15th PRIORITY PROJECT LIST REPORT (APPENDICES)

PREPARED BY:

LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION TASK FORCE

JUNE 2006

Coastal Wetlands Planning, Protection, and Restoration Act

15th Priority Project List Report

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Appendix A

Summary and Complete Text of the CWPPRA

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:
Coastal, Wetlands Planning, Protection and Restoration Act (CWPPRA)

Funding History:

(1) **CWPPRA ORIGINAL FUNDING:** Omnibus Budget Reconciliation Act of 1990 (Public Law 101-508, Title IX, Section 11211, dated 05 Nov 1990, effective 01 Dec 1990)

Provided dedicated funding for CWPPRA via the transfer of small engine fuel taxes from the Highway Trust Fund to the Sport Fish Restoration Account through FY94, thus providing CWPPRA with funds through FY95.

(2) **CWPPRA 2nd FUNDING:** Intermodal Surface Transportation Efficiency Act of 1991 (Public Law 102-240, Title VIII, Section 8002, dated 18 Dec 1991)

Provided dedicated funding for CWPPRA via the transfer of small engine fuel taxes from the Highway Trust Fund to the Sport Fish Restoration Account through FY98, thus providing CWPPRA with funds through FY99.

(3) **CWPPRA 3rd FUNDING:** Transportation Equity Act for the 21st Century (Public Law 105-178, Title IX, Section 9002, dated 09 Jun 1998)

Provided dedicated funding for CWPPRA via the transfer of small engine fuel taxes from the Highway Trust Fund to the Sport Fish Restoration Account through FY05, thus providing CWPPRA with funds through FY06.

(4) **CWPPRA 4th Funding:** Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFTEA LU) (Public Law 109-59, Title XI, Section 11101, dated 10Aug2005)

Provided dedicated funding for CWPPRA via the transfer of small engine fuel taxes from the Highway Trust Fund to the Sport Fish Restoration Account through FY11, thus providing CWPPRA with funds through FY12.

Authorization History:

(1) **CWPPRA ORIGINAL AUTHORIZATION:** Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (Public Law 101-646, Title III, dated 29 Nov 1990)

Authorized CWPPRA through 1999.

(2) **CWPPRA 2nd AUTHORIZATION:** Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 2000 (Public Law 106-74, Title IV, General Provisions, dated 20Oct1999)

SEC. 430. Section 4(a) of the Act of August 9, 1950 (16 U.S.C. 777c(a)), is amended in the second sentence by striking "1999" and inserting "2000"."

(3) **CWPPRA 3rd AUTHORIZATION:** Fish and Wildlife Programs Improvement and Nation Wildlife Refuge System Centennial Act of 2000 (Public Law 106-408, Section 123, dated 01 Nov 2000)

SEC. 123. Section 4(a) of the Dingell-Johnson Sport Fish Restoration Act (16 U.S.C. 777c(a) is amended in the second sentence by striking "2000" and inserting "2009"."

(4) **CWPPRA 4th AUTHORIZATION:** Consolidated Appropriations Act (Public Law 108-447, Division D, Title X, Section 114, dated 08Dec2004)

Sec. 114. Coastal Wetland Conservation Project Funding.

(b) PERIOD OF AUTHORIZATION. ─ Section 4(a) of the Dingell-Johnson Sport Fish Restoration Act 16 U.S.C. 777c (a) is amended in the second sentence by striking "2009" and inserting "2019"."

Additional History:

(1) **CWPPRA PRESIDENTIAL STATEMENT:**
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.

(2) **CWPPRA COST SHARING FOR 1996 AND 1997:** Water Resources Development Act OF 1996 (Public Law 104-303, Section 532, dated Oct. 12, 1996)

SEC. 532. COASTAL WETLANDS RESTORATION PROJECTS, LOUISIANA. Section 303(f) of the Coastal Wetlands Planning, Protection and Restoration Act (16 U.S.C. 3952(f); 104 Stat. 4782-4783) is amended--

(1) in paragraph (4) by striking “and (3)” and inserting “(3), and (5)”; and

(2) by adding at the end the following:

“(5) Federal share in calendar 1996 and 1997, -- Notwithstanding paragraphs (1) and (2), under approval of the conservation plan under section 304 and a determination by the Secretary that a reduction in the non-Federal share is warranted, amounts made available in accordance with section 306 to carry out coastal wetlands restoration projects under this section in calendar years 1996 and 1997 shall provide 90 percent of the cost of such project.”.

(Note: Calendar years 1996 and 1997 correspond to Priority Project Lists 5 and 6, respectively.)

(3) CWPPRA FUNDING AMENDMENT: Consolidated Appropriations Act (Public Law 108-447, Division D, Title X, Section 114, dated 08Dec2004)

SEC. 114. COASTAL WETLAND CONSERVATION PROJECT FUNDING.

(a) FUNDING.—Section 306 of the Coastal Wetlands Planning, Protection, and Restoration Act (16 U.S.C. 3955) is amended

(1) in subsection (a), by striking ", not to exceed $70,000,000,";

(2) in subsection (b), by striking ", not to exceed $15,000,000"; and

(3) in subsection 9c), by striking ", not to exceed $15,000,000,".

(4) CWPPRA ANNUAL APPROPRIATIONS AND CREATION OF SPORT FISH RESTORATION AND BOATING SAFETY TRUST FUND AMENDMENT: Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFTEA LU) (Public Law 109-59, Title XI, Section 10113 and 11115, dated 10Aug2005)

SEC. 10113. DIVISION OF ANNUAL APPROPRIATIONS. Section 4 (16 U.S.C. 777c) is amended--

(1) by striking subsections (a) through (c) and redesignating subsections (d), (e), (f), and (g) as subsections (b), (c), (d), and (e), respectively;

(2) by inserting before subsection (b), as redesignated by paragraph (1), the following:

"(a) In General. -- For each of fiscal years 2006 through 2009, the balance of each annual appropriation made in accordance with the provisions of section 3 remaining after the distributions for administrative expenses and other purposes under subsection (b) and for multistate conservation grants under section 14 shall be distributed as follows:

"(1) Coastal wetlands. -- An amount equal to 18.5 percent to the Secretary of the Interior for distribution as provided in the Coastal Wetlands Planning, Protection, and Restoration Act (16 U.S.C. 3951 et seq.)."

Sec. 11115. ELIMINATION OF AQUATIC RESOURCES TRUST FUND AND TRANSFORMATION OF SPORT FISH RESTORATION ACCOUNT.

(a) Simplification of Funding for Boat Safety Account.

(1) In general.--Paragraph (4) of section 9503(c) (relating to transfers from Trust Fund for motorboat fuel taxes) is amended--

(A) by striking so much of that paragraph as precedes subparagraph (D),

(B) by redesignating subparagraphs (D) and (E) as subparagraphs (C) and (D), respectively, and

(C) by inserting before subparagraph (C) (as so redesignated) the following:

``(4) Transfers from the trust fund for motorboat fuel taxes.--

``(A) Transfer to land and water conservation fund.--

``(i) In general.--The Secretary shall pay from time to time from the Highway Trust Fund into the land and water conservation fund provided for

in title I of the Land and Water Conservation Fund Act of 1965 amounts (as determined by the Secretary) equivalent to the motorboat fuel taxes received on or after October 1, 2005, and before October 1, 2011.

``(ii) Limitation.--The aggregate amount transferred under this subparagraph during any fiscal year shall not exceed $1,000,000.

``(B) Excess funds transferred to sport fish restoration and boating trust fund.-Any amounts in the Highway Trust Fund--

``(i) which are attributable to motorboat fuel taxes, and

``(ii) which are not transferred from the Highway Trust Fund under subparagraph (A), shall be transferred by the Secretary from the Highway Trust Fund into the Sport Fish Restoration and Boating Trust Fund.".

(2) Conforming amendment.--Paragraph (5) of section 9503(c) is amended by striking ``Account in the Aquatic Resources'' in subparagraph (A) and inserting ``and Boating''.

(b) Merging of Accounts.--

(1) In general.--Subsection (a) of section 9504 is amended to read as follows:

``(a) Creation of Trust Fund.--There is hereby established in the Treasury of the United States a trust fund to be known as the `Sport Fish Restoration and Boating Trust Fund'. Such Trust Fund shall consist of such amounts as may be appropriated, credited, or paid to it as provided in this section, section 9503(c)(4), section 9503(c)(5), or section 9602(b).".

(2) Conforming amendments.--

(A) Subsection (b) of section 9504, as amended by section 11101 of this Act, is amended--

(i) by striking ``Account'' in the heading thereof and inserting ``and Boating Trust Fund'',

(ii) by striking ``Account'' both places it appears in paragraphs (1) and (2) and inserting ``and Boating Trust Fund'', and

(iii) by striking ``account'' both places it appears in the headings for paragraphs (1) and (2) and inserting “trust fund”.

(B) Subsection (d) of section 9504, as amended by section 11101 of this Act, is amended--

(i) by striking ``Aquatic Resources'' in the heading thereof,

(ii) by striking ``any Account in the Aquatic Resources'' in paragraph (1) and inserting ``the Sport Fish Restoration and Boating'', and

(iii) by striking ``any such Account'' in paragraph (1) and inserting ``such Trust Fund''.

(C) Subsection (e) of section 9504 is amended by striking ``Boat Safety Account and Sport Fish Restoration Account'' and inserting ``Sport Fish Restoration and Boating Trust Fund''.

(D) Section 9504 is amended by striking ``aquatic resources'' in the heading thereof and inserting ``sport fish restoration and boating''.

(E) The item relating to section 9504 in the table of sections for subchapter A of chapter 98 is amended by striking ``aquatic resources'' and inserting ``sport fish restoration and boating''.

(F) Paragraph (2) of section 1511(e) of the Homeland Security Act of 2002 (6 U.S.C. 551(e)) is amended by striking ``Aquatic Resources Trust Fund of the Highway Trust Fund'' and inserting ``Sport Fish Restoration and Boating Trust Fund''.

(c) Phaseout of Boat Safety Account.--Subsection (c) of section 9504 is amended to read as follows:

``(c) Expenditures From Boat Safety Account.--Amounts remaining in the Boat Safety Account on October 1, 2005, and amounts thereafter credited to the Account under section 9602(b), shall be available, without further appropriation, for making expenditures before October 1, 2010, to carry out the purposes of section 15 of the Dingell-Johnson Sport Fish Restoration Act (as in effect on the date of the enactment of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users). For purposes of section 9602, the Boat Safety Account shall be treated as a Trust Fund established by this subchapter.''.

Coastal Wetlands Planning, Protection, and Restoration Act

15th Priority Project List Report

Appendix B

Wetland Value Assessment Methodology and Community Models

Appendix B

Wetland Value Assessment Methodology and Community Models

Table of Contents

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 <u>all</u> 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 V_1 - 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 V_2 - 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 V_3 - 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 V_4 - 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 V_5 - 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.

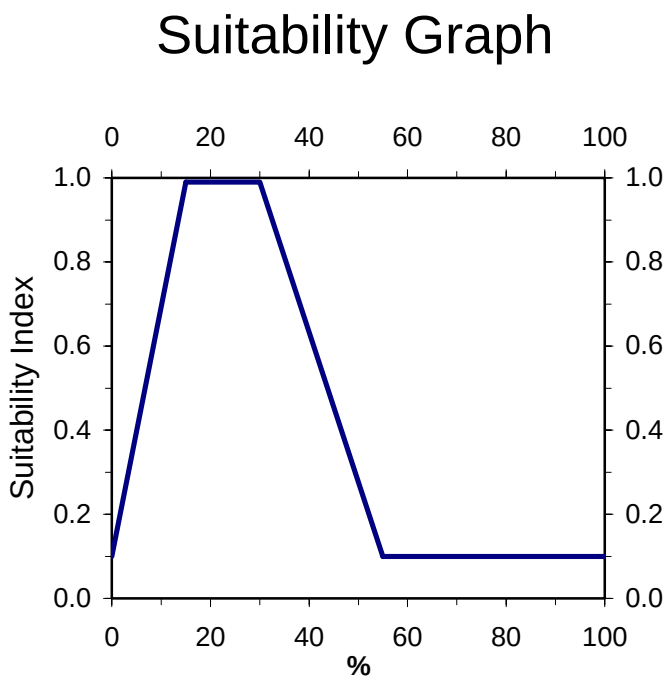
Beach Zone Habitat
Variable V_5 Beach/surf zone features.

HSI Calculation:

$$HSI = 0.23(V_1) + 0.23(V_2) + 0.18(V_3) + 0.18(V_4) + 0.18(V_5)$$

Barrier Headland

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

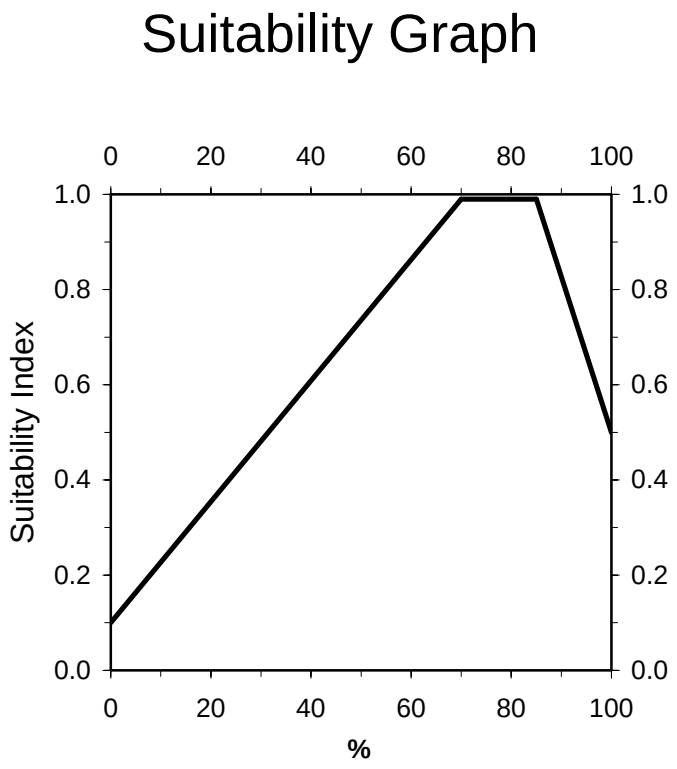


Line Formulas

If % < 15, then SI = (0.06*%) + 0.1
If 15 ≤ % ≤ 30, then SI = 1.0
If 30 < % ≤ 55, then SI = (-0.036*%) + 2.08
If % > 55, then SI = 0.1

Barrier Headland

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

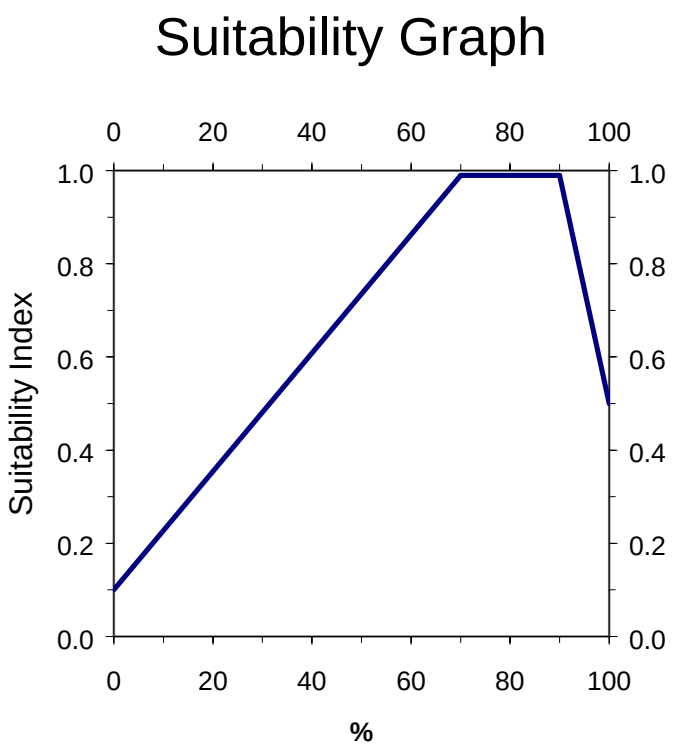


Line Formulas

If % < 70, then SI = (0.013*%) + 0.1
If 70 ≤ % ≤ 85, then SI = 1.0
If % > 85, then SI = (-0.0333*%) + 3.83

Barrier Headland

Variable V_3 Percent vegetative cover of dune and supratidal habitats.

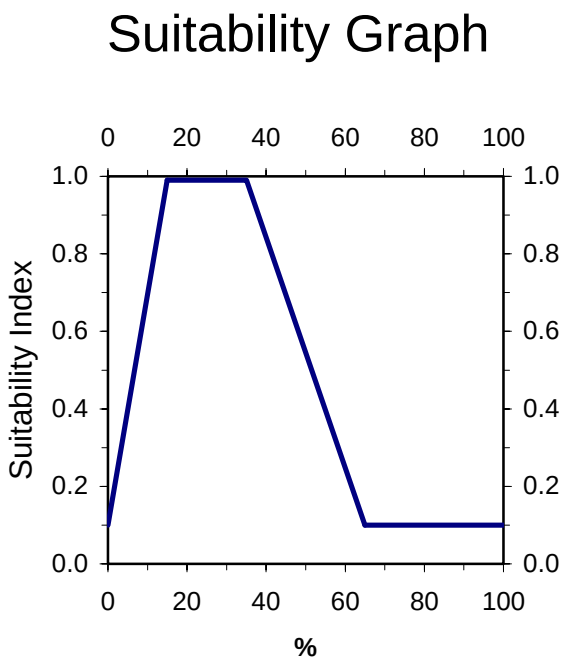


Line Formulas

If % < 70, then SI = (0.013*%) + 0.1
If 70 ≤ % ≤ 90, then SI = 1.0
If % > 90, then SI = (-0.05*%) + 5.5

Barrier Headland

Variable V_4 Percent vegetative cover by woody species.

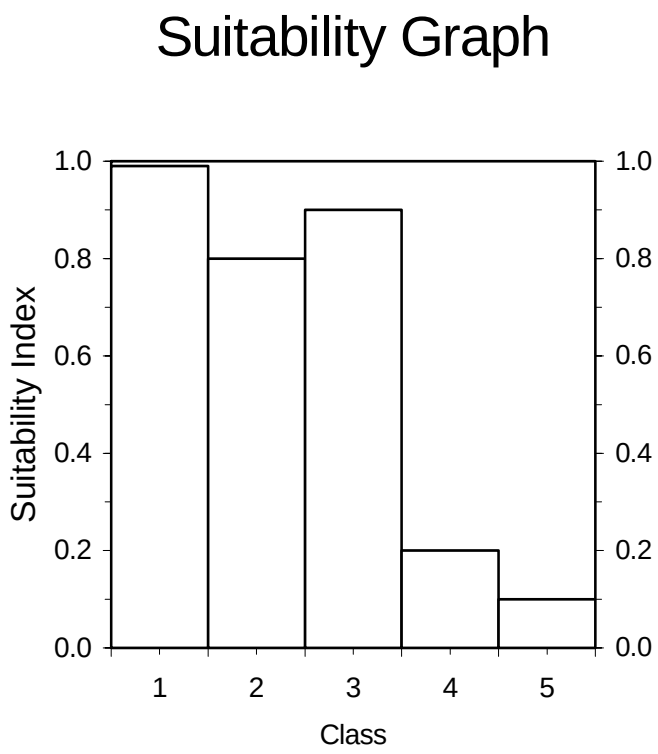


Line Formulas

If % < 15, then SI = (0.06*%) + 0.1
If 15 ≤ % ≤ 35, then SI = 1.0
If 35 < % ≤ 65, then SI = (-0.03*%) + 2.05
If % > 65, then SI = 0.1

Barrier Headland

Variable V_5 Beach/surf zone features.



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 <u>all</u> 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 interspersion, 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 interspersion; 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 (*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 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 V_4 - 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 V_5 - 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 V_6 - Edge and interspersion. 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 interspersion is determined by comparing the project area to sample

illustrations (Appendix A) depicting different degrees of interspersion. Interspersion 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, interspersion can be indicative of degradation of back-barrier marsh from subsidence, a factor taken into secondary consideration in assigning suitability indices to the various interspersion classes.

A high degree of interspersion is assumed to be optimal (SI = 1.0), and the lowest expression of interspersion (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 interspersion, 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 interspersion. 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 interspersion 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 interspersion, 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 interspersion provided optimal habitat conditions for fish and wildlife. It was determined that five classes of interspersion would best depict the range of interspersion on barrier islands. The suitability index value for each interspersion 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 V_7 - 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.

