
-9	1.2674	2016	\$0	\$5,957	\$843							
-10	1.2902	2017	\$0	\$6,064	\$858							
-11	1.3134	2018	\$0	\$6,173	\$873							
-12	1.3371	2019	\$0	\$6,284	\$889							
-13	1.3611	2020	\$0	\$6,397	\$905							
-14	1.3856	2021	\$0	\$6,513	\$921							
-15	1.4106	2022	\$0	\$1,096,522	\$938							
-16	1.4360	2023	\$0	\$6,749	\$955							
-17	1.4618	2024	\$0	\$6,871	\$972							
-18	1.4881	2025	\$0	\$6,994	\$990							
-19	1.5149	2026	\$0	\$7,120	\$1,007							
-20	1.5422	2027	\$0	\$7,248	\$1,026							
Total			\$0	\$2,157,800	\$17,400	\$0						

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	<u>10,770,000</u>
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	<u>13,463,000</u>

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

<i>Engineering and Design</i>		\$1,124,000
Engineering	\$807,000	
Geotechnical Investigation	\$207,440	
Hydrologic Modeling	\$0	
Data Collection	\$100,000	
Cultural Resources	\$10,000	
NEPA Compliance	\$0	
0	\$0	
<i>Supervision and Administration</i>		\$252,000

State Costs

<i>Supervision and Administration</i>		\$252,000
<i>Ecological Review Costs</i>		\$13,000
<i>Easements and Land Rights</i>		\$50,000
<i>Monitoring</i>		\$0
Monitoring Plan Development	\$0	
Monitoring Protocol Cost *	\$0	

Total Phase I Cost Estimate **\$1,691,000**

* Monitoring Protocol requires a minimum of one year pre-construction monitoring at a specified cost based on project type and area.

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>		\$13,463,000
Lands or Oyster Issues	0 lease acres	\$0
<i>Supervision and Inspection</i>	317 days @ 876 per day	\$278,000
<i>Supervision and Administration</i>		\$252,000

State Costs

<i>Supervision and Administration</i>		\$252,000
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Total Phase II Cost Estimate **\$14,245,000**

TOTAL ESTIMATED PROJECT FIRST COST **15,936,000**

O&M Data

Annual Costs

Annual Inspections	\$4,700
Annual Cost for Operations	\$0
Preventive Maintenance	\$0
Engineering Monitoring @ TY1-5, 10, 15, 19	\$0

Specific Intermittent Costs:

Construction Items

	Year 2	Year 7	\$0	Year 15
Contractor Mobilization/Demobilization	\$0	\$80,000	\$0	\$80,000
Permanent Nav aids (100% replacement @ \$500 EA)	\$0	\$27,000	\$0	\$27,000
Concrete Precast Prestressed Panels (5% replacement)	\$0	\$178,200	\$0	\$178,200
Concrete Precast Prestressed Piles (5% replacement)	\$0	\$164,700	\$0	\$164,700
Flotation Excavation (or propwashing for reach specific access ~ 15% of original vol)	\$0	\$93,421	\$0	\$93,421
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$543,321	\$0	\$543,321
Subtotal w/ 25% contin.	\$0	\$679,000	\$0	\$679,000
Engineer, Design & Administrative Costs				
Engineering and Design Cost	\$0	\$50,000	\$0	\$50,000
Administrative Cost	\$0	\$13,500	\$0	\$13,500
Eng Survey 5 days @ \$1,460 per day	\$0	\$7,000	\$0	\$7,000
Construction Insp 11 days @ \$876 per day	\$0	\$10,000	\$0	\$10,000
Subtotal	\$0	\$81,000	\$0	\$81,000
Federal S&A	\$0	\$13,500	\$0	\$13,500
Total	\$0	\$773,500	\$0	\$773,500

Annual Project Costs:

Corps Administration	\$665
Monitoring	\$0

Construction Schedule:

		2004	2005	2006	2007	2008	2009	2010	Total
Plan & Design Start	March-04	7	12	5	0	0	0	0	24
Plan & Design End	March-06								
Const. Start	August-06								
Const. End	June-07	0	0	3	8	0	0	0	11

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13
Whiskey Island Back Barrier Marsh Creation

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$21,645,900	Total Fully Funded Costs	\$21,786,300

Annual Charges	<u>Present Worth</u>	<u>Average Annual</u>
First Costs	\$22,526,820	\$1,904,627
Monitoring	\$0	\$0
O & M Costs	\$55,589	\$4,700
Other Costs	<u>\$7,865</u>	<u>\$665</u>
Total	\$22,590,300	\$1,910,000
Average Annual Habitat Units	292	
Cost Per Habitat Unit	\$77,364	
Total Net Acres	272	

**Coastal Wetlands Conservation and Restoration Plan
Whiskey Island Back Barrier Marsh Creation**

Project Costs 0

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	Compound	2004	\$564,421	\$5,526	\$125,447	\$118,447	\$388	\$0	-	\$0	\$814,230	
3	Compound	2005	\$967,579	\$9,474	\$215,053	\$203,053	\$665	\$0	-	\$0	\$1,395,823	
2	Compound	2006	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
1	Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
TOTAL			\$1,532,000	\$15,000	\$340,500	\$321,500	\$1,053	\$0	\$0	\$0	\$2,210,053	
Phase II												
2	Compound	2006	-	\$0	\$227,000	\$203,667	\$333	\$0	\$299,333	\$2,271,333	\$9,085,333	\$12,086,999
1	Compound	2007	-	\$0	\$113,500	\$101,833	\$166	-	\$149,667	\$1,135,667	\$4,542,667	\$6,043,500
0	Compound	2008	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0
0	Compound	2009	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0
TOTAL			\$0	\$0	\$340,500	\$305,500	\$499	\$0	\$449,000	\$3,407,000	\$13,628,000	\$18,130,499
Total First Costs			\$1,532,000	\$15,000	\$681,000	\$627,000	\$1,552	\$0	\$449,000	\$3,407,000	\$13,628,000	\$20,340,552

Year	FY	Monitoring	O&M	Corps PM	Other	
1	Discount	2008	\$0	\$4,700	\$665	-
2	Discount	2009	\$0	\$4,700	\$665	-
3	Discount	2010	\$0	\$4,700	\$665	-
4	Discount	2011	\$0	\$4,700	\$665	-
5	Discount	2012	\$0	\$4,700	\$665	-
6	Discount	2013	\$0	\$4,700	\$665	-
7	Discount	2014	\$0	\$4,700	\$665	-
8	Discount	2015	\$0	\$4,700	\$665	-
9	Discount	2016	\$0	\$4,700	\$665	-
10	Discount	2017	\$0	\$4,700	\$665	-
11	Discount	2018	\$0	\$4,700	\$665	-
12	Discount	2019	\$0	\$4,700	\$665	-
13	Discount	2020	\$0	\$4,700	\$665	-
14	Discount	2021	\$0	\$4,700	\$665	-
15	Discount	2022	\$0	\$4,700	\$665	-
16	Discount	2023	\$0	\$4,700	\$665	-
17	Discount	2024	\$0	\$4,700	\$665	-
18	Discount	2025	\$0	\$4,700	\$665	-
19	Discount	2026	\$0	\$4,700	\$665	-
20	Discount	2027	\$0	\$4,700	\$665	-
Total			\$0	\$94,000	\$13,300	\$0

Coastal Wetlands Conservation and Restoration Plan

Whiskey Island Back Barrier Marsh Creation

Present Valued Costs		Total Discounted Costs					Amortized Costs					\$1,909,992
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	1.245	2004	\$702,538	\$6,879	\$156,145	\$147,432	\$483	\$0	\$0	\$0	\$0	\$1,013,477
3	1.178	2005	\$1,140,215	\$11,164	\$253,422	\$239,281	\$784	\$0	\$0	\$0	\$0	\$1,644,866
2	1.116	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1	1.056	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$1,842,753	\$18,043	\$409,567	\$386,714	\$1,266	\$0	\$0	\$0	\$0	\$2,658,343
Phase II												
2	1.116	2006	\$0	\$0	\$253,256	\$227,224	\$371	\$0	\$333,955	\$2,534,045	\$10,136,180	\$13,485,031
1	1.056	2007	\$0	\$0	\$119,884	\$107,561	\$176	\$0	\$158,085	\$1,199,548	\$4,798,192	\$6,383,446
0	1.000	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.000	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$0	\$0	\$373,140	\$334,785	\$547	\$0	\$492,041	\$3,733,593	\$14,934,372	\$19,868,477
Total First Cost			\$1,842,753	\$18,043	\$782,708	\$721,499	\$1,813	\$0	\$492,041	\$3,733,593	\$14,934,372	\$22,526,820
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	0.947	2008	\$0	\$4,450	\$630							
-2	0.896	2009	\$0	\$4,213	\$596							
-3	0.849	2010	\$0	\$3,988	\$564							
-4	0.803	2011	\$0	\$3,776	\$534							
-5	0.761	2012	\$0	\$3,575	\$506							
-6	0.720	2013	\$0	\$3,385	\$479							
-7	0.682	2014	\$0	\$3,204	\$453							
-8	0.645	2015	\$0	\$3,034	\$429							
-9	0.611	2016	\$0	\$2,872	\$406							
-10	0.579	2017	\$0	\$2,719	\$385							
-11	0.548	2018	\$0	\$2,574	\$364							
-12	0.519	2019	\$0	\$2,437	\$345							
-13	0.491	2020	\$0	\$2,307	\$326							
-14	0.465	2021	\$0	\$2,185	\$309							
-15	0.440	2022	\$0	\$2,068	\$293							
-16	0.417	2023	\$0	\$1,958	\$277							
-17	0.394	2024	\$0	\$1,854	\$262							
-18	0.373	2025	\$0	\$1,755	\$248							
-19	0.354	2026	\$0	\$1,662	\$235							
-20	0.335	2027	\$0	\$1,573	\$223							
Total			\$0	\$55,589	\$7,865	\$0						

**Coastal Wetlands Conservation and Restoration Plan
Whiskey Island Back Barrier Marsh Creation**

Fully Funded Costs		Total Fully Funded Costs					Amortized Costs					Total First Cost
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	1.028	2004	\$580,335	\$5,682	\$128,984	\$121,787	\$399	\$0	\$0	\$0	\$837,187	
3	1.044	2005	\$1,009,783	\$9,887	\$224,433	\$211,909	\$694	\$0	\$0	\$0	\$1,456,706	
2	1.061	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
1	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$1,590,118	\$15,569	\$353,417	\$333,696	\$1,093	\$0	\$0	\$0	\$2,293,893	
Phase II												
2	1.061	2006	\$0	\$0	\$240,929	\$216,164	\$353	\$0	\$317,700	\$2,410,701	\$12,828,651	
1	1.079	2007	\$0	\$0	\$122,512	\$109,919	\$179	\$0	\$161,551	\$1,225,841	\$6,523,369	
0	1.099	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.119	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$0	\$0	\$363,441	\$326,083	\$532	\$0	\$479,251	\$3,636,543	\$19,352,019	
Total Cost			\$1,590,100	\$15,600	\$716,900	\$659,800	\$1,600	\$0	\$479,300	\$3,636,500	\$21,645,900	
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	1.0988	2008	\$0	\$5,165	\$731							
-2	1.1186	2009	\$0	\$5,257	\$744							
-3	1.1387	2010	\$0	\$5,352	\$757							
-4	1.1592	2011	\$0	\$5,448	\$771							
-5	1.1801	2012	\$0	\$5,547	\$785							
-6	1.2014	2013	\$0	\$5,646	\$799							
-7	1.2230	2014	\$0	\$5,748	\$813							
-8	1.2450	2015	\$0	\$5,851	\$828							
-9	1.2674	2016	\$0	\$5,957	\$843							
-10	1.2902	2017	\$0	\$6,064	\$858							
-11	1.3134	2018	\$0	\$6,173	\$873							
-12	1.3371	2019	\$0	\$6,284	\$889							
-13	1.3611	2020	\$0	\$6,397	\$905							
-14	1.3856	2021	\$0	\$6,513	\$921							
-15	1.4106	2022	\$0	\$6,630	\$938							
-16	1.4360	2023	\$0	\$6,749	\$955							
-17	1.4618	2024	\$0	\$6,871	\$972							
-18	1.4881	2025	\$0	\$6,994	\$990							
-19	1.5149	2026	\$0	\$7,120	\$1,007							
-20	1.5422	2027	\$0	\$7,248	\$1,026							
Total			\$0	\$123,000	\$17,400	\$0						

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	<u>13,628,000</u>
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	<u>17,035,000</u>

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

<i>Engineering and Design</i>		\$1,532,000
Engineering	\$1,007,000	
Geotechnical Investigation	\$120,000	
Hydrologic Modeling	\$100,000	
Data Collection	\$200,000	
Cultural Resources	\$75,000	
HTRW	\$0	
NEPA Compliance	\$30,000	
<i>Supervision and Administration</i>		\$340,500

State Costs

<i>Supervision and Administration</i>		\$305,500
<i>Ecological Review Costs</i>		\$16,000
<i>Easements and Land Rights</i>		\$15,000
<i>Monitoring</i>		\$0
Monitoring Plan Development	\$0	
Monitoring Protocol Cost *	\$0	

Total Phase I Cost Estimate **\$2,209,000**

* Monitoring Protocol requires a minimum of one year pre-construction monitoring at a specified cost based on project type and area.

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>		\$17,035,000
Lands or Oyster Issues	0 lease acres	\$0
<i>Supervision and Inspection</i>	256 days @ 1752 per day	\$449,000
<i>Supervision and Administration</i>		\$340,500

State Costs

<i>Supervision and Administration</i>		\$305,500
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Total Phase II Cost Estimate **\$18,130,000**

TOTAL ESTIMATED PROJECT FIRST COST **20,339,000**

O&M Data

Annual Costs

Annual Inspections	\$4,700
Annual Cost for Operations	\$0
Preventive Maintenance	\$0
Engineering Monitoring @ TY1-5, 10, 15, 19	\$0

Specific Intermittent Costs:

Construction Items

	<u>Year 2</u>	<u>Year 7</u>	<u>\$0</u>	<u>Year 14</u>
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
Subtotal	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Subtotal w/ 25% contin.	\$0	\$0	\$0	\$0
Engineer, Design & Administrative Costs				
Engineering and Design Cost	\$0	#NUM!	\$0	#NUM!
Administrative Cost	\$0	\$0	\$0	\$0
Eng Survey 0 days @ \$1,460 per day	\$0	\$0	\$0	\$0
Construction Insp 0 days @ \$876 per day	\$0	\$0	\$0	\$0
Subtotal	\$0	#NUM!	\$0	#NUM!
Federal S&A				
Total	\$0	#NUM!	\$0	#NUM!

Annual Project Costs:

Corps Administration	\$665
Monitoring	\$0

Construction Schedule:

	2004	2005	2006	2007	2008	2009	2010	Total
Plan & Design Start	March-04	7	12	0	0	0	0	19
Plan & Design End	October-05							
Const. Start	April-06							
Const. End	January-07	0	0	6	3	0	0	9

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13
Oyster Bayou Terracing

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$3,027,700	Total Fully Funded Costs	\$4,209,900

Annual Charges	<u>Present Worth</u>	<u>Average Annual</u>
First Costs	\$3,053,603	\$258,180
Monitoring	\$0	\$0
O & M Costs	\$380,583	\$32,178
Other Costs	<u>\$7,865</u>	<u>\$665</u>
Total	\$3,442,100	\$291,000
Average Annual Habitat Units	37	
Cost Per Habitat Unit	\$93,030	
Total Net Acres	61	

**Coastal Wetlands Conservation and Restoration Plan
Oyster Bayou Terracing**

Project Costs 0

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	Compound	2004	\$111,160	\$19,600	\$11,340	\$15,820	\$388	\$0	-	\$0	\$158,308	
3	Compound	2005	\$190,560	\$33,600	\$19,440	\$27,120	\$665	\$0	-	\$0	\$271,385	
2	Compound	2006	\$95,280	\$16,800	\$9,720	\$13,560	\$333	\$0	-	\$0	\$135,693	
1	Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
TOTAL			\$397,000	\$70,000	\$40,500	\$56,500	\$1,385	\$0	\$0	\$0	\$565,385	
Phase II												
1	Compound	2007	-	\$0	\$40,500	\$40,500	\$333	\$0	\$162,000	\$403,000	\$1,612,000	\$2,258,333
0	Compound	2008	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0
0	Compound	2009	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0
0	Compound	2010	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0
TOTAL			\$0	\$0	\$40,500	\$40,500	\$333	\$0	\$162,000	\$403,000	\$1,612,000	\$2,258,333
Total First Costs			\$397,000	\$70,000	\$81,000	\$97,000	\$1,718	\$0	\$162,000	\$403,000	\$1,612,000	\$2,823,718

Year	FY	Monitoring	O&M	Corps PM	Other	
1	Discount	2008	\$0	\$4,700	\$665	-
2	Discount	2009	\$0	\$4,700	\$665	-
3	Discount	2010	\$0	\$4,700	\$665	-
4	Discount	2011	\$0	\$4,700	\$665	-
5	Discount	2012	\$0	\$4,700	\$665	-
6	Discount	2013	\$0	\$4,700	\$665	-
7	Discount	2014	\$0	\$4,700	\$665	-
8	Discount	2015	\$0	\$4,700	\$665	-
9	Discount	2016	\$0	\$4,700	\$665	-
10	Discount	2017	\$0	\$4,700	\$665	-
11	Discount	2018	\$0	\$4,700	\$665	-
12	Discount	2019	\$0	\$4,700	\$665	-
13	Discount	2020	\$0	\$4,700	\$665	-
14	Discount	2021	\$0	\$4,700	\$665	-
15	Discount	2022	\$0	\$743,244	\$665	-
16	Discount	2023	\$0	\$4,700	\$665	-
17	Discount	2024	\$0	\$4,700	\$665	-
18	Discount	2025	\$0	\$4,700	\$665	-
19	Discount	2026	\$0	\$4,700	\$665	-
20	Discount	2027	\$0	\$4,700	\$665	-
Total			\$0	\$832,544	\$13,300	\$0

**Coastal Wetlands Conservation and Restoration Plan
Oyster Bayou Terracing**

Present Valued Costs			Total Discounted Costs					Amortized Costs			\$291,023	
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	1.245	2004	\$138,362	\$24,396	\$14,115	\$19,691	\$483	\$0	\$0	\$0	\$197,047	
3	1.178	2005	\$224,560	\$39,595	\$22,908	\$31,959	\$784	\$0	\$0	\$0	\$319,806	
2	1.116	2006	\$106,300	\$18,743	\$10,844	\$15,128	\$371	\$0	\$0	\$0	\$151,387	
1	1.056	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total			\$469,222	\$82,734	\$47,868	\$66,778	\$1,637	\$0	\$0	\$0	\$668,240	
Phase II												
1	1.056	2007	\$0	\$0	\$42,778	\$42,778	\$351	\$0	\$171,113	\$425,669	\$1,702,675	\$2,385,364
0	1.000	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.000	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.000	2010	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$0	\$0	\$42,778	\$42,778	\$351	\$0	\$171,113	\$425,669	\$1,702,675	\$2,385,364
Total First Cost			\$469,222	\$82,734	\$90,646	\$109,557	\$1,989	\$0	\$171,113	\$425,669	\$1,702,675	\$3,053,603
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	0.947	2008	\$0	\$4,450	\$630							
-2	0.896	2009	\$0	\$4,213	\$596							
-3	0.849	2010	\$0	\$3,988	\$564							
-4	0.803	2011	\$0	\$3,776	\$534							
-5	0.761	2012	\$0	\$3,575	\$506							
-6	0.720	2013	\$0	\$3,385	\$479							
-7	0.682	2014	\$0	\$3,204	\$453							
-8	0.645	2015	\$0	\$3,034	\$429							
-9	0.611	2016	\$0	\$2,872	\$406							
-10	0.579	2017	\$0	\$2,719	\$385							
-11	0.548	2018	\$0	\$2,574	\$364							
-12	0.519	2019	\$0	\$2,437	\$345							
-13	0.491	2020	\$0	\$2,307	\$326							
-14	0.465	2021	\$0	\$2,185	\$309							
-15	0.440	2022	\$0	\$327,062	\$293							
-16	0.417	2023	\$0	\$1,958	\$277							
-17	0.394	2024	\$0	\$1,854	\$262							
-18	0.373	2025	\$0	\$1,755	\$248							
-19	0.354	2026	\$0	\$1,662	\$235							
-20	0.335	2027	\$0	\$1,573	\$223							
Total			\$0	\$380,583	\$7,865	\$0						

**Coastal Wetlands Conservation and Restoration Plan
Oyster Bayou Terracing**

Fully Funded Costs Total Fully Funded Costs \$4,209,900 Amortized Costs \$355,944

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	1.028	2004	\$114,294	\$20,153	\$11,660	\$16,266	\$399	\$0	\$0	\$0	\$162,771	
3	1.044	2005	\$198,872	\$35,066	\$20,288	\$28,303	\$694	\$0	\$0	\$0	\$283,222	
2	1.061	2006	\$101,126	\$17,831	\$10,316	\$14,392	\$353	\$0	\$0	\$0	\$144,019	
1	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$414,292	\$73,049	\$42,264	\$58,961	\$1,446	\$0	\$0	\$0	\$590,012	
Phase II												
1	1.079	2007	\$0	\$0	\$43,716	\$43,716	\$359	\$0	\$174,863	\$434,999	\$1,739,997	\$2,437,650
0	1.099	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.119	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.139	2010	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$0	\$0	\$43,716	\$43,716	\$359	\$0	\$174,863	\$434,999	\$1,739,997	\$2,437,650
Total Cost			\$414,300	\$73,000	\$86,000	\$102,700	\$1,800	\$0	\$174,900	\$435,000	\$1,740,000	\$3,027,700

Year	FY	Monitoring	O&M	Corps PM	Other
-1	1.0988	2008	\$0	\$5,165	\$731
-2	1.1186	2009	\$0	\$5,257	\$744
-3	1.1387	2010	\$0	\$5,352	\$757
-4	1.1592	2011	\$0	\$5,448	\$771
-5	1.1801	2012	\$0	\$5,547	\$785
-6	1.2014	2013	\$0	\$5,646	\$799
-7	1.2230	2014	\$0	\$5,748	\$813
-8	1.2450	2015	\$0	\$5,851	\$828
-9	1.2674	2016	\$0	\$5,957	\$843
-10	1.2902	2017	\$0	\$6,064	\$858
-11	1.3134	2018	\$0	\$6,173	\$873
-12	1.3371	2019	\$0	\$6,284	\$889
-13	1.3611	2020	\$0	\$6,397	\$905
-14	1.3856	2021	\$0	\$6,513	\$921
-15	1.4106	2022	\$0	\$1,048,411	\$938
-16	1.4360	2023	\$0	\$6,749	\$955
-17	1.4618	2024	\$0	\$6,871	\$972
-18	1.4881	2025	\$0	\$6,994	\$990
-19	1.5149	2026	\$0	\$7,120	\$1,007
-20	1.5422	2027	\$0	\$7,248	\$1,026
Total		\$0	\$1,164,800	\$17,400	\$0

O&M Data

Annual Costs

Annual Inspections	\$4,700
Annual Cost for Operations	\$0
Preventive Maintenance	\$0
Engineering Monitoring @ TY1-5, 10, 15, 19	\$0

Specific Intermittent Costs:

Construction Items

	Year 2	Year 3	Year 8	Year 10
Contractor Mobilization/Demobilization	\$0	\$0	\$0	\$50,000
Terrace Construction (rebuild ~25% or 31,242)	\$0	\$0	\$0	\$312,420
Planting (50% or 37,490 plants)	\$0	\$0	\$0	\$131,215
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
Subtotal	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$493,635</u>
Subtotal w/ 25% contin.	\$0	\$0	\$0	\$617,000
Engineer, Design & Administrative Costs				
Engineering and Design Cost	\$0	#NUM!	\$0	\$46,000
Administrative Cost	\$0	\$0	\$0	\$12,500
Eng Survey 3 days @ \$1,460 per day	\$0	\$0	\$0	\$4,000
Construction Insp 53 days @ \$876 per day	\$0	\$0	\$0	\$46,000
Subtotal	\$0	#NUM!	\$0	\$109,000
Federal S&A	\$0	\$0	\$0	\$12,500
Total	\$0	#NUM!	\$0	\$738,500

Annual Project Costs:

Corps Administration	\$665
Monitoring	\$0

Construction Schedule:

		2004	2005	2006	2007	2008	2009	2010	Total
Plan & Design Start	March-04	7	12	6	0	0	0	0	25
Plan & Design End	March-06								
Const. Start	February-07								
Const. End	July-07	0	0	0	6	0	0	0	6

**Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13
Shoreline Protection Foundation Improvements Demo**

Project Construction Years:	1	Total Project Years	6
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$748,100	Total Fully Funded Costs	\$1,000,000

	<u>Present Worth</u>	<u>Average Annual</u>
Annual Charges		
First Costs	\$771,316	\$65,214
Monitoring	\$209,434	\$17,707
O & M Costs	\$0	\$0
Other Costs	<u>\$2,830</u>	<u>\$239</u>
Total	\$983,600	\$83,200
Average Annual Habitat Units	0	
Cost Per Habitat Unit	N/A	N/A
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan
Shoreline Protection Foundation Improvements Demo

Project Costs

0

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I											
2	Compound	2004	\$169,167	\$0	\$14,583	\$5,250	\$388	\$0	-	\$0	\$189,388
1	Compound	2005	\$120,833	\$0	\$10,417	\$3,750	\$277	\$0	-	\$0	\$135,277
0	Compound	2006	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0
0	Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0
TOTAL			\$290,000	\$0	\$25,000	\$9,000	\$665	\$0	\$0	\$0	\$324,665
Phase II											
1	Compound	2005	-	\$0	\$15,200	\$9,000	\$222	\$0	\$53,000	\$63,500	\$254,922
0	Compound	2006	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0
0	Compound	2007	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0
0	Compound	2008	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0
TOTAL			\$0	\$0	\$15,200	\$9,000	\$222	\$0	\$53,000	\$63,500	\$394,922
Total First Costs			\$290,000	\$0	\$40,200	\$18,000	\$887	\$0	\$53,000	\$63,500	\$719,587
Year	FY	Monitoring	O&M	Corps PM	Other						
1	Discount	2006	\$157,600	\$0	\$665	-					
2	Discount	2007	\$22,100	\$0	\$665	-					
3	Discount	2008	\$13,600	\$0	\$665	-					
4	Discount	2009	\$13,600	\$0	\$665	-					
5	Discount	2010	\$23,600	\$0	\$665	-					
6	Discount	2011	\$0	\$0	\$0	-					
7	Discount	2012	\$0	\$0	\$0	-					
8	Discount	2013	\$0	\$0	\$0	-					
9	Discount	2014	\$0	\$0	\$0	-					
10	Discount	2015	\$0	\$0	\$0	-					
11	Discount	2016	\$0	\$0	\$0	-					
12	Discount	2017	\$0	\$0	\$0	-					
13	Discount	2018	\$0	\$0	\$0	-					
14	Discount	2019	\$0	\$0	\$0	-					
15	Discount	2020	\$0	\$0	\$0	-					
16	Discount	2021	\$0	\$0	\$0	-					
17	Discount	2022	\$0	\$0	\$0	-					
18	Discount	2023	\$0	\$0	\$0	-					
19	Discount	2024	\$0	\$0	\$0	-					
20	Discount	2025	\$0	\$0	\$0	-					
Total			\$230,500	\$0	\$3,325	\$0					

**Coastal Wetlands Conservation and Restoration Plan
Shoreline Protection Foundation Improvements Demo**

Present Valued Costs			Total Discounted Costs					Amortized Costs					\$83,161
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost		
Phase I													
2	1.116	2004	\$188,733	\$0	\$16,270	\$5,857	\$433	\$0	\$0	\$0	\$0	\$211,293	
1	1.056	2005	\$127,630	\$0	\$11,003	\$3,961	\$293	\$0	\$0	\$0	\$0	\$142,886	
0	1.000	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.000	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total			\$316,363	\$0	\$27,273	\$9,818	\$725	\$0	\$0	\$0	\$0	\$354,180	
Phase II													
1	1.056	2005	\$0	\$0	\$16,055	\$9,506	\$234	\$0	\$55,981	\$67,072	\$268,288	\$417,136	
0	1.000	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.000	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.000	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total			\$0	\$0	\$16,055	\$9,506	\$234	\$0	\$55,981	\$67,072	\$268,288	\$417,136	
Total First Cost			\$316,363	\$0	\$43,328	\$19,324	\$960	\$0	\$55,981	\$67,072	\$268,288	\$771,316	
Year	FY	Monitoring	O&M	Corps PM	Other								
-1	0.947	2006	\$149,207	\$0	\$630								
-2	0.896	2007	\$19,809	\$0	\$596								
-3	0.849	2008	\$11,541	\$0	\$564								
-4	0.803	2009	\$10,926	\$0	\$534								
-5	0.761	2010	\$17,951	\$0	\$506								
-6	0.720	2011	\$0	\$0	\$0								
-7	0.682	2012	\$0	\$0	\$0								
-8	0.645	2013	\$0	\$0	\$0								
-9	0.611	2014	\$0	\$0	\$0								
-10	0.579	2015	\$0	\$0	\$0								
-11	0.548	2016	\$0	\$0	\$0								
-12	0.519	2017	\$0	\$0	\$0								
-13	0.491	2018	\$0	\$0	\$0								
-14	0.465	2019	\$0	\$0	\$0								
-15	0.440	2020	\$0	\$0	\$0								
-16	0.417	2021	\$0	\$0	\$0								
-17	0.394	2022	\$0	\$0	\$0								
-18	0.373	2023	\$0	\$0	\$0								
-19	0.354	2024	\$0	\$0	\$0								
-20	0.335	2025	\$0	\$0	\$0								
Total		\$209,434	\$0	\$2,830	\$0								

**Coastal Wetlands Conservation and Restoration Plan
Shoreline Protection Foundation Improvements Demo**

Fully Funded Costs Total Fully Funded Costs \$1,000,000 Amortized Costs \$84,549

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingenc	Construction Costs	Total First Cost	
Phase I												
2	1.028	2004	\$173,936	\$0	\$14,995	\$5,398	\$399	\$0	\$0	\$0	\$194,728	
1	1.044	2005	\$126,104	\$0	\$10,871	\$3,914	\$289	\$0	\$0	\$0	\$141,178	
0	1.061	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$300,040	\$0	\$25,866	\$9,312	\$688	\$0	\$0	\$0	\$335,905	
Phase II												
1	1.044	2005	\$0	\$0	\$15,863	\$9,393	\$231	\$0	\$55,312	\$66,270	\$412,147	
0	1.061	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.099	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$0	\$0	\$15,863	\$9,393	\$231	\$0	\$55,312	\$66,270	\$412,147	
Total Cost			\$300,000	\$0	\$41,700	\$18,700	\$900	\$0	\$55,300	\$66,300	\$748,100	

Year	FY	Monitoring	O&M	Corps PM	Other
-1	1.0614	2006	\$167,270	\$0	\$706
-2	1.0794	2007	\$23,855	\$0	\$718
-3	1.0988	2008	\$14,944	\$0	\$731
-4	1.1186	2009	\$15,213	\$0	\$744
-5	1.1387	2010	\$26,874	\$0	\$757
-6	1.1592	2011	\$0	\$0	\$0
-7	1.1801	2012	\$0	\$0	\$0
-8	1.2014	2013	\$0	\$0	\$0
-9	1.2230	2014	\$0	\$0	\$0
-10	1.2450	2015	\$0	\$0	\$0
-11	1.2674	2016	\$0	\$0	\$0
-12	1.2902	2017	\$0	\$0	\$0
-13	1.3134	2018	\$0	\$0	\$0
-14	1.3371	2019	\$0	\$0	\$0
-15	1.3611	2020	\$0	\$0	\$0
-16	1.3856	2021	\$0	\$0	\$0
-17	1.4106	2022	\$0	\$0	\$0
-18	1.4360	2023	\$0	\$0	\$0
-19	1.4618	2024	\$0	\$0	\$0
-20	1.4881	2025	\$0	\$0	\$0
Total		\$248,200	\$0	\$3,700	\$0

O&M Data

Annual Costs

Annual Cost for Operations	\$0
Preventive Maintenance	\$0
0	\$0
Monitoring Plan & Costs:	\$0

Specific Intermittent Costs:

Construction Items

	Year 2	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
Year 1:	\$0	\$0	\$0	\$0
Item No.	\$0	\$0	\$0	\$0
1	\$0	\$0	\$0	\$0
2	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$0
Subtotal w/ 25% contin.	\$0	\$0	\$0	\$0

Engineer, Design & Administrative Costs

Engineering and Design Cost	\$0	\$0	\$0	\$0
Administrative Cost	\$0	\$0	\$0	\$0
Eng Survey Per Diem days @ Trips per day	\$0	\$0	\$0	\$0
Construction Insp 0 days @ \$876 per day	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$0
Federal S&A	\$0	\$0	\$0	\$0
Total	\$0	\$0	\$0	\$0

Annual Project Costs:

Corps Administration	\$665
Monitoring	\$0

Construction Schedule:

		2004	2005	2006	2007	2008	2009	2010	Total
Plan & Design Start	March-04	7	5	0	0	0	0	0	12
Plan & Design End	March-05								
Const. Start	June-05								
Const. End	September-05	0	4	0	0	0	0	0	4

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13
Flowable Fill Demonstration Project

Project Construction Years:	1	Total Project Years	6
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$1,180,600	Total Fully Funded Costs	\$1,789,900

Annual Charges	<u>Present Worth</u>	<u>Average Annual</u>
First Costs	\$1,251,612	\$105,823
Monitoring	\$241,423	\$20,412
O & M Costs	\$0	\$0
Other Costs	<u>\$3,053</u>	<u>\$258</u>
Total	\$1,496,100	\$126,500
Average Annual Habitat Units	N/A	
Cost Per Habitat Unit	N/A	
Total Net Acres	N/A	

Coastal Wetlands Conservation and Restoration Plan
Flowable Fill Demonstration Project

Project Costs

0

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
3	Compound	2004	\$105,000	\$11,667	\$13,125	\$8,750	\$388	\$14,583	-	\$0	\$153,513	
2	Compound	2005	\$75,000	\$8,333	\$9,375	\$6,250	\$277	\$10,417	-	\$0	\$109,652	
1	Compound	2006	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
0	Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
TOTAL			\$180,000	\$20,000	\$22,500	\$15,000	\$665	\$25,000	\$0	\$0	\$263,165	
Phase II												
2	Compound	2005	-	\$0	\$15,000	\$10,000	\$111	\$0	\$52,667	\$99,833	\$576,944	
1	Compound	2006	-	\$0	\$7,500	\$5,000	\$55	-	\$26,333	\$49,917	\$288,472	
0	Compound	2007	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	
0	Compound	2008	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	
TOTAL			\$0	\$0	\$22,500	\$15,000	\$166	\$0	\$79,000	\$149,750	\$865,416	
Total First Costs			\$180,000	\$20,000	\$45,000	\$30,000	\$831	\$25,000	\$79,000	\$149,750	\$599,000	\$1,128,581
Year	FY	Monitoring	O&M	Corps PM	Other							
1	Discount	2007	\$115,200	\$0	\$665	-						
2	Discount	2008	\$40,000	\$0	\$665	-						
3	Discount	2009	\$40,000	\$0	\$665	-						
4	Discount	2010	\$40,000	\$0	\$665	-						
5	Discount	2011	\$40,000	\$0	\$665	-						
6	Discount	2012	\$0	\$0	\$0	-						
7	Discount	2013	\$0	\$0	\$0	-						
8	Discount	2014	\$0	\$0	\$0	-						
9	Discount	2015	\$0	\$0	\$0	-						
10	Discount	2016	\$0	\$0	\$0	-						
11	Discount	2017	\$0	\$0	\$0	-						
12	Discount	2018	\$0	\$0	\$0	-						
13	Discount	2019	\$0	\$0	\$0	-						
14	Discount	2020	\$0	\$0	\$0	-						
15	Discount	2021	\$0	\$0	\$0	-						
16	Discount	2022	\$0	\$0	\$0	-						
17	Discount	2023	\$0	\$0	\$0	-						
18	Discount	2024	\$0	\$0	\$0	-						
19	Discount	2025	\$0	\$0	\$0	-						
20	Discount	2026	\$0	\$0	\$665	-						
Total			\$275,200	\$0	\$3,990	\$0						

Coastal Wetlands Conservation and Restoration Plan
Flowable Fill Demonstration Project

Present Valued Costs			Total Discounted Costs					Amortized Costs			\$1,496,087	\$126,493
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
3	1.178	2004	\$123,734	\$13,748	\$15,467	\$10,311	\$457	\$17,185	\$0	\$0	\$0	\$180,903
2	1.116	2005	\$83,675	\$9,297	\$10,459	\$6,973	\$309	\$11,622	\$0	\$0	\$0	\$122,335
1	1.056	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.000	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$207,409	\$23,045	\$25,926	\$17,284	\$766	\$28,807	\$0	\$0	\$0	\$303,238
Phase II												
2	1.116	2005	\$0	\$0	\$16,735	\$11,157	\$124	\$0	\$58,758	\$111,380	\$445,522	\$643,676
1	1.056	2006	\$0	\$0	\$7,922	\$5,281	\$59	\$0	\$27,815	\$52,724	\$210,898	\$304,699
0	1.000	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.000	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total			\$0	\$0	\$24,657	\$16,438	\$182	\$0	\$86,573	\$164,105	\$656,420	\$948,375
Total First Cost			\$207,409	\$23,045	\$50,583	\$33,722	\$948	\$28,807	\$86,573	\$164,105	\$656,420	\$1,251,612
Year	FY	Monitoring	O&M	Corps PM	Other							
-1	0.947	2006	\$109,065	\$0	\$630							
-2	0.896	2007	\$35,853	\$0	\$596							
-3	0.849	2008	\$33,944	\$0	\$564							
-4	0.803	2009	\$32,136	\$0	\$534							
-5	0.761	2010	\$30,425	\$0	\$506							
-6	0.720	2011	\$0	\$0	\$0							
-7	0.682	2012	\$0	\$0	\$0							
-8	0.645	2013	\$0	\$0	\$0							
-9	0.611	2014	\$0	\$0	\$0							
-10	0.579	2015	\$0	\$0	\$0							
-11	0.548	2016	\$0	\$0	\$0							
-12	0.519	2017	\$0	\$0	\$0							
-13	0.491	2018	\$0	\$0	\$0							
-14	0.465	2019	\$0	\$0	\$0							
-15	0.440	2020	\$0	\$0	\$0							
-16	0.417	2021	\$0	\$0	\$0							
-17	0.394	2022	\$0	\$0	\$0							
-18	0.373	2023	\$0	\$0	\$0							
-19	0.354	2024	\$0	\$0	\$0							
-20	0.335	2025	\$0	\$0	\$223							
Total			\$241,423	\$0	\$3,053	\$0						

Coastal Wetlands Conservation and Restoration Plan
Flowable Fill Demonstration Project

Fully Funded Costs Total Fully Funded Costs \$1,789,900 Amortized Costs \$151,335

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
3	1.028	2004	\$107,960	\$11,996	\$13,495	\$8,997	\$399	\$14,995	\$0	\$0	\$0	\$157,841
2	1.044	2005	\$78,271	\$8,697	\$9,784	\$6,523	\$289	\$10,871	\$0	\$0	\$0	\$114,435
1	1.061	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$186,232	\$20,692	\$23,279	\$15,519	\$688	\$25,866	\$0	\$0	\$0	\$272,276
Phase II												
2	1.044	2005	\$0	\$0	\$15,654	\$10,436	\$116	\$0	\$54,964	\$104,188	\$416,751	\$602,109
1	1.061	2006	\$0	\$0	\$7,960	\$5,307	\$59	\$0	\$27,949	\$52,980	\$211,918	\$306,173
0	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.099	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$0	\$0	\$23,614	\$15,743	\$174	\$0	\$82,913	\$157,167	\$628,670	\$908,282
Total Cost			\$186,200	\$20,700	\$46,900	\$31,300	\$900	\$25,900	\$82,900	\$157,200	\$628,700	\$1,180,600

Year	FY	Monitoring	O&M	Corps PM	Other
-1	1.0614	2006	\$122,269	\$124,347	\$706
-2	1.0794	2007	\$43,176	\$43,953	\$718
-3	1.0988	2008	\$43,953	\$44,744	\$731
-4	1.1186	2009	\$44,744	\$45,550	\$744
-5	1.1387	2010	\$45,550	\$46,370	\$757
-6	1.1592	2011	\$0	\$0	\$0
-7	1.1801	2012	\$0	\$0	\$0
-8	1.2014	2013	\$0	\$0	\$0
-9	1.2230	2014	\$0	\$0	\$0
-10	1.2450	2015	\$0	\$0	\$0
-11	1.2674	2016	\$0	\$0	\$0
-12	1.2902	2017	\$0	\$0	\$0
-13	1.3134	2018	\$0	\$0	\$0
-14	1.3371	2019	\$0	\$0	\$0
-15	1.3611	2020	\$0	\$0	\$0
-16	1.3856	2021	\$0	\$0	\$0
-17	1.4106	2022	\$0	\$0	\$0
-18	1.4360	2023	\$0	\$0	\$0
-19	1.4618	2024	\$0	\$0	\$0
-20	1.4881	2025	\$0	\$0	\$990
Total		\$299,700	\$305,000	\$4,600	\$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	<u>599,000</u>
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	<u>749,000</u>

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

<i>Engineering and Design</i>		\$180,000
Engineering	\$75,000	
Geotechnical Investigation	\$0	
Hydrologic Modeling	\$0	
Data Collection	\$30,000	
Cultural Resources	\$0	
HTRW	\$50,000	
NEPA Compliance	\$25,000	
<i>Supervision and Administration</i>		\$22,500

State Costs

<i>Supervision and Administration</i>		\$15,000
<i>Ecological Review Costs</i>		\$0
<i>Easements and Land Rights</i>		\$20,000
<i>Monitoring</i>		\$25,000
Monitoring Plan Development	\$25,000	
Monitoring Protocol Cost *	\$0	

Total Phase I Cost Estimate **\$263,000**

* Monitoring Protocol requires a minimum of one year pre-construction monitoring at a specified cost based on project type and area.

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>		\$749,000
Lands or Oyster Issues	0 lease acres	\$0
<i>Supervision and Inspection</i>	90 days @ 876 per day	\$79,000
<i>Supervision and Administration</i>		\$22,500

State Costs

<i>Supervision and Administration</i>		\$15,000
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Total Phase II Cost Estimate **\$866,000**

TOTAL ESTIMATED PROJECT FIRST COST **1,129,000**

O&M Data

Annual Costs

Annual Inspections	\$0
Annual Cost for Operations	\$0
Preventive Maintenance	\$0
Engineering Monitoring @ TY1-5, 10, 15, 19	\$0

Specific Intermittent Costs:

<u>Construction Items</u>				<u>Year 2</u>	<u>Year 7</u>	<u>\$0</u>	<u>Year 14</u>
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
Subtotal				<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Subtotal w/ 25% contin.				\$0	\$0	\$0	\$0
<u>Engineer, Design & Administrative Costs</u>							
Engineering and Design Cost				\$0	#NUM!	\$0	#NUM!
Administrative Cost				\$0	\$0	\$0	\$0
Eng Survey	0 days	@	\$1,460 per day	\$0	\$0	\$0	\$0
Construction Insp	0 days	@	\$876 per day	\$0	\$0	\$0	\$0
Subtotal				\$0	#NUM!	\$0	#NUM!
Federal S&A				\$0	\$0	\$0	\$0
Total				\$0	#NUM!	\$0	#NUM!

Annual Project Costs:

Corps Administration	\$665
Monitoring	\$115,000

Construction Schedule:

		2004	2005	2006	2007	2008	2009	2010	Total
Plan & Design Start	March-04	7	5	0	0	0	0	0	12
Plan & Design End	March-05								
Const. Start	August-05								
Const. End	November-05	0	2	1	0	0	0	0	3

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Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13 - Demonstration Projects
Interior Shoreline Protection Demo Project

Project Construction Years:	1	Total Project Years	6
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$1,064,400	Total Fully Funded Costs	\$1,121,900

	<u>Present Worth</u>	<u>Average Annual</u>
Annual Charges		
First Costs	\$1,093,483	\$92,453
Monitoring	\$41,706	\$3,526
O & M Costs	\$0	\$0
Other Costs	<u>\$3,053</u>	<u>\$258</u>
Total	\$1,138,200	\$96,200
Average Annual Habitat Units	N/A	
Cost Per Habitat Unit	N/A	
Total Net Acres	N/A	

Coastal Wetlands Conservation and Restoration Plan

Interior Shoreline Protection Demo Project

Project Costs

0

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
1	Compound	2004	\$141,000	\$10,000	\$15,000	\$30,000	\$0	\$25,000	-	\$0	\$221,000	
0	Compound	2005	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
0	Compound	2006	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
0	Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
TOTAL			\$141,000	\$10,000	\$15,000	\$30,000	\$0	\$25,000	\$0	\$0	\$221,000	
Phase II												
1	Compound	2004	-	\$0	\$15,000	\$30,000	\$0	\$0	\$23,000	\$149,250	\$597,000	\$814,250
0	Compound	2005	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0
0	Compound	2006	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0
0	Compound	2007	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0
TOTAL			\$0	\$0	\$15,000	\$30,000	\$0	\$0	\$23,000	\$149,250	\$597,000	\$814,250
Total First Costs			\$141,000	\$10,000	\$30,000	\$60,000	\$0	\$25,000	\$23,000	\$149,250	\$597,000	\$1,035,250

Year	FY	Monitoring	O&M	Corps PM	Other	
1	Discount	2005	\$9,800	\$0	\$665	-
2	Discount	2006	\$9,800	\$0	\$665	-
3	Discount	2007	\$9,800	\$0	\$665	-
4	Discount	2008	\$9,800	\$0	\$665	-
5	Discount	2009	\$9,800	\$0	\$665	-
6	Discount	2010	\$0	\$0	\$0	-
7	Discount	2011	\$0	\$0	\$0	-
8	Discount	2012	\$0	\$0	\$0	-
9	Discount	2013	\$0	\$0	\$0	-
10	Discount	2014	\$0	\$0	\$0	-
11	Discount	2015	\$0	\$0	\$0	-
12	Discount	2016	\$0	\$0	\$0	-
13	Discount	2017	\$0	\$0	\$0	-
14	Discount	2018	\$0	\$0	\$0	-
15	Discount	2019	\$0	\$0	\$0	-
16	Discount	2020	\$0	\$0	\$0	-
17	Discount	2021	\$0	\$0	\$0	-
18	Discount	2022	\$0	\$0	\$0	-
19	Discount	2023	\$0	\$0	\$0	-
20	Discount	2024	\$0	\$0	\$665	-
Total			\$49,000	\$0	\$3,990	\$0

**Coastal Wetlands Conservation and Restoration Plan
Interior Shoreline Protection Demo Project**

Present Valued Costs			Total Discounted Costs				\$1,138,241				Amortized Costs			\$96,237
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost			
Phase I														
1	1.056	2004	\$148,931	\$10,563	\$15,844	\$31,688	\$0	\$26,406	\$0	\$0	\$0	\$233,431		
0	1.000	2005	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
0	1.000	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
0	1.000	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Total			\$148,931	\$10,563	\$15,844	\$31,688	\$0	\$26,406	\$0	\$0	\$0	\$233,431		
Phase II														
1	1.056	2004	\$0	\$0	\$15,844	\$31,688	\$0	\$0	\$24,294	\$157,645	\$630,581	\$860,052		
0	1.000	2005	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
0	1.000	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
0	1.000	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Total			\$0	\$0	\$15,844	\$31,688	\$0	\$0	\$24,294	\$157,645	\$630,581	\$860,052		
Total First Cost			\$148,931	\$10,563	\$31,688	\$63,375	\$0	\$26,406	\$24,294	\$157,645	\$630,581	\$1,093,483		
Year	FY	Monitoring	O&M	Corps PM	Other									
-1	0.947	2005	\$9,278	\$0	\$630									
-2	0.896	2006	\$8,784	\$0	\$596									
-3	0.849	2007	\$8,316	\$0	\$564									
-4	0.803	2008	\$7,873	\$0	\$534									
-5	0.761	2009	\$7,454	\$0	\$506									
-6	0.720	2010	\$0	\$0	\$0									
-7	0.682	2011	\$0	\$0	\$0									
-8	0.645	2012	\$0	\$0	\$0									
-9	0.611	2013	\$0	\$0	\$0									
-10	0.579	2014	\$0	\$0	\$0									
-11	0.548	2015	\$0	\$0	\$0									
-12	0.519	2016	\$0	\$0	\$0									
-13	0.491	2017	\$0	\$0	\$0									
-14	0.465	2018	\$0	\$0	\$0									
-15	0.440	2019	\$0	\$0	\$0									
-16	0.417	2020	\$0	\$0	\$0									
-17	0.394	2021	\$0	\$0	\$0									
-18	0.373	2022	\$0	\$0	\$0									
-19	0.354	2023	\$0	\$0	\$0									
-20	0.335	2024	\$0	\$0	\$223									
Total		\$41,706	\$0	\$3,053	\$0									

Coastal Wetlands Conservation and Restoration Plan
Interior Shoreline Protection Demo Project

Fully Funded Costs Total Fully Funded Costs \$1,121,900 Amortized Costs \$94,856

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
1	1.028	2004	\$144,975	\$10,282	\$15,423	\$30,846	\$0	\$25,705	\$0	\$0	\$227,231	
0	1.044	2005	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.061	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$144,975	\$10,282	\$15,423	\$30,846	\$0	\$25,705	\$0	\$0	\$227,231	
Phase II												
1	1.028	2004	\$0	\$0	\$15,423	\$30,846	\$0	\$0	\$23,648	\$153,458	\$613,832	\$837,208
0	1.044	2005	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.061	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$0	\$0	\$15,423	\$30,846	\$0	\$0	\$23,648	\$153,458	\$613,832	\$837,208
Total Cost			\$145,000	\$10,300	\$30,800	\$61,700	\$0	\$25,700	\$23,600	\$153,500	\$613,800	\$1,064,400

Year	FY	Monitoring	O&M	Corps PM	Other
-1	1.0436	2005	\$10,227	\$0	\$694
-2	1.0614	2006	\$10,401	\$0	\$706
-3	1.0794	2007	\$10,578	\$0	\$718
-4	1.0988	2008	\$10,769	\$0	\$731
-5	1.1186	2009	\$10,962	\$0	\$744
-6	1.1387	2010	\$0	\$0	\$0
-7	1.1592	2011	\$0	\$0	\$0
-8	1.1801	2012	\$0	\$0	\$0
-9	1.2014	2013	\$0	\$0	\$0
-10	1.2230	2014	\$0	\$0	\$0
-11	1.2450	2015	\$0	\$0	\$0
-12	1.2674	2016	\$0	\$0	\$0
-13	1.2902	2017	\$0	\$0	\$0
-14	1.3134	2018	\$0	\$0	\$0
-15	1.3371	2019	\$0	\$0	\$0
-16	1.3611	2020	\$0	\$0	\$0
-17	1.3856	2021	\$0	\$0	\$0
-18	1.4106	2022	\$0	\$0	\$0
-19	1.4360	2023	\$0	\$0	\$0
-20	1.4618	2024	\$0	\$0	\$972
Total		\$52,900	\$0	\$4,600	\$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	<u>597,000</u>
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	<u>746,000</u>

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

<i>Engineering and Design</i>		\$141,000
Engineering	\$54,000	
Geotechnical Investigation	\$37,000	
Hydrologic Modeling	\$0	
Data Collection	\$20,000	
Cultural Resources	\$10,000	
HTRW	\$0	
NEPA Compliance	\$20,000	
<i>Supervision and Administration</i>		\$15,000

State Costs

<i>Supervision and Administration</i>		\$30,000
<i>Ecological Review Costs</i>		\$0
<i>Easements and Land Rights</i>		\$10,000
<i>Monitoring</i>		\$25,000
Monitoring Plan Development	\$25,000	
Monitoring Protocol Cost *	\$0	

Total Phase I Cost Estimate **\$221,000**

* Monitoring Protocol requires a minimum of one year pre-construction monitoring at a specified cost based on project type and area.

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>		\$746,000
Lands or Oyster Issues	0 lease acres	\$0
<i>Supervision and Inspection</i>	26 days @ 876 per day	\$23,000
<i>Supervision and Administration</i>		\$15,000

State Costs

<i>Supervision and Administration</i>		\$30,000
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Total Phase II Cost Estimate **\$814,000**

TOTAL ESTIMATED PROJECT FIRST COST **1,035,000**

O&M Data

Annual Costs

Annual Inspections	\$0
Annual Engineering Monitoring	\$0
Annual Cost for Operations	\$0
Preventive Maintenance	\$0

Specific Intermittent Costs:

Construction Items

				<u>Year 2</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
State Costs				\$0	\$0	\$0	\$0
Subtotal				\$0	\$0	\$0	\$0
Subtotal w/ 25% contin.				\$0	\$0	\$0	\$0
Engineer, Design & Administrative Costs							
Engineering and Design Cost				\$0	\$0	\$0	\$0
Administrative Cost				\$0	\$0	\$0	\$0
Eng Survey	0 days	@	\$0 per day	\$0	\$0	\$0	\$0
Construction Insp	0 days	@	\$876 per day	\$0	\$0	\$0	\$0
Subtotal				\$0	\$0	\$0	\$0
Federal S&A				\$0	\$0	\$0	\$0
Total				\$0	\$0	\$0	\$0

Annual Project Costs:

Corps Administration	\$0
Monitoring	#REF!