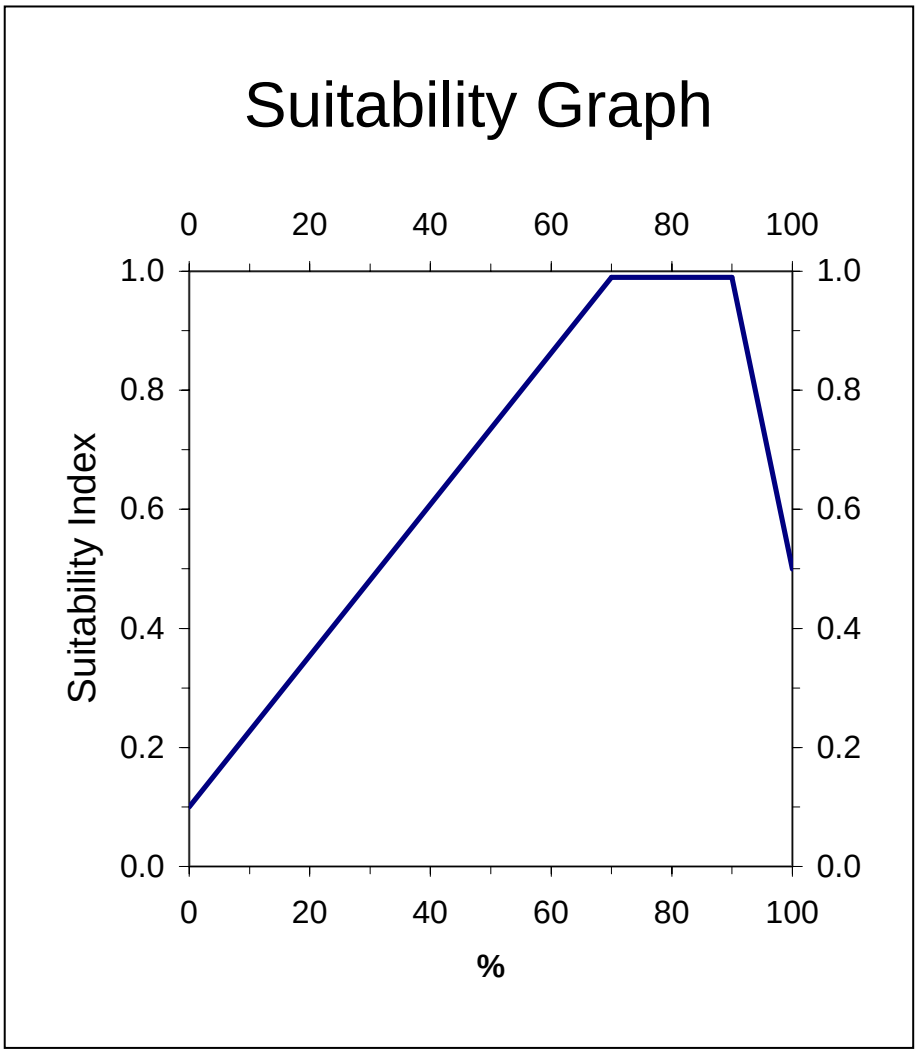
EXAMPLE for calculating V_{1a}, V_{2a}, V_{3a} and V_{4a}: If island cross section has an average dune width=50 m, supradtidal width=150 m, intertidal width=400 m, and subtidal width=150 m, then assume subaerial width =600m.
V_{1a}=(50/600)=8%, V_{2a}=(150/600)=25%, V_{3a}=(400/600)=67%, V_4=(150/600)=25%.

HSI Calculation:

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

Barrier Island

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

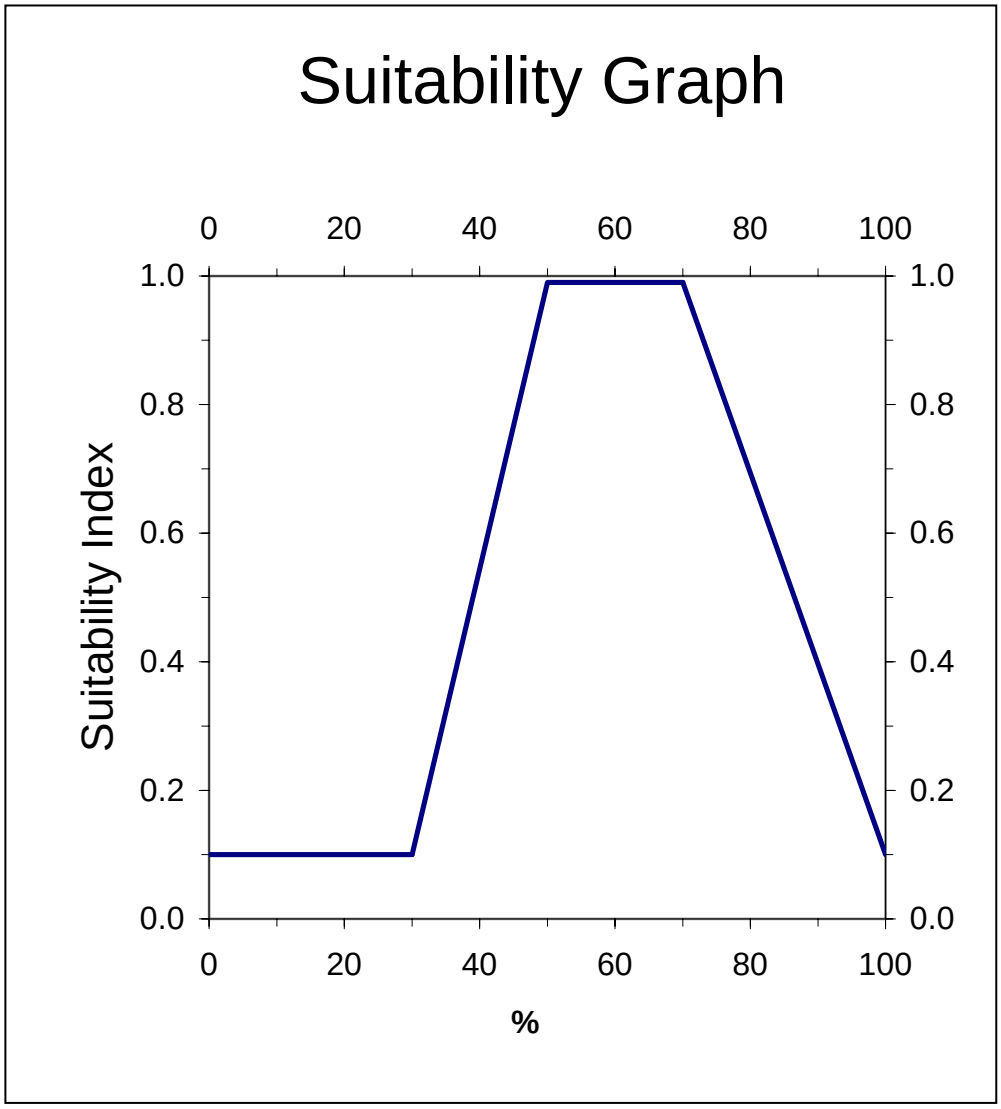


Line Formulas:

If % < 5, then SI = (0.18*%) + 0.1
If 5 ≤ % ≤ 15, then SI = 1.0
If 15 < % ≤ 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.

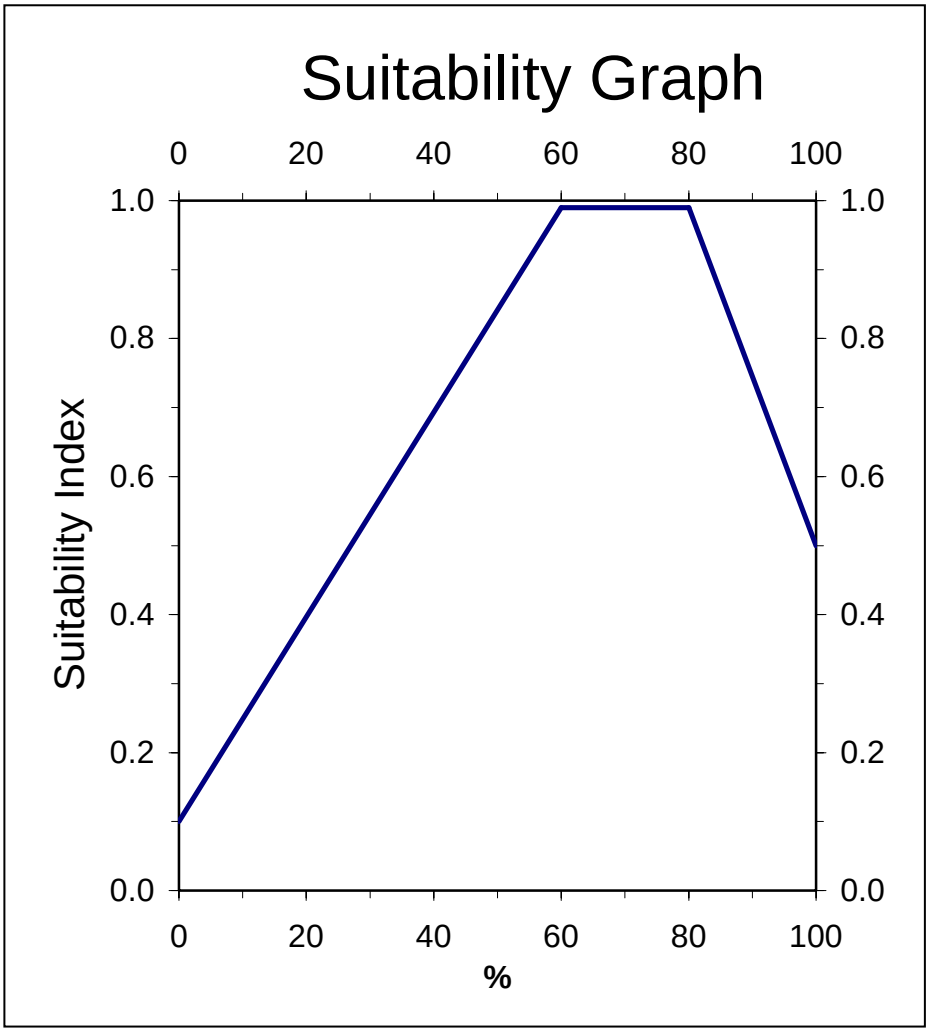


Line Formulas

If % < 60, then SI = (0.015*%) + 0.1
If 60 ≤ % ≤ 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.

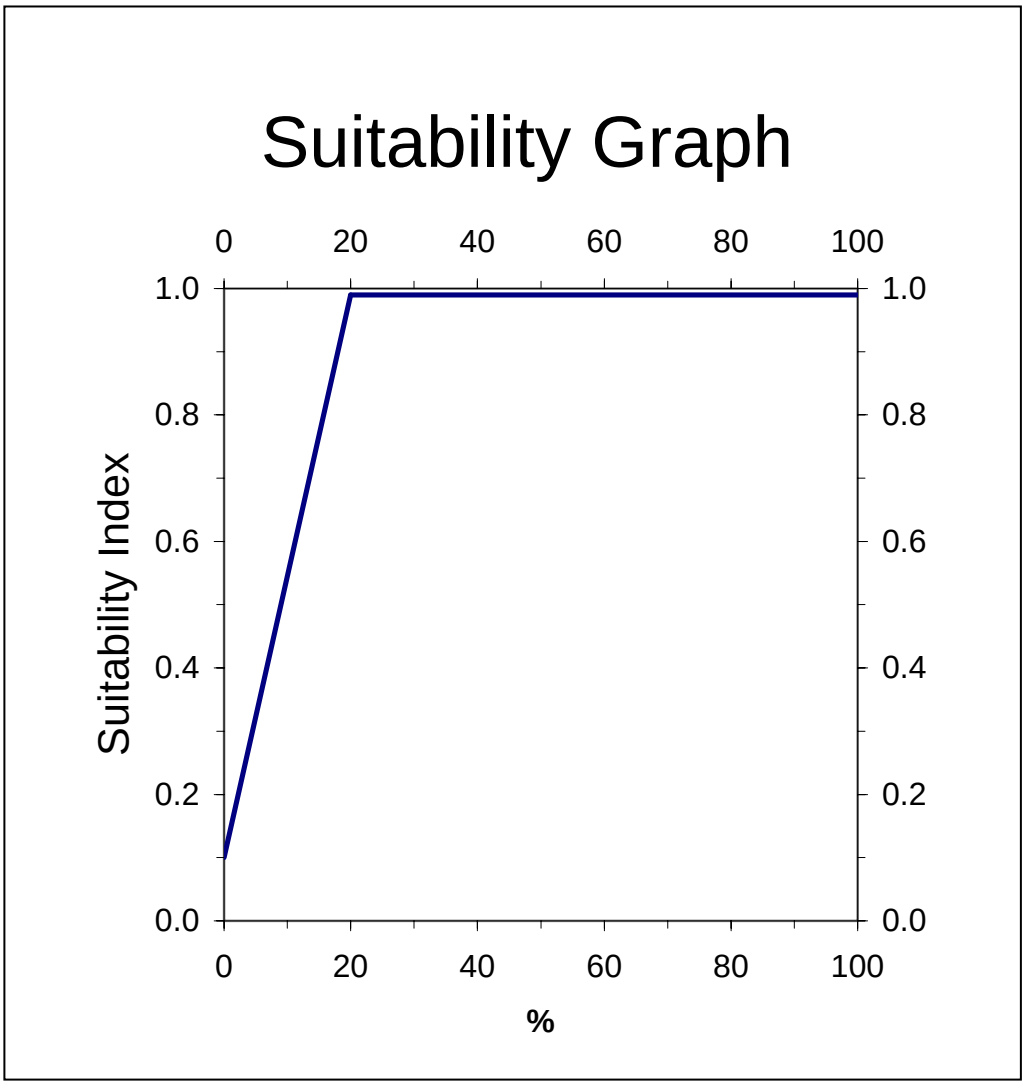


Line Formulas

If % < 20, then SI = (0.045*%) + 0.1
If 20 ≤ % ≤ 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.

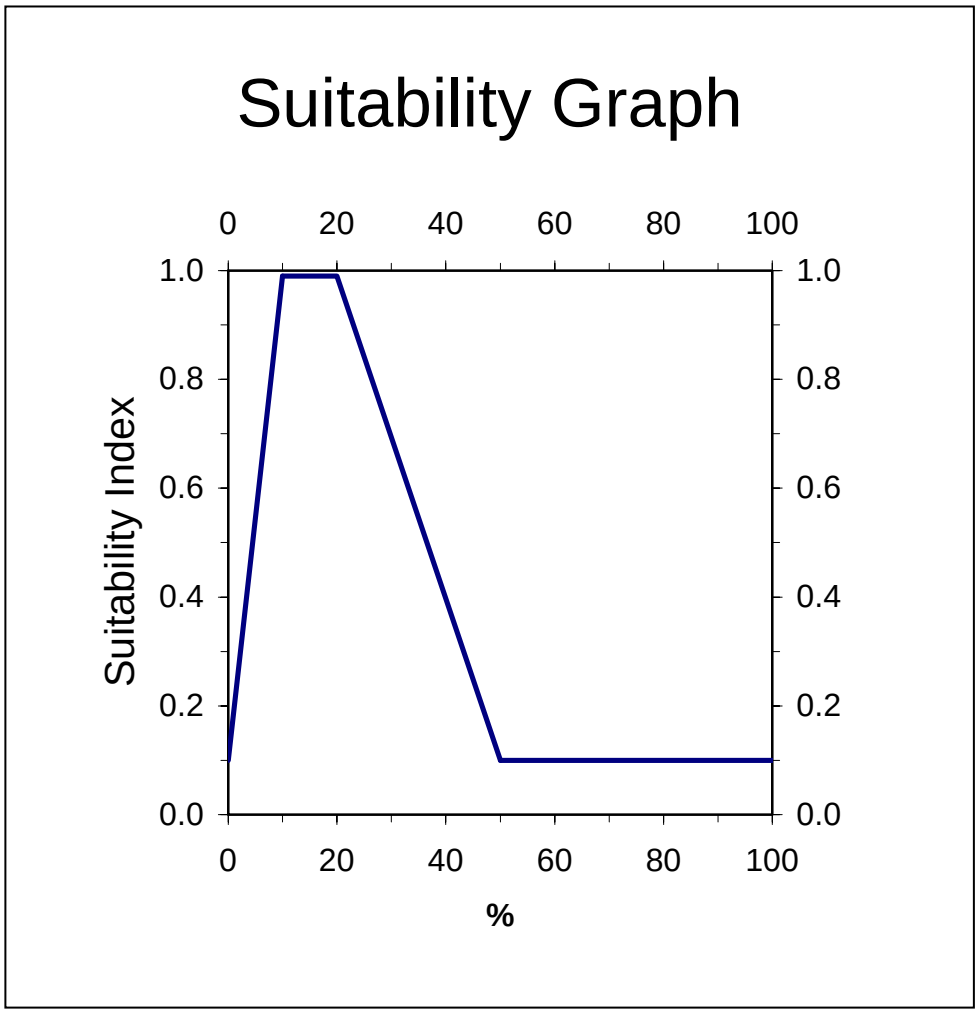


Line Formulas

If % < 70, then SI = (0.013*%) + 0.1
If 70 ≤ % ≤ 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.

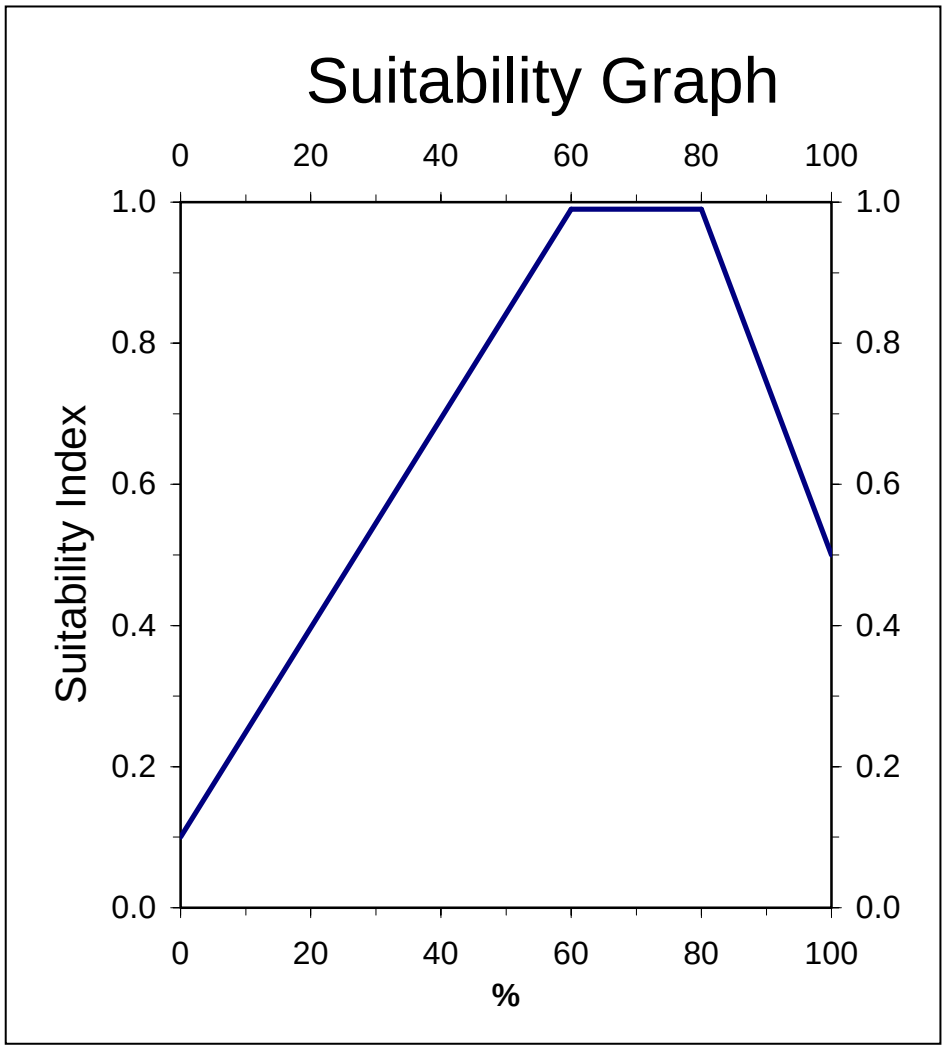


Line Formulas

If % < 30, then SI = 0.1
If 30 ≤ % < 50, then SI = (0.045*%) – 1.25
If 50 ≤ % ≤ 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).