Construction Schedule:

		2004	2005	2006	2007	2008	2009	2010	Total
Plan & Design Start	March-04	3	0	0	0	0	0	0	3
Plan & Design End	June-04								
Const. Start	September-04								
Const. End	October-04	1	0	0	0	0	0	0	1

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13 - Demonstration Projects
Soil Salinity Remediation Demonstration Project

Project Construction Years:	1	Total Project Years	6
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$1,672,500	Total Fully Funded Costs	\$1,840,700

Annual Charges	<u>Present Worth</u>	<u>Average Annual</u>
First Costs	\$1,713,022	\$144,835
Monitoring	\$65,682	\$5,553
O & M Costs	\$50,338	\$4,256
Other Costs	<u>\$3,053</u>	<u>\$258</u>
Total	\$1,832,100	\$154,900
Average Annual Habitat Units	N/A	
Cost Per Habitat Unit	N/A	
Total Net Acres	N/A	

**Coastal Wetlands Conservation and Restoration Plan
Soil Salinity Remediation Demonstration Project**

Project Costs

0

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	Compound	2004	\$119,000	\$5,833	\$14,000	\$17,500	\$388	\$14,583	-	\$0	\$171,305	
3	Compound	2005	\$85,000	\$4,167	\$10,000	\$12,500	\$277	\$10,417	-	\$0	\$122,360	
2	Compound	2006	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
1	Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0	
TOTAL			\$204,000	\$10,000	\$24,000	\$30,000	\$665	\$25,000	\$0	\$0	\$293,665	
Phase II												
2	Compound	2006	-	\$0	\$4,000	\$5,000	\$111	\$0	\$3,000	\$39,961	\$159,844	\$211,916
1	Compound	2007	-	\$0	\$20,000	\$25,000	\$554	-	\$15,000	\$199,805	\$799,219	\$1,059,578
0	Compound	2008	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0
0	Compound	2009	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0	\$0
TOTAL			\$0	\$0	\$24,000	\$30,000	\$665	\$0	\$18,000	\$239,766	\$959,063	\$1,271,494
Total First Costs			\$204,000	\$10,000	\$48,000	\$60,000	\$1,330	\$25,000	\$18,000	\$239,766	\$959,063	\$1,565,159
Year	FY	Monitoring	O&M	Corps PM	Other							
1	Discount	2008	\$0	\$0	\$665	-						
2	Discount	2009	\$19,850	\$0	\$665	-						
3	Discount	2010	\$19,850	\$5,000	\$665	-						
4	Discount	2011	\$19,850	\$57,375	\$665	-						
5	Discount	2012	\$19,850	\$0	\$665	-						
6	Discount	2013	\$0	\$0	\$0	-						
7	Discount	2014	\$0	\$0	\$0	-						
8	Discount	2015	\$0	\$0	\$0	-						
9	Discount	2016	\$0	\$0	\$0	-						
10	Discount	2017	\$0	\$0	\$0	-						
11	Discount	2018	\$0	\$0	\$0	-						
12	Discount	2019	\$0	\$0	\$0	-						
13	Discount	2020	\$0	\$0	\$0	-						
14	Discount	2021	\$0	\$0	\$0	-						
15	Discount	2022	\$0	\$0	\$0	-						
16	Discount	2023	\$0	\$0	\$0	-						
17	Discount	2024	\$0	\$0	\$0	-						
18	Discount	2025	\$0	\$0	\$0	-						
19	Discount	2026	\$0	\$0	\$0	-						
20	Discount	2027	\$0	\$0	\$665	-						
Total			\$79,400	\$62,375	\$3,990	\$0						

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**Coastal Wetlands Conservation and Restoration Plan
Soil Salinity Remediation Demonstration Project**

Present Valued Costs			Total Discounted Costs					\$1,832,095				Amortized Costs			\$154,902
Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost				
Phase I															
4	1.245	2004	\$148,120	\$7,261	\$17,426	\$21,782	\$483	\$18,152	\$0	\$0	\$0	\$213,224			
3	1.178	2005	\$100,166	\$4,910	\$11,784	\$14,730	\$327	\$12,275	\$0	\$0	\$0	\$144,192			
2	1.116	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
1	1.056	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Total			\$248,286	\$12,171	\$29,210	\$36,513	\$809	\$30,427	\$0	\$0	\$0	\$357,416			
Phase II															
2	1.116	2006	\$0	\$0	\$4,463	\$5,578	\$124	\$0	\$3,347	\$44,583	\$178,332	\$236,427			
1	1.056	2007	\$0	\$0	\$21,125	\$26,406	\$585	\$0	\$15,844	\$211,044	\$844,175	\$1,119,179			
0	1.000	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
0	1.000	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
Total			\$0	\$0	\$25,588	\$31,985	\$709	\$0	\$19,191	\$255,627	\$1,022,507	\$1,355,606			
Total First Cost			\$248,286	\$12,171	\$54,798	\$68,497	\$1,518	\$30,427	\$19,191	\$255,627	\$1,022,507	\$1,713,022			
Year	FY	Monitoring	O&M	Corps PM	Other										
-1	0.947	2008	\$0	\$0	\$630										
-2	0.896	2009	\$17,792	\$0	\$596										
-3	0.849	2010	\$16,845	\$4,243	\$564										
-4	0.803	2011	\$15,948	\$46,095	\$534										
-5	0.761	2012	\$15,098	\$0	\$506										
-6	0.720	2013	\$0	\$0	\$0										
-7	0.682	2014	\$0	\$0	\$0										
-8	0.645	2015	\$0	\$0	\$0										
-9	0.611	2016	\$0	\$0	\$0										
-10	0.579	2017	\$0	\$0	\$0										
-11	0.548	2018	\$0	\$0	\$0										
-12	0.519	2019	\$0	\$0	\$0										
-13	0.491	2020	\$0	\$0	\$0										
-14	0.465	2021	\$0	\$0	\$0										
-15	0.440	2022	\$0	\$0	\$0										
-16	0.417	2023	\$0	\$0	\$0										
-17	0.394	2024	\$0	\$0	\$0										
-18	0.373	2025	\$0	\$0	\$0										
-19	0.354	2026	\$0	\$0	\$0										
-20	0.335	2027	\$0	\$0	\$223										
Total			\$65,682	\$50,338	\$3,053	\$0									

**Coastal Wetlands Conservation and Restoration Plan
Soil Salinity Remediation Demonstration Project**

Fully Funded Costs Total Fully Funded Costs \$1,840,700 Amortized Costs \$155,630

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	1.028	2004	\$122,355	\$5,998	\$14,395	\$17,993	\$399	\$14,995	\$0	\$0	\$176,135	
3	1.044	2005	\$88,708	\$4,348	\$10,436	\$13,045	\$289	\$10,871	\$0	\$0	\$127,698	
2	1.061	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
1	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
TOTAL			\$211,063	\$10,346	\$24,831	\$31,039	\$688	\$25,866	\$0	\$0	\$303,832	
Phase II												
2	1.061	2006	\$0	\$0	\$4,245	\$5,307	\$118	\$0	\$3,184	\$42,413	\$169,652	\$224,919
1	1.079	2007	\$0	\$0	\$21,588	\$26,985	\$598	\$0	\$16,191	\$215,670	\$862,679	\$1,143,711
0	1.099	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.119	2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$0	\$0	\$25,833	\$32,292	\$716	\$0	\$19,375	\$258,083	\$1,032,331	\$1,368,630

Total Cost \$211,100 \$10,300 \$50,700 \$63,300 \$1,400 \$25,900 \$19,400 \$258,100 \$1,032,300 \$1,672,500

Year	FY	Monitoring	O&M	Corps PM	Other
-1	1.0988	2008	\$0	\$0	\$731
-2	1.1186	2009	\$22,204	\$0	\$744
-3	1.1387	2010	\$22,604	\$5,694	\$757
-4	1.1592	2011	\$23,011	\$66,512	\$771
-5	1.1801	2012	\$23,425	\$0	\$785
-6	1.2014	2013	\$0	\$0	\$0
-7	1.2230	2014	\$0	\$0	\$0
-8	1.2450	2015	\$0	\$0	\$0
-9	1.2674	2016	\$0	\$0	\$0
-10	1.2902	2017	\$0	\$0	\$0
-11	1.3134	2018	\$0	\$0	\$0
-12	1.3371	2019	\$0	\$0	\$0
-13	1.3611	2020	\$0	\$0	\$0
-14	1.3856	2021	\$0	\$0	\$0
-15	1.4106	2022	\$0	\$0	\$0
-16	1.4360	2023	\$0	\$0	\$0
-17	1.4618	2024	\$0	\$0	\$0
-18	1.4881	2025	\$0	\$0	\$0
-19	1.5149	2026	\$0	\$0	\$0
-20	1.5422	2027	\$0	\$0	\$1,026
Total		\$91,200	\$72,200	\$4,800	\$0

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E&D and Construction Data

ESTIMATED CONSTRUCTION COST	<u>959,063</u>
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	<u>1,199,000</u>

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

<i>Engineering and Design</i>		\$204,000
Engineering	\$84,000	
Geotechnical Investigation	\$43,000	
Soil Analysis	\$22,000	
Data Collection	\$10,000	
Cultural Resources	\$0	
HTRW	\$25,000	
NEPA Compliance	\$20,000	
<i>Supervision and Administration</i>		\$24,000

State Costs

<i>Supervision and Administration</i>		\$30,000
<i>Ecological Review Costs</i>		\$0
<i>Easements and Land Rights</i>		\$10,000
<i>Monitoring</i>		\$25,000
Monitoring Plan Development	\$25,000	
Monitoring Protocol Cost *	\$0	

Total Phase I Cost Estimate \$293,000

* Monitoring Protocol requires a minimum of one year pre-construction monitoring at a specified cost based on project type and area.

PHASE II

Federal Costs

<i>Estimated Construction Cost +25% Contingency</i>		\$1,199,000
Lands or Oyster Issues	0	lease acres \$0
<i>Supervision and Inspection</i>	21 days @	876 per day \$18,000
<i>Supervision and Administration</i>		\$24,000

State Costs

<i>Supervision and Administration</i>		\$30,000
---------------------------------------	--	----------

Total Phase II Cost Estimate \$1,271,000

TOTAL ESTIMATED PROJECT FIRST COST 1,564,000

O&M Data

Annual Costs

Annual Inspections	\$0
Annual engineering monitoring	\$0
Annual Cost for Operations	\$0
Preventive Maintenance	\$0

Specific Intermittent Costs:

Construction Items

				<u>Year 2</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Breach Containment Dikes				\$0	\$0	\$40,300	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$40,300	\$0
0				\$0	\$0	\$50,000	\$0
0				\$0	\$0	\$0	\$0
0				\$0	\$0	\$0	\$0
State Costs				\$0	\$0	\$0	\$0
Subtotal				\$0	\$0	\$130,600	\$0
Subtotal w/ 25% contin.				\$0	\$0	\$163,000	\$0
Engineer, Design & Administrative Costs							
Engineering and Design Cost				\$0	\$0	\$4,000	\$0
Administrative Cost				\$0	\$0	\$0	\$0
Eng Survey	0 days	@	\$0 per day	\$0	\$0	\$0	\$0
Construction Insp	0 days	@	\$876 per day	\$0	\$0	\$0	\$0
Subtotal				\$0	\$0	\$4,000	\$0
Federal S&A							
				\$0	\$0	\$0	\$0
Total				\$0	\$0	\$167,000	\$0

Annual Project Costs:

Corps Administration	\$665
Monitoring	\$0

Construction Schedule:

		2004	2005	2006	2007	2008	2009	2010	Total
Plan & Design Start	March-04	7	5	0	0	0	0	0	12
Plan & Design End	March-06								
Const. Start	August-06								
Const. End	August-07	0	0	2	10	0	0	0	12

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 13
Hackberry Bay Oyster Reef Demonstration Project

Project Construction Years:	1	Total Project Years	6
Interest Rate	5.625%	Amortization Factor	0.08455
Fully Funded First Costs	\$1,378,700	Total Fully Funded Costs	\$1,687,500

	<u>Present Worth</u>	<u>Average Annual</u>
Annual Charges		
First Costs	\$1,409,094	\$119,138
Monitoring	\$238,318	\$20,150
O & M Costs	\$0	\$0
Other Costs	<u>\$223</u>	<u>\$19</u>
Total	\$1,647,600	\$139,300
Average Annual Habitat Units	N/A	
Cost Per Habitat Unit	N/A	
Total Net Acres	N/A	

**Coastal Wetlands Conservation and Restoration Plan
Hackberry Bay Oyster Reef Demonstration Project**

Project Costs

0

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I											
2	Compound	2004	\$127,167	\$8,750	\$15,167	\$17,500	\$0	\$14,583	-	\$0	\$183,167
1	Compound	2005	\$90,833	\$6,250	\$10,833	\$12,500	\$0	\$10,417	-	\$0	\$130,833
0	Compound	2006	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0
0	Compound	2007	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	\$0
TOTAL			\$218,000	\$15,000	\$26,000	\$30,000	\$0	\$25,000	\$0	\$0	\$314,000
Phase II											
1	Compound	2005	-	\$0	\$26,000	\$30,000	\$0	\$0	\$85,000	\$173,750	\$695,000
0	Compound	2006	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0
0	Compound	2007	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0
0	Compound	2008	-	\$0	\$0	\$0	\$0	-	\$0	\$0	\$0
TOTAL			\$0	\$0	\$26,000	\$30,000	\$0	\$0	\$85,000	\$173,750	\$695,000
Total First Costs			\$218,000	\$15,000	\$52,000	\$60,000	\$0	\$25,000	\$85,000	\$173,750	\$695,000
Discount Schedule											
Year	FY	Monitoring	O&M	Corps PM	Other						
1	Discount	2006	\$56,000	\$0	\$0	-					
2	Discount	2007	\$56,000	\$0	\$0	-					
3	Discount	2008	\$56,000	\$0	\$0	-					
4	Discount	2009	\$56,000	\$0	\$0	-					
5	Discount	2010	\$56,000	\$0	\$0	-					
6	Discount	2011	\$0	\$0	\$0	-					
7	Discount	2012	\$0	\$0	\$0	-					
8	Discount	2013	\$0	\$0	\$0	-					
9	Discount	2014	\$0	\$0	\$0	-					
10	Discount	2015	\$0	\$0	\$0	-					
11	Discount	2016	\$0	\$0	\$0	-					
12	Discount	2017	\$0	\$0	\$0	-					
13	Discount	2018	\$0	\$0	\$0	-					
14	Discount	2019	\$0	\$0	\$0	-					
15	Discount	2020	\$0	\$0	\$0	-					
16	Discount	2021	\$0	\$0	\$0	-					
17	Discount	2022	\$0	\$0	\$0	-					
18	Discount	2023	\$0	\$0	\$0	-					
19	Discount	2024	\$0	\$0	\$0	-					
20	Discount	2025	\$0	\$0	\$665	-					
Total			\$280,000	\$0	\$665	\$0					

**Coastal Wetlands Conservation and Restoration Plan
Hackberry Bay Oyster Reef Demonstration Project**

Present Valued Costs			Total Discounted Costs					\$1,647,635				Amortized Costs		\$139,306
Year	Fiscal Year		E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost		
Phase I														
2	1.116	2004	\$141,875	\$9,762	\$16,921	\$19,524	\$0	\$16,270	\$0	\$0	\$0	\$204,352		
1	1.056	2005	\$95,943	\$6,602	\$11,443	\$13,203	\$0	\$11,003	\$0	\$0	\$0	\$138,193		
0	1.000	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
0	1.000	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Total			\$237,818	\$16,364	\$28,364	\$32,727	\$0	\$27,273	\$0	\$0	\$0	\$342,545		
Phase II														
1	1.056	2005	\$0	\$0	\$27,463	\$31,688	\$0	\$0	\$89,781	\$183,523	\$734,094	\$1,066,548		
0	1.000	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
0	1.000	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
0	1.000	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Total			\$0	\$0	\$27,463	\$31,688	\$0	\$0	\$89,781	\$183,523	\$734,094	\$1,066,548		
Total First Cost			\$237,818	\$16,364	\$55,826	\$64,415	\$0	\$27,273	\$89,781	\$183,523	\$734,094	\$1,409,094		

Year	FY	Monitoring	O&M	Corps PM	Other
-1	0.947	2006	\$53,018	\$0	\$0
-2	0.896	2007	\$50,194	\$0	\$0
-3	0.849	2008	\$47,521	\$0	\$0
-4	0.803	2009	\$44,991	\$0	\$0
-5	0.761	2010	\$42,595	\$0	\$0
-6	0.720	2011	\$0	\$0	\$0
-7	0.682	2012	\$0	\$0	\$0
-8	0.645	2013	\$0	\$0	\$0
-9	0.611	2014	\$0	\$0	\$0
-10	0.579	2015	\$0	\$0	\$0
-11	0.548	2016	\$0	\$0	\$0
-12	0.519	2017	\$0	\$0	\$0
-13	0.491	2018	\$0	\$0	\$0
-14	0.465	2019	\$0	\$0	\$0
-15	0.440	2020	\$0	\$0	\$0
-16	0.417	2021	\$0	\$0	\$0
-17	0.394	2022	\$0	\$0	\$0
-18	0.373	2023	\$0	\$0	\$0
-19	0.354	2024	\$0	\$0	\$0
-20	0.335	2025	\$0	\$0	\$223
Total		\$238,318	\$0	\$223	\$0

**Coastal Wetlands Conservation and Restoration Plan
Hackberry Bay Oyster Reef Demonstration Project**

Fully Funded Costs Total Fully Funded Costs \$1,687,500 Amortized Costs \$142,677

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
2	1.028	2004	\$130,752	\$8,997	\$15,594	\$17,993	\$0	\$14,995	\$0	\$0	\$0	\$188,331
1	1.044	2005	\$94,795	\$6,523	\$11,306	\$13,045	\$0	\$10,871	\$0	\$0	\$0	\$136,540
0	1.061	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$225,547	\$15,519	\$26,900	\$31,039	\$0	\$25,866	\$0	\$0	\$0	\$324,871
Phase II												
1	1.044	2005	\$0	\$0	\$27,134	\$31,309	\$0	\$0	\$88,708	\$181,329	\$725,314	\$1,053,793
0	1.061	2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.079	2007	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
0	1.099	2008	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL			\$0	\$0	\$27,134	\$31,309	\$0	\$0	\$88,708	\$181,329	\$725,314	\$1,053,793
Total Cost			\$225,500	\$15,500	\$54,000	\$62,300	\$0	\$25,900	\$88,700	\$181,300	\$725,300	\$1,378,700

Year	FY	Monitoring	O&M	Corps PM	Other
-1	1.0614	2006	\$59,436	\$0	\$0
-2	1.0794	2007	\$60,447	\$0	\$0
-3	1.0988	2008	\$61,535	\$0	\$0
-4	1.1186	2009	\$62,642	\$0	\$0
-5	1.1387	2010	\$63,770	\$0	\$0
-6	1.1592	2011	\$0	\$0	\$0
-7	1.1801	2012	\$0	\$0	\$0
-8	1.2014	2013	\$0	\$0	\$0
-9	1.2230	2014	\$0	\$0	\$0
-10	1.2450	2015	\$0	\$0	\$0
-11	1.2674	2016	\$0	\$0	\$0
-12	1.2902	2017	\$0	\$0	\$0
-13	1.3134	2018	\$0	\$0	\$0
-14	1.3371	2019	\$0	\$0	\$0
-15	1.3611	2020	\$0	\$0	\$0
-16	1.3856	2021	\$0	\$0	\$0
-17	1.4106	2022	\$0	\$0	\$0
-18	1.4360	2023	\$0	\$0	\$0
-19	1.4618	2024	\$0	\$0	\$0
-20	1.4881	2025	\$0	\$0	\$990
Total		\$307,800	\$0	\$1,000	\$0

O&M Data

Annual Costs

0	\$0
Annual Inspections	\$0
Annual Cost for Operations	\$0
Preventive Maintenance	\$0

Specific Intermittent Costs:

Construction Items

	<u>Year 2</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
(\$56,000/Yr). Terrebonne Bay Project Monitoring Cost is \$438,656 for 8 yrs.	\$0	\$0	\$0	\$0
This project monitoring is required only for five years. Terrebonne Bay treatment length is 4,800 lf, whereas this project treatment length is only 1,800.	\$0	\$0	\$0	\$0
0	\$0	\$0	\$0	\$0
Year 1	\$0	\$0	\$0	\$0
Year 2	\$0	\$0	\$0	\$0
Year 3	\$0	\$0	\$0	\$0
Subtotal	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Subtotal w/ 25% contin.	\$0	\$0	\$0	\$0
Engineer, Design & Administrative Costs				
Engineering and Design Cost	\$0	\$0	\$0	\$0
Administrative Cost	\$0	\$0	\$0	\$0
Eng Survey 0 days @ \$0 per day	\$0	\$0	\$0	\$0
Construction Insp 0 days @ \$876 per day	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$0
Federal S&A	\$0	\$0	\$0	\$0
Total	\$0	\$0	\$0	\$0

Annual Project Costs:

Corps Administration	\$0
Monitoring	\$0

Construction Schedule:

		2004	2005	2006	2007	2008	2009	2010	Total
Plan & Design Start	March-04	7	5	0	0	0	0	0	12
Plan & Design End	March-05								
Const. Start	June-05								
Const. End	September-05	0	4	0	0	0	0	0	4

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

13th Priority Project List Report

Appendix E

Wetland Value Assessment for Candidate Projects

Appendix E
Wetland Value Assessment For Candidate Projects
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WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project Goose Point/Pointe Platte Marsh Creation

The WVA for this project includes 1 subarea. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
Brackish Marsh	297

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

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: Whiskey Island Back Barrier Marsh Creation

Project Area: 1,384

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	51	0.56	51	0.56	48	0.53
V2	% Aquatic	45	0.51	45	0.51	40	0.46
V3	Interspersion	%	0.29	%	0.29	%	0.29
	Class 1						
	Class 2						
	Class 3	45		45		45	
	Class 4	55		55		55	
V4	%OW <= 1.5ft	60	0.87	60	0.87	55	0.81
V5	Salinity (ppt)	3.5	1.00	3.5	1.00	3.5	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		Emergent Marsh HSI = 0.64		EM HSI = 0.64		EM HSI = 0.62	
		Open Water HSI = 0.68		OW HSI = 0.68		OW HSI = 0.64	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: Goose Point/Pointe Platte Marsh Creation

Project Area: 1,384

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	51	0.56	76	0.78	82	0.84
V2	% Aquatic	45	0.51	70	0.73	70	0.73
V3	Interspersion	%	0.29	%	0.76	%	0.76
	Class 1			70		70	
	Class 2						
	Class 3	45					
	Class 4	55		30		30	
V4	%OW <= 1.5ft	60	0.87	65	0.94	65	0.94
V5	Salinity (ppt)	3.5	1.00	3.5	1.00	3.5	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		Emergent Marsh HSI = 0.64		EM HSI = 0.84		EM HSI = 0.87	
		Open Water HSI = 0.68		OW HSI = 0.84		OW HSI = 0.84	

Project: Goose Point/Pointe Platte Marsh Creation
FWP

Variable		TY 20					
		Value	SI	Value	SI	Value	SI
V1	% Emergent	80	0.82				
V2	% Aquatic	65	0.69				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 70 30	0.76	%		%	
V4	%OW <= 1.5ft	60	0.87				
V5	Salinity (ppt)	3.5	1.00				
V6	Access Value	1.00	1.00				
		EM HSI = 0.86		EM HSI =		EM HSI =	
		OW HSI = 0.81		OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Goose Point/Pointe Platte Marsh Creation

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	709	0.64	454.16	
1	707	0.64	452.88	453.52
20	669	0.62	416.11	8253.12
			AAHUs =	435.33

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	709	0.64	454.16	
1	759	0.84	637.98	544.40
3	1139	0.87	996.02	1629.70
20	1105	0.86	953.86	16572.86
			AAHUs	937.35

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs	937.35
B. Future Without Project Emergent Marsh AAHUs	= 435.33
Net Change (FWP - FWOP) =	502.02

AAHU CALCULATION - OPEN WATER

Project: Goose Point/Pointe Platte Marsh Creation

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	675	0.68	456.52	
1	677	0.68	457.88	457.20
20	715	0.64	460.07	8724.48
			AAHUs =	459.08

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	675	0.68	456.52	
1	240	0.84	202.47	341.63
3	245	0.84	206.69	409.17
20	279	0.81	227.32	3691.87
			AAHUs	222.13

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	222.13
B. Future Without Project Open Water AAHUs =	459.08
Net Change (FWP - FWOP) =	-236.95

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	502.02
B. Open Water Habitat Net AAHUs =	-236.95
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	296.75

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project Caernarvon Outfall Management East

The WVA for this project includes 1 subarea. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
Intermediate Marsh	103

TOTAL BENEFITS = 103 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Whiskey Island Back Barrier Marsh Creation

Project Area:

Fresh.....

Condition: Future Without Project

Intermediate.. 6,839

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	72	0.75	72	0.75	65	0.69
V2	% Aquatic	60	0.64	60	0.64	60	0.64
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.40	% 100	0.40	% 100	0.40
V4	%OW <= 1.5ft	60	0.78	60	0.78	60	0.78
V5	Salinity (ppt) fresh intermedia	 0.6	1.00	 0.6	1.00	 0.6	1.00
V6	Access Value fresh intermedia	 1.00	1.00	 1.00	1.00	 1.00	1.00
Emergent Marsh HSI		0.77		EM HSI = 0.77		EM HSI = 0.72	
Open Water HSI		0.72		OW HSI = 0.72		OW HSI = 0.72	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Caernarvon Outfall Management East

Project Area:

Fresh.....

Condition: Future With Project

Intermediate... 6,839

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	72	0.75	72	0.75	72	0.75
V2	% Aquatic	60	0.64	60	0.64	65	0.69
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.40	% 100	0.40	% 100	0.40
V4	%OW <= 1.5ft	60	0.78	60	0.78	60	0.78
V5	Salinity (ppt) fresh intermedia	 0.6	1.00	 0.5	1.00	 0.5	1.00
V6	Access Value fresh intermedia	 1.00	1.00	 1.00	1.00	 1.00	1.00
Emergent Marsh HSI		0.77		EM HSI = 0.77		EM HSI = 0.77	
Open Water HSI		0.72		OW HSI = 0.72		OW HSI = 0.75	

Project: Caernarvon Outfall Management East
FWP

Variable		TY 20					
		Value	SI	Value	SI	Value	SI
V1	% Emergent	70	0.73				
V2	% Aquatic	65	0.69				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 10 90	0.42	%		%	
V4	%OW <= 1.5ft	65	0.83				
V5	Salinity (ppt) fresh intermedia	0.5	1.00				
V6	Access Value fresh intermedia	1.00	1.00				
		EM HSI = 0.76		EM HSI =		EM HSI =	
		OW HSI = 0.75		OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Caernarvon Outfall Management East

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	4951	0.77	3793.35	
1	4924	0.77	3772.67	3783.01
20	4443	0.72	3212.33	66291.74
			AAHUs =	3503.74

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	4951	0.77	3793.35	
1	4913	0.77	3764.24	3778.80
3	4886	0.77	3743.55	7507.79
20	4763	0.76	3601.45	62429.04
			AAHUs	3685.78

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHU	3685.78
B. Future Without Project Emergent Marsh AA	3503.74
Net Change (FWP - FWOP) =	182.04

AAHU CALCULATION - OPEN WATER

Project: Caernarvon Outfall Management East

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1888	0.72	1354.91	
1	1915	0.72	1374.29	1364.60
20	2396	0.72	1719.47	29390.73
			AAHUs =	1537.77

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1888	0.72	1354.91	
1	1901	0.72	1364.24	1359.58
3	1928	0.75	1439.72	2803.70
20	2051	0.75	1543.15	25352.41
			AAHUs	1475.78

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs	1475.78
B. Future Without Project Open Water AAHUs	1537.77
Net Change (FWP - FWOP) =	-61.98

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs	182.04
B. Open Water Habitat Net AAHUs	-61.98
Net Benefits=(2.1xEMAAHUs+OWAAHUs)	103.33

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project Naomi Siphon Outfall Area Sediment Delivery

The WVA for this project includes 1 subarea. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
Fresh Marsh	77

TOTAL BENEFITS =	77	AAHUS
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WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Whiskey Island Back Barrier Marsh Creation

Project Area:

Fresh..... 222

Condition: Future Without Project

Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	39	0.45	39	0.45	38	0.44
V2	% Aquatic	64	0.68	64	0.68	64	0.68
V3	Interspersion Class 1	%	0.36	%	0.36	%	0.36
	Class 2	40		40		40	
	Class 3						
	Class 4	60		60		60	
V4	%OW <= 1.5ft	30	0.44	30	0.44	30	0.44
V5	Salinity (ppt) fresh intermediate	1.4	1.00	1.4	1.00	1.4	1.00
V6	Access Value fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.55	EM HSI =	0.55	EM HSI =	0.55
Open Water HSI		=	0.71	OW HSI =	0.71	OW HSI =	0.71

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Naomi Siphon Outfall Area Sediment Delivery

Project Area:

Fresh..... 222

Condition: Future With Project

Intermediate....

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	39	0.45	100	1.00	100	1.00
V2	% Aquatic	64	0.68	0	0.10	0	0.10
V3	Interspersion Class 1	%	0.36	%	1.00	%	1.00
	Class 2	40		100		100	
	Class 3						
	Class 4	60					
V4	%OW <= 1.5ft	30	0.44	0	0.10	0	0.10
V5	Salinity (ppt) fresh intermediate	1.4	1.00	1.4	1.00	1.4	1.00
V6	Access Value fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.55	EM HSI =	1.00	EM HSI =	1.00
Open Water HSI		=	0.71	OW HSI =	0.29	OW HSI =	0.29

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project Spanish Pass Diversion

The WVA for this project includes 1 subarea. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
Fresh Marsh	79

TOTAL BENEFITS =	79	AAHUS
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WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Whiskey Island Back Barrier Marsh Creation

Project Area:

Fresh..... 1,580

Condition: Future Without Project

Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	12	0.21	12	0.21	6	0.15
V2	% Aquatic	30	0.37	30	0.37	30	0.37
V3	Interspersion	%	0.20	%	0.20	%	0.20
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5	100		100		100	
V4	%OW <= 1.5ft	10	0.21	10	0.21	10	0.21
V5	Salinity (ppt)						
	fresh	1	1.00	1	1.00	1	1.00
	intermediate						
V6	Access Value						
	fresh	1.00	1.00	1.00	1.00	1.00	1.00
	intermediate						
Emergent Marsh HSI		=	0.34	EM HSI =	0.34	EM HSI =	0.30
Open Water HSI		=	0.47	OW HSI =	0.47	OW HSI =	0.47

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Spanish Pass Diversion

Project Area:

Fresh..... 1,580

Condition: Future With Project

Intermediate...