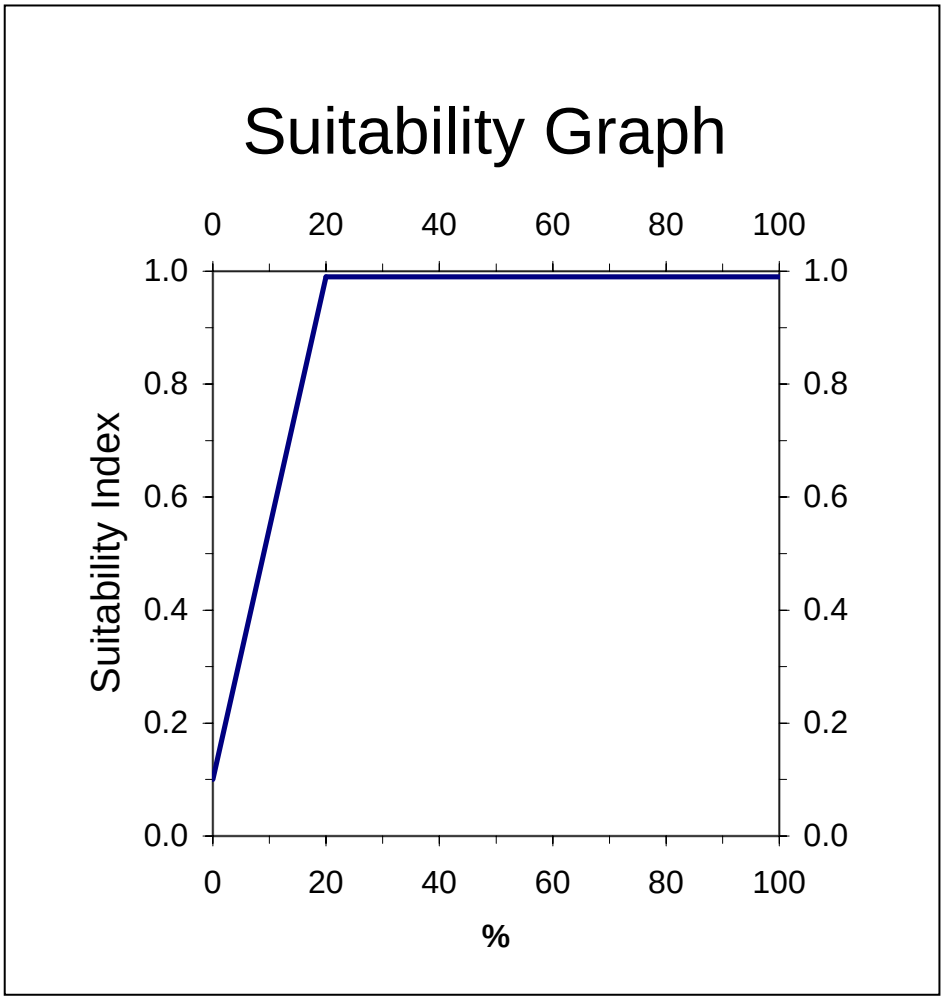


Line Formulas

If % < 60, then SI = (0.015*%) + 0.1
If 60 ≤ % ≤ 80, then SI = 1.0
If % > 80, then SI = (-0.025*%) + 3

Barrier Island

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

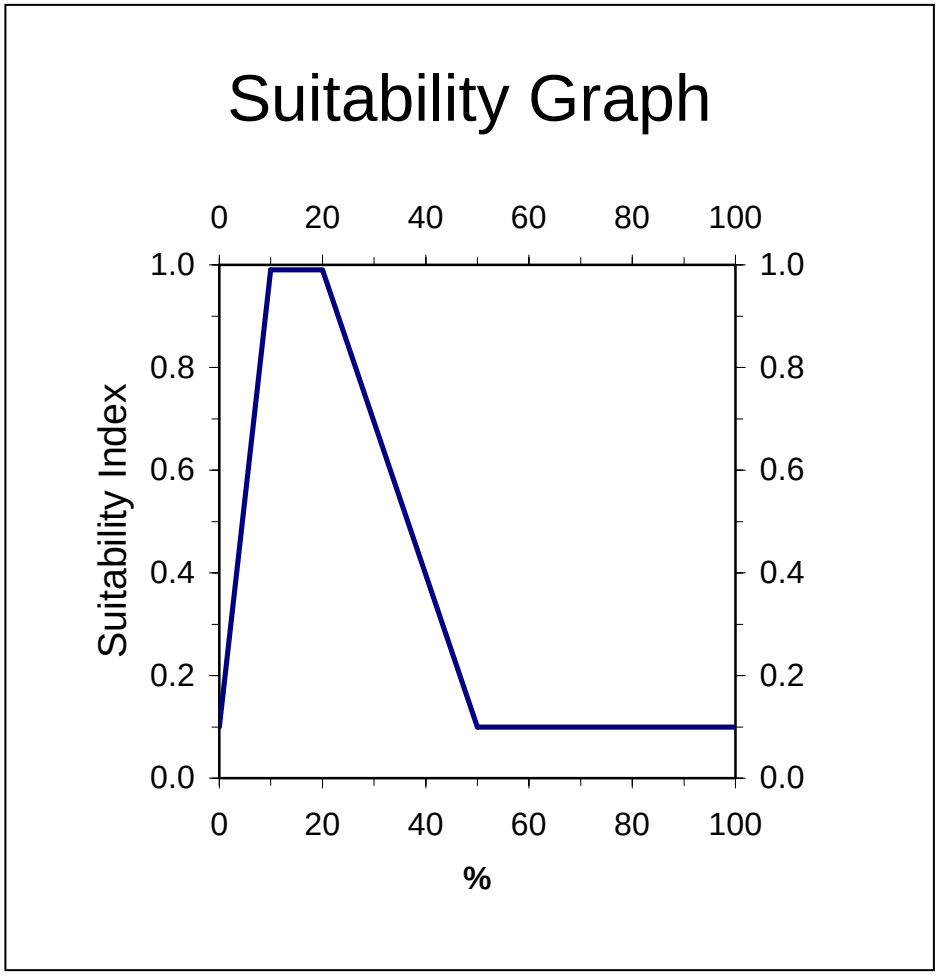


Line Formulas

If % < 20, then SI = (0.045*%) + 0.1
If % ≥ 20, then SI = 1.0

Barrier Island

Variable V_5 Percent vegetative cover by woody species.



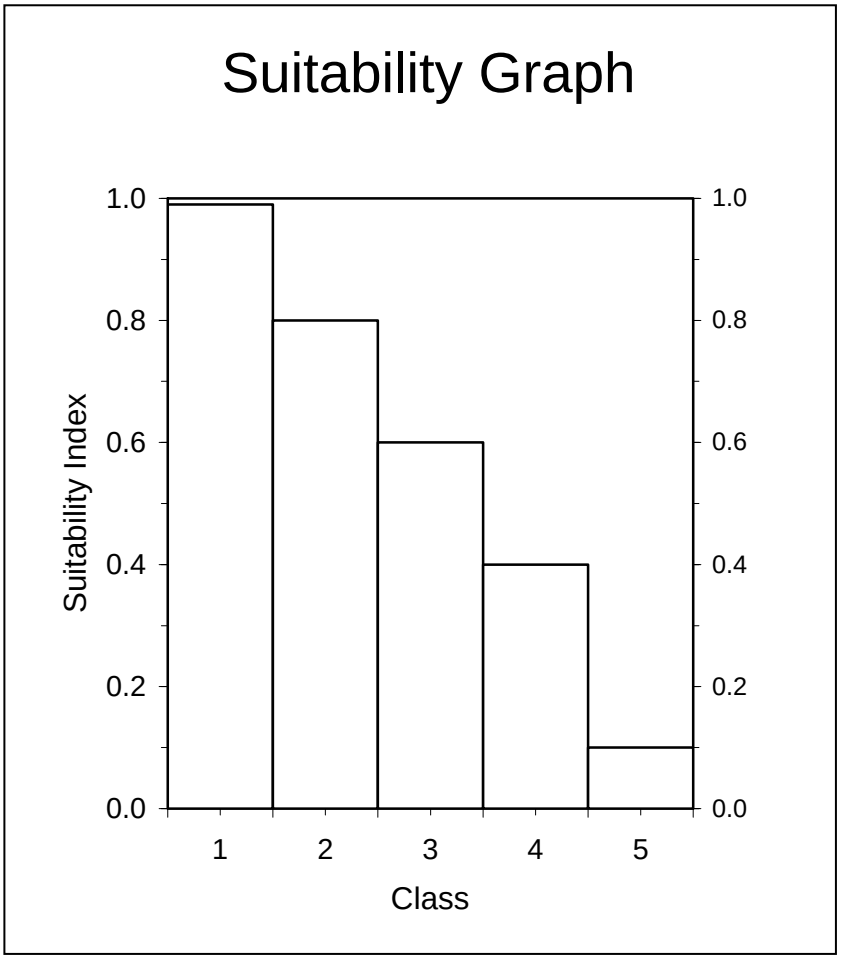
Line Formulas

If % < 10, then SI = (0.09*%) + 0.1
If 10 ≤ % ≤ 20, then SI = 1.0
If 20 < % ≤ 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 V_6 Edge and Interspersion.



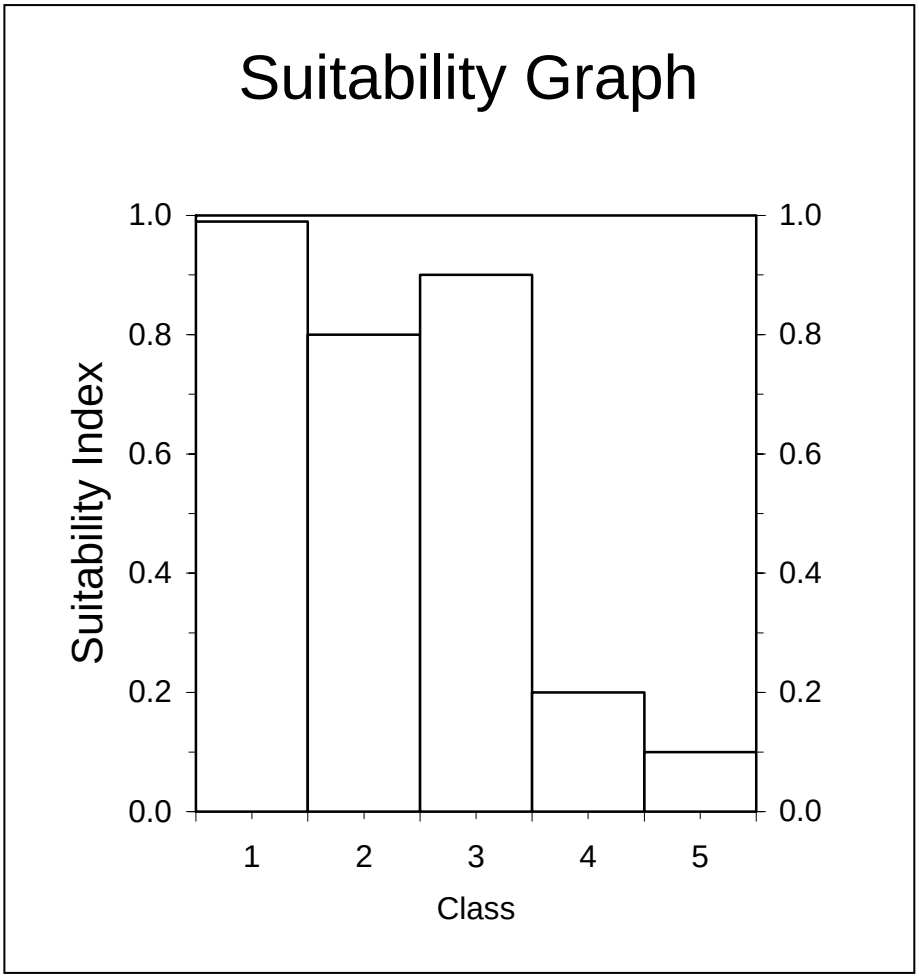
Instructions for Calculating SI for Variable V_6:

1. Refer to Appendix A for examples of the different interspersion classes.

2. Estimate the percent of project area in each class. If the <u>entire</u> project area is open water, assign interspersion Class 5.

Barrier Island

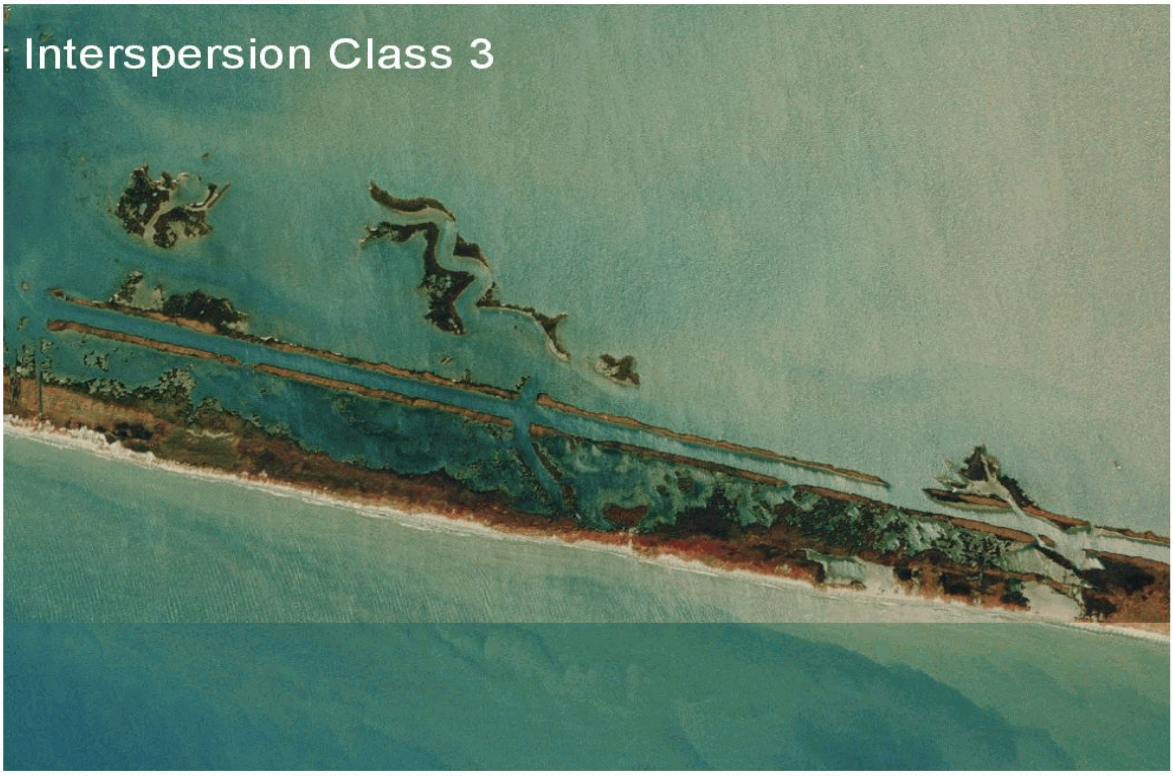
Variable V_7 Beach/surf zone features.



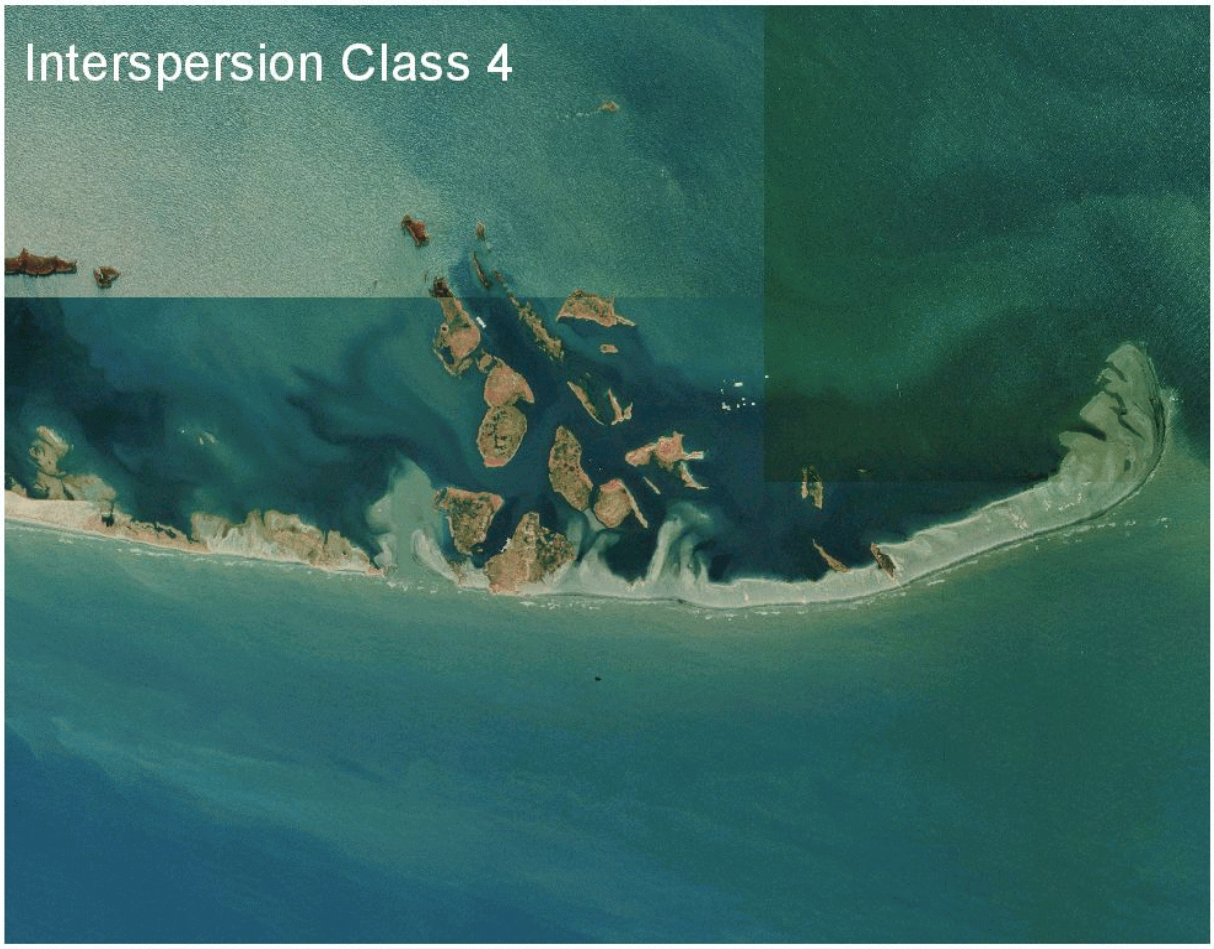
Class 1 = Natural Beach/Unconfined Disposal
Class 2 = Confined Disposal
Class 3 = Breakwaters
Class 4 = Rock on Beach
Class 5 = Seawall/No emergent habitat

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 Service1981). It was assumed that the three variables in this model do not have a strong compensatory relationship.

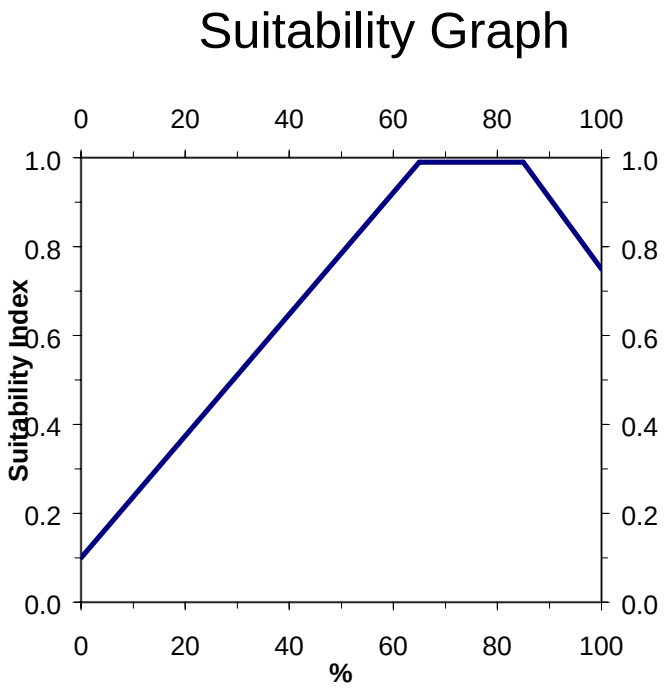
HSI Calculation: $HSI = (SIV_1 \times SIV_2 \times SIV_3)^{1/3}$

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 V_1 Percent Tree Canopy Cover



Line Formulas

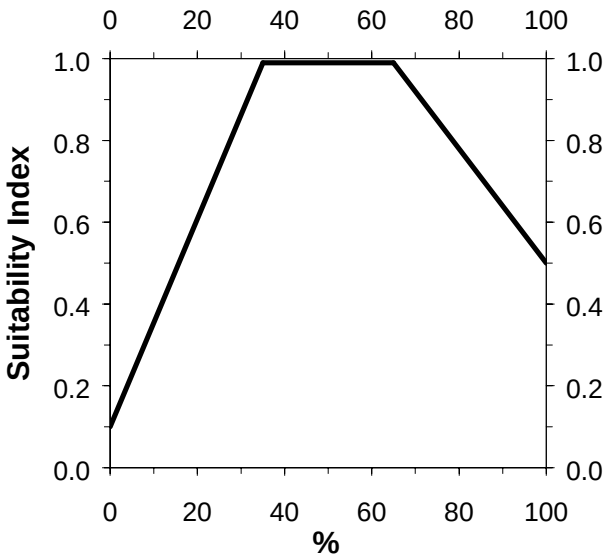
If % < 65, then SI = (0.014*%) + 0.1
If 65 ≤ % ≤ 85, then SI = 1.0
If % > 85, then SI = (-0.017*%) + 2.445

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 V_2 Percent Shrub/Midstory Cover

Suitability Graph



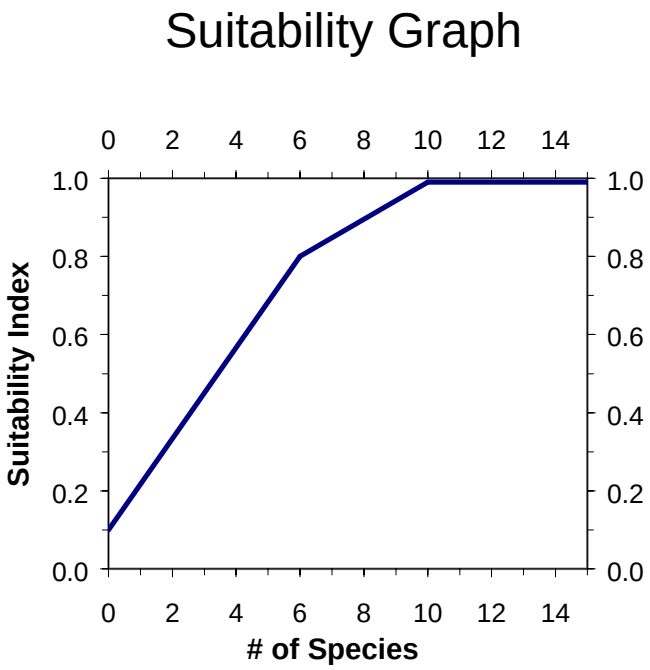
Line Formulas

If % < 35, then SI = (0.026*%) + 0.1
If 35 ≤ % ≤ 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 V_3 Native Woody Species Diversity



Line Formulas

If % < 6, then SI = (0.117*%) + 0.1
If 6 ≤ % < 10, then SI = (0.05*%) + 0.5
If % ≥ 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

Estuarine Fish and Shellfish	Birds	Mammals
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	Freshwater Fish
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	
Reptiles and Amphibians	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 interspersion, 4) percent of the open water area $\leq$ 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 V_3 - 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 V_1. 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 V_4 - 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 V_5 - 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 V_6 - 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 V_6 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 V_6 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 V_1, V_2, and V_6 by grouping them together, when possible, and weighting them greater than the remaining variables. Weighting was facilitated by treating the grouped variables as a geometric mean. Variables V_3, V_4, and V_5 were grouped to isolate their influence relative to V_1, V_2, and V_6.