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	12	0.21	13	0.22	34	0.41
V2	% Aquatic	30	0.37	30	0.37	60	0.64
V3	Interspersion	%	0.20	%	0.20	%	0.30
	Class 1						
	Class 2						
	Class 3						
	Class 4						
	Class 5	100		100		75	
V4	%OW <= 1.5ft	10	0.21	10	0.21	20	0.33
V5	Salinity (ppt)						
	fresh	1	1.00	1	1.00	1	1.00
	intermediate						
V6	Access Value						
	fresh	1.00	1.00	1.00	1.00	1.00	1.00
	intermediate						
Emergent Marsh HSI		=	0.34	EM HSI =	0.35	EM HSI =	0.51
Open Water HSI		=	0.47	OW HSI =	0.47	OW HSI =	0.68

AAHU CALCULATION - EMERGENT MARSH

Project: Spanish Pass Diversion

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	197	0.34	67.67	
1	190	0.34	65.27	66.47
20	99	0.30	29.40	885.88
			AAHUs =	47.62

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	197	0.34	67.67	
1	207	0.35	72.67	70.16
20	532	0.51	272.07	3110.00
			AAHUs	159.01

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	159.01
B. Future Without Project Emergent Marsh AAHUs =	47.62
Net Change (FWP - FWOP) =	111.39

AAHU CALCULATION - OPEN WATER

Project: Spanish Pass Diversion

Future Without Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1383	0.47	655.01	
1	1390	0.47	658.32	656.66
20	1481	0.47	701.42	12917.56
			AAHUs =	678.71

Future With Project			Total HUs	Cummulative HUs
TY	Water Acres	x HSI		
0	1383	0.47	655.01	
1	1373	0.47	650.27	652.64
20	1048	0.68	709.39	13126.04
			AAHUs	688.93

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	688.93
B. Future Without Project Open Water AAHUs =	678.71
Net Change (FWP - FWOP) =	10.22

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	111.39
B. Open Water Habitat Net AAHUs =	10.22
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	78.76

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: Bayou Sale Shoreline Protection

The WVA for this project includes 2 subareas. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
Bottomland hardwoods	33
Fresh Marsh	120

TOTAL BENEFITS =	153	AAHUS
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COMMUNITY HABITAT SUITABILITY MODEL

Bottomland Hardwoods

Project: Bayou Sale Shoreline Protection Acres: 58
 Condition: Whiskey Island Back Barrier Marsh Creation

Variable		TY 0		TY 1		TY 20	
		Class/Value	SI	Class/Value	SI	Class/Value	SI
V1	Species Assoc.	Class 5	1.00	Class 5	1.00	Class 5	1.00
V2	Maturity (input age or dbh, not both)	Age dbh 14.1	0.61	Age dbh 14.1	0.61	Age dbh 15.1	0.67
V3	Understory / Midstory	Understory % 66 Midstory % 31	0.97	Understory % 66 Midstory % 31	0.97	Understory % 66 Midstory % 31	0.97
V4	Hyrology	Class 3	1.00	Class 3	1.00	Class 3	1.00
V5	Forest Size	Class 4	0.80	Class 4	0.80	Class 4	0.80
V6	Surrounding Land Use	Values % Forest / marsh Abandoned Ag Pasture / Hay Active Ag Development	0.89	Values % 85 10 5	0.89	Values % 85 10 5	0.89
V7	Disturbance Type Distance	Class 2 Class 3	1.00	Class 2 Class 3	1.00	Class 2 Class 3	1.00
		HSI =	0.85	HSI =	0.85	HSI =	0.88

COMMUNITY HABITAT SUITABILITY MODEL

Bottomland Hardwoods

Project: Bayou Sale Shoreline Protection Acres: 58
 Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Class/Value	SI	Class/Value	SI	Class/Value	SI
V1	Species Assoc.	Class 5	1.00	Class 5	1.00	Class 1	
V2	Maturity (input age or dbh, not both)	Age dbh 14.1	0.61	Age dbh 14.1	0.61	Age dbh 0	0.00
V3	Understory / Midstory	Understory % 66 Midstory % 31	0.97	Understory % 66 Midstory % 31	0.97	Understory % 0 Midstory % 0	
V4	Hyrology	Class 3	1.00	Class 3	1.00	Class 3	1.00
V5	Forest Size	Class 4	0.80	Class 4	0.80	Class 4	
V6	Surrounding Land Use	Values % Forest / marsh Abandoned Ag Pasture / Hay Active Ag Development	0.89	Values % 85 10 5	0.89	Values % 85 10 5	0.89
V7	Disturbance Type Distance	Class 2 Class 3	1.00	Class 2 Class 3	1.00	Class 2 Class 3	1.00
		HSI =	0.85	HSI =	0.85	HSI =	0.00

AAHU CALCULATION, Bottomland Hardwoods

Project: Bayou Sale Shoreline Protection

Future With Project			Total HUs	Cummulative HUs
TY	Acres	x HSI		
0	58	0.85	49.43	
1	58	0.85	49.43	49.43
20	58	0.88	50.83	952.40
			Total	
			CHUs =	1001.82
			AAHUs =	50.09

Future Without Project			Total HUs	Cummulative HUs
TY	Acres	x HSI		
0	58	0.85	49.43	
1	55	0.85	46.87	48.15
20	0	0.00	0.00	296.84
			Total	
			CHUs =	344.99
			AAHUs =	17.25

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project AAHUs =	50.09
B. Future Without Project AAHUs =	17.25
Net Change (FWP - FWOP) =	32.84

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Bayou Sale Shoreline Protection

Project Area:

Fresh.....

Condition: Future Without Project

Intermediate.. 312

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	50	0.55	47	0.52	0	0.10
V2	% Aquatic	2	0.12	2	0.12	1	0.11
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	60 40	0.68	58 42	0.66	100	0.10
V4	%OW <= 1.5ft	59	0.76	56	0.73	27	0.40
V5	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.00
V6	Access Value fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.66		EM HSI =	0.64	EM HSI =	0.24
Open Water HSI =		0.34		OW HSI =	0.33	OW HSI =	0.26

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Bayou Sale Shoreline Protection

Project Area:

Fresh.....

Condition: Future With Project

Intermediate.... 312

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	50	0.55	86	0.87	89	0.90
V2	% Aquatic	1	ERROR	9	0.18	9	0.18
V3	Interspersion	%		%		%	
	Class 1	60	0.68	100	1.00	100	1.00
	Class 2						
	Class 3	40					
V4	%OW <= 1.5ft	59	0.76	25	0.38	25	0.38
V5	Salinity (ppt)						
	fresh intermediate	1	1.00	1	1.00	1	1.00
V6	Access Value						
	fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI =		0.66		EM HSI =	0.92	EM HSI =	0.94
Open Water HSI =		0.18		OW HSI =	0.39	OW HSI =	0.39

Project: Bayou Sale Shoreline Protection

FWP

Variable		TY 20					
		Value	SI	Value	SI	Value	SI
V1	% Emergent	87	0.88				
V2	% Aquatic	7	0.16				
V3	Interspersion	%		%		%	
	Class 1	100	1.00				
	Class 2						
	Class 3						
V4	%OW <= 1.5ft	25	0.38				
V5	Salinity (ppt)						
	fresh intermediate	1	1.00				
V6	Access Value						
	fresh intermediate	1.00	1.00				
EM HSI =		0.92		EM HSI =		EM HSI =	
OW HSI =		0.38		OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Bayou Sale Shoreline Protection

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	155	0.66	102.19	
1	147	0.64	93.80	97.96
20	0	0.24	0.00	704.08
			AAHUs =	40.10

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	155	0.66	102.19	
1	217	0.92	199.08	147.97
3	278	0.94	260.01	458.73
20	271	0.92	250.24	4336.87
			AAHUs	247.18

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	247.18
B. Future Without Project Emergent Marsh AAHUs =	40.10
Net Change (FWP - FWOP) =	207.08

AAHU CALCULATION - OPEN WATER

Project: Bayou Sale Shoreline Protection

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	157	0.34	53.00	
1	168	0.33	56.10	54.56
20	370	0.26	95.81	1491.07
			AAHUs =	77.28

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	157	0.18	28.42	
1	34	0.39	13.34	25.21
3	34	0.39	13.34	26.67
20	41	0.38	15.41	244.68
			AAHUs	14.83

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	14.83
B. Future Without Project Open Water AAHUs =	77.28
Net Change (FWP - FWOP) =	-62.45

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	207.08
B. Open Water Habitat Net AAHUs =	-62.45
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	120.13

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project Shark Island Shoreline Protection

The WVA for this project includes 1 subarea. Total benefits for this project are as follow:

<u>Area</u>	<u>AAHUs</u>
Intermediate Marsh	54

TOTAL BENEFITS =	54	AAHUS
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WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Shark Island Shoreline Protection
 Whiskey Island Back Barrier Marsh Creation
 Condition: Future Without Project

Project Area:
 Fresh.....
 Intermediate.. 248

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	72	0.75	68	0.71	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	70	0.76	65	0.72		0.10
	Class 2						
	Class 3	30		35		100	
V4	%OW <= 1.5ft	13	0.25	11	0.22	2	0.12
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	4		4		3	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.00		1.00		1.00	
Emergent Marsh HSI =		0.81		EM HSI =	0.78	EM HSI =	0.24
Open Water HSI =		0.29		OW HSI =	0.28	OW HSI =	0.23

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Shark Island Shoreline Protection
 Condition: Future With Project

Project Area:
 Fresh.....
 Intermediate.... 248

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	72	0.75	72	0.75	72	0.75
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	70	0.76	70	0.76	70	0.76
	Class 2						
	Class 3	30		30		30	
V4	%OW <= 1.5ft	13	0.25	21	0.34	13	0.25
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	4		4		3	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.00		1.00		1.00	
Emergent Marsh HSI =		0.81		EM HSI =	0.81	EM HSI =	0.81
Open Water HSI =		0.29		OW HSI =	0.29	OW HSI =	0.29

AAHU CALCULATION - EMERGENT MARSH

Project: Shark Island Shoreline Protection

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	178	0.81	143.50	
1	169	0.78	131.34	137.38
20	0	0.24	0.00	958.31
			AAHUs =	54.78

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	178	0.81	143.50	
1	178	0.81	143.50	143.50
20	178	0.81	143.50	2726.50
			AAHUs	143.50

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	143.50
B. Future Without Project Emergent Marsh AAHUs	=	54.78
Net Change (FWP - FWOP)	=	88.72

AAHU CALCULATION - OPEN WATER

Project: Shark Island Shoreline Protection

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	70	0.29	20.08	
1	79	0.28	22.30	21.20
20	248	0.23	56.76	779.66
			AAHUs =	40.04

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	70	0.29	20.08	
1	70	0.29	20.55	20.32
20	70	0.29	20.08	386.04
			AAHUs	20.32

NET CHANGE IN AAHUs DUE TO PROJECT		
A. Future With Project Open Water AAHUs	=	20.32
B. Future Without Project Open Water AAHUs	=	40.04
Net Change (FWP - FWOP)	=	-19.73

TOTAL BENEFITS IN AAHUs DUE TO PROJECT		
A. Emergent Marsh Habitat Net AAHUs	=	88.72
B. Open Water Habitat Net AAHUs	=	-19.73
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	=	53.73

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project Whiskey Island Back Barrier Marsh Creation

The WVA for this project includes 1 subarea. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
Barrier Island	292

TOTAL BENEFITS =	292	AAHUS
-------------------------	------------	--------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Barrier Island

Project: Whiskey Island Back Barrier Marsh Creation

Condition: Future Without Project

Variable		TY 0		TY 1		TY 10	
		Value	SI	Value	SI	Value	SI
V1	% Dune	1	0.28	1	0.28	0	0.10
V2	% Supratidal	70	0.55	70	0.55	60	0.70
V3	% Intertidal	29	0.10	29	0.10	40	0.55
V4	% Vegetative Cover	25	0.45	25	0.45	66	1.00
V5	% Woody Cover	19	1.00	19	1.00	19	1.00
V6	Interspersion	%	0.91	%	0.91	%	0.84
	Class 1	85		85		60	
	Class 2					20	
	Class 3						
	Class 4	15		15		20	
V7	Beach/surf Zone	1	1.00	1	1.00	1	1.00
		HSI = 0.559		HSI = 0.559		HSI = 0.732	

Project..... Whiskey Island Back B37Barrier Marsh Creation

FWOP

Variable		TY 20		TY		TY	
		Value	SI	Value	SI	Value	SI
V1	% Dune	0	0.10				
V2	% Supratidal	20	1.00				
V3	% Intertidal	80	0.70				
V4	% Vegetative Cover	66	1.00				
V5	% Woody Cover	19	1.00				
V6	Interspersion	%	0.77	%		%	
	Class 1	35					
	Class 2	40					
	Class 3						
	Class 4	25					
V7	Beach/surf Zone	1	1.00				
		HSI = 0.789		HSI =		HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Barrier Island

Project: Whiskey Island Back Barrier Marsh Creation

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Dune	1	0.28	1	0.28	1	0.28
V2	% Supratidal	70	0.55	48	0.88	47	0.90
V3	% Intertidal	29	0.10	51	1.00	52	1.00
V4	% Vegetative Cover	25	0.45	25	0.45	50	0.79
V5	% Woody Cover	19	1.00	13	1.00	13	1.00
V6	Interspersion	%	0.91	%	0.83	%	0.94
	Class 1	85		62		90	
	Class 2						
	Class 3			27			
	Class 4	15		11		10	
V7	Beach/surf Zone	1	1.00	1	1.00	1	1.00
		HSI = 0.559		HSI = 0.745		HSI = 0.834	

Project..... Whiskey Island Back Barrier Marsh Creation

FWP

Variable		TY 10		TY 20		TY	
		Value	SI	Value	SI	Value	SI
V1	% Dune	0	0.10	0	0.10		
V2	% Supratidal	41	0.99	17	0.87		
V3	% Intertidal	59	1.00	83	0.61		
V4	% Vegetative Cover	64	0.98	62	0.96		
V5	% Woody Cover	13	1.00	13	1.00		
V6	Interspersion	%	0.89	%	0.84	%	
	Class 1	75		60			
	Class 2	10		20			
	Class 3						
	Class 4	15		20			
V7	Beach/surf Zone	1	1.00	1	1.00		
		HSI = 0.852		HSI = 0.756		HSI =	

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project Oyster Bayou Terracing

The WVA for this project includes 1 subarea. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
Brackish Marsh	37

TOTAL BENEFITS =	37	AAHUS
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WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: Whiskey Island Back Barrier Marsh Creation

Project Area: 1,417

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	49	0.54	49	0.54	44	0.50
V2	% Aquatic	0	0.10	0	0.10	1	0.11
V3	Interspersion	%	0.34	%	0.34	%	0.34
	Class 1						
	Class 2						
	Class 3	70		70		70	
	Class 4	30		30		30	
V4	%OW <= 1.5ft	94	0.72	94	0.72	94	0.72
V5	Salinity (ppt)	16	0.10	16	0.10	16	0.10
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.53	EM HSI =	0.53	EM HSI =	0.50
Open Water HSI		=	0.28	OW HSI =	0.28	OW HSI =	0.29

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: Oyster Bayou Terracing

Project Area: 1,417

Condition: Future With Project

Variable		TY 0		TY 1		TY 2	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	49	0.54	51	0.56	53	0.58
V2	% Aquatic	0	0.10	0	0.10	1	0.11
V3	Interspersion	%	0.34	%	0.40	%	0.40
	Class 1						
	Class 2						
	Class 3	70		100		100	
	Class 4	30					
V4	%OW <= 1.5ft	94	0.72	74	1.00	74	1.00
V5	Salinity (ppt)	16	0.10	16	0.10	16	0.10
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
Emergent Marsh HSI		=	0.53	EM HSI =	0.55	EM HSI =	0.57
Open Water HSI		=	0.28	OW HSI =	0.31	OW HSI =	0.32

Project: Oyster Bayou Terracing
FWP

Variable		TY 14		TY 15		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	49	0.54	49	0.54	48	0.53
V2	% Aquatic	1	0.11	1	0.11	2	0.12
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.40	% 100	0.40	% 100	0.40
V4	%OW <= 1.5ft	76	1.00	76	1.00	77	1.00
V5	Salinity (ppt)	16	0.10	16	0.10	16	0.10
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		EM HSI = 0.54		EM HSI = 0.54		EM HSI = 0.53	
		OW HSI = 0.32		OW HSI = 0.32		OW HSI = 0.33	

AAHU CALCULATION - EMERGENT MARSH

Project: Oyster Bayou Terracing

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	697	0.53	372.03	
1	692	0.53	369.36	370.69
20	619	0.50	311.00	6456.17
			AAHUs =	341.34

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	697	0.53	372.03	
1	707	0.55	390.82	381.39
2	745	0.57	420.97	405.82
14	699	0.54	377.76	4790.07
15	699	0.54	377.76	377.76
20	680	0.53	363.26	1852.44
			AAHUs	390.37

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs	= 390.37
B. Future Without Project Emergent Marsh AAHUs	= 341.34
Net Change (FWP - FWOP) =	49.03

AAHU CALCULATION - OPEN WATER

Project: Oyster Bayou Terracing

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	720	0.28	202.53	
1	725	0.28	203.94	203.24
20	798	0.29	232.75	4146.11
			AAHUs =	217.47

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	720	0.28	202.53	
1	668	0.31	204.73	203.85
2	672	0.32	212.92	208.82
14	718	0.32	227.50	2642.51
15	718	0.32	227.50	227.50
20	737	0.33	240.91	1170.86
			AAHUs	222.68

NET CHANGE IN AAHUs DUE TO PROJECT				
A. Future With Project Open Water AAHUs	=			222.68
B. Future Without Project Open Water AAHUs	=			217.47
Net Change (FWP - FWOP)	=			5.21

TOTAL BENEFITS IN AAHUs DUE TO PROJECT				
A. Emergent Marsh Habitat Net AAHUs	=			49.03
B. Open Water Habitat Net AAHUs	=			5.21
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6				36.86

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

13th Priority Project List Report

Appendix F

Public Support For Candidate Projects

**Public Support for Candidate Projects
for the
13th Priority Project List**

**Projects Receiving Verbal Public Support at November 19-20, 2003 Public Meetings
or Letters of Public Support:**

Bayou Sale Ridge Protection

- Carla Blanchard Dartez, Louisiana State Representative, District 51, letter dated 6 Aug 03
- Dan J. Hidalgo, Margaret Wooster Properties, letter dated 2 Sep 03
- Butch Gautreaux, Louisiana State Senator District 21, letter dated 1 Aug 03
- Alton D. LeBlanc, Jr., Chitimacha Tribe of Louisiana, Council Resolution dated 6 Nov 03
- Dr. Earl Robicheaux, Brownell Park and Carillon, e-mail dated 6 Dec 03
- Peter Soprano, Chairman, St. Mary Parish Council, Resolution dated 27 Aug and letter dated 2 Sep 03
- St. Mary Land and Exploration Company, memo dated 4 Dec 03
- Carol Vinning, St. Mary Parish Government, verbal support, 19 Nov 03
- George Mikhael, St. Mary Parish Government, verbal support, 19 Nov 03
- Mohan Menon, representing St. Mary Parish, verbal support, 19 Nov 03

Goose Point/Point Platte Marsh Creation Project

- Kevin Davis, St. Tammany Parish President, letter dated 8 Apr 03 and 1 Dec 03
- Joe Impastato, St. Tammany Councilman, letter dated 1 Dec 03
- Michelle Hubert, Friends of Louisiana Wildlife Refuges, Inc., letter dated 2 Dec 03
- Oscar Vera, Ph.D., E.I., Parsons, Brinckerhoff, Quade and Douglas, Inc., letter dated 28 Nov 03
- Brian Fortson, St. Tammany Parish CZM, verbal support, 20 Nov 03

Caernarvon Outfall Management (East)

- Carlton Dufrechou, Director, Lake Pontchartrain Basin Foundation, letter dated 20 March 03
- Dan Arcenaux, St. Bernard Parish CZM, verbal support of a modified project, 20 Nov 03
- Jim Hasik, St. Bernard Parish CZM, verbal support of a modified project, 20 Nov 03
- Henry Rodriguez, St. Bernard Parish Councilman-at-Large, verbal support of a modified project, 20 Nov 03

Spanish Pass Diversion

- Curtis R. Hopkins, Chairperson, Gulf Coast Joint Venture, North American Waterfowl Management Plan, letter dated 4 Dec 03
- Kenneth M. Babcock, Director, Southern Regional Office Ducks Unlimited, letter dated 4 Dec 03

- Benny Rousselle, Plaquemines Parish President, letters dated 2 Dec 03 & 05 Dec 03
- Benny Rousselle, Plaquemines Parish President, verbal support, 20 Nov 03
- Nat Phillips, Louisiana Fruit Company, verbal support, 20 Nov 03
- Andrew McInnes, Plaquemines Parish CZM, verbal support, 20 Nov 03
- Marnie Winter, Jefferson Parish, verbal support, 20 Nov 03

Naomi Siphon Outfall Area Marsh Creation / Nourishment

- Woody Crews, Chairman, Jefferson Parish Marine Fisheries Advisory Board, letter dated 20 Nov 03
- Benny Rousselle, Plaquemines Parish President, verbal support, 20 Nov 03
- O'Neil Marlborough, representing Jefferson Parish, verbal support, 20 Nov 03
- Marnie Winter, Jefferson Parish, verbal support, 20 Nov 03
- Jason Smith, Jefferson Parish Marine Fisheries Advisory Board, verbal support, 20 Nov 03
- Arthur Cormier, Jefferson Parish Marine Fisheries Advisory Board, verbal support, 20 Nov 03

Whiskey Island Backbarrier Marsh Creation

- Terrebonne Parish Council Resolution on 15 Dec 03 (letter dated 23 Dec 03)
- Bob Jones, Terrebonne Parish, verbal support, 20 Nov 03
- Nolan Bergeron, Terrebonne Parish CZM Chairman, verbal support, 20 Nov 03

Oyster Bayou Terracing

- Myles Hebert, Cameron Parish Police Jury, verbal support, 19 Nov 03

Hackberry Bay Oyster Reef Demonstration Project

- Woody Crews, Chairman, Jefferson Parish Marine Fisheries Advisory Board, letter dated 20 Nov 03

Flowable Fill Demonstration Project

- Randy Moertle, Vermilion Parish Police Jury, verbal support, 19 Nov 03
- Sherrill Sagrera, Vermilion Parish, verbal support, 19 Nov 03
- Judge Edwards, Vermilion Corporation, verbal support, 19 Nov 03

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

13th Priority Project List Report

Appendix G

Status of Projects from 1st through 13th Priority Project Lists

And

Project Status Summary Report by Basin

Appendix G+
Status of Projects from 1st through 13th Priority Project Lists
And
Project Status Summary Report by Basin
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(Basin Summary follows the Project Status Summary by Agency)

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

PROJECT STATUS SUMMARY REPORT

27 March 2004

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

Reports enclosed:

Project Details by Lead Agency

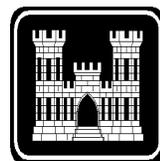
Project Summary by Basin

Project Summary by Priority List

Information based on data furnished by the Federal Lead Agencies and collected by the Corps of Engineers

Prepared by:

Planning, Programs and Project Management Division
Coastal Restoration Branch
U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

Actual
Obligations/
Expenditures

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			
				CSA	Const Start	Const End	Baseline	Current	%	

Lead Agency: DEPT. OF THE ARMY, CORPS OF ENGINEERS

Priority List 0.1

CRMS - Wetlands	COAST	COAST					\$66,890,300	\$8,738,226	13.1	\$0
										\$0
Status:										
<hr/>										
Total Priority List		0.1					\$66,890,300	\$8,738,226	13.1	\$0
<hr/>										

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

Priority List 0.2

Monitoring Contingency Fund	COAST	COAST					\$1,500,000	\$1,500,000	100.0	\$79,387
										\$31,824
Status:										
<hr/>										
Total Priority List		0.2					\$1,500,000	\$1,500,000	100.0	\$79,387
<hr/>										

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

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Priority List 1										
Barataria Bay Waterway Wetland Creation	BARA	JEFF	445	24-Apr-1995 A	22-Jul-1996 A	15-Oct-1996 A	\$1,759,257	\$1,162,187	66.1	\$1,162,187 \$1,162,187
	Status:	The enlargement of Queen Bess Island was incorporated into the project and the construction of a 9-acre cell was completed in October 1996, at a cost of \$945,678. Remaining funds may be used to clear marsh creation sites of oyster leases. If oyster-related conflicts are removed from the remaining marsh creation sites, these areas will be incorporated into the Corp's O&M disposal plan for the next three maintenance cycles. The USACE, LADNR, and LDWF are currently pursuing an administrative process to identify and prioritize beneficial use sites along the BBWW. Additional monitoring of the Queen Bess site was discontinued in 2002 on the recommendation of the local sponsor and monitoring team.								
Bayou Labranche Wetland Creation	PONT	STCHA	203	17-Apr-1993 A	06-Jan-1994 A	07-Apr-1994 A	\$4,461,301	\$3,668,885	82.2	\$3,622,506 \$3,621,051
	Status:	Contract awarded to T. L. James Co. (Dredge "Tom James") for dredging approximately 2,500,000 cy of Lake Pontchartrain sediments and placing in marsh creation area. Contract final inspection was performed on April 7, 1994. Site visit by Task Force took place on April 13, 1994. The project is being monitored.								
Lake Salvador Shoreline Protection at Jean Lafitte NHP&P	BARA	JEFF		29-Oct-1996 A	01-Jun-1995 A	21-Mar-1996 A	\$60,000	\$58,753	97.9	\$58,753 \$58,753
	Status:	This project was added to Priority List 1 at the March 1995 Task Force meeting. The Task Force approved the expenditure of up to \$45,000 in Federal funds and non-Federal funds of \$15,000 (25%) for the design of the project. A design review meeting was held with Jean Lafitte Park personnel in May 1996 to resolve design comments prior to advertisement for the construction contract. The contract was awarded December 4, 1996 for \$610,000 to Bertucci Contracting Corp. The contract was completed in March 1997. Complete. This project was design only.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Vermilion River Cutoff Bank Protection	TECHE	VERMI	65	17-Apr-1993 A	10-Jan-1996 A	11-Feb-1996 A	\$1,526,000	\$2,022,987	132.6 !	\$1,800,900 \$1,797,835
<p>Status: The project was modified by moving the dike from the west to the east bank of the cutoff to better protect the wetlands. The need for the sediment retention fence on the west bank is still undetermined. The Task Force approved a revised project estimate of \$2,500,000; however, current estimate is less.</p> <p>The Task Force approved a revised project estimate of \$2,500,000; however, current estimate is less.</p> <p>Condemnation of real estate easements was required because of unclear ownership titles and significantly lengthened the project schedule. Construction was completed in February 1996.</p> <p>Complete.</p>										
West Bay Sediment Diversion	DELTA	PLAQ	9,831	29-Aug-2002 A	10-Sep-2003 A	28-Nov-2003 A	\$8,517,066	\$22,615,838	265.5 !	\$6,359,784 \$5,488,310
<p>Status: Flow measurements taken in February 2004 recorded discharge of 10,000 cfs through the diversion channel. Project construction began in September 2003 and construction was completed in November 2003. An advertisement for construction of the project opened 08 July 2003 and bids were opened on 11 August 2003. Chevron-Texaco relocated a major oil pipeline in May 2003 under a reimbursable construction agreement. A real estate plan for the project was completed in October 2002 and execution of the plan will be completed in July 2003. The project Cost Sharing Agreement was signed August 29, 2002. A 95% design review was held May 17, 2002. A Record of Decision finalizing the EIS was signed on March 18, 2002. The Task Force, by fax vote, approved a revised project description and reauthorized the project to comply with CWPPRA Section 3952 in April 2002. At the January 10, 2001 Task Force meeting, approval was granted to proceed with the project at the current price of \$22 million due to the increased costs of maintaining the anchorage area. A VE study on the project was undertaken the week of August 21, 2000.</p>										
Total Priority List		1	10,544				\$16,323,624	\$29,528,649	180.9	\$13,004,130 \$12,128,136

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

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Priority List 2										
Clear Marais Bank Protection	CA/SB	CALCA	1,067	29-Apr-1996 A	29-Aug-1996 A	03-Mar-1997 A	\$1,741,310	\$3,696,088	212.3 !	\$2,886,044 \$2,886,044
	<p>Status: The original construction estimate was low, based on the proposed plan in that the rock quantity estimate was less than half of the quantity needed (based on the original design), and the estimate did not include a floatation channel needed for construction. This accounts for most of the cost increase shown. The current estimate is based on the original rock dike design and costs about \$89/foot.</p> <p>Complete.</p>									
West Belle Pass Headland Restoration	TERRE	LAFOU	474	27-Dec-1996 A	10-Feb-1998 A	17-Jul-1998 *	\$4,854,102	\$6,734,920	138.7 !	\$5,397,377 \$5,391,149
	<p>Status: We received verbal authority from HQ Counsel to acquire oyster leases, for this project only, directly impacted by the construction of the project. Construction cost increase approved at the January 16, 1998 Task Force meeting.</p> <p>Construction complete. Agreement reached between COE, DNR, and T.L. James Co. on the remediation of the marsh buggy tracks. Planting proposal requested from the Plant Material Research Center.</p>									
Total Priority List		2	1,541				\$6,595,412	\$10,431,008	158.2	\$8,283,421 \$8,277,192

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

Priority List 3

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Channel Armor Gap Crevasse	DELTA	PLAQ	936	13-Jan-1997 A	22-Sep-1997 A	02-Nov-1997 A	\$808,397	\$888,985	110.0	\$649,340 \$649,340
	Status:	Cost increase was due to additional project management costs, by both Federal and Local Sponsor.								
		Surveys identified a pipeline in the crevasse area which would be negatively impacted by the project. US Fish & Wildlife Service reviewed their permit for the pipeline and determined that Shell Pipeline was required to lower it at their own cost. USFWS requested a modification to the alignment on USFWS-owned lands.								
		Construction complete.								
MRGO Disposal Area Marsh Protection	PONT	STBER	755	17-Jan-1997 A	25-Jan-1999 A	29-Jan-1999 A	\$512,198	\$313,145	61.1	\$313,145 \$313,145
	Status:	Completed scope of work greatly reduced. Work was to be performed via a simplified acquisition contract as estimated construction cost is under \$100,000. Bids received were higher than Government estimate by 25%. Subsequently received an in-house labor estimate from Vicksburg District. Vicksburg District completed construction on 29 January 1999.								
		Cost increase was due to additional project management costs, environmental investigations and local sponsor activities not included in the baseline estimate. Further title research indicates that private ownership titles are unclear, requiring condemnation. This accounts for the long period between CSA execution and project construction.								
Pass-a-Loutre Crevasse [DEAUTHORIZED]	DELTA	PLAQ	1,043				\$2,857,790	\$119,835	4.2	\$119,835 \$119,835
	Status:	Two pipelines and two power poles are in the area of the crevasse, increasing relocation costs by approximately \$2.15 million. LA DNR asked that the Corps investigate alternative locations to avoid or minimize impacts to the pipelines, but there are no more suitable locations for the cut. The Corps has also reviewed the design to determine whether relocations cost-savings could be achieved. Reducing the bottom width of the crevasse from 430 feet as originally proposed to 200 feet reduced the relocation cost only marginally.								
		A draft memorandum dated December 5, 1997 was sent to the CWPPRA Technical Committee Chairman requesting the Task Force to deauthorize the project. COE requested deauthorization at the January 16, 1998 Task Force meeting. Task Force formally deauthorized project July 23, 1998.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
	Total Priority List	3	2,734				\$4,178,385	\$1,321,965	31.6	\$1,082,320 \$1,082,320
	3	Project(s)								
	2	Cost Sharing Agreements Executed								
	2	Construction Started								
	2	Construction Completed								
	1	Project(s) Deferred/Deauthorized								

Priority List 4

Beneficial Use of Hopper Dredge Material Demonstration (DEMO) [DEAUTHORIZED]	DELTA	PLAQ		30-Jun-1997 A			\$300,000	\$58,310	19.4	\$58,310 \$58,310
	Status:	Current scheme was found to be non-implementable due to inability of the hopper dredge to get close enough to the disposal area to spray over the bank of the Mississippi River.								
		Project deauthorized October 4, 2000.								
Grand Bay Crevasse [DEAUTHORIZED]	BRET	PLAQ	634				\$2,468,908	\$65,747	2.7	\$65,747 \$65,747
	Status:	The major landowner has indicated non-support of the project and has withheld ROE because of concern about sedimentation negatively impacting oil and gas interests within the deposition area.								
		A draft memorandum dated December 5, 1997 was sent to the CWPPRA Technical Committee Chairman requesting the Task Force to deauthorize the project. COE requested deauthorization at the January 16, 1998 Task Force meeting. Project deauthorized July 23, 1998.								