For all marsh models, V_1 receives the strongest weighting. The relative weights of V_1, V_2, and V_6 differ by marsh model to reflect differing levels of importance for those variables between the marsh types. For example, the amount of aquatic vegetation was deemed more important in a fresh/intermediate marsh than in a saline marsh, due to the relative contributions of aquatic vegetation between the two marsh types in terms of providing food and cover. Therefore, V_2 receives more weight in the fresh/intermediate HSI formula than in the saline HSI formula. Similarly, the degree of aquatic organism access was considered more important in a saline marsh than a fresh/intermediate marsh, and V_6 receives more weight in the saline HSI formula than in the fresh/intermediate formula. As with the Suitability Index graphs, the Habitat Suitability Index formulas were developed by consensus among the 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 V_2 and V_4, 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 V_2 and V_4 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:

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

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

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

Wetland Value Assessment Community Model

Fresh/Intermediate Marsh

Vegetation:

Variable V_1 Percent of wetland area covered by emergent vegetation.

Variable V_2 Percent of open water area covered by aquatic vegetation.

Interspersion:

Variable V_3 Marsh edge and interspersion.

Water Depth:

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

Water Quality:

Variable V_5 Mean high salinity during the growing season (March through November).

Aquatic Organism Access:

Variable V_6 Aquatic organism access.

HSI Calculations:

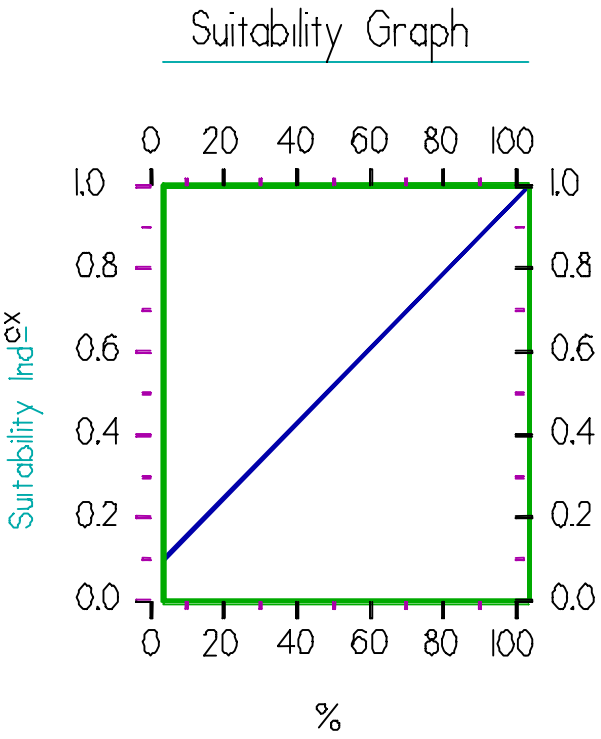
Fresh / Intermediate H S I

$$\textbf{Emergent Marsh H S I} = \frac{(3.5 \times (SIV_1^5 \times SIV_6^1)^{(1/6)}) + (SIV_3 + SIV_5) / 2}{4.5}$$

$$\textbf{Open Water H S I} = \frac{(3.5 \times (SIV_2^3 \times SIV_6^1)^{(1/4)}) + (SIV_3 + SIV_4 + SIV_5) / 3}{4.5}$$

Fresh/Intermediate Marsh

Variable V_1 Percent of wetland area covered by emergent vegetation.

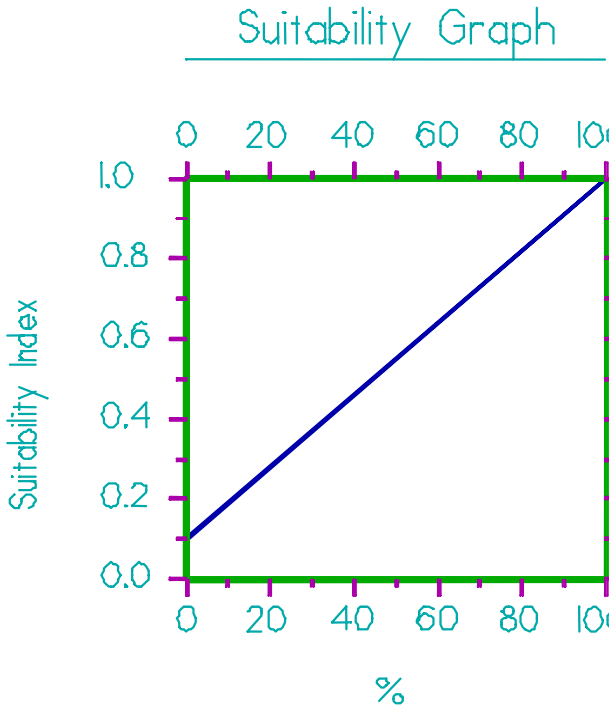


Line Formula

SI = (0.009 * %) + 0.1

Fresh/Intermediate Marsh

Variable V_2 Percent of open water area covered by aquatic vegetation.

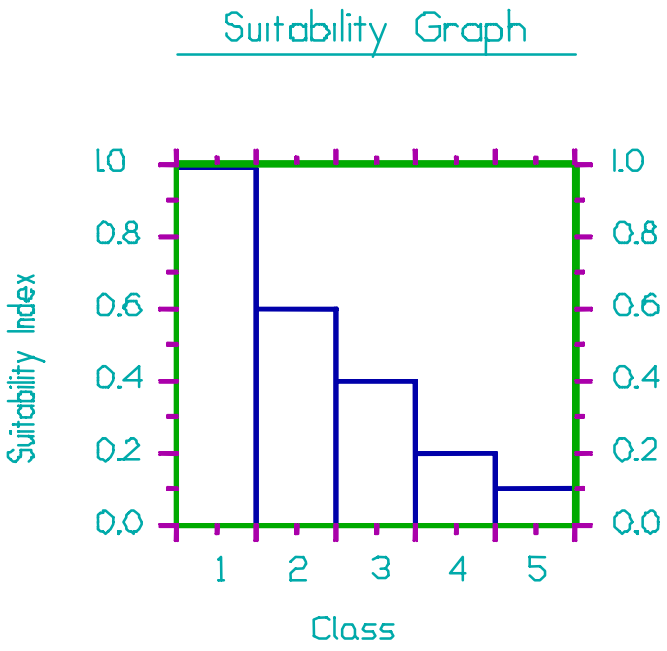


Line Formula

SI = (0.009 * %) + 0.1

Fresh/Intermediate Marsh

Variable V_3 Marsh edge and interspersion.



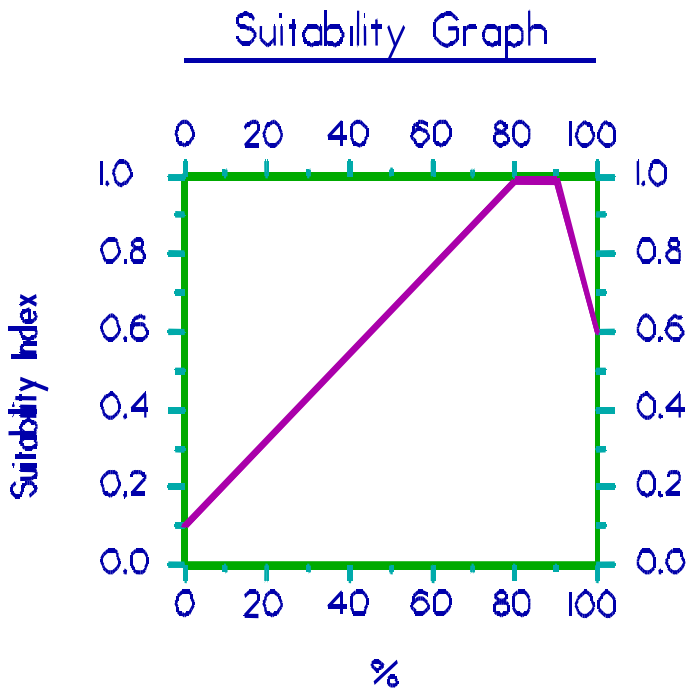
Instructions for Calculating the SI for Variable V_3:

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



Line Formulas

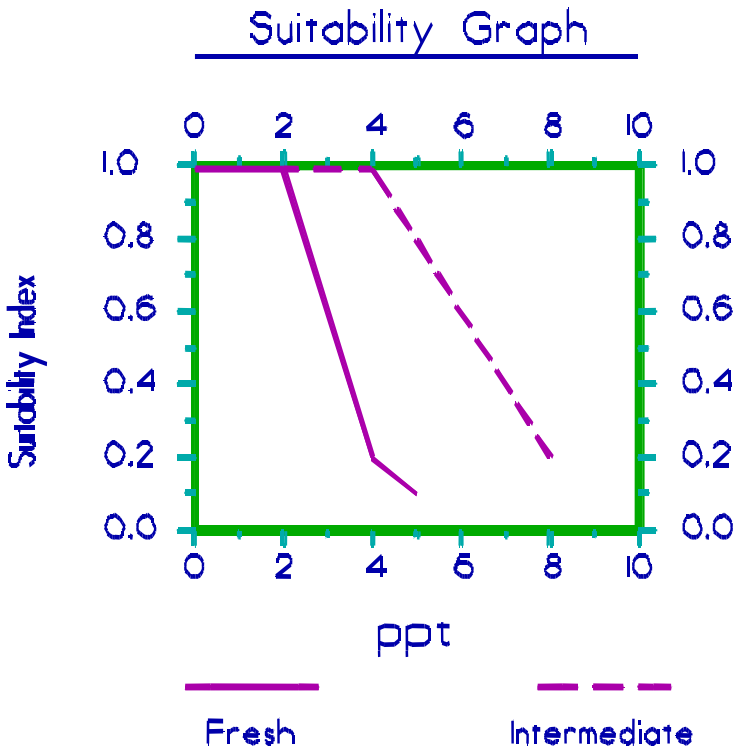
If $0 \leq \% < 80$, then SI = (0.01125 * %) + 0.1

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

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

Fresh/Intermediate Marsh

Variable V_5 Mean high salinity during the growing season (March through November).



Line Formulas

Fresh Marsh:

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

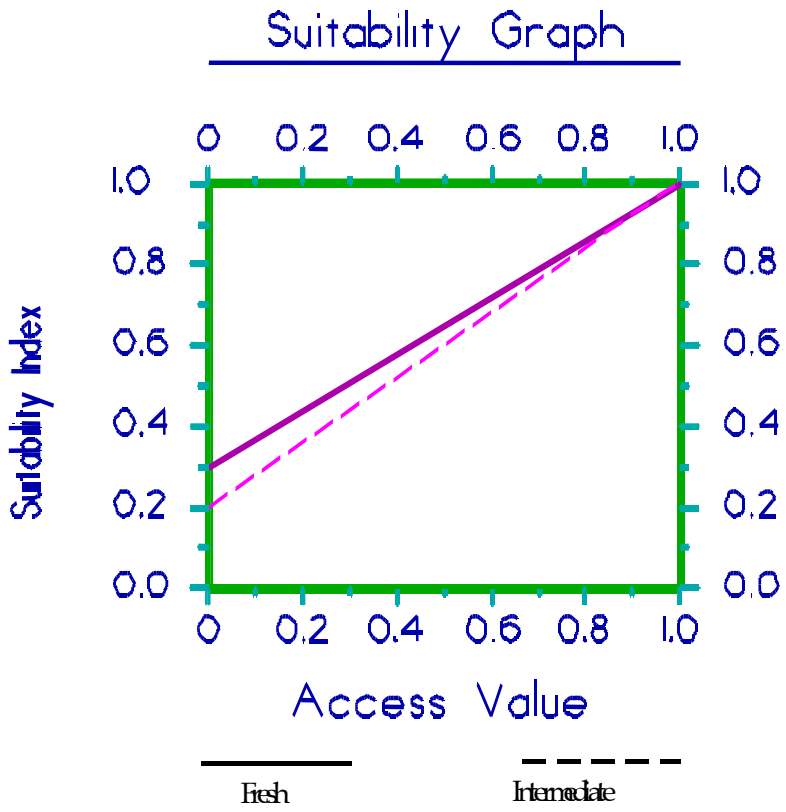
Intermediate Marsh:

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

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

Fresh/Intermediate Marsh

Variable V_6 Aquatic organism access.



Line Formulas

Fresh Marsh:

SI = (0.7 * Access Value) + 0.3

Intermediate Marsh:

SI = (0.8 * Access Value) + 0.2

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

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

Wetland Value Assessment Community Model

Brackish Marsh

Vegetation:

Variable V_1 Percent of wetland area covered by emergent vegetation.

Variable V_2 Percent of open water area covered by aquatic vegetation.

Interspersion:

Variable V_3 Marsh edge and interspersion.

Water Depth:

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

Water Quality:

Variable V_5 Average annual salinity.

Aquatic Organism Access:

Variable V_6 Aquatic organism access.

HSI Calculations:

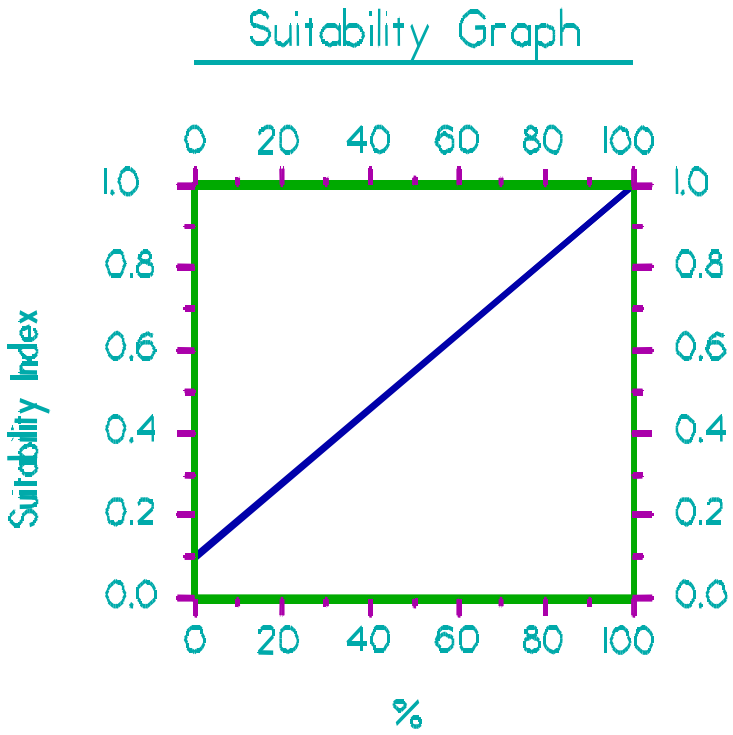
Brackish Marsh H S I

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

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

Brackish Marsh

Variable V_1 Percent of wetland area covered by emergent vegetation.

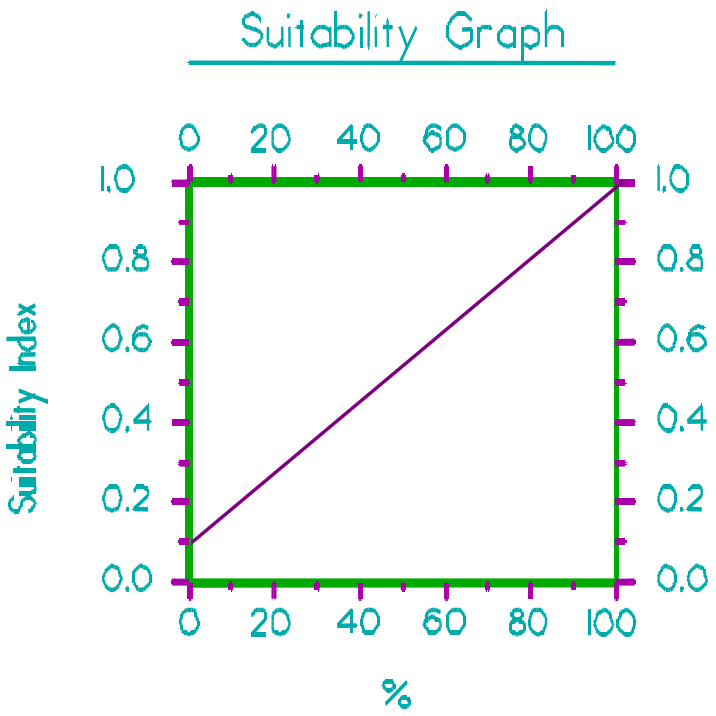


Line Formula

SI = (0.009 * %) + 0.1

Brackish Marsh

Variable V_2 Percent of open water area covered by aquatic vegetation.

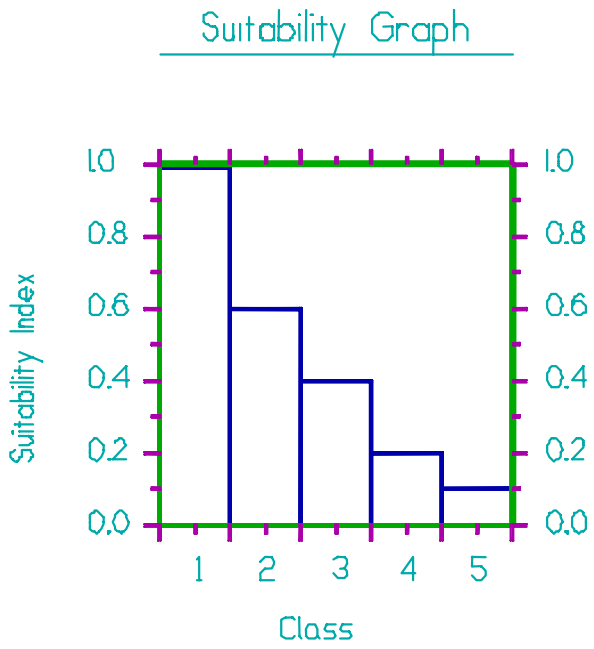


Line Formula

SI = (0.009 * %) + 0.1

Brackish Marsh

Variable V_3 Marsh edge and interspersion.



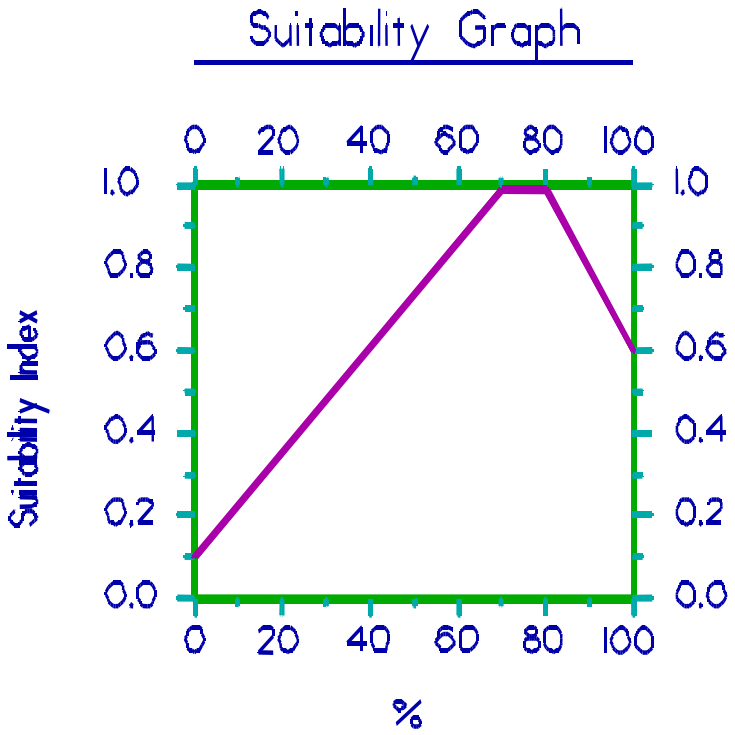
Instructions for Calculating SI for Variable V_3:

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



Line Formulas

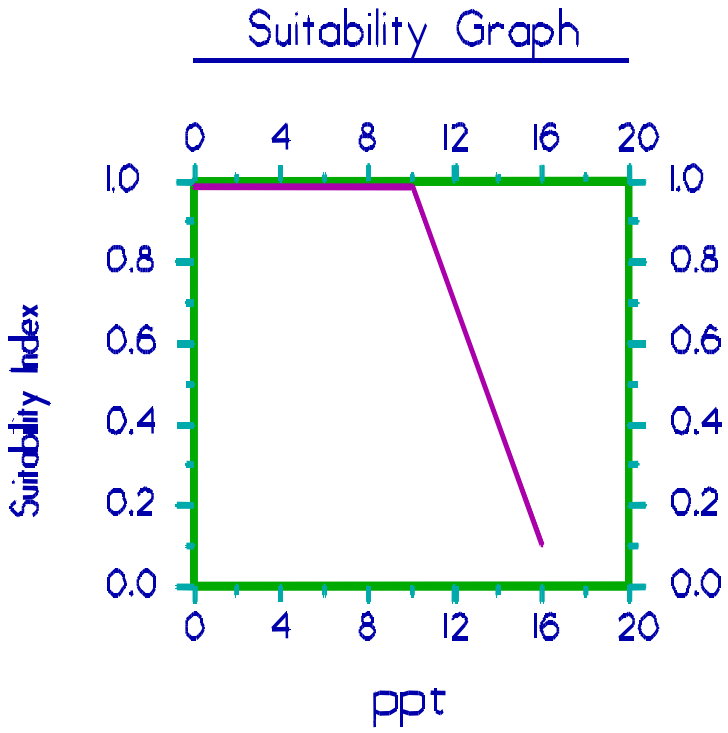
If 0 ≤ % < 70, then SI = (0.01286 * %) + 0.1

If 70 ≤ % ≤ 80, then SI = 1.0

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

Brackish Marsh

Variable V_5 Average annual salinity.



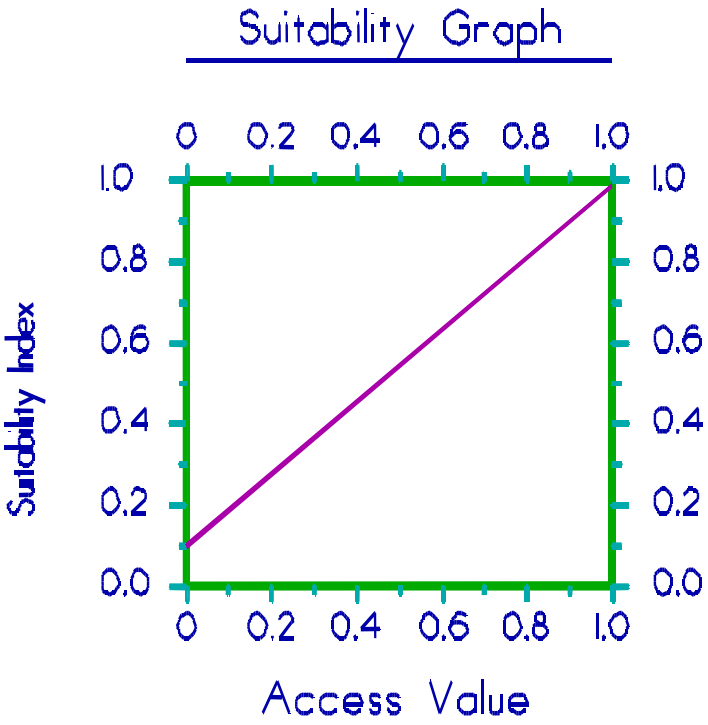
Line Formulas

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

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

Brackish Marsh

Variable V_6 Aquatic organism access.



Line Formula

SI = (0.9 * 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 V_1 Percent of wetland area covered by emergent vegetation.

Variable V_2 Percent of open water area covered by aquatic vegetation.

Interspersion:

Variable V_3 Marsh edge and interspersion.

Water Depth:

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

Water Quality:

Variable V_5 Average annual salinity.

Aquatic Organism Access:

Variable V_6 Aquatic organism access.

HSI Calculation:

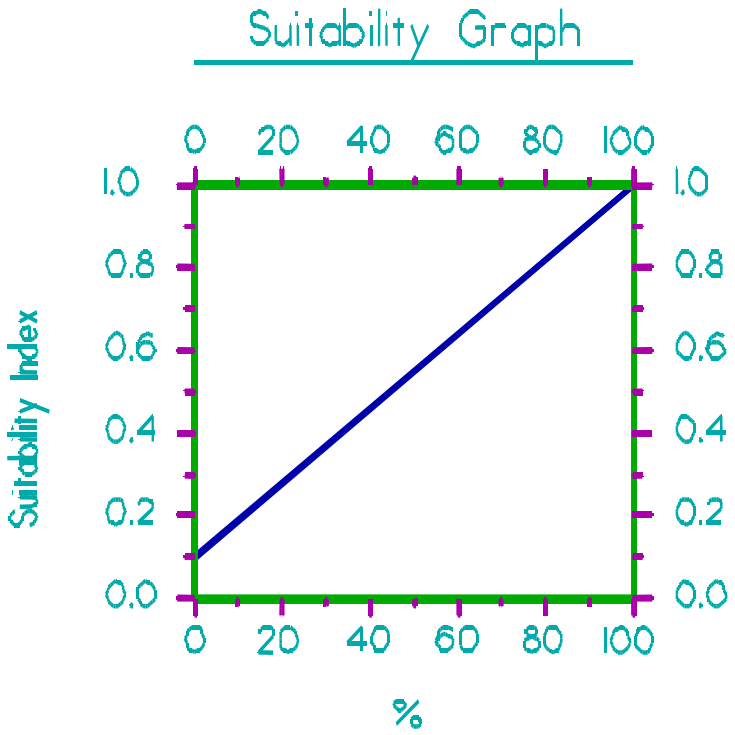
Saline Marsh H S I

$$\textbf{Emergent Marsh H S I} = \frac{(3.5 \times (SIV_1^3 \times SIV_6^1)^{(1/4)}) + (SIV_3 + SIV_5) / 2}{4.5}$$

$$\textbf{Open Water H S I} = \frac{(3.5 \times (SIV_2^1 \times SIV_6^{2.5})^{(1/3.5)}) + (SIV_3 + SIV_4 + SIV_5) / 3}{4.5}$$

Saline Marsh

Variable V_1 Percent of wetland area covered by emergent vegetation.

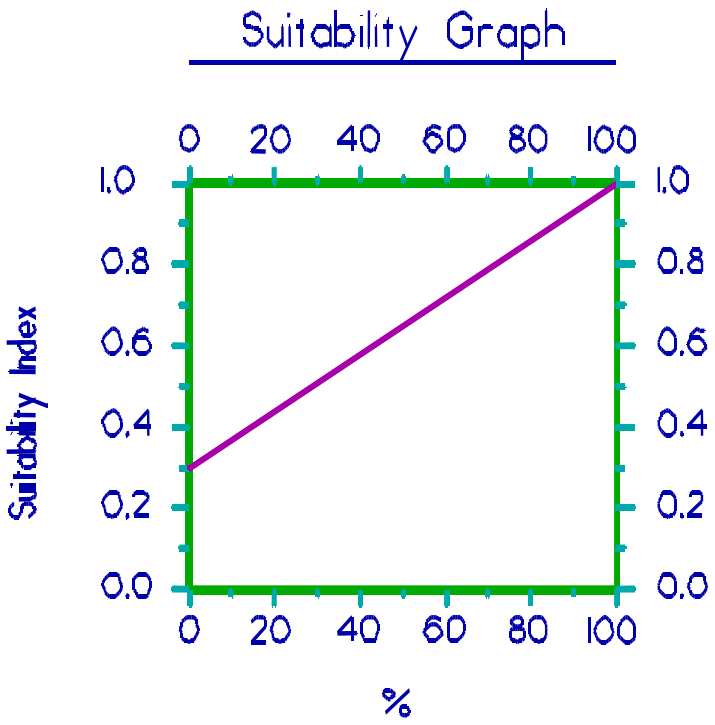


Line Formula

SI = (0.009 * %) + 0.1

Saline Marsh

Variable V_2 Percent of open water area covered by aquatic vegetation.

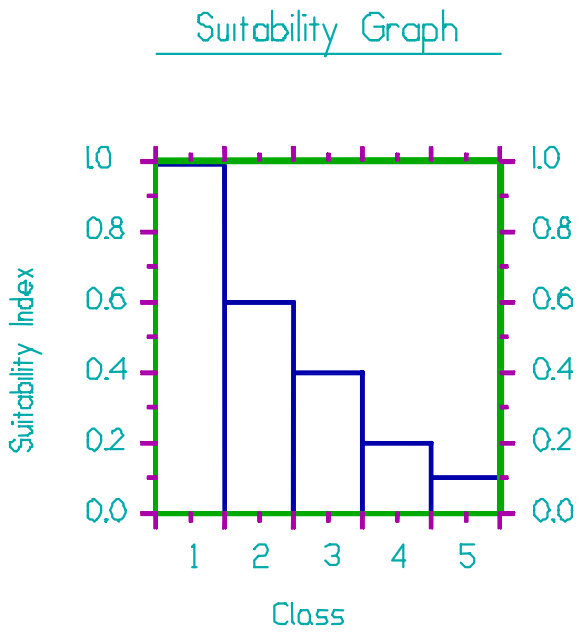


Line Formula

SI = (0.007 * %) + 0.3

Saline Marsh

Variable V_3 Marsh edge and interspersion.



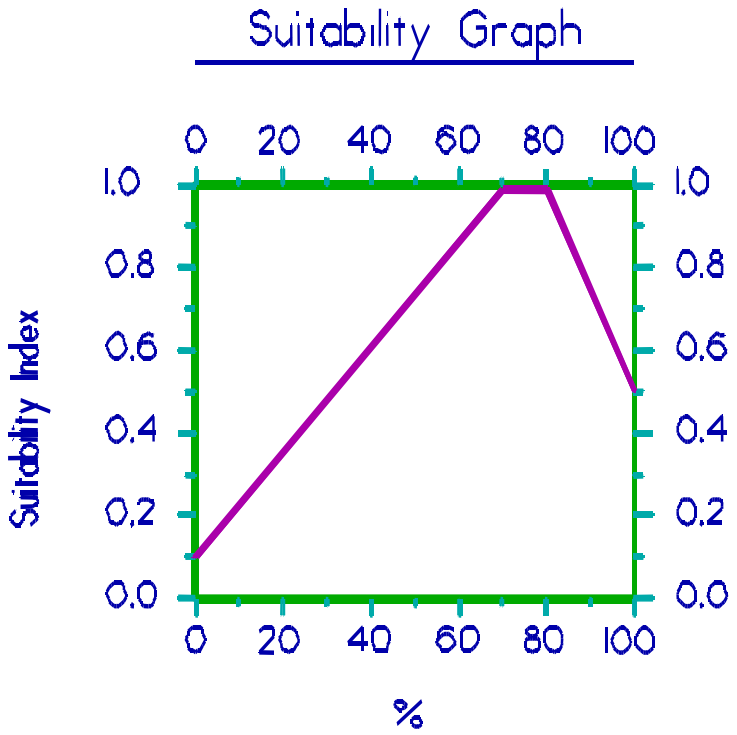
Instructions for Calculating SI for Variable V_3:

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



Line Formulas

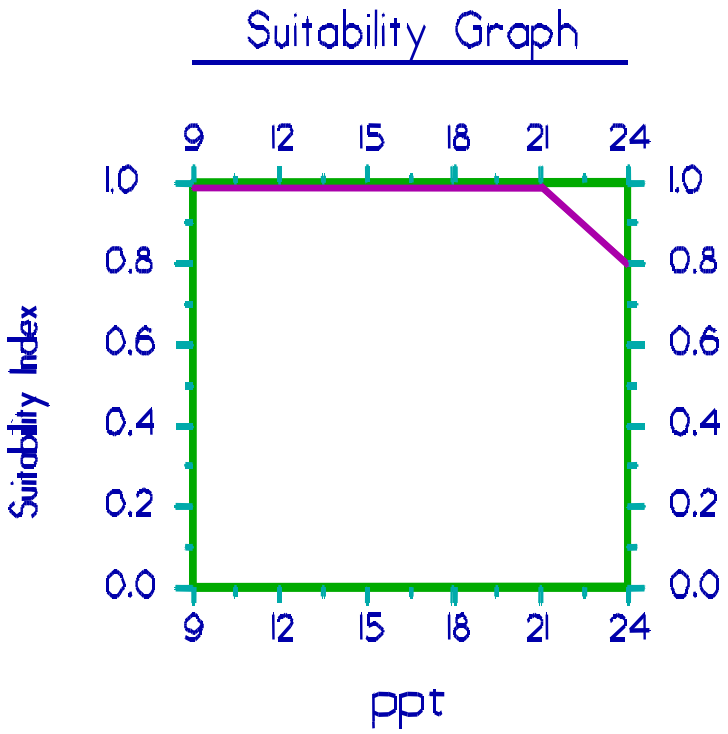
If 0 ≤ % < 70, then SI = (0.01286 * %) + 0.1

If 70 ≤ % ≤ 80, then SI = 1.0

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

Saline Marsh

Variable V_5 Average annual salinity.



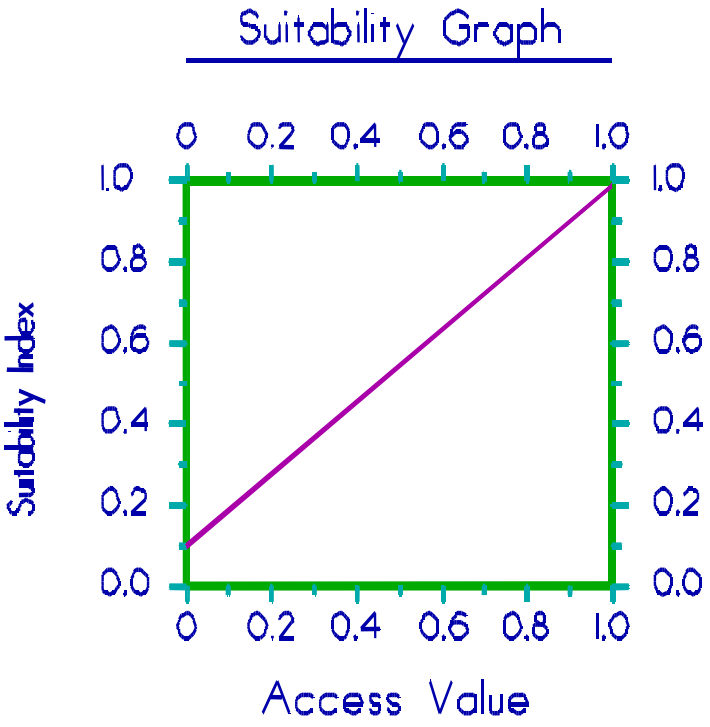
Line Formulas

If 9 ≤ ppt ≤ 21, then SI = 1.0

If ppt > 21, then SI = (-0.067 * ppt) + 2.4

Saline Marsh

Variable V_6 Aquatic organism access.



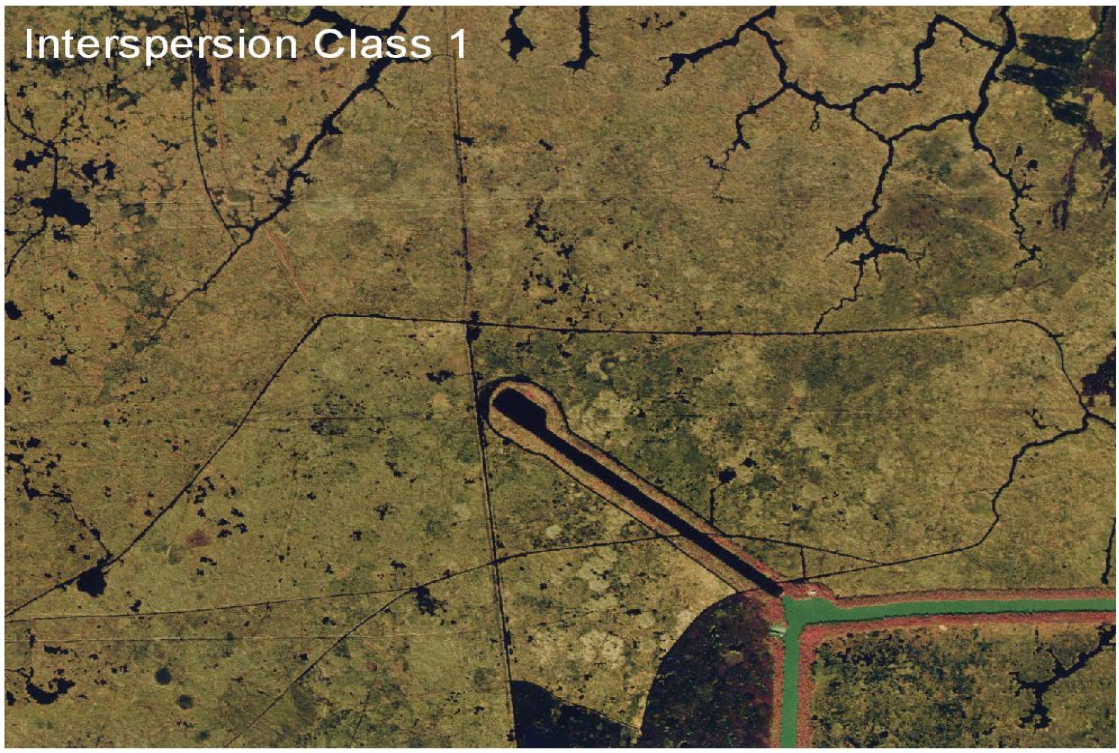
Line Formula

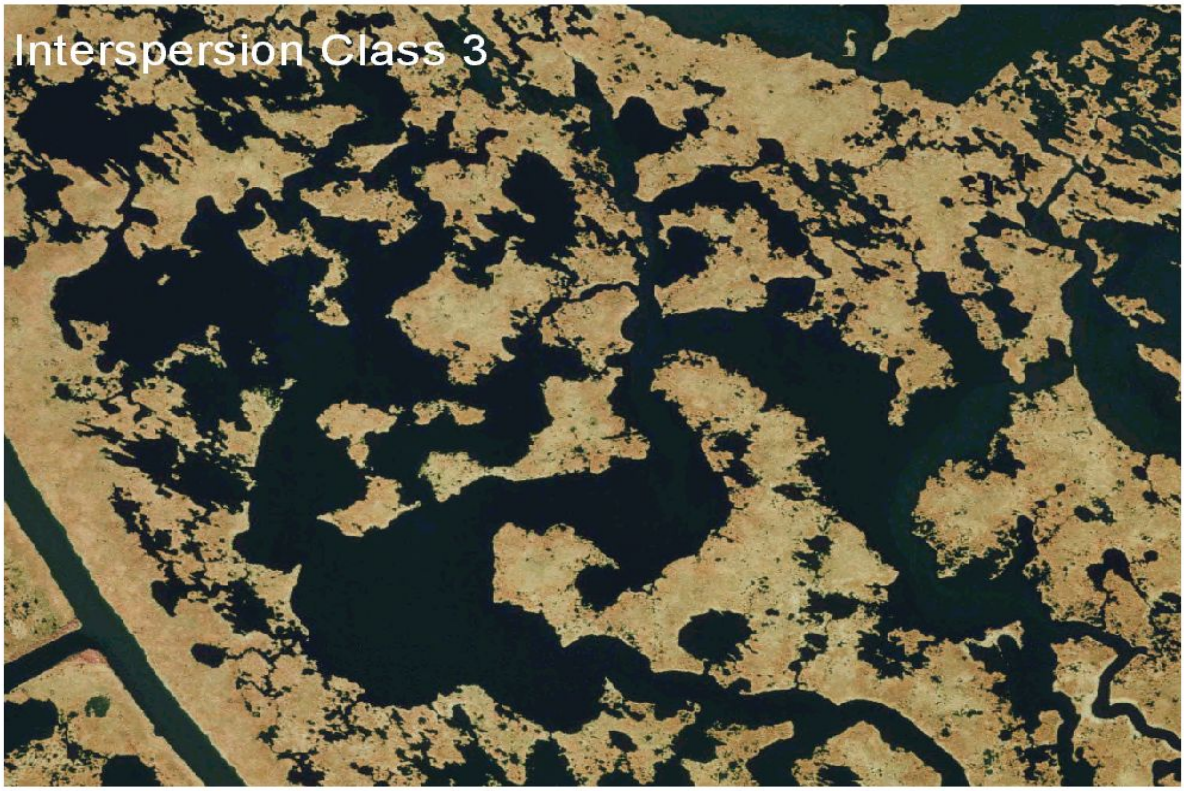
SI = (0.9 * Access Value) + 0.1

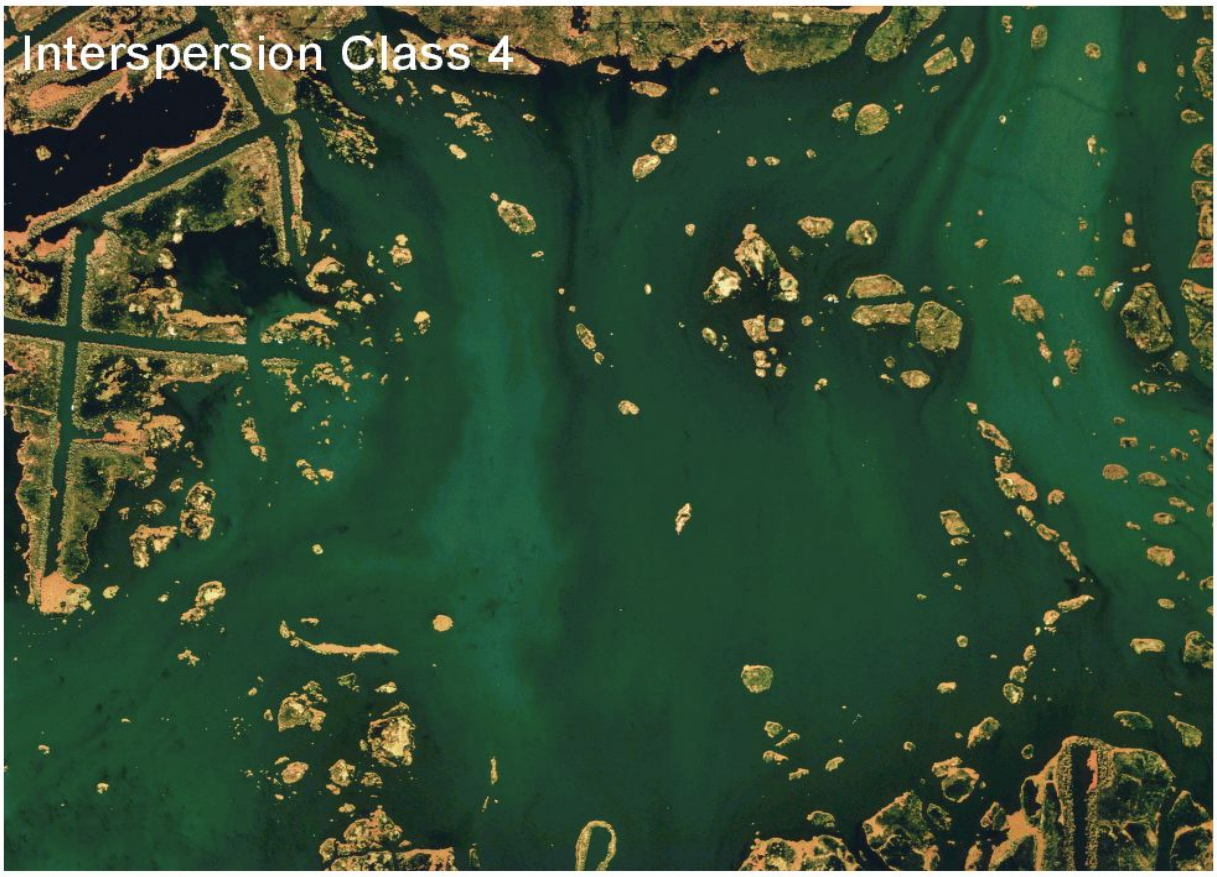
Note: Access Value = P * R, where "P" = percentage of wetland area considered accessible by estuarine organisms during normal tidal fluctuations, and "R" = Structure Rating.