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		4	634				\$2,768,908	\$124,057	4.5	\$124,057 \$124,057
2 Project(s) 1 Cost Sharing Agreements Executed 0 Construction Started 0 Construction Completed 2 Project(s) Deferred/Deauthorized										

Priority List 5

Bayou Chevee Shoreline Protection	PONT	ORL	75	01-Feb-2001 A	25-Aug-2001 A	17-Dec-2001 A	\$2,555,029	\$2,590,180	101.4	\$2,242,012 \$2,240,519
Status: Approval of model CSA for PPL 5, 6, and 8 projects granted on November 13, 2000. Construction began August 2001 and completed December 2001. Revised project consisted of constructing a 2,870-foot rock dike across the mouth of the north cove and a 2,820-foot rock dike tying into and extending an existing USFWS rock dike, across the south cove. Approximately 75 acres of brackish marsh will be protected by the project.										

Total Priority List		5	75				\$2,555,029	\$2,590,180	101.4	\$2,242,012 \$2,240,519
1 Project(s) 1 Cost Sharing Agreements Executed 1 Construction Started 1 Construction Completed 0 Project(s) Deferred/Deauthorized										

Priority List 6

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Flexible Dustpan Demo at Head of Passes (DEMO)	DELTA	PLAQ		31-May-2002 A	03-Jun-2002 A	21-Jun-2002 A	\$1,600,000	\$1,905,538	119.1	\$1,860,095 \$1,860,095
<p>Status: CSA executed May 31, 2002. Construction completed June 21, 2002.</p> <p>The Dustpan/Cutterhead Marsh Creation Demonstration project as originally approved, no longer involves the use of a cutterhead dredge. At the October 25, 2001 Task Force meeting, it was approved the motion to use the authorized funds for a "flexible dustpan" demonstration project and approved changing the name of the project to "Flexible Dustpan Demo at Head of Passes".</p> <p>The project was completed as an operations and maintenance task order through an ERDC research and development IDC contract. The project identified some minor areas of concern with regard to the dredge plants effectiveness as a maintenance tool. The dredge was effective in its performance for the beneficial placement of material. The final surveys and quantities have not yet been reported.</p>										
Marsh Creation East of the Atchafalaya River- Avoca Island [DEAUTHORIZED]	TERRE	STMRY	434				\$6,438,400	\$66,869	1.0	\$66,869 \$66,869
<p>Status: A draft memorandum dated December 5, 1997 was sent to the Technical Committee Chairman requesting the Task Force to deauthorize the project. COE requested deauthorization at the January 16, 1998 Task Force meeting.</p> <p>Project deauthorized July 23, 1998.</p>										
Marsh Island Hydrologic Restoration	TECHE	IBERI	367	01-Feb-2001 A	25-Jul-2001 A	12-Dec-2001 A	\$4,094,900	\$5,143,155	125.6 !	\$3,892,611 \$3,873,445
<p>Status: Approval of model CSA for PPL 5, 6 and 8 projects granted on November 13, 2000. CSA executed on February 1, 2001. Advertised as 100% small business set-aside. Construction began July 2001 and completed December 2001.</p> <p>Revised design of closures from earthen to rock because soil borings indicate highly organic material in borrow area.</p>										
Total Priority List		6	801				\$12,133,300	\$7,115,562	58.6	\$5,819,574 \$5,800,409

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

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Priority List 8										
Sabine Refuge Marsh Creation	CA/SB	CAMER	993	09-Mar-2001 A	15-Aug-2001 A	30-Sep-2006	\$15,724,965	\$16,308,590	103.7	\$3,568,775 \$3,580,317
	Status: This project was approved by the Task Force as a part of Priority Project List 8. The project consists of constructing 5 marsh creation sites within the Sabine National Wildlife Refuge using material dredged out of the Calcasieu River Ship Channel. The current estimated project cost to construct all cycles is approximately \$21.4 million.									
	The first cycle was completed on February 26, 2002. The total project cost for dredging cycle 1 was \$3,412,415. The project was advertised for bid as a component of the Calcasieu River and Pass Maintenance Dredging contract on February 16, 2001. Construction initiation was advanced in conjunction with an accelerated maintenance dredging schedule for the Calcasieu River.									
	On January 28, 2004 the CWPPRA Task Force provided additional funding and construction approval for Cycles 2 and 3. Cycle 2 is currently scheduled to be constructed in 2005. Cycle 3 would be constructed in 2006.									
Total Priority List			8	993			\$15,724,965	\$16,308,590	103.7	\$3,568,775 \$3,580,317

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

Priority List 9

Freshwater Bayou Bank Stabilization - Belle Isle Canal to Lock	TECHE	VERMI	241	01-Jun-2004			\$1,498,967	\$1,498,967	100.0	\$912,879 \$990,546
	Status: A site visit was held in January 2001 with the Local Sponsor and landowner. Right of entry for surveys and borings obtained March 14, 2001. Met with Local Sponsor after survey data processed obtained consensus on cross-section and depth contour. A 30% design review was held in June 2002. Project revised to include Area A - shoreline protection work only. A 95% design review was completed in January 2004. Draft model CSA is in review at Corps of Engineers headquarters in Washington, D.C. Construction approval from the Task Force is on hold pending execution of the cost share agreement.									

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Opportunistic Use of the Bonnet Carre Spillway	PONT	STCHA	177	13-Oct-2004	15-Dec-2004		\$150,706	\$188,383	125.0 !	\$82,248 \$82,248
<p>Status: A draft operations plan for opportunistic use of the spillway has been developed and is under review. Impacts to the environment, recreation, and economy are being looked at. The team is currently scheduled to ask for construction approval at the October 2004 Task Force meeting. A draft model CSA is in review.</p> <p>Lake Pontchartrain Basin Foundation has partnered with the LSU Coastal Ecology Institute in the development of a nutrient budget model for Lake Pontchartrain. The nutrient budget report was approved by EPA on June 28, 2001.</p> <p>This project involves no physical construction.</p>										
Periodic Intro of Sediment and Nutrients at Selected Diversion Sites Demo (DEMO)	COAST	VARY		13-Oct-2004	15-Dec-2004	15-Feb-2005	\$1,502,817	\$1,502,817	100.0	\$31,506 \$31,506
<p>Status: Field site investigations have been completed. Development of sediment capacities at alternative sites is being undertaken.</p>										
Weeks Bay MC and SP/Commercial Canal/Freshwater Redirection	TECHE	IBERI	278				\$1,229,337	\$1,229,337	100.0	\$455,525 \$462,576
<p>Status: Fully funded Phase 1 cost for this project is \$1,229,337. The project area includes approximately 2,900 acres of fresh to brackish marsh habitat.</p> <p>The project kick-off was in April 2001 with the COE and DNR. Surveys, soils investigations, gage data, and environmental data are presently being gathered for assessment. A hydrologic model is being developed to assist in the understanding of water movement in this part of the basin. Shore protection alternatives are under evaluation.</p>										
Total Priority List			9	696			\$4,381,827	\$4,419,504	100.9	\$1,482,158 \$1,566,876

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

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Benneys Bay Diversion	DELTA	PLAQ	5,706	01-Apr-2004	01-Sep-2005	01-Jan-2006	\$1,076,328	\$1,076,328	100.0	\$427,869 \$494,426
	Status: This project was approved for Phase I design on PPL9 in January 1999. The project work plan for Phase I was submitted to the P&E Subcommittee in May 2001. Right of Entry to perform surveys and geotechnical borings was received in August 2001. Site surveys were performed in October 2001 and geotechnical borings were collected in June 2002. A 30% design review was completed in September 2002. At the design review meeting agreement was reached to proceed further except for one feature which is being reevaluated at the request of the local sponsor. The project is scheduled to complete all design work in October 2004 and will seek construction approval in January 2005.									
Delta Building Diversion at Myrtle Grove	BARA	JEFF	8,891				\$3,002,114	\$3,002,114	100.0	\$1,311,861 \$1,390,033
	Status: The proposed NMFS/UNO fisheries modeling effort, and its relationship to required EIS input, has been discussed by the principal agencies involved with this project. The current view within the management team is that additional fisheries data collection and analysis will be required over and above the proposed modeling. At this time, it has been decided to begin assembling an inter-agency EIS team and allow them to outline major data and analytic requirements for the NEPA document. The required NEPA scoping meetings have been held and the scoping document is being compiled. An initial Value Engineering study is scheduled for the week of July 22, 2002. WRDA may fund Phase 2.									
Delta Building Diversion North of Fort St. Philip	BRET	PLAQ	501	01-Jan-2004 *	01-Sep-2004		\$1,155,200	\$1,155,200	100.0	\$545,635 \$583,138
	Status: Phase I activities are progressing. A project team has been formed and several site visits have been made. Property owners have been identified and will be contacted to determine their willingness to allow project construction. Elevation surveys, subsurface soil data and cultural resource surveys are underway. A hydrologic model has been developed to determine the size of the channel armor gaps and the sediment diversion channel. Salinity modeling efforts are underway to determine the extent of project effects on salinity levels.									
Total Priority List		10	15,098				\$5,233,642	\$5,233,642	100.0	\$2,285,364 \$2,467,597

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

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Priority List 11										
Grand Lake Shoreline Protection	MERM	CAMER	495	13-Oct-2004	15-Jan-2005	15-Apr-2005	\$1,049,029	\$1,049,029	100.0	\$298,042 \$339,474
	Status: The Kickoff meeting was held April 2002. A draft CSA is under negotiation. A site visit was conducted in June 2002. The Phase 1 work plan was submitted to the P&E subcommittee in July 2002. Surveys and borings of the project area have been completed. The preliminary design is being performed. The EA for the project is being prepared for public review. A 30% design review meeting is tentatively scheduled for mid April 2004. The project is scheduled to seek construction authorization from the Task Force at the October 2004 meeting.									
<hr/>										
Total Priority List		11	495				\$1,049,029	\$1,049,029	100.0	\$298,042 \$339,474

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

Priority List 12

Avoca Island Diversion and Land Building	TERRE	STMRY	143	01-Jun-2004	01-Aug-2005		\$2,229,876	\$2,229,876	100.0	\$71,018 \$164,267
	Status: This project was approved for Phase I design on PPL12 in January 2003. A kickoff meeting and site visit was held in March 2003. The project work plan for Phase I was submitted to the P&E Subcommittee in May 2003. Right of Entry to perform surveys and geotechnical borings was requested in June 2003. Site surveys began in December 2003 and are scheduled to be completed in April 2004. Initial environmental assessment has begun along with preparations for hydrologic modeling.									

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Lake Borgne and MRGO Shoreline Protection	PONT	STBER	266	01-Jun-2004	01-Mar-2005		\$1,348,345	\$1,348,345	100.0	\$303,868 \$379,274
	Status: This project was approved for Phase I design on PPL12 in January 2003. A kickoff meeting and site visit was held in April 2003. The project work plan for Phase I was submitted to the P&E Subcommittee in October 2003. Right of Entry to perform surveys and geotechnical borings was requested in June 2003 and received in August 2003. Surveys and geotechnical borings were collected during fall 2003. A preliminary design report was completed in December 2003. A 30% design review is targeted for spring 2004.									
Mississippi River Sediment Trap	DELTA	PLAQ	1,190	01-Jan-2005			\$1,880,376	\$1,880,376	100.0	\$70,707 \$77,401
	Status: This complex project was approved for Phase I design activities in August 2002. A kickoff meeting was held in September 2002. The project work plan is under development pending a second plan formulation meeting with the local sponsor (LA Dept. of Natural Resources and Corps of Engineers).									
South White Lake Shoreline Protection	MERM	VERMI	702		01-Oct-2004		\$1,588,085	\$1,588,085	100.0	\$215,206 \$299,406
	Status: Surveys expected to be complete by October 24, 2003. Geotech boring collection expected to be complete by October 17, 2003. Preliminary engineering design work to start in beginning of November.									
Total Priority List		12	2,301				\$7,046,682	\$7,046,682	100.0	\$660,798 \$920,348

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

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Shoreline Protection Foundation Improvements Demonstration Project	COAST	ALL					\$1,000,000	\$1,000,000	100.0	\$0 \$78
Spanish Pass Diversion	DELTA	PLAQ	433	01-Oct-2005	15-Apr-2006	15-Aug-2006	\$1,137,344	\$1,137,344	100.0	\$0 \$1,164
	Status:	The Task Force gave Phase 1 approval on January 28, 2004. The project delivery team is being assembled and a kickoff meeting and field trip is being scheduled for early Spring 2004. A work plan is also currently being drafted.								
Total Priority List		13	433				\$2,137,344	\$2,137,344	100.0	\$0 \$1,243

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

Total DEPT. OF THE ARMY, CORPS OF ENGINEERS 36,345 \$148,518,447 \$97,544,438 65.7 \$38,930,039 \$38,560,311

- 33 Project(s)**
- 14 Cost Sharing Agreements Executed**
- 13 Construction Started**
- 11 Construction Completed**
- 4 Project(s) Deferred/Deauthorized**

Notes:

1. Expenditures based on Corps of Engineers financial data.
2. Date codes: A = Actual date * = Behind schedule
3. Percent codes: ! = 125% of baseline estimate exceeded

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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

Lead Agency: ENVIRONMENTAL PROTECTION AGENCY, REGION 6

Priority List Conservation Plan

State of Louisiana Wetlands Conservation Plan	COAST	COAST		13-Jun-1995 A	03-Jul-1995 A	21-Nov-1997 A	\$238,871	\$191,807	80.3	\$191,807 \$191,807
	Status:	The date the MIPR was issued to obligate the Federal funds for the development of the plan is used as the construction start date for reporting purposes.								
		Complete.								

Total Priority List	Cons Plan						\$238,871	\$191,807	80.3	\$191,807 \$191,807
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- 1 Project(s)
- 1 Cost Sharing Agreements Executed
- 1 Construction Started
- 1 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 1

Isles Dernieres Restoration East Island	TERRE	TERRE	9	17-Apr-1993 A	16-Jan-1998 A	15-Jun-1999 A	\$6,345,468	\$8,762,416	138.1 !	\$8,706,479 \$8,612,076
	Status:	This phase of the Isles Dernieres restoration project was combined with Isles Dernieres, Phase 1 (Trinity Island), a priority list 2 project. Additional funds to cover the increased construction cost on lowest bid received were approved at the January 16, 1998 Task Force meeting.								
		Construction start was January 16, 1998. Hydraulic dredging was completed September 1998. Vegetation planting was completed June 1999.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		1	9				\$6,345,468	\$8,762,416	138.1	\$8,706,479 \$8,612,076
<ul style="list-style-type: none"> 1 Project(s) 1 Cost Sharing Agreements Executed 1 Construction Started 1 Construction Completed 0 Project(s) Deferred/Deauthorized 										

Priority List 2

Isles Dernieres Restoration Trinity Island	TERRE	TERRE	109	17-Apr-1993 A	27-Jan-1998 A	15-Jun-1999 A	\$6,907,897	\$10,774,974	156.0 !	\$10,788,637 \$10,759,515
<p>Status: Costs increased due to construction bids significantly greater than projected in plans and specifications. Additional funds to cover the increased project construction/dredging cost were approved at the January 16, 1998 Task Force meeting.</p> <p>The 30' hydraulic dredge, the Tom James, mobilized at East Island on about January 27, 1998. Dredging was completed in September 1998. Vegetation plantings was completed June 1999.</p>										

Total Priority List		2	109				\$6,907,897	\$10,774,974	156.0	\$10,788,637 \$10,759,515
<ul style="list-style-type: none"> 1 Project(s) 1 Cost Sharing Agreements Executed 1 Construction Started 1 Construction Completed 0 Project(s) Deferred/Deauthorized 										

Priority List 3

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Red Mud Demonstration (DEMO) [DEAUTHORIZED]	PONT	STJON		03-Nov-1994 A			\$350,000	\$470,500	134.4 !	\$531,955 \$531,955
	Status:	Facility construction is essentially complete; project was put on hold pending resolution of cell contamination by saltwater before planting occurred and has subsequently been deauthorized. Demonstration cells completed; no vegetation installed.								
		The Task Force approved the deauthorization of the project on August 7, 2001. Escrowed funds will be returned to Kaiser Aluminum and Chemical Corp.								
Whiskey Island Restoration	TERRE	TERRE	1,239	06-Apr-1995 A	13-Feb-1998 A	15-Jun-2000 A	\$4,844,274	\$7,106,586	146.7 !	\$7,057,118 \$7,006,707
	Status:	At the January 16, 1998 meeting, the Task Force approved additional funds to cover the increased construction cost on lowest bid received.								
		Work was initiated on February 13, 1998. Dredging completed July 1998. Initial vegetation with spartina on bay shore, July 1998. Additional vegetation seeding/planting was carried out in spring 2000.								
Total Priority List		3	1,239				\$5,194,274	\$7,577,086	145.9	\$7,589,073 \$7,538,662

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

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Compost Demonstration (DEMO) [DEAUTHORIZED]	CA/SB	CAMER		22-Jul-1996 A			\$370,594	\$255,391	68.9	\$255,391 \$255,391
	Status:	Plans and specifications have been finalized. All permits and construction approvals have been obtained.								
		The amount of compost vegetation needed has not yet been supplied. A smaller sized demonstration has been designed. Advertisement for construction bids has been made.								
		The Task Force approved deauthorization on January 16, 2002.								
Total Priority List		4					\$370,594	\$255,391	68.9	\$255,391 \$255,391

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

Priority List 5

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Bayou Lafourche Siphon	TERRE	IBERV		19-Feb-1997	A		\$24,487,337	\$1,500,000	6.1	\$1,500,000 \$1,500,000
<p>Status: Priority List 5 authorized funding in the amount of \$1,000,000 for the FY 96 Phase 1 of this project. Priority List 6 authorized \$8,000,000 for the FY 97 Phase 2 of this project. In FY 98, Priority List 7 authorized \$7,987,000, for a project estimate of \$16,987,000. At the January 20, 1999 Task Force meeting for approval of Priority List 8, \$7,500,000 completed funding for the project, for a total of \$24,487,337. EPA motioned to allow \$16,095,883 from project funds be delayed and put to immediate use on PPL 8. The public has been involved in development of the scope of the evaluation phase. EPA proposes an alternative approach for siphoning and pumping 1,000 cfs year-round (versus the 2,000 cfs siphon only at high river times). Addition of pumps increases the estimated cost. Additional engineering is projected to be completed in 2000.</p> <p>The Cost Sharing Agreement (CSA) was executed February 19, 1997. Preliminary draft report was distributed to Technical Committee members in October 1998. Additional hydrologic work by the U.S. Geological Survey and the COE. Additional geotechnical analysis has been conducted. Review has been conducted of technical reports and estimated costs is in progress.</p> <p>At the October 25, 2001 meeting, the Task Force agreed to proceed with Phase 1 Engineering and Design, and approved an estimate of \$9,700,000, subject to several stipulations. The State of Louisiana will pay 50 percent of the Phase 1 E&D costs of \$9.7 million, as agreed to by the State Wetlands Authority. The allocation of CWPPRA funds for Phase 1 E&D does not commit the Task Force to a specific funding level for project construction. A decision to proceed beyond the 30% design review will be made by the Task Force and the State.</p>										
Total Priority List 5							\$24,487,337	\$1,500,000	6.1	\$1,500,000 \$1,500,000

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

Priority List 5.1

Mississippi River Reintroduction into Bayou Lafourche	TERRE	IBERV	988	23-Jul-2003	A		\$9,700,000	\$9,700,000	100.0	\$4,934,275 \$809,090
<p>Status: Engineering and Design is currently underway. NEPA Scoping meetings have been targeted to begin in April 2004. The 30% design review is currently anticipated to be held in the Summer-Fall of 2005.</p>										

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
	Total Priority List	5.1	988				\$9,700,000	\$9,700,000	100.0	\$4,934,275 \$809,090
0	Project(s)									
1	Cost Sharing Agreements Executed									
0	Construction Started									
0	Construction Completed									
0	Project(s) Deferred/Deauthorized									

Priority List 6

Bayou Boeuf Pump Station [DEAUTHORIZED]	TERRE	STMAR	0				\$150,000	\$3,452	2.3	\$3,452 \$3,452
	Status:	This was a 3-phased project. Priority List 6 authorized funding of \$150,000; Priority List 7 was scheduled to fund \$250,000; and Priority List 8 was scheduled to fund \$100,000. Total project cost was estimated to be \$500,000. By letter dated November 18, 1997, EPA notified the Technical Committee that they and LA DNR agree to deauthorize the project.								
		Deauthorization was approved at the July 23, 1998 Task Force meeting.								
	Total Priority List	6	0				\$150,000	\$3,452	2.3	\$3,452 \$3,452

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

Priority List 9

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures	
				CSA	Const Start	Const End	Baseline	Current	%		
LA Highway 1 Marsh Creation	BARA	LAFOU	146	05-Oct-2000	A		\$1,151,484	\$1,433,393	124.5	\$1,257,351 \$246,068	
	Status:	The U.S. Environmental Protection Agency and Louisiana Department of Natural Resources are recommending that this project be de-authorized because: Soil properties and the construction budget are incompatible; hundreds of land ownerships and unopened successions would cause time delays and increase costs; the future La. Hwy-1 Bridge footprint would encroach on the project footprint; and there are several oil and gas pipelines and wells within the project area. The deauthorization is scheduled on the agenda for the July 16, 2003, Tech Committee. Per the CWPPRA Standard Operating Procedures, the request for deauthorization was sent to the Tech Committee in a letter dated April 8, 2003.									
New Cut Dune and Marsh Restoration	TERRE	TERRE	102	01-Sep-2000	A		\$7,393,626	\$10,329,068	139.7 !	\$9,114,168 \$657,263	
	Status:	DNR and EPA are currently investigating possible alternate sand sources in close proximity to the island, gulfward of the project area.									
Timbalier Island Dune and Marsh Restoration	TERRE	TERRE	273	05-Oct-2000	A	01-May-2004	31-Mar-2005	\$16,234,679	\$20,090,068	123.7	\$17,341,847 \$1,181,599
	Status:	State advertised for construction bids February 2004. Pre-bid conference held 4 March 2004 and bid opening scheduled for 17 March 2004.									
Total Priority List		9	521				\$24,779,789	\$31,852,529	128.5	\$27,713,366 \$2,084,930	

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

Priority List 10

Lake Borgne Shoreline Protection	PONT	STBER	167	02-Oct-2001	A	01-Feb-2005	01-May-2005	\$1,334,360	\$1,667,950	125.0	\$1,807,456 \$423,005
	Status:	Fieldwork for Phase I cultural resources survey is underway. Results from survey will assist in determining alignment so project design can proceed.									

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Small Freshwater Diversion to the Northwestern Barataria Basin	BARA	STJAM	941	08-Oct-2001 A	01-Jul-2007		\$1,899,834	\$2,362,687	124.4	\$2,051,637 \$252,084
	Status:	Surveying is underway. Landrights work for water level gages is continuing.								
Total Priority List		10	1,108				\$3,234,194	\$4,030,637	124.6	\$3,859,093 \$675,089

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

Priority List 11

River Reintroduction into Maurepas Swamp	PONT	STJON	5,438	04-Apr-2002 A	01-Jan-2006	01-Jul-2007	\$5,434,288	\$6,780,307	124.8	\$5,645,010 \$781,844
	Status:	DNR has contract in place (for some time now), to accomplish: 1) hydraulic feasibility study; 2) preliminary engineering; and 3) final design. Data are being gathered to support the modeling, and model development has begun. Contractors are coordinating with academic contractors that worked on the Phase 0 studies and related continuation studies. Land rights investigations are continuing. EPA and its NEPA contractor have conducted scoping with the public seeking input on issues of significance to be addressed in the Environmental Impact Statement; a Responsiveness Summary for the public is pending further determination by EPA on alternatives. The Corps of Engineers and EPA also conducted an interagency scoping of issues for the Clean Water Act 404 Permit. Information gathering is underway on issues not dependent on land right resolutions. Application for Clean Water Act 404 permit has been submitted to COE.								
Ship Shoal: Whiskey West Flank Restoration	TERRE	TERRE	182		01-Apr-2005		\$2,998,960	\$3,742,053	124.8	\$3,269,130 \$281,786
	Status:	DMJM Harris has recently been given a notice to proceed with the Engineering and Design of the project. A project kick-off meeting is tentatively set for March 2004.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		11	5,620				\$8,433,248	\$10,522,360	124.8	\$8,914,139 \$1,063,630
2 Project(s)										
1 Cost Sharing Agreements Executed										
0 Construction Started										
0 Construction Completed										
0 Project(s) Deferred/Deauthorized										

Priority List 12

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Bayou Dupont Sediment Delivery System	BARA	PLAQ	400	15-Apr-2004	01-Jan-2005	01-Jan-2007	\$2,192,735	\$2,731,479	124.6	\$2,371,636 \$10,609

Status:

EPA has processed preliminary pre-award funding to DNR to begin work on the project. Final cost share agreements are expected to be in place by Jan 1, 2004.

Two special forums were held following Corps regular monthly dredgers' forums in late spring/summer 2003 to discuss pipeline delivery of sediment for marsh building purposes. Dredgers provided information and advice during those discussions related to existing technology. Scientists indicated recommendations/issues related to targeting areas for marsh building, target elevation, sediment quality, etc.

The Bayou Dupont project is, to some extent, the first of its kind. Following examples from Corps of Engineers beneficial use projects using materials dredged for navigational maintenance, this project may prove pipeline delivery a very useful tool in coastal restoration. Based on discussions and suggestions from the special dredgers' forums above, EPA proceeded to sponsor an opportunity for technology exchange with the dredging industry, as described below.