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




Interspersion Class 3


Interspersion Class 4

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 1ft 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 approximates the relative degree to which the structure in question would allow

[1] Below Marsh Level

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.

      Access Value = P
      = .90

   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.

      Access Value = P * R
      = .90 * .35
      = .32

   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.

      Access Value = P
      = .90

      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.

Access Value = 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

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.

Access Value = P
= .90

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.

Access Value = P * R_2
= .90 * .35
= .32

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.

Access Value = ([P_1*R_1] + [P_2*R_3])/(P_1+P_2)

= ([.20*.5]+[.70*.35])/(.20+.70)
= (.10 + .25)/.90

= .35/.90
= .39

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.

Access Value $= ([P_1*R_1]+[P_2*R_2]+[P_3*R_3])/(P_1+P_2+P_3)$

$= ([.20*.5]+[.40*.35]+[.30*.1])/(.20+.40+.30)$
$= (.10+.14+.03)/.90$
$= .27/.90$
$= .30$

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, tupelogum, 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 V_1 - 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 V_2 - 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 tupelogum 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 V_3 - 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 V_4 - 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 tupelogum 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 V_1 and V_3, 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 V_2, stand maturity, was given slightly less weight than stand structure and water regime. Variable V_4, 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.

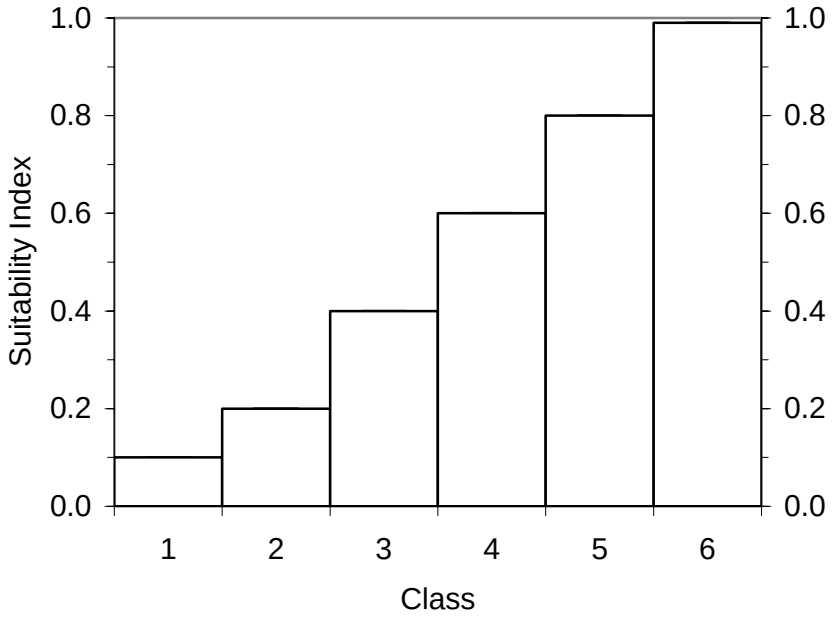
Swamp

Variable V_1 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



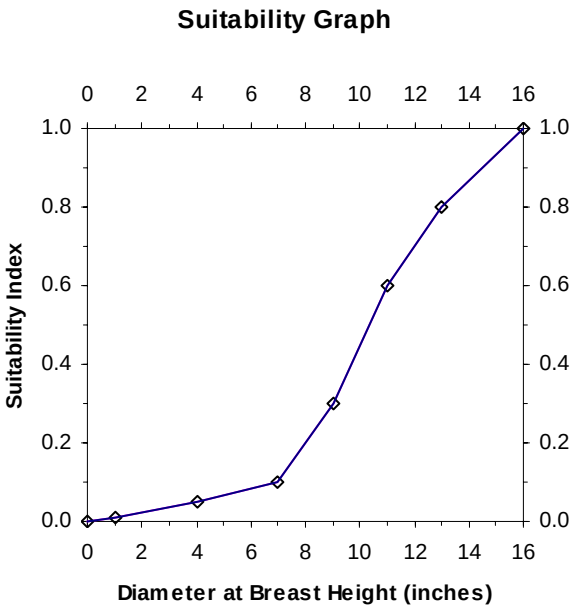
Swamp

Variable V_2 Stand maturity.

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

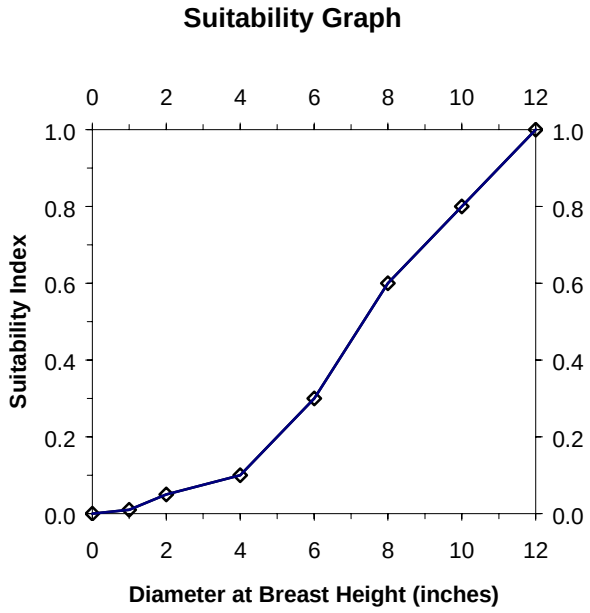
Notes:

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 Index Line Formulas for baldcypress:

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



Suitability Index Line Formulas for tupelogum et al.:

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

Swamp

Variable V_3 Water regime.

Density	Basal Area	Factor
Open	<40ft²	0.2
Moderately Open	40ft² ≤BA≤80ft²	0.4
Moderate	81ft² ≤BA≤120ft²	0.6
Moderately Dense	121ft² ≤BA≤160ft²	0.8
Dense	>161ft²	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

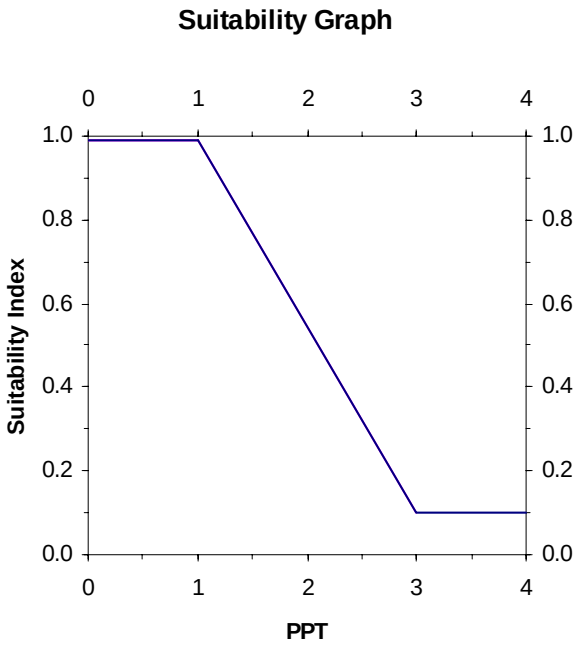
1. Permanently Flooded: Water covers the substrate throughout the year in all years.
2. Semipermanently Flooded: Surface water is present throughout the growing season in most years.
3. Seasonally Flooded: Surface water is present for extended periods, especially in the growing season, but is absent 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 V_4 Mean high salinity during the growing season.



Line Formulas

If 0. ppt. 1.0, then SI = 1.0

If 1.0 < ppt < 3.0, then SI = (-0.45 * ppt) + 1.45

If ppt. 3.0, then 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

15th 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:	Bayou Lamoque Freshwater Diversion	Date:	6-Jul-05	Revised:	21-Jul-05
Computed by:	Tim Hart & Greg Miller, USACE	*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization - inriver work	1	LS	$50,000	$50,000
2	Pile removal - upriver diversion channel entrance	1	LS	$7,800	$7,800
3	Pile removal - downriver diversion channel entrance	1	LS	$7,800	$7,800
4	Debris removal and disposal - upriver channel and structure	1	LS	$9,500	$9,500
5	Debris removal and disposal - downriver channel and structure	1	LS	$9,500	$9,500
6	Dredging - upriver structure entrance channel cleanout	20,001	CY	$1.60	$32,002
7	Dredging - downriver structure entrance channel cleanout	28,890	CY	$1.60	$46,224
8	Gate and gear box removal - upriver diversion structure	1	LS	$36,000	$36,000
9	Gate and gear box removal - downriver diversion structure	1	LS	$36,000	$36,000
10	Trash screen - rebuild upriver structure trash screen	1	LS	$24,000	$24,000
11	Trash screen - rebuild downriver structure trash screen	1	LS	$18,750	$18,750
12	Mobilization/Demobilization - outfall area work	1	LS	$50,000	$50,000
13	Dredging - access to mouth of Bayou Lamoque	6,945	CY	$1.60	$11,112
14	Dredging - downriver structure outfall channel cleanout	3,611	CY	$1.60	$5,778
15	Clearing and grubbing	1	LS	$20,000.00	$20,000
16	Dredging - spoil bank gapping #1	6,945	CY	$1.70	$11,807
17	Dredging - spoil bank gapping #2	6,945	CY	$1.70	$11,807
18	Dredging - spoil bank gapping #3	13,890	CY	$1.70	$23,613
19	Dredging - spoil bank gapping #4	13890	CY	$1.70	$23,613

ESTIMATED CONSTRUCTION COST **$435,306**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$544,133**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$175,000			
Geotechnical Investigation	$0			
Hydrologic Modeling	$150,000			
Data Collection	$150,000			
Monitoring Plan Development	$25,000			
Cultural Resources	$35,000			
NEPA Compliance	$150,000			
			SubTotal:	$685,000

EPA

Supervision and Administration $50,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM, ecological review and engineering review) $100,000

Easements and Land Rights

Oyster Issues:	67 Leases	$150,250	
Land Rights:		$108,500	
		SubTotal:	$258,750

Monitoring

Monitoring Plan Review	$5,000		
Monitoring Protocal Cost *	$27,524		
		SubTotal:	$32,524

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Total Phase I Cost Estimate: **$1,129,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency			$544,133	
Landrights:			$136,000	
Oyster Issues:	1,605 Leased AC		$1,605,000	
			SubTotal:	$2,285,133
Supervision and Inspection	60 days @	$933.00	per day	$55,980
Supervision and Administration			EPA & USACE:	$125,000

State Costs

Supervision and Administration $75,000

Total Phase II Cost Estimate: **$2,541,113**

TOTAL ESTIMATED PROJECT FIRST COST **$3,670,113**

Bayou Lamoque Freshwater Diversion
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections	**$4,900**
Annual Cost for Operations	**$0**
Preventive Maintenance	**$0**

Specific Intermittent Costs:

Construction Items				**Year 5**	**Year 10**	**Year 15**
Mob and Demob				$50,000	$50,000	$50,000
Debris Removal				$19,000	$19,000	$19,000
Pile Replacement					$58,350	
			Subtotal	$69,000	$127,350	$69,000
			Subtotal w/ 25% contingency	***$86,250***	***$159,188***	***$86,250***

State Costs

Engineering and Design Cost				$0	$0	$0
Administrative Cost				$2,588	$3,184	$2,588
Eng Survey						
	0 days	@	$1,556 per day	$0	$0	$0
Inspection						
	2 days	@	$933 per day	$1,866	$1,866	$1,866
			Subtotal	***$4,454***	***$5,050***	***$4,454***

Federal Costs

Administrative Cost				$2,588	$3,184	$2,588
			Total	**$93,292**	**$167,422**	**$93,292**

Annual Project Costs:

Corps Administration	**$700**	
Monitoring *	**$27,524**	*(Dependent upon type of project)*

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-07**	*(Minimum of one year to complete this phase)*
Const. Start	**May-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**July-08**	

Project:	Lake Hermitage Marsh Creation	Date:	19-Jul-05	Revised:	21-Jul-05
Computed by:	Russ Joffrion - LDNR	*Project Priority List 15*			

Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	$1,600,000	$1,600,000
2	Floatation Access Channel	162,490	CY	$3.00	$487,470
3	Rock	42,586	TONS	$30.00	$1,277,580
4	Earthwork	1	LS	$14,000	$14,000
5	Settlement Plates	10	EACH	$1,000	$10,000
6	Warning Signs	2	EACH	$1,500	$3,000
7	Grade Stakes and Flagging	100	EACH	$1,000	$100,000
8	Marsh Creation (Cut)	4,841,228	CY	$3.00	$14,523,684
9	Marsh Nourishment (Cut)	522,722	CY	$3.00	$1,568,166
10	Jack and Bore Highway	160	LF	$1,000	$160,000
11	Jacking Pit	1	EA	$18,000	$18,000
12	Earthen Containment Dikes	13,500	LF	$15.00	$202,500
13	Earthen Terraces	25,000	LF	$15.00	$375,000
14	Terrace Plantings (6 rows, 5 ft-spacing, plugs)	30,000	EACH	$4.00	$120,000
15	Woven Geotextile	28,600	SY	$5.00	$143,000

ESTIMATED CONSTRUCTION COST **$20,602,400**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$25,753,000**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$500,000			
Geotechnical Investigation	$114,000			
Hydrologic Modeling	$0			
Data Collection (Bathy., Topo., & Mag. Survey)	$100,000			
Cultural Resources	$0			
NEPA Compliance	$0			
			SubTotal:	$714,000

USFWS

Supervision and Administration (includes all NEPA compliance) $200,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM, ecological review and engineering review) $130,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	$0		
Land Rights		$75,000		
			SubTotal:	$75,000

Monitoring

Monitoring Plan Development	$0			
Monitoring Protocal Cost *	$0			
			SubTotal:	$0

** Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Total Phase I Cost Estimate: **$1,122,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$25,753,000		
Oyster Issues (# of Leased Acres)	0 Leased AC	$0		
			SubTotal:	$25,753,000
Supervision and Inspection	321 days @	$933.00	per day	$299,493
Supervision and Administration				$100,000

State Costs

Supervision and Administration $75,000

Total Phase II Cost Estimate: **$26,227,493**

TOTAL ESTIMATED PROJECT FIRST COST **$27,349,493**

Lake Hermitage Marsh Creation
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections	**$4,900**
Annual Cost for Operations	**$0**
Preventive Maintenance	**$0**

Specific Intermittent Costs:

Construction Items	**Year 3**	**Year 14**
Contractor Mobilization/Demobilization	$100,000	$100,000
Floatation Access Channel (50% of original volume @$3.0/cy)	$243,735	$243,735
Rock Dike Maintenance Lift (replace 25%of Rock @ TY3 & 10%@TY14)	$319,395	$127,770
Warning Signs (replace 2 signs @TY14)	$0	$3,000
Subtotal	$663,130	$474,505
Subtotal w/ 25% contingency	***$828,913***	***$593,131***

State Costs

Engineering and Design Cost					$59,873	$43,921
Administrative Cost					$16,579	$11,863
Eng Survey						
	5 days	@	$1,556	per day	$7,780	$7,780
Inspection						
TY3	14 days	@	$933	per day	$13,062	
TY14	14 days	@	$933	per day		$13,062
			Subtotal		***$97,294***	***$76,626***

Federal Costs

Administrative Cost	$16,579	$11,863
Total	**$942,786**	**$681,620**

Annual Project Costs:

Corps Administration	**$700**	
Monitoring *	**$0**	*(Dependent upon type of project)*

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-07**	*(Minimum of one year to complete this phase)*
Const. Start	**May-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**May-09**	

Project:	Venice Ponds Marsh Creation and Crevasses	Date:	29-Jun-05	Revised:	21-Jul-05
Computed by:	Chris Monnerjahn	*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization and Demobilization	1	LS	$520,000	$520,000
2	Marsh Creation - Site 1	440,440	CY	$2.25	$990,990
3	Marsh Creation - Site 2	703,010	CY	$2.30	$1,616,923
4	Marsh Creation - Site 3	364,210	CY	$2.15	$783,052
5	Culverts (4-36" dia.)	400	LF	$105.00	$42,000
6	Gaps into Site 2	200	CY	$12.00	$2,400
7	Timber Access Restriction Structure at Site 2 Gaps	2	EA	$13,000	$26,000
8	Crevasse into Site 3	28,920	CY	$1.60	$46,272
9	Timber Access Restriction Structure into Site 3	1	LS	$31,000	$31,000
10	3 Crevasses into Site 4	48,660	CY	$1.70	$82,722
11	Clearing and Grubbing for Crevasse Sites	1	LS	$62,000	$62,000
12	Crevasse Enhancement/Bifurcation Dredging	81,560	CY	$1.60	$130,496

ESTIMATED CONSTRUCTION COST **$4,333,855**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$5,417,319**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$300,000
Geotechnical Investigation	$163,000
Hydrologic Modeling	$50,000
Data Collection - Surveys, gages	$100,000
Cultural Resources	$15,000
NEPA Compliance(including HTRW requirements)	$60,000

SubTotal: $688,000

EPA

Supervision and Administration $100,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM, ecological review and engineering review) $100,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	$0
Land Rights		$115,700

SubTotal: $115,700

Monitoring

Monitoring Plan Development	$0
Monitoring Protocal Cost *	$0

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

SubTotal: $0

Total Phase I Cost Estimate: **$1,007,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency $5,417,319

Real Estate: $306,000

SubTotal: $5,723,319

Supervision and Inspection 6 months @ $35,000.00 /month + $35k $245,000

Supervision and Administration EPA & USACE: $125,000

State Costs

Supervision and Administration $75,000

Total Phase II Cost Estimate: **$6,168,319**

TOTAL ESTIMATED PROJECT FIRST COST **$7,175,319**

Venice Ponds Marsh Creation and Crevasses
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections	**$4,900**
Annual Cost for Operations	
Preventive Maintenance	

Specific Intermittent Costs:

Construction Items	**Year 7**	**Year 14**
Mob & Demob	$75,000	$75,000
Crevasse Maintenance Dredging (25% of original cost)	$64,873	$64,873
Access Restriction Structure Replacement at Site 2 (2 each at $13,000 each)	$26,000	$26,000
Access Restriction Structure Replacement at Site 3 (1 each at $31,000 each)	$31,000	$31,000
Subtotal	$196,873	$196,873
Subtotal w/ 25% contingency	***$246,091***	***$246,091***

State Costs

Engineering and Design Cost					$19,514	$19,514
Administrative Cost					$4,922	$4,922
Eng Survey						
	5 days	@	$1,556	per day	$7,780	$7,780
Inspection						
	60 days	@	$933	per day	$55,980	$55,980
			Subtotal		***$88,196***	***$88,196***

Federal Costs

Administrative Cost	$4,922	$4,922
Total	**$339,209**	**$339,209**

Annual Project Costs:

Corps Administration	**$700**	
Monitoring *	**$0**	*(Dependent upon type of project)*

** Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-07**	*(Minimum of one year to complete this phase)*
Const. Start	**May-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**November-08**	

Project:	South Terrebonne Terracing	Date:	1-Jul-05	Revised:	21-Jul-05
Computed by: Chris Monnerjahn		*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$75,000	$75,000
2	Interior Terraces	95,340	LF	$16.95	$1,616,013
3	Exterior Terraces	18,000	LF	$24.50	$441,000
4	Plantings (6 rows/terrace @ 7 ft OC)	97,236	EA	$4.00	$388,944

ESTIMATED CONSTRUCTION COST **$2,520,957**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$3,151,196**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$300,000
Geotechnical Investigation	$394,000
Terrace Analyses	$20,000
Data Collection	$60,000
HTRW Preliminary Assessment	$10,000
Cultural Resources	$10,000
NEPA Compliance	$30,000

SubTotal: $824,000

NMFS

Supervision and Administration $63,024

Corps Administration $3,000

State Costs

Supervision and Administration (including PM, ecological review and engineering review) $100,000

Easements and Land Rights

Oyster Issues:	20 Leases	$59,000	
Land Rights:		$115,700	
		SubTotal:	$174,700

Monitoring

Monitoring Plan Development	$0
Monitoring Protocal Cost *	$0

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

SubTotal: $0

Total Phase I Cost Estimate: **$1,165,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$3,151,196	
Oyster Issues (# of Leased Acres)	719 Leased AC	$719,000	
		SubTotal:	$3,870,196
Supervision and Inspection	7 months @	$25,000.00 /month + $35k	$210,000
Supervision and Administration		NMFS & USACE:	$125,000

State Costs

Supervision and Administration $75,000

Total Phase II Cost Estimate: **$4,280,196**

TOTAL ESTIMATED PROJECT FIRST COST **$5,445,196**

South Terrebonne Terracing
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections	**$4,900**
Annual Cost for Operations	
Preventive Maintenance	

Specific Intermittent Costs:

Construction Items	**Year 14**
Mob & Demob	$50,000
Terracing Maintenance (25% of original cost)	$514,253
Subtotal	$564,253
Subtotal w/ 25% contingency	***$705,317***

State Costs

Engineering and Design Cost				$51,557
Administrative Cost				$14,107
Eng Survey				
5 days	@	$1,556	per day	$7,780
Inspection				
120 days	@	$933	per day	$111,960
Subtotal				***$185,404***

Federal Costs

Administrative Cost	$14,107
Total	**$904,828**

Annual Project Costs:

Corps Administration	**$700**	
Monitoring *	**$0**	*(Dependent upon type of project)*

** Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-07**	*(Minimum of one year to complete this phase)*
Const. Start	**May-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**December-08**	

Project:	Bird Island/SW Pass SP &MC	Date:	7-Jul-05	Revised:	7-Jul-05
Computed by: John Jurgensen & Loland Broussard		*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$750,000	$750,000
2	Rock Riprap	100,111	TONS	$30	$3,003,330
3	Geotextile	73,178	SY	$5.00	$365,890
4	Floatation Channel - SW Point	189,638	CY	$4.00	$758,552
5	Floatation Channel - Lighthouse Point	155,648	CY	$2.50	$389,120
6	Temporary Navaids	19	Each	$1,000	$19,000
7	Settlement Plates	16	Each	$1,000	$16,000
8	Hydraulic Dredging	625,005	CY	$3.00	$1,875,015
9	Containment Dikes	38,370	CY	$2.50	$95,925
10	Interior Channels	9,447	CY	$2.00	$18,894
11	Vegetative Plantings	14	Acres	$5,000	$70,000

ESTIMATED CONSTRUCTION COST **$7,361,726**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$9,202,158**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$564,903
Geotechnical Investigation	$150,000
Hydrologic Modeling	$0
Data Collection	$122,000
Cultural Resources	$10,000
NEPA Compliance	$30,000

SubTotal: $876,903

	NRCS	Actual
Supervision and Administration	$184,043	$184,043
Corps Administration		$3,000

State Costs

Supervision and Administration (including PM, ecological review and engineering review) $184,043

Easements and Land Rights

Oyster Issues:	4 Leases	$20,000
Land Rights:		$100,000

SubTotal: $120,000

Monitoring

Monitoring Plan Development	$0
Monitoring Protocal Cost *	$0

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

SubTotal: $0

Total Phase I Cost Estimate: **$1,368,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$9,202,158		
Oyster Issues (# of Leased Acres)	205 Leased AC	$205,000		
			SubTotal:	$9,407,158
Supervision and Inspection	197 days @	$1,867.00	per day	$367,799
Supervision and Administration				$184,043

State Costs

Supervision and Administration $184,043

Total Phase II Cost Estimate: **$10,143,043**

TOTAL ESTIMATED PROJECT FIRST COST **$11,511,043**

Bird Island/SW Pass SP &MC
Operation & Maintenance and Monitoring

Project Priority List 15
June 30, 2005
Revised: *July 7, 2005*

O&M Cost Considerations:

Annual Costs:

Annual Inspections	**$4,900**
Annual Cost for Operations	**$0**
Preventive Maintenance	**$0**

Specific Intermittent Costs:

Construction Items	**Year 3**	**Year 5**	**Year 14**
Contractor Mobilization/Demobilization	$100,000		$100,000
Foreshore Rock Dike (25% replace @ TY3 / 10% Replace @ TY14)	$750,840		$300,330
Access Channel (50% of original @ $3.50/cy)	$604,251		$604,251
Temporary Navaids (100% of original @ TY3 & TY14)	$19,000		$19,000
Vegetative Plantings (30% replacement @ TY5)		$21,000	
Subtotal	$1,474,091	$21,000	$1,023,581
Subtotal w/ 25% contingency	***$1,842,614***	***$26,250***	***$1,279,476***

State Costs

Engineering and Design Cost					$125,724	$2,539	$89,565
Administrative Cost					$36,853	$788	$25,590
Eng Survey							
	3 days	@	$3,111	per day	$9,333		$9,333
Inspection							
	31 days	@	$1,867	per day	$57,877		
	2 days	@	$1,867	per day		$3,734	
	19 days	@	$1,867	per day			$35,473
Subtotal					***$229,787***	***$7,061***	***$159,961***

Federal Costs

Administrative Cost					$36,853	$788	$25,590
Total					**$2,109,254**	**$34,099**	**$1,465,027**

Annual Project Costs:

Corps Administration	**$700**	
Monitoring *	**$0**	*(Dependent upon type of project)*

** Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Construction Schedule:

Planning & Design Start	**March-06**	
Planning & Design End	**March-08**	*(Minimum of one year to complete this phase)*
Const. Start	**January-09**	*(Requires 4 months for contracting and advertising)*
Const. End	**August-09**	

Project:	South Pecan Island Freshwater Introduction	Date:	29-Jun-05	Revised:	20-Jul-05
Computed by:	Patrick Williams	*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$150,000	$150,000
2	Channel Excavation (north of HWY 82)	24,129	CY	$3.00	$72,387
3	Channel Excavation (south of HWY 82)	6,272	CY	$2.00	$12,544
4	Clearing and Grubbing	1	LS	$5,000	$5,000
5	Road capping/crushed limestone	2,400	TONS	$40.00	$96,000
6	Tie-in S. White Lake foreshore dike	3,045	TONS	$80.00	$243,600
7	HWY 82 structure	1	LS	$439,160	$439,160
8	Rock Armoring at HWY 82 Structure	3,400	TONS	$40.00	$136,000
9	Geotextile Fabric	5,800	SY	$5.00	$29,000
10	Pump Relocation (Bull Pasture)	1	LS	$100,000	$100,000
11	Pump (new - Green Tract)	1	LS	$200,000	$200,000
12	Bridge (to new pump)	1	LS	$200,000	$200,000
13	Pipe Drop/Riser (24", schedule 40 PVC)	360	LF	$42.00	$15,120
14	Seeding	10	AC	$500	$5,000

ESTIMATED CONSTRUCTION COST **$1,703,811**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$2,129,764**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$143,873			
Geotechnical Investigation (road, channel, structure)	$60,000			
Hydrologic Modeling (2D)	$300,000			
Data Collection (surveys and gages)	$200,000			
Cultural Resources	$10,000			
NEPA Compliance	$30,000			
			SubTotal:	$743,873

NMFS

Supervision and Administration $75,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM, ecological review and engineering review) $100,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	$0		
Land Rights		$100,000		
			SubTotal:	$100,000

Monitoring

Monitoring Plan Development	$0			
Monitoring Protocal Cost *	$0			
			SubTotal:	$0

** Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Total Phase I Cost Estimate: **$1,022,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$2,129,764		
Oyster Issues (# of Leased Acres)	0 Leased AC	$0		
			SubTotal:	$2,129,764
Supervision and Inspection	120 days @	$933.00	per day	$111,960
Supervision and Administration				$90,000

State Costs

Supervision and Administration $75,000

Total Phase II Cost Estimate: **$2,406,724**

TOTAL ESTIMATED PROJECT FIRST COST **$3,428,724**

South Pecan Island Freshwater Introduction
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections	**$4,900**
Annual Cost for Operations (hyacinth removal 3 times/yr)	**$2,000**
Preventive Maintenance	

Specific Intermittent Costs:

Construction Items	**Year 7**	**Year 14**
Contractor Mobilization/Demobilization	$35,000	$35,000
Dredge conveyance channel (30% of original volume)	$22,000	$22,000
Replace flapgates		$50,000
Subtotal	$57,000	$107,000
Subtotal w/ 25% contingency	***$71,250***	***$133,750***

State Costs

Engineering and Design Cost				$6,277	$11,154
Administrative Cost				$2,138	$2,675
Eng Survey					
	3 days	@	$1,556 per day	$4,668	$4,668
Inspection					
	30 days	@	$933 per day	$27,990	$27,990
			Subtotal	***$41,073***	***$46,487***

Federal Costs

Administrative Cost	$2,138	$2,675
Total	**$114,461**	**$182,912**

Annual Project Costs:

Corps Administration	**$700**	
Monitoring *	**$0**	*(Dependent upon type of project)*

** Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-08**	*(Minimum of one year to complete this phase)*
Const. Start	**May-09**	*(Requires 4 months for contracting and advertising)*
Const. End	**September-09**	

Project:	Enhancement of Barrier Island Vegetation Demo	Date:	22-Jun-05	Revised:	21-Jul-05
Computed by: Patricia A. Taylor, P.E.		*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	mobilization - three boats, two 4-wheelers	4	LS	$25,000	$100,000
2	supplies/equipment - sprayers, tank, product, seeds	1	LS	$56,000	$56,000
3	labor (30 days, 16 are field days)	1	LS	$22,000	$22,000
4	travel costs (4 trips/4 people/4 days each)	64	EA	$250	$16,000
5					$0
6					$0
7					$0
8					$0

ESTIMATED CONSTRUCTION COST **$194,000**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$242,500**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$100,000	
Geotechnical Investigation	$0	not required, using existing project
Sampling/Analysis, pre construction	$25,000	initial biomass & soil sampling
Data Collection, recon trip, document existing cond.	$35,000	5 day trip incl boat, supplies and report
Cultural Resources	$0	not required, using existing project
NEPA Compliance	$30,000	
Monitoring Plan Development	$35,000	

SubTotal: $225,000

Actual

Supervision and Administration $25,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM and engineering review) $25,000

Easements and Land Rights

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

SubTotal: $20,000

Monitoring

Monitoring Plan Review	$5,000
Monitoring Protocol Cost *	$0

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

SubTotal: $5,000

Total Phase I Cost Estimate: **$303,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency $242,500

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

SubTotal: $242,500

Supervision and Inspection 30 days @ $933.00 per day $27,990

Supervision and Administration $25,000

State Costs

Supervision and Administration $25,000

Total Phase II Cost Estimate: **$320,490**

TOTAL ESTIMATED PROJECT FIRST COST **$623,490**

Enhancement of Barrier Island Vegetation
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

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

Specific Intermittent Costs:

Construction Items	**Year 5**	**Year 10**	**Year 15**
	$0		
	$0		
Subtotal	$0	$0	$0
Subtotal w/ 25% contingency	***$0***	***$0***	***$0***

State Costs

Engineering and Design Cost				$0	$0	$0
Administrative Cost				$0	$0	$0
Eng Survey						
	0 days	@	$1,556 per day	$0	$0	$0
Inspection						
	0 days	@	$933 per day	$0	$0	$0
			Subtotal	***$0***	***$0***	***$0***

Federal Costs

Administrative Cost				$0	$0	$0
			Total	**$0**	**$0**	**$0**

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Corps Administration	**$700**	**$700**	**$0**	**$0**	**$0**
Monitoring and Reporting*	**$72,751**	**$87,751**	**$0**	**$0**	**$0**

** See the proposed monitoring activities and plan below.*

Monitoring will be performed in partnership with a University. A two-year monitoring program, post-construction, is proposed. Reference areas will be established. Quarterly site visits (two day visits) for two years plus an additional six site visits during the two year demonstration period as needed based upon site and climatological conditions.
7 two-day visits @ $6,393 = $44,751 annual inspection costs (two years), 7 rounds of analysis @ $4,000 each round/year = $72,751 plus $15,000 closeout report at the end of the second and final monitoring year.
Treatments will be applied to a plot in a replicated framework, and a statistical analysis of results performed. Size of plot is anticipated to be approximately 5 acres, actual size is dependent upon site and vegetation.
Monitoring site visits will include visual inspection, plant/soil sampling, and comparison to reference areas in order to develop recommendations for future planting projects.
This project is unlike other construction projects and the minimum time requirements for typical design and construction phases do not apply. Once funds are received and an agreement is in place with a university, this project can begin.

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-06**	*(Minimum of one year to complete this phase)*
Const. Start	**March-07**	*(Requires 4 months for contracting and advertising)*
Const. End	**June-07**	

Project:	Barrier Island Sand Blowing Demo	Date:	1-Jul-05	Revised:	15-Aug-05
Computed by:	Chris Monnerjahn, USACE	*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization and Demobilization	1	LS	$94,000	$94,000
2	Sand (Loading, Hauling, Placement)	1	LS	$719,800.00	$719,800
3					$0
4					$0

ESTIMATED CONSTRUCTION COST **$813,800**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$1,017,250**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$150,000		
Geotechnical Investigation			
Logistical Study	$50,000		
Data Collection - Surveys	$25,000		
Cultural Resources	$15,000		
NEPA Compliance	$60,000		
Monitoring Plan Development	$25,000		
		SubTotal:	$325,000

		Actual
Supervision and Administration		$75,000
Corps Administration		$3,000

State Costs

Supervision and Administration (including PM, and engineering reviews, but NO ecological review)				$50,000
Easements and Land Rights				
Oyster Issues (# of Leases)	0 Leases	$0		
Land Rights		$51,000		
			SubTotal:	$51,000
Monitoring				
Monitoring Plan Review	$5,000			
Monitoring Protocal Cost *	$0			
			SubTotal:	$5,000

** Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Total Phase I Cost Estimate: **$509,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$1,017,250		
	Real Estate:	$25,000		
			SubTotal:	$1,042,250
Supervision and Inspection	1 months @	$25,000.00	per month	$45,000
Supervision and Administration				$75,000

State Costs

Supervision and Administration				$25,000
		Total Phase II Cost Estimate:		**$1,187,250**

TOTAL ESTIMATED PROJECT FIRST COST **$1,696,250**

Barrier Island Sand Blowing Demo
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections
Annual Cost for Operations
Preventive Maintenance

Specific Intermittent Costs:

Construction Items					**Year 5**	**Year 10**	**Year 15**
			Subtotal		$0	$0	$0
			Subtotal w/ 25% contingency		***$0***	***$0***	***$0***
State Costs							
Engineering and Design Cost					$0	$0	$0
Administrative Cost					$0	$0	$0
Eng Survey							
	0 days	@	$1,556	per day	$0	$0	$0
Inspection							
	0 days	@	$933	per day	$0	$0	$0
			Subtotal		***$0***	***$0***	***$0***
Federal Costs							
Administrative Cost					$0	$0	$0
				Total	**$0**	**$0**	**$0**

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Corps Administration	**$700**	**$700**	**$700**	**$0**	**$0**
Monitoring and Reporting*	**$15,000**	**$15,000**	**$30,000**	**$0**	**$0**

** See the proposed monitoring activities and plan below.*

Monitoring Plan: (includes monies for annual surveys & $15,000 for final report)

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-07**	*(Minimum of one year to complete this phase)*
Const. Start	**March-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**May-08**	

Project:	Nourishment of Perm. Flooded Cypress Swamps Demo	Date:	8-Aug-05	Revised:	8-Aug-05
Computed by: Robert Dubois, USFWS		*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$100,000	$100,000
2	Dredging	130,680	CY	$2.50	$326,700
3	Containment Dikes	36,575	CY	$2.00	$73,150
4	Plantings	1	LS	$50,000	$50,000
5					$0
6					$0
7					$0
8					$0

ESTIMATED CONSTRUCTION COST **$549,850**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$687,313**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$50,337			
Geotechnical Investigation	$51,000			
Hydrologic Modeling	$0			
Data Collection	$50,000			
Cultural Resources (included in Fed. S&A)	$0			
NEPA Compliance (included in Fed. S&A)	$0			
Monitoring Plan Dev. (included in Monitoring Plan)	$25,000			
			SubTotal:	$176,337

	Actual
Supervision and Administration	$65,000
Corps Administration	$3,000

State Costs

Supervision and Administration (including PM and engineering review)				$25,000
Easements and Land Rights				
Oyster Issues (# of Leases)	0 Leases	$0		
Land Rights		$50,000		
			SubTotal:	$50,000
Monitoring				
Monitoring Plan Review	$5,000			
Monitoring Protocal Cost *				
			SubTotal:	$5,000

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Total Phase I Cost Estimate: **$324,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$687,313		
Oyster Issues (# of Leased Acres)	0 Leased AC	$0		
			SubTotal:	$687,313
Supervision and Inspection	60 days @	$933.00	per day	$55,980
Supervision and Administration				$25,000

State Costs

Supervision and Administration	$25,000

Total Phase II Cost Estimate: **$793,293**

TOTAL ESTIMATED PROJECT FIRST COST **$1,117,293**

Nourishment of Perm. Flooded Cypress Swamps
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections
Annual Cost for Operations
Preventive Maintenance

Specific Intermittent Costs:

Construction Items				**Year 1**	**Year 10**	**Year 15**
Contractor Mobilization/Demobilization				$10,000		
Degrade Dikes				$10,000		
			Subtotal	$20,000	$0	$0
			Subtotal w/ 25% contingency	***$25,000***	***$0***	***$0***
State Costs						
Engineering and Design Cost					$0	$0
Administrative Cost					$0	$0
Eng Survey						
	0 days	@	$1,556 per day	$0	$0	$0
Inspection						
	10 days	@	$933 per day	$9,330	$0	$0
			Subtotal	***$9,330***	***$0***	***$0***
Federal Costs						
Administrative Cost				$750	$0	$0
			Total	**$35,080**	**$0**	**$0**

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Corps Administration	**$700**	**$700**	**$700**	**$700**	**$700**
Monitoring and Reporting*	**$75,000**	**$40,000**	**$40,000**	**$75,000**	**$20,000**

** See the proposed monitoring activities and plan below.*

Monitoring Plan:
Within the disposal sites and control sites the selected trees would be cored to observe their growth history also, existing soil data would be collected (i.e., redox, salinity, etc.). Annual site visits would be made after the deposition of material and tree survival, tree growth (newly planted trees), and soil data would be collected. At year four, selected mature cypress trees would be cored and ring analysis would be preformed to establish if there were any effects of the soil deposition. Data would also be collected on the growth and survivability of the newly planted trees.

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**March-07**	*(Minimum of one year to complete this phase)*
Const. Start	**March-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**June-08**	

Project:	Dredge Containment Demo	Date:	8-Jul-05	Revised:	15-Aug-05
Computed by: Jurgensen		*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$100,000	$100,000
2	Marsh Creation	96,800	CY	$2.50	$242,000
3	Containment System	1	LS	$79,200	$79,200
4	Removal of Containment System	1	LS	$10,000	$10,000
					$0
					$0
					$0
					$0

ESTIMATED CONSTRUCTION COST **$431,200**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$539,000**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$40,202
Geotechnical Investigation	$45,000
Hydrologic Modeling	$0
Data Collection	$100,000
Cultural Resources	$10,000
NEPA Compliance	$30,000
Monitoring Plan Development	$20,000

SubTotal: $245,202

Actual

Supervision and Administration $25,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM and engineering review) $25,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	$0	
Land Rights		$25,000	

SubTotal: $25,000

Monitoring

Monitoring Plan Review	$5,000
Monitoring Protocal Cost *	$0

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

SubTotal: $5,000

Total Phase I Cost Estimate: **$325,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$539,000		
Oyster Issues (# of Leased Acres)	0 Leased AC	$0		

SubTotal: $539,000

Supervision and Inspection	35 days @	$933.00	per day	$32,655
Supervision and Administration				$25,000

State Costs

Supervision and Administration $25,000

Total Phase II Cost Estimate: **$621,655**

TOTAL ESTIMATED PROJECT FIRST COST **$946,655**

Dredge Containment Demo
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections
Annual Cost for Operations
Preventive Maintenance

Specific Intermittent Costs:

Construction Items					**Year 5**
					$0
			Subtotal		$0
			Subtotal w/ 25% contingency		***$0***
State Costs					
Engineering and Design Cost					$0
Administrative Cost					$0
Eng Survey					
	0 days	@	$1,556	per day	$0
Inspection					
	0 days	@	$933	per day	$0
			Subtotal		***$0***
Federal Costs					
Administrative Cost					$0
				Total	**$0**

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**
Corps Administration	**$700**	**$700**	**$700**
Monitoring and Reporting*	**$5,751**	**$5,751**	**$20,751**

** See the proposed monitoring activities and plan below.*

Monitoring Plan:

Use monitoring costs for Terraces and Vegetation type projects - $5,571 per year.
Include $15,000 in YR 3 for Close-Out Report.