Conference title: Long Distance Transport of Dredged Material for LA Coastal Restoration. The Region 6-sponsored conference, "Long-Distance Pipeline Transport of Dredged Material to Restore Coastal Wetlands of Louisiana", held on October 14, 2003 in New Orleans, LA was declared highly successful by restoration scientists, dredging industry representatives, and local leaders. The purpose of the conference was to advance the use of pipeline transport of sediments for rapid and far-reaching wetland restoration. The conference was funded by EPA (\$30K). EPA enlisted assistance from the Corps of Engineers national research laboratory in Vicksburg, MS and the Western Dredging Association. The unprecedented conference fully engaged the dredging industry with restoration scientists seeking improved tools for landscape recovery. Over 200 participants packed the Jefferson-Orleans Parish conference facility. Dredgers expressed strong confidence that their direct involvement in the restoration process would be a benefit. Technical presentations covered a range from slurry technology, explanation of dredging operations used to reclaim expansive lands in the The Netherlands, transport of mining/ores over difficult terrain in excess of 100 miles, and many other awe-inspiring engineering feats that may have relevance in coastal LA restoration. Critical assistance was provided by the Corps of Engineers, NO District; the Governor's Office; Louisiana Department of Natural Resources; both Jefferson and Plaquemines Parishes; NOAA Fisheries; industry specialists; and researchers from University of New Orleans, Tulane University, Louisiana State University, and Texas A&M University. The keynote speaker was Dr. Willem Vlasblom, Chair, Dredging Technology Department, Delft University, The Netherlands. Holland is recognized as the world leader in dredging technology. See more about Dr Vlasblom at www.ocp.tudelft.nl/dredging/vlasblom/vlasblom.htm or by searching 'vlasblom delft'. Next steps are currently being formulated to engage restoration managers and to answer remaining critical questions. This conference builds on EPA's commitment to innovative technology advancement for restoration, and follows EPA's original research on the pipeline transport technology begun in Terrebonne Parish, published in 1991.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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

Total Priority List	12	400				\$2,192,735	\$2,731,479	124.6	\$2,371,636 \$10,609
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- 1 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Priority List 13

Whiskey Island Back Barrier Marsh Creation	TERRE	TERRE	272			\$2,293,893	\$2,293,893	100.0	\$0 \$518
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Status:

Total Priority List	13	272				\$2,293,893	\$2,293,893	100.0	\$0 \$518
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- 1 Project(s)
- 0 Cost Sharing Agreements Executed
- 0 Construction Started
- 0 Construction Completed
- 0 Project(s) Deferred/Deauthorized

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total	ENVIRONMENTAL PROTECTION		10,266				\$94,328,300	\$90,196,024	95.6	\$76,827,349
	AGENCY, REGION 6									\$33,504,767

- 17 Project(s)
- 13 Cost Sharing Agreements Executed
- 3 Construction Started
- 3 Construction Completed
- 3 Project(s) Deferred/Deauthorized

Notes:

1. Expenditures based on Corps of Engineers financial data.
2. Date codes: A = Actual date * = Behind schedule
3. Percent codes: ! = 125% of baseline estimate exceeded

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Lead Agency: DEPT. OF THE INTERIOR, FISH & WILDLIFE SERVICE										
Priority List 1										
Bayou Sauvage National Wildlife Refuge Hydrologic Restoration, Phase 1	PONT	ORL	1,550	17-Apr-1993 A	01-Jun-1995 A	30-May-1996 A	\$1,657,708	\$1,630,193	98.3	\$1,220,982 \$1,156,905
	Status:	FWS and LDNR are presently developing a project Operation and Maintenance Plan.								
Cameron Creole Plugs	CA/SB	CAMER	865	17-Apr-1993 A	01-Oct-1996 A	28-Jan-1997 A	\$660,460	\$991,295	150.1 !	\$732,407 \$730,914
	Status:	Complete.								
Cameron Prairie National Wildlife Refuge Shoreline Protection	MERM	CAMER	247	17-Apr-1993 A	19-May-1994 A	09-Aug-1994 A	\$1,177,668	\$1,227,123	104.2	\$1,017,434 \$1,017,434
	Status:	Complete.								
Sabine National Wildlife Refuge Erosion Protection	CA/SB	CAMER	5,542	17-Apr-1993 A	24-Oct-1994 A	01-Mar-1995 A	\$4,895,780	\$1,602,656	32.7	\$1,294,242 \$1,291,313
	Status:	Complete.								
Total Priority List 1			8,204				\$8,391,616	\$5,451,267	65.0	\$4,265,065 \$4,196,565

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

Priority List 2

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Bayou Sauvage National Wildlife Refuge Hydrologic Restoration, Phase 2	PONT	ORL	1,280	30-Jun-1994 A	15-Apr-1996 A	28-May-1997 A	\$1,452,035	\$1,642,552	113.1	\$1,256,667 \$1,154,282
	Status:	FWS and LDNR are presently developing a project Operation and Maintenance Plan.								
Total Priority List		2	1,280				\$1,452,035	\$1,642,552	113.1	\$1,256,667 \$1,154,282

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

Priority List 3

Sabine Refuge Structure Replacement (Hog Island)	CA/SB	CAMER	953	26-Oct-1996 A	01-Nov-1999 A	10-Sep-2003 A	\$4,581,454	\$4,528,915	98.9	\$3,307,763 \$3,273,234
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Status:

Construction began the week of November 1, 1999, and was originally projected to be completed by June 2001. The structures have been installed (Headquarters Canal structure - February 9, 2000, Hog Island Gully structure - August 2000, and the West Cove structure - June 2001). However the Hog Island Gully and West Cove structures continue not to be fully operational due to an electrical service problem.

The 3-Phase electrical service to the structures is not the proper 3-Phase. Transformers and filters were added to the structures by December 2001, but operation was not totally satisfactory. On March 12, 2002, the Rotorque logic controller representative corrected problems with the Hog Island Gully Structure (motors running in reverse). However NRCS engineers in June 2002 determined that the structures continued to operate incorrectly in the automatic mode. The logic controllers are causing motor malfunctions even with filters and transformers in place because they are able to determine that motor power is not the correct 3-Phase.

A contracted electrical engineering consulting firm recommended installation of rotary phase converters at each structure. The converters provide "3-phase" output with balanced voltage. It is hoped that better voltage balance would eliminate motor reversal and other problems. The estimated cost is \$20,000 to install rotary phase converters at both the Hog Island Gully and West Cove structure sites.

We anticipate phase converter installation and project final completion by September 2003.

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		3	953				\$4,581,454	\$4,528,915	98.9	\$3,307,763 \$3,273,234
<ul style="list-style-type: none"> 1 Project(s) 1 Cost Sharing Agreements Executed 1 Construction Started 1 Construction Completed 0 Project(s) Deferred/Deauthorized 										

Priority List 5

Grand Bayou/GIWW Freshwater Diversion	TERRE	LAFOU	199	01-Sep-2005	01-Mar-2006	01-Mar-2007	\$5,135,468	\$8,209,722	159.9 !	\$1,062,589 \$844,401
<p>Status: Because authorization and funding of the Morganza Hurricane Protection Project has yet to occur, and because the Morganza levee segment located within the Grand Bayou Project area is the lowest priority Morganza levee segment, the Morganza Project does not have available funds to contribute toward development of a model to evaluate both projects. Consequently, FWS, NRCS and DNR have agreed that significant construction delays would occur if we delay project implementation in order to work together and share project development costs with the Morganza Project. Therefore, implementation of the Grand Bayou Project will proceed such that the 2 proposed Grand Bayou Project water management structures located along the hurricane levee alignment would be built inside of the levee alignment in a manner that would not interfere with construction of those or other Morganza features.</p>										

Total Priority List		5	199				\$5,135,468	\$8,209,722	159.9	\$1,062,589 \$844,401
<ul style="list-style-type: none"> 1 Project(s) 0 Cost Sharing Agreements Executed 0 Construction Started 0 Construction Completed 0 Project(s) Deferred/Deauthorized 										

Priority List 6

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
North Lake Boudreaux Basin Freshwater Introduction & Hydrologic Mgmt	TERRE	TERRE	603	22-Oct-1998 A	01-Sep-2005	01-Sep-2006	\$9,831,306	\$10,519,383	107.0	\$903,699 \$875,098
Status: Engineering and design work on the preferred conveyance channel alignment has been halted since some landowners are opposed to some of the terms of the draft landrights agreement. An alternative conveyance channel alignment may be pursued pending a decision from the new Secretary of the DNR and the FWS.										

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Nutria Harvest for Wetland Restoration (DEMO)	COAST	COAST		27-Oct-1998 A	20-Sep-1998 A	30-Oct-2003 A	\$2,140,000	\$2,140,000	100.0	\$1,562,844 \$791,270
		Status:		<p>During FY 2001 and 2002, the LDWF performed the following tasks: 1) Produced a 2001 herbivory damage survey report and map on December 31, 2001 ("A Survey of Nutria Herbivory Damage in Coastal Louisiana in 2001," by Edmond Mouton, G. Linscombe and S. Hartley); 2) Coordinated with consultants to develop and implement various nutria meat marketing activities. Marketing activities included: a) developing local, national, and international nutria meat market potential for human consumption; b) developing a nutria meat marketing plan; c) participating in festivals and chef's competitions; d) distributing nutria meat to the public through sales at grocery stores, restaurants, and other retail outlets; e) determining nutria meat processing costs, product price structure, and potential meat production volume; and f) planning product and market-specific promotional and advertising activities based on the Nutria Marketing Strategic Report.</p> <p>The LDWF 1999, 2000, and 2001 nutria coastal damage surveys and reports indicated continued nutria-related marsh damages in the Louisiana deltaic plain at a level of approximately 100,000 acres per year impacted. Future incentive payments to trappers and nutria herbivory surveys will be funded through the Nutria Control Project approved in January 2002. Funding for nutria meat processors enrolled in the program as well as nutria meat marketing activities will continue under this demonstration project.</p> <p>During October - December 2001, LDWF participated in the following events by providing nutria dishes; the New Iberia Golf Classic, GIS Day at the USGS Wetlands Center, the CWPPRA December 14, 2001, dedication at Sabine NWR (160 people), three events by Chef Parola, Louisiana State Archives (200 people), Baton Rouge Catholic High "Food Festival" (300 people), an event at the Louisiana State Capitol (400 people), and the New Orleans City Park's "Celebration in the Oaks Party". LDWF is continuing work with the LA Culinary Arts Institute to develop nutria products for retail and wholesale such as nutria nuggets, nutria spring rolls, nutria sausage, nutria tamales, nutria boudin, and nutria jambalaya.</p> <p>The Weill Agency was contracted from February 2002 to January 2003; 1) to provide information to the public concerning nutria meat nutrition and nutria's impact on coastal wetlands; 2) to develop new markets, and 3) to create positive publicity for nutria meat by developing partnerships. April to July, 2002, LDWF nutria promotion activities included presentation of nutria products at the following events: 1) Nutria Beignets at the "Wild Beast Fest" in Plaquemine, LA (350 guests); 2) Nutria Beignets at the Old State Capitol (250 guests including State Legislators); 3) assisted the Weill Agency in a grocery store (Two Matherns's stores) promotion presenting smoked sausage prepared by Bellue's in Baton Rouge, and 4) finally, developed a Nutria Web site (www.nutria.com). The Weill Agency contract activities included: 1) promoting nutria and serving nutria gumbo, at the "Wild Beast Feast" in Larose, LA; 2) provided nutria meat nutritional information at the "The Around the World/Digestive Health Foundation of LA"; 3) served Nutria Beignets at the "Beast Feast" in Port Allen, LA; 4) served smoked nutria sausage at "Matherns's Supermarket Road Show" in Baton Rouge, LA; 5) served nutria sausage at the "Gonzales Jambalaya Festival" in Gonzales, LA; and 6) finally, served nutria jambalaya at the "Baton Rouge Family Day in the Park".</p> <p>From July through September 2002, the following activities were completed: A contract chef (Philippe Parola): 1) prepared "Nutria Gumbo" at the Royal Sonesta Hotel in New Orleans of the annual meeting of the Council for Development of French in Louisiana (250 members); 2) prepared "Nutria Gumbo" at the Renaissance Hotel for the Bastille Day Celebration (500 guests); 3) trained the kitchen staff of Woods & Waters of Louisiana on the preparation of "Louisiana Nutria Beignets Appetizers;" 4) served "Nutria Gumbo" at the Cancer Society Benefit in Baton Rouge (800 guests); 5) served nutria at the Wild Game Festival in the Lafayette CajunDome (200 guests); and 6)</p>						

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				CSA	Const Start	Const End	Baseline	Current	%	
<p>participated in the 2002 New Orleans Culinary Classic and the Louisiana Restaurant Food Exposition August 3 to 5, 2002. LDWF sponsored a "Nutria Meat Category" at the Exposition. The Louisiana Culinary Institute, under contract, traveled to China via an invitation from Jin Hong Food Trade Co., LTD and demonstrated different cooking methods and recipes for nutria to a team of Chinese chefs and marketing staff. The LDWF staff worked with the Weill Agency to participate in The Louisiana Restaurant Association Expo in New Orleans and the Alternative Fuel Vehicles and Food Expo in Gonzales at the Lamar Dixon Expo Center. Chef Parola and the Weill Agency developed nutria meat products for the wholesale and retail food service industry, such as nutria sausage, nutria spring rolls and nutria nuggets. Pete Giovinco from Deer Depot is making "Nutria Snack Sticks" and "Nutria Jerky" for potential marketing.</p> <p>From October to December 2002, the following activities were completed: LDWF and Chef Philippe Parola on several promotional events during this period: 1) prepared "Nutria Gumbo" at the Bluebonnet Swamp Festival, Baton Rouge, LA, 2) prepared gumbo, baked nutria, and nutria tempura at a WGBO radio talk show in Baton Rouge (500 guests), 3) provided a nutria meat-cooking demonstration and served nutria at the Santa Helpers Expo at the Lamar Dixon Center in Gonzales, LA (800 guests), 4) provided cooking demonstrations at the Beach Walk Café in Destin, FL, 5) served nutria gumbo at Fair Oak Estate, Baton Rouge, LA (350 guests), 6) served nutria gumbo at River Ranch City Club, Lafayette, LA (400 guests), 7) LDWF contracted with the LA Culinary Institute to travel to China to demonstrate different cooking methods and recipes to Chinese chefs, and 8) provided a graphic design of an up-dated brochure promoting "Louisiana Nutria Meat." Weill Agency Contract: The Weill Agency participated in nine events this quarter; the Taste of Baton Rouge Food Expo, the Yambilee Festival, the Prairie Cajun Folklife Festival, the Thibodeauvill Fall Festival, and the Plaquemines Parish Fair and Orange Festival, as well as website development and nutria product development packaging, labeling and marketing issues.</p> <p>From January to March 2003, the following activities were completed: Promotional Events: LDWF and Chef Philippe Parola the following promotional events: 1) prepared "Nutria Gumbo" at the Brandy Wine Club House, Baton Rouge, LA, 2) conducted a seminar to promote nutria meat as a delicacy and a possible nutria gumbo menu item for the U.S. Navy, 3) served "Nutria Gumbo" at UCT Hall for House Representative Mike Futrell (300 guests), 4) served "Nutria Gumbo" at the handicapped children's playground ground breaking at New Orleans City Park (600 guests), 5) produced a new brochure for nutria meat information, recipes and nutrition and LDWF (4,650 copies; \$2,093.68), and 6) LDWF staff prepared "Nutria Jambalaya" and gave a nutria presentation at the New Iberia, LA Rotary Club meeting in New Iberia, LA. Weill Agency Contract: The Weill Agency contract terminated January 31, 2003 (\$129,802.77). Firefly Digital Contract: Firefly Digital has been contracted to upgrade the "Nutria.com" web site and develop an educational CD for \$11,800.00.</p> <p>From April through June 2003 the following activities were completed: Promotional Events: 1) Chef Parola demonstrated nutria meat preparation and organized judging for the U. S. Army Corps of Engineers annual "Earth Day Celebration" in New Orleans, 2) LDWF assisted Chef Kevin Diez by providing nutria meat for the Baton Rouge Family Fun Fair, and 3) LDWF provided nutria sausage to the Opelousas Chamber of Commerce for a national cycling event. Project Development: The LDWF and Giovenco's Processing processed 510 pounds of meat to make 3,000 nutria smoke snack sticks for promotional events. LDWF contracted with Firefly Digital to upgrade the Nutria Website "www.nutria.com" to be completed in September 2003. The upgrade will provide easier site navigational access and more accurate and rapid user information.</p>										

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		6	603				\$11,971,306	\$12,659,383	105.7	\$2,466,543 \$1,666,367
<ul style="list-style-type: none"> 2 Project(s) 2 Cost Sharing Agreements Executed 1 Construction Started 1 Construction Completed 0 Project(s) Deferred/Deauthorized 										

Priority List 9

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Freshwater Introduction South of Highway 82	MERM	CAMER	296	12-Sep-2000 A	01-Dec-2004	01-May-2005	\$607,138	\$726,223	119.6	\$447,280 \$447,199
<p>Status: The project was approved for Phase I engineering and design on January 11, 2000. An initial implementation meeting was held in April 2000; field trips were held in May and June 2000. The FWS/DNR Cost Share Agreement was signed on September 12, 2000. Elevational surveys of marsh levels and existing water monitoring stations and control points were completed by Lonnie Harper and Associates on October 26, 2000. Three additional continuous recorders were established in May and June 2001 at the Unit 14 Boathouse, South Lake 14 and in Cop Cop Bayou.</p> <p>Erick Swenson (LSU Coastal Ecology Institute) submitted a hydrologic study of the project area entitled, "Analysis of Water Level Data from Rockefeller Refuge and the Grand and White Lakes Basin" in October 2001. That report concluded that a "precipitation-induced" water level gradient (0.6 feet or greater 50% of the time) existed between marshes north of Highway 82 and the target marshes in the Rockefeller Refuge south of that highway. That gradient was 1.5 feet or greater 30% of the time. Marsh levels varied from 1.0 to 1.2 feet NAVD88 north and to 1.0 to 1.4 feet NAVD88 south of Highway 82. The project hydrology is currently being modeled as described below.</p> <p>Hydrodynamic Modeling Study</p> <p>Hydrodynamic modeling meetings and a field trip were held October 9, 2001, November 30, 2001, and December 11, 2001 respectively. Hydrodynamic modeling began on January 28, 2002. Additional continuous water level and salinity recorders were installed in March 2002 at Grand Volle Lake and Rollover Bayou to support the modeling study. Data corrections and the application of a barometric pressure correction to two unvented LDWF continuous data recorders caused delays in the original modeling schedule. An interagency meeting was held May 24, 2002, to review the Fenstermaker and Associates' model setup and work plan status. The one-dimensional "Mike 11" model was used for the analysis. Landrights were obtained to allow pre-construction modeling data collection and surveying on Miami Corporation property.</p> <p>Model calibration was completed November 21, 2002, with the project-sponsors acceptance of the calibration results. Model verification was completed December 12, 2002. A favorable semi-final modeling results meeting was held on February 6, 2003. A draft modeling report was presented in April 2003. The model indicated that the project, with a number of original features removed or reduced, would significantly flow freshwater south of Hwy 82 to reduce salinities in the project area. The model results suggested the following modifications to the conceptual project; 1) removal of the Boundary Line borrow canal plug, 2) removal of the northeastern north-south canal, 3) removal of 2 of the recommended four 3-48 inch-diameter-culverted structures along the boundary canal, 4) relocate the new Dyson structure to the north, and 5) removal of the Big Constance structure modification feature. The incorporation of these recommendations would significantly reduce project costs. May 14, 2003, and June 11, 2003, modeling meetings resulted in the modelers preparing a additional "with-project" salinity reduction analysis submitted on June 18, 2003, depicting; 1) net and percent difference in monthly average salinities (with vs without project), and 2) an analysis of salinity spike reductions with vs without project. The semi-final modeling report was submitted for agency review on August 6, 2003.</p> <p>A favorable 30% Design Review meeting was held on May 14, 2003 with USFWS concurrence to proceed to final design. On July 10, 2003, after review of additional modeling salinity analysis output, the LA Department of Natural Resources gave concurrence to proceed with project construction.</p>										

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
The project is presently in semi-final design stage in preparation for a 95% Design Review Meeting to be held in the Fall 2003. Phase II construction funding approval will be sought at either the October 2003 or the January 2004 Task Force meeting.										
Mandalay Bank Protection Demonstration (DEMO)	TERRE	TERRE		06-Dec-2000 A	25-Apr-2003 A	01-Sep-2003 A	\$1,194,495	\$1,869,659	156.5 !	\$1,252,363 \$1,215,883
	Status:	Construction was completed 9/1/2003.								
Total Priority List			9	296			\$1,801,633	\$2,595,882	144.1	\$1,699,642 \$1,663,081

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

Priority List 10

Delta Management at Fort St. Philip	BRET	PLAQ	267	16-May-2001 A	01-Aug-2004	01-Nov-2004	\$3,183,938	\$2,053,216	64.5	\$1,634,930 \$244,986
	Status:	Oyster lease appraisals for those leases impacted by the project have been completed. Buyout offers will be forwarded to the leaseholders in February 2004. If buyout negotiations are successful, project sponsors could advertise for bids in late spring 2004 and possibly go to construction in later summer/early fall 2004.								

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
East Sabine Lake Hydrologic Restoration	CA/SB	CAMER	393	17-Jul-2001 A	01-Oct-2004	30-Jan-2007	\$6,490,751	\$5,494,843	84.7	\$1,018,277 \$660,436

Status:

Phase I funding was approved on January 10, 2001. FWS, DNR and the NRCS completed a joint cost-share agreement on July 17, 2001.

Hydrodynamic Modeling Study

NRCS contracted with FTN for hydrodynamic modeling services. Phase I hydrodynamic modeling consists of reconnaissance, gathering of existing data, model selection and model geometry establishment. Phase II modeling will include initial model calibration (without-project and with-project scenario) model runs.

Surveys and Data Recorders

DNR contracted to establish survey monument control points in December 2001. DNR installed three continuous water level and salinity recorders in September 2001, and contracted the installation and maintenance of five more in January 2002 for modeling purposes. FTN installed an additional continuous recorder near Johnsons Bayou in Spring 2002. Nine data recorders were thus deployed for a 16-month period (February 2002 to June 2003). NRCS completed most cross sectional surveys by July 2002. Benchmark and cross sectional surveys were completed in March 2002; marsh elevation surveys were completed by May 2002.

The project will be completed as two construction units. Construction Unit 1 will include the earthen terraces, shoreline stabilization, and minor hydrologic structures; Construction Unit 2 will include the larger hydrologic restoration structures currently modeled. Landrights work was initiated in February 2002; most of project is located on the Sabine NWR.

Construction Unit 1

The Pines Ridge weir component and surrounding marshes were inspected in June 2002. A project sponsor field trip was held December 5, 2002, to inspect existing Sabine NWR terraces and to determine the east Sabine Lake shoreline's suitability for vegetative plantings. That trip indicated that the existing Sabine NWR terrace design (located south of Willow Bayou Canal) was favorable for use as a CU 1 terrace component. Revised CU 1 component draft permit-level 30% Design drawings were prepared by the NRCS in November 2002 and revised in March 2003.

Favorable Construction Unit 1 interagency 30% Design Review and 95% Design Review Conferences were held March 25, 2003, and July 8, 2003, respectively. Work is proceeding on final designs, NEPA permitting, the draft Environmental Assessment, and other Phase II requirements. Phase II construction approval will be sought at either the October 2003 or January 2004 Task Force meetings.

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Grand-White Lakes Landbridge Restoration	MERM	CAMER	213	24-Jul-2001 A	10-Jul-2003 A	30-Oct-2004	\$9,635,224	\$5,796,174	60.2	\$4,421,468 \$2,937,657
	Status:									
	Phase 1 engineering and design funding was approved on January 10, 2001. The LDNR/ USFWS Cost Share Agreement was executed on July 24, 2001. LDNR certified landrights completion on December 12, 2001.									
	Project sponsors received conditional Phase II construction funding approval from the CWPPRA Task Force on August 7, 2002. All of the CWPPRA and NEPA project construction requirements have been completed; 1.) the NRCS Overgrazing Determination (August 30, 2002), 2) LA state Coastal Zone Consistency Determination (September 19, 2002), 3) the LA Department of Environmental Quality Water Quality Certification (October 28, 2002), 4) the Environmental Assessment (November 19, 2002), 5) the Corps' CWPPRA Section 303(e) Determination (December 2002), and 6) the Corps' Section 404 Permit (December 2002). A favorable 95% Design Review Conference was held September 12, 2002.									
	The final designs and specifications and contracting is completed. The project construction contract was awarded in June 2003, the Notice to Proceed was issued on July 10, 2003, and Construction Unit 1 (the Grand Lake rock foreshore dike and marsh restoration) construction has begun. Construction Unit 2 (Collicon Lake Terraces) contracting will begin in October 2003. The project ground breaking was held August 15, 2003.									
North Lake Mechant Landbridge Restoration	TERRE	TERRE	604	16-May-2001 A	01-Apr-2003 A	01-Feb-2006	\$2,383,052	\$2,383,052	100.0	\$850,729 \$469,782
	Status:									
	Surveys of impacted oyster leases have been completed. Oyster lease appraisals are expected to be completed within the next two months. Permit applications and NEPA requirements are still in process. Phase II construction authorization has been delayed until April 2004.									
Terrebonne Bay Shore Protection Demonstration (DEMO)	COAST	TERRE		24-Jul-2001 A	01-Mar-2005	01-May-2005	\$2,006,373	\$2,296,721	114.5	\$1,351,023 \$251,057
	Status:									
	Oyster lease appraisals are nearly complete. However, the leases have not yet been cleared. The delay in clearing the oyster leases will cause construction to be delayed until spring of 2005.									

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
	Total Priority List	10	1,477				\$23,699,338	\$18,024,006	76.1	\$9,276,426 \$4,563,917
5	Project(s)									
5	Cost Sharing Agreements Executed									
2	Construction Started									
0	Construction Completed									
0	Project(s) Deferred/Deauthorized									

Priority List 11

Dedicated Dredging on the Barataria Basin Landbridge	BARA	JEFF	564	03-Apr-2002 A	01-Jan-2005	01-Jan-2006	\$2,294,410	\$2,868,013	125.0 !	\$215,640 \$200,409
	Status:	Due to delays in the geotechnical investigation and subsequent report, the request for Phase 2 approval is now scheduled for the April 2004 Task Force meeting. A 30% design review is scheduled for November 2003 and the 95% design review is scheduled for January 2004.								

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
South Grand Chenier Hydrologic Restoration	MERM	CAMER	440	03-Apr-2002 A	01-May-2005	01-Mar-2006	\$2,358,420	\$2,948,025	125.0	\$1,047,837 \$222,931
	Status:									
	The project was approved in January 2002. An implementation meeting and field trip was held on March 13, 2002, at Rockefeller Refuge, attended by agencies (USFWS, LDNR, LDWF, and NRCS), landowner representatives, and consulting engineers.									
	Hydrodynamic Modeling									
	A hydrodynamic modeling meeting was held on May 6, 2002, to discuss planning and the benefits of modeling this project with the Little Pecan Bayou HR project. Project surveying, continuous water level and salinity recorder deployment, and the modeling contract was issued to Fenstermaker and Associates on June 14, 2002; a modeling work plan was submitted in July 2002. Elevation surveys and the installation of continuous water level and salinity recorders necessary for hydrodynamic modeling were completed and installed by August 2002. Data collection and model initialization for calibration is completed. Preliminary and final model "Set Up" meetings were held on June 11, 2003, and August 6, 2003 respectively in Lafayette, LA. Model calibration is expected to be completed by September 5, 2003, validation completed by September 30, 2003, model results and presentation by October 15, 2003, the draft model report by October 5, 2003, and a final report by October 11, 2003.									
	Landrights									
	Landrights meetings were held between project sponsors and the major landowners on October 17, 2002, in New Orleans, and all landowners on January 16, 2003, at Rockefeller Refuge, in which the goals and objectives of this and the Little Pecan Bayou Freshwater Introduction Project were presented.									
West Lake Boudreaux Shoreline Protection and Marsh Creation	TERRE	TERRE	145	03-Apr-2002 A	01-Jan-2005	01-Jan-2006	\$1,322,354	\$1,652,943	125.0 !	\$693,184 \$332,839
	Status: ﻿The geotechnical investigation conducted by the geotechnical consultanting firm Burns, Cooley, and Dennis was completed in June. The survey work is being contracted out to DNR and should be completed in July. In late July we (NRCS, DNR, and FWS) will be conducting a meeting to discuss the geotech report and design issues. At that time we will be setting a date for the 30% design meeting that will take place in August.									

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		11	1,149				\$5,975,184	\$7,468,981	125.0	\$1,956,662 \$756,178
<ul style="list-style-type: none"> 3 Project(s) 3 Cost Sharing Agreements Executed 0 Construction Started 0 Construction Completed 0 Project(s) Deferred/Deauthorized 										

Priority List 13

Goose Point/Point Platte Marsh Creation	PONT	S TTAM	436				\$1,930,596	\$1,930,596	100.0	\$30,000 \$997
<p>Status: FWS will be working with DNR to do the engineering and design on this project. The Cost Share Agreement is currently in draft stage and will be executed within the next month.</p>										

Total Priority List		13	436				\$1,930,596	\$1,930,596	100.0	\$30,000 \$997
<ul style="list-style-type: none"> 1 Project(s) 0 Cost Sharing Agreements Executed 0 Construction Started 0 Construction Completed 0 Project(s) Deferred/Deauthorized 										

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total	DEPT. OF THE INTERIOR, FISH & WILDLIFE SERVICE		14,597				\$64,938,630	\$62,511,304	96.3	\$25,321,356 \$18,119,024

- 20 Project(s)
- 18 Cost Sharing Agreements Executed
- 10 Construction Started
- 8 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Notes:

1. Expenditures based on Corps of Engineers financial data.
2. Date codes: A = Actual date * = Behind schedule
3. Percent codes: ! = 125% of baseline estimate exceeded

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

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

Lead Agency: DEPT. OF COMMERCE, NATIONAL MARINE FISHERIES SERVICE

Priority List 1

Fourchon Hydrologic Restoration [DEAUTHORIZED]	TERRE	LAFOU	150				\$252,036	\$7,703	3.1	\$7,703 \$7,703
	Status:	In a meeting on October 7, 1993, Port Fourchon conveyed to NMFS personnel that any additional work in the project area could be conducted by the Port and they did not wish to see the project pursued because they question its benefits and are concerned that undesired Government / general public involvement would result after implementation.								
		Deauthorized.								
Lower Bayou LaCache Hydrologic Restoration [DEAUTHORIZED]	TERRE	TERRE	86	17-Apr-1993	A		\$1,694,739	\$99,625	5.9	\$99,625 \$99,625
	Status:	In a public hearing on September 22, 1993, with landowners in the project area, users strenuously objected to the proposed closure of the two east-west connections between Bayou Petit Caillou and Bayou Terrebonne. NMFS received a letter from LA DNR, dated February 6, 1995, recommending deauthorization of the project. NMFS forwarded the letter to COE for Task Force approval.								
		Deauthorized.								
Total Priority List		1	236				\$1,946,775	\$107,328	5.5	\$107,328 \$107,328

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

Priority List 2

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Atchafalaya Sediment Delivery	ATCH	STMRY	2,232	01-Aug-1994 A	25-Jan-1998 A	21-Mar-1998 A	\$907,810	\$2,532,147	278.9 !	\$2,427,005 \$2,028,115
Status: Project cost increase was approved by the Task Force at the January 16, 1998 meeting. Construction project complete. First costs accounting underway.										
Big Island Mining	ATCH	STMRY	1,560	01-Aug-1994 A	25-Jan-1998 A	08-Oct-1998 A	\$4,136,057	\$7,077,404	171.1 !	\$6,970,352 \$6,602,058
Status: Project cost increase was approved by the Task Force at the January 16, 1998 meeting. Construction project complete. First costs accounting underway.										
Point Au Fer Canal Plugs	TERRE	TERRE	375	01-Jan-1994 A	01-Oct-1995 A	08-May-1997 A	\$1,069,589	\$2,855,208	266.9 !	\$2,733,540 \$2,349,357
Status: Construction for the project will be accomplished in two phases. Phase I construction on the wooden plugs in the oil and gas canals in Area 1 was completed December 22, 1995. Phase II construction in Area 2 has been delayed until suitable materials can be found to backfill the canal fronting the Gulf of Mexico. Phase II construction completed in May 1997. Task Force approved project design change and project cost increase at December 18, 1996 meeting. Phase III was authorized and a cooperative agreement awarded on August 27, 1999. Phase III was completed in spring 2000. Closing out cooperative agreement between NOAA and LADNR.										
Total Priority List			2	4,167			\$6,113,456	\$12,464,759	203.9	\$12,130,896 \$10,979,529

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

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Bayou Perot/Bayou Rigolettes Marsh Restoration [DEAUTHORIZED]	BARA	JEFF	1,065	03-Mar-1995 A			\$1,835,047	\$20,963	1.1	\$20,963 \$20,963
	Status:	A feasibility study conducted by LA DNR indicated that possible wetlands benefits from construction of this project are questionable. LA DNR has indicated a willingness to deauthorize the project. In April 1996, LA DNR had asked to reconsider the project with potential of combining this with two other projects in the watershed. Project deauthorized at January 16, 1998 Task Force meeting. Deauthorized.								
East Timbalier Island Sediment Restoration, Phase 1	TERRE	LAFOU	1,913	01-Feb-1995 A	01-May-1999 A	01-May-2001 A	\$2,046,971	\$3,729,587	182.2 !	\$3,714,838 \$3,618,369
	Status:	Construction completed in December 1999. Aerial seeding of the dune platform was achieved in spring 2000, and the installation of sand fencing was completed September 30, 2000. Vegetative dune plantings were completed May 1, 2001.								
Lake Chapeau Sediment Input and Hydrologic Restoration	TERRE	TERRE	509	01-Mar-1995 A	14-Sep-1998 A	18-May-1999 A	\$4,149,182	\$5,379,987	129.7 !	\$5,195,425 \$4,467,052
	Status:	Construction complete. Vegetative plantings were installed in spring 2000. Closing out cooperative agreement between NOAA and LADNR.								
Lake Salvador Shore Protection Demonstration (DEMO)	BARA	STCHA		01-Mar-1995 A	02-Jul-1997 A	30-Jun-1998 A	\$1,444,628	\$2,809,846	194.5 !	\$2,749,405 \$2,449,768
	Status:	Phase 1 was completed September 1997. Phase 2 is shoreline protection between Bayou desAllemnands and Lake Salvador. Construction began in April 1998 and completed in June 1998. Final first costs have been finalized. Closed out cooperative agreement between NOAA and LADNR. First costs accounting undersay. Project has served its demonstration purpose and is being removed by DNR with O&M funds, summer of 2002.								

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		3	3,487				\$9,475,828	\$11,940,383	126.0	\$11,680,631 \$10,556,152
<ul style="list-style-type: none"> 4 Project(s) 4 Cost Sharing Agreements Executed 3 Construction Started 3 Construction Completed 1 Project(s) Deferred/Deauthorized 										

Priority List 4

East Timbalier Island Sediment Restoration, Phase 2	TERRE	LAFOU	215	08-Jun-1995 A	01-May-1999 A	15-Jan-2000 A	\$5,752,404	\$7,600,863	132.1 !	\$7,578,113 \$7,488,950
<p>Status: NOAA and DNR is currently closing out the cooperative agreements for East Tinbalier Island Phase 1 and 2. Considering the damage invoked on the island as a result of Hurricane Lily and Tropical Storm Isadore, future construction will be reassessed pursuant to engineering feasibility and the Phase 2 prioritization process.</p>										
Eden Isles East Marsh Restoration [DEAUTHORIZED]	PONT	S TTAM	1,454				\$5,018,968	\$39,025	0.8	\$39,025 \$39,025
<p>Status: NMFS letter of September 8, 1997 requested the CWPPRA Task Force to move forward with deauthorization of this project. Bids were placed twice to acquire the land; both times they were rejected due to higher bids by private developers. Project deauthorized at January 16, 1998 Task Force meeting.</p> <p>Deauthorized.</p>										

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		4	1,669				\$10,771,372	\$7,639,888	70.9	\$7,617,139 \$7,527,976
<ul style="list-style-type: none"> 2 Project(s) 1 Cost Sharing Agreements Executed 1 Construction Started 1 Construction Completed 1 Project(s) Deferred/Deauthorized 										
Priority List 5										
Little Vermilion Bay Sediment Trapping	TECHE	VERMI	441	22-May-1997 A	10-May-1999 A	20-Aug-1999 A	\$940,065	\$886,030	94.3	\$822,044 \$586,829
Status: Construction completed in August 1999. Cooperative agreement being closed out. First costs accounting underway.										
Myrtle Grove Siphon	BARA	PLAQ	1,119	20-Mar-1997 A			\$15,525,950	\$489,074	3.2	\$489,074 \$489,074
Status: The 5th Priority List authorized funding in the amount of \$4,500,000 for the FY 96 Phase 1 of this project. Priority List 6 authorized funding in the amount of \$6,000,000 for FY 97. Priority List 8 is authorized to fund the remaining \$5,000,000. Total project cost is estimated to be \$15,525,950.										
NOAA and LADNR are closing out the cooperative agreement and returning remaining project funds to the CWPPRA program. Project will remain active as authorized.										
Total Priority List		5	1,560				\$16,466,015	\$1,375,104	8.4	\$1,311,118 \$1,075,903
<ul style="list-style-type: none"> 2 Project(s) 2 Cost Sharing Agreements Executed 1 Construction Started 1 Construction Completed 0 Project(s) Deferred/Deauthorized 										

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Priority List 6										
Black Bayou Hydrologic Restoration	CA/SB	CAMER	3,594	28-May-1998 A	01-Jul-2001 A	15-Nov-2001 A	\$6,316,800	\$6,382,511	101.0	\$6,181,716 \$4,540,833
	Status:	In November 2003 Signs were replaced along the Black Bayou Cut Off Canal as a result of repeated barge contact. Safety rail was installed on top of sheet pile cap at the Self Regulating Tide Gate by the same contractor.								
Delta Wide Crevasses	DELTA	PLAQ	2,386	28-May-1998 A	21-Jun-1999 A	31-Dec-2014	\$5,473,934	\$4,732,653	86.5	\$3,012,788 \$746,216
	Status:	Awaiting permit revision. Bid document completed, and construction anticipated this spring.								
Sediment Trapping at "The Jaws"	TECHE	STMAR	1,999	28-May-1998 A	01-Jun-2004	15-Sep-2004	\$3,167,400	\$3,392,135	107.1	\$3,077,537 \$354,963
	Status:	Surveys have been completed, and final plans and specifications have been submitted to begin the bidding process. Construction is expected to begin in early June 2004.								
Total Priority List			6	7,979			\$14,958,134	\$14,507,299	97.0	\$12,272,041 \$5,642,013

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

Priority List 7

Grand Terre Vegetative Plantings	BARA	JEFF	127	23-Dec-1998 A	01-May-2001 A	01-Jul-2001 A	\$928,895	\$883,233	95.1	\$845,463 \$310,320
	Status:	Planting of 3,100 units each of bitter panicum, gulf cordgrass, and marshhay cordgrass on beach nourishment/dune area, and installation of approximately 35,000 smooth cordgrass and 800 black mangrove was completed in June 2001. Monitoring is underway. Project area is being evaluated for additional plantings in 2003/2004.								

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Pecan Island Terracing	MERM	VERMI	442	01-Apr-1999 A	15-Dec-2002 A	10-Sep-2003 A	\$2,185,900	\$2,862,806	131.0 !	\$2,617,989 \$1,804,284
Status: Terrace construction was completed August 26, 2003, with plantings completed September 10, 2003.										
Total Priority List			7	569			\$3,114,795	\$3,746,039	120.3	\$3,463,452 \$2,114,604

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

Priority List 8

Bayou Bienvenue Pump Station Diversion and Terracing [DEAUTHORIZED]	PONT	STBER	442	01-Jun-2000 A			\$3,295,574	\$212,142	6.4	\$212,142 \$212,142
Status: Cooperative Agreement awarded in June 1, 2000. Preliminary design analyses indicate that terrace construction significantly more costly than originally estimated due to poor geo-technical condition. The project is estimated to cost between \$17 and \$20 million to build.										
At the January 16, 2002 Task Force meeting, DNR and NOAA/NMFS requested initiation of the deauthorization procedure. Deauthorization was approved by the Task Force at the April 16, 2002 meeting.										
Hopedale Hydrologic Restoration	PONT	STBER	134	11-Jan-2000 A	10-Jan-2004 A	10-Apr-2004	\$2,179,491	\$1,562,000	71.7	\$2,116,062 \$487,320
Status: Cooperative Agreement was awarded January 11, 2000. Engineering and design is complete, with design surveys, geo-technical investigations and hydrologic modeling complete. Landrights for the major project feature are complete. NEPA compliance and regulatory requirements are complete. A construction contract was awarded in November 2003, and initiation of construction activities is scheduled for January 2004.										

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		8	576				\$5,475,065	\$1,774,142	32.4	\$2,328,204 \$699,462
2 Project(s)										
2 Cost Sharing Agreements Executed										
1 Construction Started										
0 Construction Completed										
1 Project(s) Deferred/Deauthorized										

Priority List 9

Castille Pass Channel Sediment Delivery	ATCH	STMRY	589	29-Sep-2000 A	01-Apr-2005	01-Aug-2005	\$1,484,633	\$1,855,792	125.0 !	\$1,547,474 \$580,124
Status:	30% Design meeting held January 20, 2004, as a result additional hydrodynamic and sediment model runs were requested. These additional model runs are underway. A 95% design meeting is anticipated for May 2004. Anticipate construction request in July 2004.									
Chandeaur Islands Marsh Restoration	PONT	STBER	220	10-Sep-2000 A	01-Jun-2001 A	31-Jul-2001 A	\$1,435,066	\$1,745,305	121.6	\$1,485,827 \$678,612
Status:	Cooperative Agreement was awarded September 10, 2000. Vegetative planting is scheduled for spring, 2001, and are phased over two years. Pilot planting project completed in June, 2000. First phase of vegetative plantings completed July 2001 with installation of approximately 80,000 smooth cordgrass plants along 6.6 miles of overwash fan perimeters. Project area is being evaluated for additional plantings in 2003.									
East/West Grand Terre Islands Restoration	BARA	JEFF	403	21-Sep-2000 A	01-Apr-2005	01-Sep-2005	\$1,856,203	\$2,312,023	124.6	\$2,102,410 \$1,119,998
Status:	Cooperative Agreement was awarded September 21, 2000. Preliminary geotechnical investigations of potential sand sources is complete. Additional detailed geotechnical investigations are required to accurately identify and delineate sand sources. Data acquisition for modeling complete, and preliminary modeling results for design alternatives is complete; additional modeling required to complete project performance assessments. Landrights in progress. Preliminary assessment of oyster resources is complete. Preliminary design review was delayed due to the need for additional geotechnical information and project performance projections.									

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Four Mile Canal Terracing and Sediment Trapping	TECHE	VERMI	167	25-Sep-2000 A	10-Jun-2003 A	30-Apr-2004	\$5,086,511	\$3,443,962	67.7	\$2,932,089 \$980,608
	Status:	Construction of White Lake terraces are scheduled to be completed by March 2004, with plantings to follow in this area in April 2004.								
LaBranche Wetlands Terracing, Planting, and Shoreline Protection	PONT	STCHA	489	21-Sep-2000 A			\$821,752	\$305,376	37.2	\$305,376 \$305,376
	Status:	Cooperative Agreement was awarded September 21, 2000. Engineering and design complete. Construction is scheduled for 2002. Task Force approved Phase 2 funding at January 10, 2001 meeting. In a letter dated September 7, 2001, NMFS returned Phase 2 funding because of waning landowner support. Deauthorization is not requested at this time.								
Total Priority List		9	1,868				\$10,684,165	\$9,662,458	90.4	\$8,373,175 \$3,664,717

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

Priority List 10

Rockefeller Refuge Gulf Shoreline Stabilization	MERM	CAMER	920	27-Sep-2001 A	01-Apr-2005	01-Jul-2005	\$1,929,888	\$2,408,478	124.8	\$2,123,979 \$510,097
	Status:	As a result of poor soil conditions at the project site, NOAA Fisheries and LDNR are moving forward with at least three, and up to five, design alternatives for proposed construction of test sections of each.								

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		10	920				\$1,929,888	\$2,408,478	124.8	\$2,123,979 \$510,097
<ul style="list-style-type: none"> 1 Project(s) 1 Cost Sharing Agreements Executed 0 Construction Started 0 Construction Completed 0 Project(s) Deferred/Deauthorized 										

Priority List 11

Barataria Barrier Island: Pelican Island and Pass La Mer to Chaland Pass	BARA	PLAQ	534	06-Aug-2002 A	01-Apr-2004	30-Oct-2004	\$61,995,587	\$66,492,384	107.3	\$55,608,693 \$2,598,628
<p>Status: Critical Phase 1 issues include identification of sand sources, selection of a preferred construction alignment (i.e., seaward or landward), land rights and oysters.</p> <p>A Cooperative Agreement was awarded to LDNR, and NMFS has awarded a contract for engineering and design and environmental compliance services.</p> <p>Pre-design investigations, preliminary design review and 95% design reviews are complete. Regulatory approvals are in process. Landrights are substantially complete.</p> <p>Pending Phase 2 approval, advertisement of construction contracts is anticipated for February 2004, and the initiation of construction is scheduled for April 2004</p>										
Little Lake Shoreline Protection/Dedicated Dredging near Round Lake	BARA	LAFOU	713	06-Aug-2002 A	01-Apr-2004	30-Oct-2005	\$35,994,929	\$31,488,686	87.5	\$26,700,140 \$307,049
<p>Status: Phase 2 funding approved November 2003. Permits received. Construction anticipated this Spring.</p>										

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Pass Chaland to Grand Bayou Pass Barrier Shoreline Restoration	BARA	PLAQ	161	06-Aug-2002 A	01-Mar-2005	01-Aug-2005	\$1,880,700	\$2,344,387	124.7	\$2,016,020 \$448,653
	Status:	A Cooperative Agreement was awarded July 25, 2002. Engineering and design contract has been issued, and kickoff meeting and site visit were conducted in February 2003. Pre-design surveys, geotechnical and other data collection are underway and should be complete by fall 2003. Preliminary design is anticipated during late 2003.								
		Critical Phase 1 issues include identification of sand sources, landrights (numerous undivided heirships and potential reclamation issues) and oysters.								
Total Priority List		11	1,408				\$99,871,216	\$100,325,457	100.5	\$84,324,853 \$3,354,331
	3	Project(s)								
	3	Cost Sharing Agreements Executed								
	0	Construction Started								
	0	Construction Completed								
	0	Project(s) Deferred/Deauthorized								
Total	DEPT. OF COMMERCE, NATIONAL MARINE FISHERIES SERVICE		24,439				\$180,806,709	\$165,951,334	91.8	\$145,732,815 \$46,232,113
	29	Project(s)								
	27	Cost Sharing Agreements Executed								
	15	Construction Started								
	12	Construction Completed								
	5	Project(s) Deferred/Deauthorized								

Notes:

1. Expenditures based on Corps of Engineers financial data.
2. Date codes: A = Actual date * = Behind schedule
3. Percent codes: != 125% of baseline estimate exceeded

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Lead Agency: DEPT. OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE										
Priority List 1										
GIWW to Clovelly Hydrologic Restoration	BARA	LAFOU	175	17-Apr-1993 A	21-Apr-1997 A	31-Oct-2000 A	\$8,141,512	\$8,916,131	109.5	\$6,885,017 \$6,814,008
	Status: The project was divided into two contracts in order to expedite implementation. The first contract to install most of the weir structures, began May 1, 1997 and completed November 30, 1997, at a cost of \$646,691. The second contract to install bank protection, one weir and one plug, began January 1, 2000 and completed October 31, 2000, at a cost of \$3,400,000. All project construction is complete. O&M Plan signed September 16, 2002.									
Vegetative Plantings - Dewitt-Rollover Planting Demonstration(DEMO) [DEAUTHORIZED]	MERM	VERMI		17-Apr-1993 A	11-Jul-1994 A	26-Aug-1994 A	\$191,003	\$92,012	48.2	\$92,012 \$92,012
	Status: Sub-project of the Vegetative Plantings project. Complete and deauthorized.									
Vegetative Plantings - Falgout Canal Planting Demonstration(DEMO)	TERRE	TERRE		17-Apr-1993 A	30-Aug-1996 A	30-Dec-1996 A	\$144,561	\$209,284	144.8 !	\$198,488 \$198,488
	Status: Sub-project of the Vegetative Plantings project. Wave-stilling devices are in place. Vegetative plantings are in place. Complete.									
Vegetative Plantings - Timbalier Island Planting Demonstration (DEMO)	TERRE	TERRE		17-Apr-1993 A	15-Mar-1995 A	30-Jul-1996 A	\$372,589	\$306,745	82.3	\$303,278 \$301,542
	Status: Sub-project of the Vegetative Plantings project. Complete.									
Vegetative Plantings - West Hackberry Planting Demonstration (DEMO)	CA/SB	CAMER		17-Apr-1993 A	15-Apr-1993 A	30-Mar-1994 A	\$213,947	\$258,805	121.0	\$249,146 \$247,303
	Status: Sub-project of the Vegetative Plantings project. Complete.									

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		1	175				\$9,063,612	\$9,782,976	107.9	\$7,727,940 \$7,653,352
5 Project(s)										
5 Cost Sharing Agreements Executed										
5 Construction Started										
5 Construction Completed										
1 Project(s) Deferred/Deauthorized										

Priority List 2

Boston Canal/Vermilion Bay Shore Protection	TECHE	VERMI	378	24-Mar-1994 A	13-Sep-1994 A	30-Nov-1995 A	\$1,008,634	\$1,012,649	100.4	\$836,897 \$814,685
	Status:	Complete.								
Brown Lake Hydrologic Restoration	CA/SB	CAMER	282	28-Mar-1994 A	01-Feb-2006	01-Jan-2007	\$3,222,800	\$3,201,890	99.4	\$666,249 \$575,868
	Status:	Landowners have changed since project inception. Permit transfer agreement being pursued.								
Caernarvon Diversion Outfall Management	BRET	PLAQ	802	13-Oct-1994 A	01-Jun-2001 A	19-Jun-2002 A	\$2,522,199	\$4,536,000	179.8 !	\$3,167,331 \$2,754,056
	Status:	This project was proposed for deauthorization in December 1996, but was referred for revisions at the request of the landowners and DNR. The project was modified. The final plan/EA has been prepared. Bids were opened 23 February 2001. The low bid exceeded the funds available. Task Force approved additional funds. Construction complete June 19, 2002.								
East Mud Lake Marsh Management	CA/SB	CAMER	1,520	24-Mar-1994 A	01-Oct-1995 A	15-Jun-1996 A	\$2,903,635	\$3,375,936	116.3	\$2,424,174 \$2,321,818
	Status:	Bid opening was August 8, 1995 and contract awarded to Crain Bros. Construction started in early October 1995. Water control structures are installed and the vegetation installed in the summer of 1996. Construction complete. O&M plan executed. Maintenance needs on a water control structure is being evaluated.								

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Freshwater Bayou Wetland Protection	MERM	VERMI	1,593	17-Aug-1994 A	29-Aug-1994 A	15-Aug-1998 A	\$2,770,093	\$3,455,303	124.7	\$2,553,051 \$2,486,769
<p>Status: The project was expedited in order to allow the use of stone removed from the Wax Lake Outlet Weir at a substantial cost savings. Construction is included as an option in the Corps of Engineers contract for the Wax Lake Outlet Weir removal. Option was exercised on September 2, 1994.</p> <p>Project construction is complete. Maintenance contract underway to repair rock dike.</p>										
Fritchie Marsh Restoration	PONT	STTAM	1,040	21-Feb-1995 A	01-Nov-2000 A	01-Mar-2001 A	\$3,048,389	\$2,201,674	72.2	\$1,435,755 \$1,391,631
<p>Status: O&M plan executed January 29, 2003.</p>										
Highway 384 Hydrologic Restoration	CA/SB	CAMER	150	13-Oct-1994 A	01-Oct-1999 A	07-Jan-2000 A	\$700,717	\$1,058,554	151.1 !	\$689,987 \$646,012
<p>Status: Construction start slipped from November 1997 to July 1999 because of landright issues. All landright agreements signed. Construction complete January 7, 2000.</p> <p>O&M plan executed. Maintenance contract complete. Minor damage from Hurricane Lili to be repaired. Contract in preparation.</p>										
Jonathan Davis Wetland Restoration	BARA	JEFF	510	05-Jan-1995 A	22-Jun-1998 A	01-Jan-2006	\$3,398,867	\$28,886,616	849.9 !	\$8,608,291 \$6,967,839
<p>Status: Additional geotechnical investigation and surveying were required due to changes in site conditions. Revisions to project design as a result of the new information are scheduled to be completed in September 2004. The final construction unit is scheduled to begin in February 2005.</p>										
Total Priority List			2				\$19,575,334	\$47,728,623	243.8	\$20,381,736 \$17,958,678

- 8 Project(s)
- 8 Cost Sharing Agreements Executed
- 7 Construction Started
- 6 Construction Completed
- 0 Project(s) Deferred/Deauthorized

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Priority List 3										
Brady Canal Hydrologic Restoration	TERRE	TERRE	297	15-May-1998 A	01-May-1999 A	22-May-2000 A	\$4,717,928	\$5,279,558	111.9	\$3,352,719 \$3,282,229
	Status:	Project delayed because of landowner concerns about permit conditions regarding monitoring, and objection from a pipeline company in the area. In addition, CSA revisions were needed to accommodate the landowner's interest in providing non-Federal funding. Permitting and design conditions have resulted in the CSA being modified to also include Fina Oil Co. and LL&E. Both will help cost share the project. The revised CSA is complete.								
		Construction project is complete. O&M plan signed July 16, 2002.								
Cameron-Creole Maintenance	CA/SB	CAMER	2,602	09-Jan-1997 A	30-Sep-1997 A	15-Jul-1998 A	\$3,719,926	\$3,736,718	100.5	\$865,905 \$841,813
	Status:	The first three contracts for maintenance work are complete. The project provides for maintenance on an as-needed basis.								
Cote Blanche Hydrologic Restoration	TECHE	STMRY	2,223	01-Jul-1996 A	25-Mar-1998 A	15-Dec-1998 A	\$5,173,062	\$6,029,987	116.6	\$5,363,126 \$5,254,666
	Status:	Construction start date slipped from November 1997 to March 1998 because of concern about the source of shell to construct the project. Site inspection for bidder was held January 12, 1998. Concern for a source of shell may require budget modifications. Contract awarded February 1998; notice to proceed March 1998. Construction was completed December 1998.								
		O&M plan executed. Maintenance contract complete.								
Southwest Shore White Lake Demonstratoin (DEMO) [DEAUTHORIZED]	MERM	VERMI		11-Jan-1995 A	30-Apr-1996 A	31-Jul-1996 A	\$126,062	\$103,468	82.1	\$103,468 \$103,468
	Status:	Complete. Project deauthorized.								
Violet Freshwater Distribution [DEAUTHORIZED]	PONT	STBER	247	13-Oct-1994 A			\$1,821,438	\$128,627	7.1	\$128,627 \$128,627
	Status:	Rights-of-way to gain access to the site was a problem due to multiple landowner coordination, and additional questions have arisen about rights to operate existing siphon.								
		Project deauthorized, October 4, 2000.								

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
West Pointe a la Hache Outfall Management	BARA	PLAQ	1,087	05-Jan-1995 A			\$881,148	\$4,068,045	461.7 !	\$340,453 \$324,479
	Status:	Final Modeling report is being prepared by LDNR, due early Spring 2004. Planning decision regarding project status will occur upon completion of final report.								
White's Ditch Outfall Management [DEAUTHORIZED]	BRET	PLAQ	37	13-Oct-1994 A			\$756,134	\$32,862	4.3	\$32,862 \$32,862
	Status:	LA DNR concurred with NRCS to deauthorize the project. Project deauthorized at the January 16, 1998 Task Force meeting. Deauthorized.								
Total Priority List			3	6,493			\$17,195,698	\$19,379,265	112.7	\$10,187,159 \$9,968,145

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

Priority List 4

Barataria Bay Waterway West Side Shoreline Protection	BARA	JEFF	232	23-Jun-1997 A	01-Jun-2000 A	01-Nov-2000 A	\$2,192,418	\$3,013,365	137.4 !	\$2,295,330 \$2,266,963
	Status:	The project is being coordinated with the COE dredging program. Contract advertised December 1999. Construction complete. Dedication ceremony held October 20, 2000. O&M plan signed July 15, 2002.								
Bayou L'Ours Ridge Hydrologic Restoration [DEAUTHORIZED]	BARA	LAFU	737	23-Jun-1997 A			\$2,418,676	\$403,857	16.7	\$372,809 \$369,414
	Status:	The initial step of deauthorization was taken at the January Task Force meeting. The process will be finalized at the April Task Force meeting.								

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Flotant Marsh Fencing Demonstration (DEMO) [DEAUTHORIZED]	TERRE	TERRE		16-Jul-1999 A			\$367,066	\$106,960	29.1	\$106,960
	Status: Difficulty in locating an appropriate site for demonstration and difficulty in addressing engineering constraints. Project deauthorized, October 4, 2000.									
Perry Ridge Shore Protection	CA/SB	CALCA	1,203	23-Jun-1997 A	15-Dec-1998 A	15-Feb-1999 A	\$2,223,518	\$2,289,090	102.9	\$1,824,040
	Status: Project complete.									
Plowed Terraces Demonstration (DEMO)	CA/SB	CAMER		22-Oct-1998 A	30-Apr-1999 A	31-Aug-2000 A	\$299,690	\$325,641	108.7	\$312,035
	Status: Project initially put on hold pending results of an earlier terraces demonstration project being paid for by the Gulf of Mexico program. The first attempt to plow the terraces in the summer of 1999 was not successful. A second contract was advertised in January 2000 to try again. Construction is complete.									
Total Priority List			4	2,172			\$7,501,368	\$6,138,913	81.8	\$4,911,174
\$4,848,638										

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

Priority List 5

Freshwater Bayou Bank Stabilization	MERM	VERMI	511	01-Jul-1997 A	15-Feb-1998 A	15-Jun-1998 A	\$3,998,919	\$2,543,313	63.6	\$1,994,964
	Status: The local cost share is being paid by Acadian Gas Company. Contract was awarded January 14, 1998. Construction is complete.									

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Naomi Outfall Management	BARA	JEFF	633	12-May-1999 A	01-Jun-2002 A	15-Jul-2002 A	\$1,686,865	\$2,181,427	129.3 !	\$1,225,065 \$1,200,542
	Status: This project was combined with the BBWW "Dupre Cut" East project for planning and design; construction will be separate.									
	The operation of the siphon is being reviewed by DNR. Hydraulic analysis is complete; results concurred in by both agencies. Construction contract advertised in March 2002. Construction began June 2002 and completed in July 2002.									
	O&M plan in draft.									
Raccoon Island Breakwaters Demonstration (DEMO)	TERRE	TERRE		03-Sep-1996 A	21-Apr-1997 A	31-Jul-1997 A	\$1,497,538	\$1,795,388	119.9	\$1,745,181 \$1,735,274
	Status: Complete.									
Sweet Lake/Willow Lake Hydrologic Restoration	CA/SB	CAMER	247	23-Jun-1997 A	01-Nov-1999 A	02-Oct-2002 A	\$4,800,000	\$4,944,107	103.0	\$4,361,810 \$3,302,573
	Status: The rock bank protection feature of the project is complete.									
	The second contract has been awarded; terrace construction and vegetative planting will be finished by October 1, 2002. Contractor was unable to complete the construction. Contract terminated; remaining work was advertised December 2001. Contract awarded, and construction completed October 2, 2002.									
Total Priority List			5				\$11,983,322	\$11,464,235	95.7	\$9,327,020 \$8,210,792

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

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Barataria Bay Waterway East Side Shoreline Protection	BARA	JEFF	217	12-May-1999 A	01-Dec-2000 A	31-May-2001 A	\$5,019,900	\$5,224,477	104.1	\$4,035,628 \$4,010,408
	Status:	This project was combined with the Naomi Outfall Management project for planning and design; construction was separate. Project construction complete. O&M plan signed October 2, 2002.								
Cheniere au Tigre Sediment Trapping Demonstration (DEMO)	TECHE	VERMI		20-Jul-1999 A	01-Sep-2001 A	02-Nov-2001 A	\$500,000	\$625,000	125.0	\$596,654 \$577,311
	Status:	A request for proposals was advertised in Feb 2000. No valid proposals received. Proceeding with design of a rock structure. Project advertised for bid. Bid came in over estimate. LDNR and NRCS shifted funds from monitoring to construction. Delay in getting new obligation due to internal COE procedures. Government order received July 13, 2001. Construction complete.								
Oaks/Avery Canal Hydrologic Restoration, Increment 1	TECHE	VERMI	160	22-Oct-1998 A	15-Apr-1999 A	11-Oct-2002 A	\$2,367,700	\$2,873,104	121.3	\$2,067,841 \$1,767,715
	Status:	O&M Plan in draft.								
Penchant Basin Natural Resources Plan, Increment 1	TERRE	TERRE	1,155	23-Apr-2002 A	01-Oct-2005	01-Sep-2006	\$14,103,051	\$14,103,051	100.0	\$1,401,568 \$1,198,799
	Status:	Final model runs being selected.								
Total Priority List			6				\$21,990,651	\$22,825,632	103.8	\$8,101,691 \$7,554,233

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

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Barataria Basin Landbridge Shoreline Protection, Phase 1 and 2	BARA	JEFF	1,304	16-Jul-1999 A	01-Dec-2000 A	01-Jun-2005	\$17,515,029	\$21,987,488	125.5 !	\$5,095,611 \$4,077,796
	Status:	Design is scheduled to be completed for the final construction unit of this phase in April 2004.								
Thin Mat Flotant Marsh Enhancement Demonstration (DEMO)	TERRE	TERRE		16-Oct-1998 A	15-Jun-1999 A	10-May-2000 A	\$460,222	\$530,283	115.2	\$379,167 \$295,982
	Status:	Construction complete. Monitoring ongoing.								
Total Priority List			7	1,304			\$17,975,251	\$22,517,771	125.3	\$5,474,779 \$4,373,778

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

Priority List 8

Humble Canal Hydrologic Restoration	MERM	CAMER	378	21-Mar-2000 A	01-Jul-2002 A	01-Mar-2003 A	\$1,526,136	\$1,530,812	100.3	\$733,899 \$577,295
	Status:	Construction complete March 2003.								
Lake Portage Land Bridge	TECHE	VERMI	24	07-Apr-2000 A	15-Feb-2003 A	01-May-2004	\$1,013,820	\$1,265,891	124.9	\$1,074,184 \$666,766
	Status:	Construction ongoing and scheduled to be completed in May 2004.								

Draft Final Monitoring Plan sent for review on March 16, 2004. TAG originally met on October 15, 2002 to develop plan. Since that time plan was modified to adapt to CRMS. Plan expected to be finalized by May 2004.

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Upper Oak River Freshwater Siphon [DEAUTHORIZED]	BRET	PLAQ	339				\$2,500,239	\$56,362	2.3	\$56,362 \$56,362
<p>Status: Total project cost estimate is \$12,994,800; Priority List 8 funded \$2,500,000 for completion of engineering and design and construction of the outflow channel. Funding of the siphon will be requested when engineering and design are completed.</p> <p>Project feasibility being evaluated. DNR has solicited a cost estimate from one of their engineering firms to perform a feasibility study. Target dates will be established if project is deemed feasible.</p> <p>Deauthorization procedures initiated.</p>										
Total Priority List		8	741				\$5,040,195	\$2,853,065	56.6	\$1,864,445 \$1,300,424

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

Priority List 9

Barataria Basin Landbridge Shoreline Protection, Phase 3	BARA	JEFF	264	25-Jul-2000 A	20-Oct-2003 A	31-Dec-2005	\$15,204,620	\$12,816,320	84.3	\$5,350,752 \$666,107
<p>Status: Construction Unit #3 is under construction and scheduled to be completed in April 2004. Construction Unit #4 is in design phase until June 2004.</p>										
Black Bayou Culverts Hydrologic Restoration	CA/SB	CAMER	540	25-Jul-2000 A	01-Sep-2004	01-Aug-2005	\$5,900,387	\$5,386,152	91.3	\$3,749,163 \$540,028
<p>Status: Favorable 30% design review held September 19, 2002. 95% design review will be held in May 2003. Request for phase 2 funding will be made at the August Task Force meeting.</p>										

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Little Pecan Bayou Hydrologic Restoration	MERM	CAMER	144	25-Jul-2000 A	01-Feb-2007	01-Jan-2008	\$1,245,278	\$1,556,598	125.0 !	\$824,930 \$211,284
	Status:	Hydrodynamic Modeling is ongoing. Planning decisions regarding project features are on hold pending model results.								
Perry Ridge West Bank Stabilization	CA/SB	CAMER	83	25-Jul-2000 A	01-Nov-2001 A	31-Jul-2002 A	\$3,742,451	\$1,738,544	46.5	\$1,645,488 \$1,587,690
	Status:	The Perry Ridge project approved on Priority List 4 was the first phase of this project. This is the second and final phase of the project. Task Force approved Phase 2 construction funding January 10, 2001. The rock bank protection is installed. The contract for the terraces and vegetation has been completed.								
South Lake DeCade Freshwater Introduction	TERRE	TERRE	247	25-Jul-2000 A	01-Jul-2005	01-Jun-2006	\$396,489	\$495,611	125.0	\$344,416 \$314,735
	Status:	A proposal to construct the shoreline protection component of the project as a stand alone feature will be presented to the Task Force in the near future. Further investigation of the freshwater introduction component is ongoing.								
Total Priority List		9	1,278				\$26,489,225	\$21,993,225	83.0	\$11,914,748 \$3,319,845

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

Priority List 10

GIWW Bank Restoration of Critical Areas in Terrebonne	TERRE	TERRE	366	16-May-2001 A	01-Oct-2004	01-Jan-2006	\$1,735,983	\$2,170,000	125.0 !	\$1,014,042 \$566,682
	Status:	30% Design review scheduled for May 2003.								

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		10	366				\$1,735,983	\$2,170,000	125.0	\$1,014,042 \$566,682
<ul style="list-style-type: none"> 1 Project(s) 1 Cost Sharing Agreements Executed 0 Construction Started 0 Construction Completed 0 Project(s) Deferred/Deauthorized 										

Priority List 11

Barataria Basin Landbridge Shoreline Protection, Phase 4	BARA	JEFF	256	09-May-2002 A	01-Jul-2004	01-Jun-2005	\$22,787,951	\$18,798,599	82.5	\$1,778,283 \$306,351
Status: Design is completed and funding has been authorized. Construction is scheduled to begin in July 2004.										
Coastwide Nutria Control Program	COAST	COAST	14,963	26-Feb-2002 A	20-Nov-2002 A		\$12,945,696	\$13,012,998	100.5	\$7,106,176 \$1,681,426
Status: Implementation began with the 2002-2003 trapping season. A report on the first years accomplishments will be given at the August Task Force meeting.										
Raccoon Island Shoreline Protection/Marsh Creation, Ph 2	TERRE	TERRE	167	23-Apr-2002 A	01-Mar-2005	20-Sep-2006	\$1,016,758	\$1,270,948	125.0 !	\$832,822 \$150,007
Status: Geotechnical investigation task order issued by DNR. The project will be constructed in 2 units. the first unit will consist of the rock breakwaters. The second unit will consist of dedicated dredging for creation of barrier island habitat from dunes to back barrier marshes and the planting of associated plant communities.										

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		11	15,386				\$36,750,405	\$33,082,545	90.0	\$9,717,281 \$2,137,784
<ul style="list-style-type: none"> 3 Project(s) 3 Cost Sharing Agreements Executed 1 Construction Started 0 Construction Completed 0 Project(s) Deferred/Deauthorized 										

Priority List 11.1

Holly Beach Sand Management	CA/SB	CALCA	330	09-May-2002 A	01-Aug-2002 A	31-Mar-2003 A	\$19,252,492	\$13,812,561	71.7	\$8,010,079 \$6,096,377
<p>Status: The placement of the sand material on to the beach was completed on Saturday, March 1, 2003. Required work that is now in progress consist of demobilization of the pipeline segments, dressing the completed beach work, erection of the Sand Fencing and installation of the vegetation.</p>										

Total Priority List		11.1	330				\$19,252,492	\$13,812,561	71.7	\$8,010,079 \$6,096,377
<ul style="list-style-type: none"> 1 Project(s) 1 Cost Sharing Agreements Executed 1 Construction Started 1 Construction Completed 0 Project(s) Deferred/Deauthorized 										

Priority List 12

Floating Marsh Creation Demonstration (DEMO)	COAST	COAST		12-Jun-2003 A	01-Jan-2005	30-Oct-2005	\$1,080,891	\$1,080,891	100.0	\$268,434 \$4,671
<p>Status: This project was approved as part of the 12th priority list. Project development is underway.</p>										

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total Priority List		12					\$1,080,891	\$1,080,891	100.0	\$268,434 \$4,671
<ul style="list-style-type: none"> 1 Project(s) 1 Cost Sharing Agreements Executed 0 Construction Started 0 Construction Completed 0 Project(s) Deferred/Deauthorized 										

Priority List 13

Bayou Sale Shoreline Protection	TECHE	STMRY	329				\$2,254,912	\$2,254,912	100.0	\$1,698,487 \$1,302
Status: Project was authorized for Phase 1 funding at the January 2004 Task Force meeting. Planning Phase began February 2004.										
Total Priority List		13	329				\$2,254,912	\$2,254,912	100.0	\$1,698,487 \$1,302

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

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

PROJECT	BASIN	PARISH	ACRES	***** SCHEDULES *****			***** ESTIMATES *****			Actual Obligations/ Expenditures
				CSA	Const Start	Const End	Baseline	Current	%	
Total	DEPT. OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE		37,772				\$197,889,339	\$217,084,615	109.7	\$100,599,016 \$73,994,700

50 Project(s)
48 Cost Sharing Agreements Executed
34 Construction Started
29 Construction Completed
7 Project(s) Deferred/Deauthorized

Notes:

1. Expenditures based on Corps of Engineers financial data.
2. Date codes: A = Actual date * = Behind schedule
3. Percent codes: ! = 125% of baseline estimate exceeded

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Total All Priority Lists

PROJECT	ACRES	***** ESTIMATES *****			Actual Obligations/ Expenditures	
		Baseline	Current	%		
SUMMARY	Total All Projects	123,419	\$686,481,425	\$633,287,715	92.3	\$387,410,576 \$210,410,915
149	Project(s)					
121	Cost Sharing Agreements Executed					
76	Construction Started					
64	Construction Completed					
19	Project(s) Deferred/Deauthorized					
			Total Available Funds			
			Federal Funds	\$477,902,048		
			Non/Federal Funds	\$102,247,367		
			Total Funds	\$580,149,415		

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Atchafalaya									
Priority List: 2	2	3,792	2	2	2	0	\$5,043,867	\$9,609,551	\$8,630,172
Priority List: 9	1	589	1	0	0	0	\$1,484,633	\$1,855,792	\$580,124
Basin Total	3	4,381	3	2	2	0	\$6,528,500	\$11,465,343	\$9,210,297
Basin: Barataria									
Priority List: 1	3	620	3	3	3	0	\$9,960,769	\$10,137,071	\$8,034,947
Priority List: 2	1	510	1	1	0	0	\$3,398,867	\$28,886,616	\$6,967,839
Priority List: 3	3	2,152	3	1	1	1	\$4,160,823	\$6,898,854	\$2,795,210
Priority List: 4	2	969	2	1	1	1	\$4,611,094	\$3,417,222	\$2,636,377
Priority List: 5	2	1,752	2	1	1	0	\$17,212,815	\$2,670,501	\$1,689,616
Priority List: 6	1	217	1	1	1	0	\$5,019,900	\$5,224,477	\$4,010,408
Priority List: 7	2	1,431	2	2	1	0	\$18,443,924	\$22,870,721	\$4,388,116
Priority List: 9	3	813	3	1	0	0	\$18,212,307	\$16,561,736	\$2,032,173
Priority List: 10	2	9,832	1	0	0	0	\$4,901,948	\$5,364,801	\$1,642,117
Priority List: 11	5	2,228	5	0	0	0	\$124,953,577	\$121,992,069	\$3,861,092
Priority List: 12	1	400	0	0	0	0	\$2,192,735	\$2,731,479	\$10,609
Basin Total	25	20,924	23	11	8	2	\$213,068,759	\$226,755,547	\$38,068,504
Basin: Breton Sound									
Priority List: 2	1	802	1	1	1	0	\$2,522,199	\$4,536,000	\$2,754,056
Priority List: 3	1	37	1	0	0	1	\$756,134	\$32,862	\$32,862
Priority List: 4	1	634	0	0	0	1	\$2,468,908	\$65,747	\$65,747
Priority List: 8	1	339	0	0	0	1	\$2,500,239	\$56,362	\$56,362
Priority List: 10	2	768	1	0	0	0	\$4,339,138	\$3,208,416	\$828,124
Basin Total	6	2,580	3	1	1	3	\$12,586,618	\$7,899,388	\$3,737,151

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Calcasieu/Sabine									
Priority List: 1	3	6,407	3	3	3	0	\$5,770,187	\$2,852,755	\$2,269,530
Priority List: 2	4	3,019	4	3	3	0	\$8,568,462	\$11,332,469	\$6,429,742
Priority List: 3	2	3,555	2	2	2	0	\$8,301,380	\$8,265,633	\$4,115,048
Priority List: 4	3	1,203	3	2	2	1	\$2,893,802	\$2,870,122	\$2,360,691
Priority List: 5	1	247	1	1	1	0	\$4,800,000	\$4,944,107	\$3,302,573
Priority List: 6	1	3,594	1	1	1	0	\$6,316,800	\$6,382,511	\$4,540,833
Priority List: 8	1	993	1	1	0	0	\$15,724,965	\$16,308,590	\$3,580,317
Priority List: 9	2	623	2	1	1	0	\$9,642,838	\$7,124,696	\$2,127,718
Priority List: 10	1	393	1	0	0	0	\$6,490,751	\$5,494,843	\$660,436
Priority List: 11.1	1	330	1	1	1	0	\$19,252,492	\$13,812,561	\$6,096,377
Basin Total	19	20,364	19	15	14	1	\$87,761,677	\$79,388,286	\$35,483,264
Basin: Coastal Basins									
Priority List: Cons Plan	1		1	1	1	0	\$238,871	\$191,807	\$191,807
Priority List: 0.1	1		0	0	0	0	\$66,890,300	\$8,738,226	\$0
Priority List: 0.2	1		0	0	0	0	\$1,500,000	\$1,500,000	\$31,824
Priority List: 6	1		1	1	1	0	\$2,140,000	\$2,140,000	\$791,270
Priority List: 9	1		0	0	0	0	\$1,502,817	\$1,502,817	\$31,506
Priority List: 10	1		1	0	0	0	\$2,006,373	\$2,296,721	\$251,057
Priority List: 11	1	14,963	1	1	0	0	\$12,945,696	\$13,012,998	\$1,681,426
Priority List: 12	1		1	0	0	0	\$1,080,891	\$1,080,891	\$4,671
Priority List: 13	1		0	0	0	0	\$1,000,000	\$1,000,000	\$78
Basin Total	9	14,963	5	3	2	0	\$89,304,948	\$31,463,460	\$2,983,639

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date	
Basin: Miss. River Delta										
Priority List:	1	1	9,831	1	1	1	0	\$8,517,066	\$22,615,838	\$5,488,310
Priority List:	3	2	1,979	1	1	1	1	\$3,666,187	\$1,008,820	\$769,175
Priority List:	4	1		1	0	0	1	\$300,000	\$58,310	\$58,310
Priority List:	6	2	2,386	2	2	1	0	\$7,073,934	\$6,638,191	\$2,606,311
Priority List:	10	1	5,706	0	0	0	0	\$1,076,328	\$1,076,328	\$494,426
Priority List:	12	1	1,190	0	0	0	0	\$1,880,376	\$1,880,376	\$77,401
Priority List:	13	1	433	0	0	0	0	\$1,137,344	\$1,137,344	\$1,164
Basin Total	9	21,525	5	4	3	2	\$23,651,235	\$34,415,206	\$9,495,097	
Basin: Mermentau										
Priority List:	1	2	247	2	2	2	1	\$1,368,671	\$1,319,135	\$1,109,446
Priority List:	2	1	1,593	1	1	1	0	\$2,770,093	\$3,455,303	\$2,486,769
Priority List:	3	1		1	1	1	1	\$126,062	\$103,468	\$103,468
Priority List:	5	1	511	1	1	1	0	\$3,998,919	\$2,543,313	\$1,972,403
Priority List:	7	1	442	1	1	1	0	\$2,185,900	\$2,862,806	\$1,804,284
Priority List:	8	1	378	1	1	1	0	\$1,526,136	\$1,530,812	\$577,295
Priority List:	9	2	440	2	0	0	0	\$1,852,416	\$2,282,821	\$658,483
Priority List:	10	2	1,133	2	1	0	0	\$11,565,112	\$8,204,652	\$3,447,755
Priority List:	11	2	935	1	0	0	0	\$3,407,449	\$3,997,054	\$562,404
Priority List:	12	1	702	0	0	0	0	\$1,588,085	\$1,588,085	\$299,406
Basin Total	14	6,381	12	8	7	2	\$30,388,843	\$27,887,450	\$13,021,713	

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date	
Basin: Pontchartrain										
Priority List:	1	2	1,753	2	2	2	0	\$6,119,009	\$5,299,078	\$4,777,956
Priority List:	2	2	2,320	2	2	2	0	\$4,500,424	\$3,844,225	\$2,545,913
Priority List:	3	3	1,002	3	1	1	2	\$2,683,636	\$912,272	\$973,727
Priority List:	4	1	1,454	0	0	0	1	\$5,018,968	\$39,025	\$39,025
Priority List:	5	1	75	1	1	1	0	\$2,555,029	\$2,590,180	\$2,240,519
Priority List:	8	2	576	2	1	0	1	\$5,475,065	\$1,774,142	\$699,462
Priority List:	9	3	886	2	1	1	0	\$2,407,524	\$2,239,064	\$1,066,236
Priority List:	10	1	167	1	0	0	0	\$1,334,360	\$1,667,950	\$423,005
Priority List:	11	1	5,438	1	0	0	0	\$5,434,288	\$6,780,307	\$781,844
Priority List:	12	1	266	0	0	0	0	\$1,348,345	\$1,348,345	\$379,274
Priority List:	13	1	436	0	0	0	0	\$1,930,596	\$1,930,596	\$997
Basin Total	18	14,373	14	8	7	4	\$38,807,244	\$28,425,184	\$13,927,957	
Basin: Teche / Vermilion										
Priority List:	1	1	65	1	1	1	0	\$1,526,000	\$2,022,987	\$1,797,835
Priority List:	2	1	378	1	1	1	0	\$1,008,634	\$1,012,649	\$814,685
Priority List:	3	1	2,223	1	1	1	0	\$5,173,062	\$6,029,987	\$5,254,666
Priority List:	5	1	441	1	1	1	0	\$940,065	\$886,030	\$586,829
Priority List:	6	4	2,526	4	3	3	0	\$10,130,000	\$12,033,394	\$6,573,435
Priority List:	8	1	24	1	1	0	0	\$1,013,820	\$1,265,891	\$666,766
Priority List:	9	3	686	1	1	0	0	\$7,814,815	\$6,172,266	\$2,433,730
Priority List:	13	1	329	0	0	0	0	\$2,254,912	\$2,254,912	\$1,302
Basin Total	13	6,672	10	9	7	0	\$29,861,308	\$31,678,116	\$18,129,246	

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Terrebonne									
Priority List: 1	5	245	4	3	3	2	\$8,809,393	\$9,385,773	\$9,219,434
Priority List: 2	3	958	3	3	2	0	\$12,831,588	\$20,365,102	\$18,500,020
Priority List: 3	4	3,958	4	4	4	0	\$15,758,355	\$21,495,717	\$18,374,357
Priority List: 4	2	215	2	1	1	1	\$6,119,470	\$7,707,823	\$7,595,911
Priority List: 5	3	199	2	1	1	0	\$31,120,343	\$11,505,110	\$4,079,674
Priority List: 5.1	0	988	1	0	0	0	\$9,700,000	\$9,700,000	\$809,090
Priority List: 6	4	2,192	2	0	0	2	\$30,522,757	\$24,692,755	\$2,144,217
Priority List: 7	1		1	1	1	0	\$460,222	\$530,283	\$295,982
Priority List: 9	4	622	4	1	1	0	\$25,219,289	\$32,784,406	\$3,369,480
Priority List: 10	2	970	2	1	0	0	\$4,119,035	\$4,553,052	\$1,036,464
Priority List: 11	3	494	2	0	0	0	\$5,338,072	\$6,665,944	\$764,631
Priority List: 12	1	143	0	0	0	0	\$2,229,876	\$2,229,876	\$164,267
Priority List: 13	1	272	0	0	0	0	\$2,293,893	\$2,293,893	\$518
Basin Total	34	11,256	27	15	13	5	\$154,522,293	\$153,909,734	\$66,354,046
Total All Basins	149	123,419	121	76	64	19	\$686,481,425	\$633,287,715	\$210,410,915

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Summary Report by Priority List

P/L	No. of Projects	Acres	CSA Executed	Under Const.	Const. Completed	Federal Const. Funds Available	Non/Fed Const. Funds Matching Share	Baseline Estimate	Current Estimate	Obligations To Date	Expenditures To Date
1	14	18,932	14	0	14	\$28,084,900	\$9,364,310	\$39,933,317	\$53,433,297	\$33,611,603	\$32,498,118
2	15	13,372	15	2	12	\$28,173,110	\$13,670,907	\$40,644,134	\$83,041,915	\$52,841,358	\$49,129,196
3	11	12,514	11	0	10	\$29,939,100	\$7,258,487	\$32,879,168	\$43,871,358	\$32,909,236	\$31,480,803
4	4	1,650	4	0	4	\$29,957,533	\$2,163,584	\$10,468,030	\$13,228,959	\$12,009,518	\$11,861,214
5	9	3,225	8	0	6	\$33,371,625	\$2,513,924	\$60,627,171	\$25,139,241	\$15,442,739	\$13,871,614
5.1	0	988	1	0	0	\$0	\$4,850,000	\$9,700,000	\$9,700,000	\$4,934,275	\$809,090
6	11	10,481	11	1	7	\$39,134,000	\$5,711,133	\$54,614,991	\$57,041,007	\$28,592,980	\$20,596,153
7	4	1,873	4	1	3	\$42,540,715	\$3,939,571	\$21,090,046	\$26,263,810	\$8,938,230	\$6,488,382
8	4	1,529	4	3	1	\$41,864,079	\$3,140,370	\$20,444,412	\$20,667,293	\$7,492,920	\$5,311,699
9	19	4,659	15	2	3	\$47,907,300	\$10,578,540	\$68,136,639	\$70,523,598	\$51,183,089	\$12,299,450
10	12	18,969	9	2	0	\$47,659,220	\$4,780,014	\$35,833,045	\$31,866,763	\$18,558,905	\$8,783,382
11	12	24,058	10	1	0	\$57,332,369	\$22,867,256	\$152,079,082	\$152,448,372	\$105,210,977	\$7,651,396
11.1	1	330	1	0	1	\$0	\$6,906,281	\$19,252,492	\$13,812,561	\$8,010,079	\$6,096,377
12	6	2,701	1	0	0	\$51,938,097	\$1,628,858	\$10,320,308	\$10,859,052	\$3,300,868	\$935,628
13	5	1,470	0	0	0	\$0	\$1,292,512	\$8,616,745	\$8,616,745	\$1,728,487	\$4,059
Active Projects	127	116,751	108	12	61	\$477,902,048	\$102,201,480	\$584,639,580	\$620,513,971	\$384,765,263	\$207,816,561
Deauthorized Projects	19	6,668	12	0	2			\$33,212,674	\$2,343,711	\$2,374,118	\$2,370,722
Total Projects	146	123,419	120	12	63	\$477,902,048	\$102,247,367	\$686,242,554	\$633,095,908	\$387,218,769	\$210,219,108
Conservation Plan	1		1	0	1	\$0	\$45,886	\$238,871	\$191,807	\$191,807	\$191,807
CRMS - Wetlands	1		0	0	0	\$0	\$1,310,734	\$66,890,300	\$8,738,226	\$0	\$0
MCF	1		0	0	0	\$0	\$225,000	\$1,500,000	\$1,500,000	\$79,387	\$31,824
Total Construction Program	149	123,419	121	12	64	\$477,902,048	\$102,247,367	\$686,481,425	\$633,287,715	\$387,410,576	\$210,410,915
							\$580,149,415				

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT**Project Summary Report by Priority List**

- NOTES:
1. Total of 149 projects includes 127 active construction projects, 19 deauthorized projects, the CRMS-Wetlands Monitoring project, the Monitoring Contingency Fund, and the State of Louisiana's Wetlands Conservation Plan.
 2. Federal funding for FY04 is estimated to be \$54,000,000.
 3. Total construction program funds available is \$580,149,415 .
 4. The current estimate for reconciled, closed-out deauthorized projects is equal to expenditures to date.
 5. Current Estimate for the 5th priority list includes authorized funds for FY 96, FY 97 FY 98 and FY 99 for phased projects with multi-year funding.
 6. Current Estimate for the 6th priority list includes authorized funds for FY 97, FY 98 and FY 99 for phased projects with multi-year funding.
 7. The Task Force approved 8 unfunded projects, totalling \$77,492,000 on Priority List 7 (not included in totals).
 8. Obligations include expenditures and remaining obligations to date.
 9. Non-Federal Construction Funds Available are estimated using cost share percentages as authorized for before and after approval of Conservation Plan.
 10. Baseline and current estimates for PPL 9 (and future project priority lists) reflect funding utilizing cash flow management principles.
 11. The amount shown for the non-federal construction funds available is comprised of 5% minimum cash of current estimate, and the remainder may be WIK and/or cash. The percentage of WIK would influence the total construction funds (cash) available.
 12. PPL 11, Maurepas Diversion project, benefits 36,121 acres of swamp. This number is not included in the acre number in this table, because this acreage is classified differently than acres protected by marsh projects.
 13. PPL 5.1 is used to record the Bayou Lafourche project as approved by a motion passed by the Task Force on October 25, 2001, to proceed with Phase 1 ED, estimated cost of \$9,700,000, at a cost share of 50% Federal and 50% non-Federal.
 14. Priority Lists 9 through 13 are funded utilizing cash flow management. Baseline and current estimates for these priority lists reflect only approved, funded estimates. Both baseline and current estimates are revised as funding is approved.