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-07**	*(Minimum of one year to complete this phase)*
Const. Start	**March-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**May-08**	

Project:	Evaluation of Bioengineered Reef Breakwaters Demo	Date:	8-Aug-05	Revised:	15-Aug-05
Computed by:	John Foret, NMFS	*Project Priority List 15*			

Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	$60,000	$60,000
2	Var. Density Concrete(Forms/Hardware)-Delivered on sit	40	CY	$162	$6,480
3	Anchor system	7	Each	$1,500	$10,500
4	Navigation Aids	2	Each	$2,000	$4,000

ESTIMATED CONSTRUCTION COST **$80,980**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$101,225**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$75,000			
Geotechnical Investigation	$35,000			
Hydrologic Modeling	$0			
Data Collection (Phase I)	$42,000			
Cultural Resources	$10,000			
NEPA Compliance	$20,000			
Monitoring Plan Development	$25,000			
			SubTotal:	$207,000

Actual

Supervision and Administration $15,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM and engineering review) $25,000

Easements and Land Rights

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

Monitoring

Monitoring Plan Review	$5,000			
Monitoring Protocal Cost *	$0			
			SubTotal:	$5,000

** Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Total Phase I Cost Estimate: **$270,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$101,225		
Oyster Issues (# of Leased Acres)	0 Leased AC	$0		
			SubTotal:	$101,225
Supervision and Inspection	10 days @	$933.00	per day	$9,330
Supervision and Administration				$15,000

State Costs

Supervision and Administration $25,000

Total Phase II Cost Estimate: **$150,555**

TOTAL ESTIMATED PROJECT FIRST COST **$420,555**

Evaluation of Bioengineered Reef Breakwaters Demo
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections
Annual Cost for Operations
Preventive Maintenance

Specific Intermittent Costs:

Construction Items	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Mobilization/Demobilization	$0	$120,000	$0	$0	$0
Var. Density Concrete (1,600 cy @$162 per) plus Forms/Hardware-Delivered on site	$0	$259,200	$0	$0	$0
Anchor system (30 @ $1500)	$0	$45,000	$0	$0	$0
Navigation Aids (2 @ $2000)	$0	$4,000	$0	$0	$0
Subtotal	$0	$428,200	$0	$0	$0
Subtotal w/ 25% contingency	***$0***	***$535,250***	***$0***	***$0***	***$0***
State Costs					
Engineering and Design Cost	$0	$32,505	$0	$0	$0
Administrative Cost	$0	$17,128	$0	$0	$0
Eng Survey					
3 days @ $1,556 per day	$0	$4,668	$0	$0	$0
Inspection					
50 days @ $933 per day	$0	$46,650	$0	$0	$0
Subtotal	***$0***	***$100,951***	***$0***	$0	$0
Federal Costs					
Administrative Cost	$0	$10,705	$0		
Total	**$0**	**$111,656**	**$0**		

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Corps Administration	**$700**	**$700**	**$700**	**$700**	**$700**
Monitoring and Reporting*	**$63,000**	**$27,000**	**$27,000**	**$27,000**	**$47,000**

** See the proposed monitoring activities and plan below.*

Monitoring Components:

Surveying (6 Trips, 7 surveys each trip)

A total of 7 transects will be taken for each section and should be surveyed pre-construction, post-construction, and the following years at the same time of year for a total of 6 surveys. Transects should be surveyed in the center and ends of each section. Also, each section will have 3 transects at 100 ft, 300 ft, and 500 ft beyond each side of the section to evaluate updrift and downdrift impacts.

Aerial Photography (5 trips, 1 per year)

Aerial photography will provide a view of the effectiveness of the structures ability to reduce erosion rates found in the area of deployment.

Ground Photography (6 trips)

Ground-level photography will be collected during each survey. The photography will help document shoreline change, integrity of the structures, wave attenuation, and other aspects of the project.

Wave Gauging (4 gages, 5 trips)

Four wave gauges will be installed to measure wave attenuation at the bioengineered breakwater. One wave gauge will be installed offshore of the structures to collect the incident waves. A gauge will also be located leeward of the section. A third and fourth gauge will be located to the side of the section on the same contour as the two in the lee of the structures to determine the non-affected incident wave.

Tide Gauge (2 gages, 5 trips)

A tide gauge will be installed and operated concurrent with the offshore wave gauge to measure water surface elevations.

Settlement Plates (5 plates)

Settlement plates will be installed to measure the magnitude and rate of settlement of each structure. They will also determine any rotation of the individual units. The settlement plates will be installed during construction and surveyed by the contractor. Settlement of the plates will be measured during each monitoring survey over the next 5 years.

Biological Analysis (5 trips)

During each monitoring period, a biological assessment will be conducted. The growth and health of the oysters will be measured and statistically compared. Samples of the oysters can be taken to the lab for gut content testing as well as other tests. Water temperature and salinity will also be taken at each visit. This data can be compared to nearby gages to analyze trends.

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-07**	*(Minimum of one year to complete this phase)*
Const. Start	**March-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**September-08**	

Project:	Thin Layer Nourishment Demo	Date:	12-Jul-05	Revised:	25-Jul-05
Computed by:	Rachel Sweeney, NMFS	*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$100,000	$100,000
2	Marsh Nourishment	60,000	CY	$3.50	$210,000

ESTIMATED CONSTRUCTION COST **$310,000**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$387,500**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$75,000
Geotechnical Investigation (design geotech and	$60,000
Hydrologic Modeling	$0
Data Collection (Pre-construction surveys,	$100,000
Cultural Resources	$10,000
NEPA Compliance (covered in Federal S&A)	$0
Monitoring Plan Development	$20,000

SubTotal: $265,000

Actual

Supervision and Administration $25,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM and engineering review) $25,000

Easements and Land Rights

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

SubTotal: $20,000

Monitoring

Plan review $5,000

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

SubTotal: $5,000

Total Phase I Cost Estimate: **$343,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency $387,500

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

SubTotal: $387,500

Supervision and Inspection 30 days @ $933.00 per day $27,990

Supervision and Administration $25,000

State Costs

Supervision and Administration $25,000

Total Phase II Cost Estimate: **$465,490**

TOTAL ESTIMATED PROJECT FIRST COST **$808,490**

Thin Layer Nourishment Demo
Monitoring

Project Priority List 15

Annual Demonstration Project Monitoring Costs:

	Year 1	Year 2	Year 3	Year 4	Year 5
Corps Administration	**$700**	**$700**	**$700**	**$700**	**$700**
Monitoring and Reporting*	**$100,000**	**$0**	**$100,000**	**$0**	**$100,000**

* *See the proposed monitoring activities and plan below.*

Physical and Biological Monitoring Plan: Years 1, 3 and 5. Performance assessments will be conducted prior to; during; and after construction to determine the relationship between slurry concentraion, geographical extent of influence, and level of benefits. Guidance regarding project design, construction techniques and construction implementation will be developed. Performance assessments will include aerial photography, elevational surveys, geotechnical evaluations, settlement, detailed physico-chemical analyses of the soil environment, hydrologic monitoring and quantitative assessments of vegetation recruitment and change over time. A comprehensive assessment of the implications of this sediment enrichment to wetland structure and chancge over time requires a multi-year implementation and monitoring program so that temporal changes in wetland structure and species composition can be identified. Consequently, this demonstration project is designed as a five year project.

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-07**	*(Minimum of one year to complete this phase)*
Const. Start	**March-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**May-08**	

Project:	Floating Wave Attenuator Demo	Date:	21-Jul-05	Revised:	15-Aug-05
Computed by: Patricia A. Taylor, P.E.		*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Initial installation cost	1,500	LF	$400	$600,000
2					$0
3					$0
4					$0

ESTIMATED CONSTRUCTION COST **$600,000**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$750,000**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$100,000
Geotechnical Investigation	$35,000
Hydrologic Modeling	$0
Data Collection	$30,000
Cultural Resources	$10,000
NEPA Compliance	$30,000
Monitoring Plan Development	$25,000

SubTotal: $230,000

Actual

Supervision and Administration $25,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM and engineering review) $25,000

Easements and Land Rights

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

Monitoring

Monitoring Plan Review	$5,000
Monitoring Protocal Cost *	$0

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

SubTotal: $5,000

Total Phase I Cost Estimate: **$308,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$750,000		
Oyster Issues (# of Leased Acres)	0 Leased AC	$0		
			SubTotal:	$750,000
Supervision and Inspection	20 days @	$933.00	per day	$18,660
Supervision and Administration				$25,000

State Costs

Supervision and Administration $25,000

Total Phase II Cost Estimate: **$818,660**

TOTAL ESTIMATED PROJECT FIRST COST **$1,126,660**

Floating Wave Attenuator Demo
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

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

Specific Intermittent Costs:

Construction Items	**Year 5**	**Year 10**	**Year 15**
	$0	$0	$0
Subtotal	$0	$0	$0
Subtotal w/ 25% contingency	***$0***	***$0***	***$0***
State Costs			
Engineering and Design Cost		$0	$0
Administrative Cost	$0	$0	$0
Eng Survey			
days @ $1,556 per day	$0	$0	$0
Inspection			
days @ $933 per day	$0	$0	$0
Subtotal	***$0***	***$0***	***$0***
Federal Costs			
Administrative Cost	$0	$0	$0
Total	**$0**	**$0**	**$0**

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Corps Administration	**$700**	**$700**	**$700**	**$700**	**$700**
Monitoring and Reporting*	**$147,404**	**$147,404**	**$162,404**	**$7,404**	**$22,404**

** See the proposed monitoring activities and plan below.*

Each test section will be visually inspected once a year during five year test period for structural integrity and sediment accretion measurements taken. The shoreline erosion rate will also be monitored during the five-year demo period and compared to a control section. Wave monitoring will be conducted for three years, seven units at $20,000 per unit (one unit on either side of each test section plus one control unit) per year. EPA recommends State perform monitoring in partnership with EPA
Annual project monitoring costs (shoreline erosion) based upon a one-day field trip ($4,915) plus one day State engineering survey ($1,556) and inspection ($933).
Year three includes $15,000 for a report on the wave monitoring and year five includes $15,000 for closeout report.

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-07**	*(Minimum of one year to complete this phase)*
Const. Start	**March-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**July-08**	

Project:	HESCO Concertainers Demo	Date:	12-Jul-05	Revised:	1-Aug-05
Computed by: Greg Miller, USACE		*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$50,000.00	$50,000
	Test Section #1 (low wave energy)				
2	HESCO Concertainers(installed)	204	Unit	$430.00	$87,720
3	Dredging - fill material	1,020	CY	$3.00	$3,060
	Test Section #2 (medium wave energy)				
4	HESCO Concertainers(installed)	204	Unit	$430.00	$87,720
5	Dredging - fill material	1,020	CY	$3.00	$3,060
	Test Section #3 (high wave energy)				
6	HESCO Concertainers(installed)	204	Unit	$430.00	$87,720
7	Dredging - fill material	1,020	CY	$3.00	$3,060

ESTIMATED CONSTRUCTION COST **$322,340**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$402,925**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$100,000
Geotechnical Investigation	$30,000
Hydrologic Modeling	$0
Data Collection	$40,000
Cultural Resources	$10,000
NEPA Compliance	$30,000
Monitoring Plan Development	$25,000

SubTotal: $235,000

Actual

Supervision and Administration $50,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM and engineering review) $25,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	$0
Land Rights		$50,000

SubTotal: $50,000

Monitoring

Monitoring Plan Review	$5,000
Monitoring Protocal Cost *	$0

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

SubTotal: $5,000

Total Phase I Cost Estimate: **$368,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency $402,925

Real Estate: $25,000

SubTotal: $427,925

Supervision and Inspection 45 days @ $933.00 per day $41,985

Supervision and Administration $50,000

State Costs

Supervision and Administration $25,000

Total Phase II Cost Estimate: **$544,910**

TOTAL ESTIMATED PROJECT FIRST COST **$912,910**

HESCO Concertainers Demonstration
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

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

Specific Intermittent Costs:

Construction Items	**Year 5**	**Year 10**	**Year 15**
Subtotal	$0	$0	$0
Subtotal w/ 25% contingency	***$0***	***$0***	***$0***
State Costs			
Engineering and Design Cost	$0	$0	$0
Administrative Cost	$0	$0	$0
Eng Survey			
0 days @ $1,556 per day	$0	$0	$0
Inspection			
0 days @ $933 per day	$0	$0	$0
Subtotal	***$0***	***$0***	***$0***
Federal Costs			
Administrative Cost	$0	$0	$0
Total	**$0**	**$0**	**$0**

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Corps Administration	**$700**	**$700**	**$700**	**$700**	**$700**
Monitoring and Reporting*	**$190,000**	**$10,000**	**$10,000**	**$190,000**	**$25,000**

** See the proposed monitoring activities and plan below.*

Monitoring Plan: The demo should monitor both engineering performance of the test sections and the performance of the structures in preventing shoreline erosion. In year 1 and in year 4, waves will be monitored behind the test sections.

Construction Schedule:

Planning & Design Start	##########	
Planning & Design End	##########	*(Minimum of one year to complete this phase)*
Const. Start	**March-07**	*(Requires 4 months for contracting and advertising)*
Const. End	**May-07**	

Project:	Lake Pontchartrain SP and Habitat Enhancement Dem	Date:	2-Aug-05	Revised:	15-Aug-05
Computed by:	Chris Monnerjahn, USACE	*Project Priority List 15*			

Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Mobilization/Demobilization	1	LS	$100,000	$100,000
2	Reefball Breakwaters	1,800	Each	$200	$360,000
3	Sand-Filled Geobag Breakwaters	962	Bags	$182	$175,000
4	HESCO Concertainer Breakwaters	612	Unit	$445	$272,340
5	Signs	20	Each	$1,000	$20,000
6					$0

ESTIMATED CONSTRUCTION COST **$927,340**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$1,159,175**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$150,000			
Geotechnical Investigation	$50,000			
Hydrologic Modeling				
Data Collection	$50,000			
Cultural Resources	$10,000			
NEPA Compliance	$50,000			
Monitoring Plan Development	$25,000			
			SubTotal:	$335,000

	Actual
Supervision and Administration	$75,000
Corps Administration	$3,000

State Costs

Supervision and Administration (including PM, engineering review and NO ecological review)				$50,000
Easements and Land Rights				
	Oyster Issues (# of Leases)	0 Leases	$0	
	Land Rights		$50,000	
			SubTotal:	$50,000
Monitoring				
Monitoring Plan Review		$5,000		
Monitoring Protocal Cost *		$0		
			SubTotal:	$5,000

** Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Total Phase I Cost Estimate: **$518,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		########		
	Landrights	$25,000		
			SubTotal:	$1,184,175
Supervision and Inspection	120 days @	$933.00	per day	$111,960
Supervision and Administration				$75,000

State Costs

Supervision and Administration	$50,000

Total Phase II Cost Estimate: **$1,421,135**

TOTAL ESTIMATED PROJECT FIRST COST **$1,939,135**

Lake Pontchartrain SP and Habitat Enhancement Demo
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections
Annual Cost for Operations
Preventive Maintenance

Specific Intermittent Costs:

Construction Items					**Year 5**	**Year 10**	**Year 15**
			Subtotal		$0	$0	$0
			Subtotal w/ 25% contingency		***$0***	***$0***	***$0***
State Costs							
Engineering and Design Cost					$0	$0	$0
Administrative Cost					$0	$0	$0
Eng Survey							
	0 days	@	$1,556	per day	$0	$0	$0
Inspection							
	0 days	@	$933	per day	$0	$0	$0
			Subtotal		***$0***	***$0***	***$0***
Federal Costs							
Administrative Cost					$0	$0	$0
				Total	**$0**	**$0**	**$0**

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Corps Administration	**$700**	**$700**	**$700**	**$700**	**$700**
Monitoring and Reporting*	**$190,000**	**$10,000**	**$10,000**	**$190,000**	**$25,000**

** See the proposed monitoring activities and plan below.*

Monitoring Plan: The demo should monitor both engineering performance of the test sections and the performance of the structures in preventing shoreline erosion. Includes wave monitoring in years 1 and 4

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-06**	*(Minimum of one year to complete this phase)*
Const. Start	**March-07**	*(Requires 4 months for contracting and advertising)*
Const. End	**August-07**	

Project:	Backfilling Canals to Maximize Hydrologic Rest. Demo	Date:	29-Jun-05	Revised:	18-Jul-05
Computed by	Kenneth Teague, EPA	*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$50,000	$50,000
2	Spoil Bank Degrading	350,000	CY	$2.00	$700,000
3					$0
4					$0
5					$0

ESTIMATED CONSTRUCTION COST **$750,000**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$937,500**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$67,110		
Geotechnical Investigation	$0		
Hydrologic Modeling	$0		
Data Collection	$60,000	includes quantity survey + mag survey	
Cultural Resources	$10,000		
NEPA Compliance	$20,000		
Monitoring Plan Development	$20,000		
		SubTotal:	$177,110

	Actual
Supervision and Administration	$25,000
Corps Administration	$3,000

State Costs

Supervision and Administration (including PM and engineering review)	$25,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	$0		
Land Rights		$30,000		
			SubTotal:	$30,000

Monitoring

Monitoring Plan Review	$5,000		
		SubTotal:	$5,000

** Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Total Phase I Cost Estimate: **$265,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$937,500		
Oyster Issues (# of Leased Acres)	0 Leased AC	$0		
			SubTotal:	$937,500
Supervision and Inspection	150 days @	$933.00	per day	$139,950
Supervision and Administration				$25,000

State Costs

Supervision and Administration	$25,000

Total Phase II Cost Estimate: **$1,127,450**

TOTAL ESTIMATED PROJECT FIRST COST **$1,392,450**

Backfilling Canals to Maximize Hydrologic Rest. Demo
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections
Annual Cost for Operations
Preventive Maintenance

Specific Intermittent Costs:

Construction Items					**Year 5**	**Year 10**	**Year 15**
				Subtotal	$0	$0	$0
				Subtotal w/ 25% contingency	***$0***	***$0***	***$0***
State Costs							
Engineering and Design Cost					$0	$0	$0
Administrative Cost					$0	$0	$0
Eng Survey							
	0 days	@	$1,556	per day	$0	$0	$0
Inspection							
	0 days	@	$933	per day	$0	$0	$0
				Subtotal	***$0***	***$0***	***$0***
Federal Costs							
Administrative Cost					$0	$0	$0
				Total	**$0**	**$0**	**$0**

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 10**
Corps Administration	**$700**	**$700**	**$700**	**$700**	**$700**	**$700**
Monitoring and Reporting*	**$50,000**	**$0**	**$0**	**$0**	**$50,000**	**$50,000**

** See the proposed monitoring activities and plan below.*

Monitoring Plan

Baseline evaluation

Pre-project monitoring would be used to establish baseline measurements that future monitoring would be compared to. The site would be mapped with color infrared aerial photographs taken prior to the start of construction. Field data would be collected to establish the average pre-project depth of all marsh ponds in the project area, the water depths of all canals that are to be backfilled and the elevation of all spoil banks prior to backfilling. All elevation and depth measurements would be compared to marsh elevation if possible. Soil cores would be taken from the spoil banks that are to be leveled, as well as a nearby reference marsh, and analyzed for bulk density, percent water content and percent organic matter. Vegetation type and percent cover would be determined within plots established randomly in the project area, but stratified according to pre-construction habitat type/elevation (e.g. spoil bank, existing emergent marsh, shallow water, canal, etc). Standard CWPPRA vegetative monitoring techniques would be used. SAV coverage in the canals would be estimated using the Braun-Blaquet method.

Post-construction monitoring

Immediately following backfilling, degraded spoil banks and filled areas of canals would be mapped based on elevation and water depth relative to marsh elevation. Oblique aerial photographs would be taken for qualitative, visual evidence of the immediate results of backfilling.

5 Years post completion monitoring

After the project has been completed for five years, new color infrared aerial photographs would be taken, and analyzed for changes in the land/water ratios, and habitat analysis (spoil bank/emergent marsh/floating aquatic vegetation) within the project area. Water depth of ponds and canals, and elevation of degraded spoil banks and any new marsh areas will also be measured again within the project area. Soil cores would be taken from the former spoil bank areas, as well as a nearby reference marsh, and analyzed for bulk density, percent water content and percent organic matter. The percent recovery of soil properties on the former spoil bank areas would be calculated with the following formula:

% Recovery =

where B = the average value of bulk density, water content or organic matter from the pre-project baseline evaluation.

S = the value of bulk density, water content, or organic matter measured on the former spoil bank area.

M = the value of bulk density, water content, or organic matter measured from the reference marsh.

10 Years post completion monitoring

After ten years the monitoring conducted at 5 years would be repeated.

Project evaluation

Ecological processes often operate on longer timescales than those allowed for by restoration monitoring plans, and that may hold true for this project. However, monitoring ten years post project completion would allow researchers to determine if the project is headed in the proper direction. The open water areas may still be open water after ten years, but they may become shallower and begin to have localized areas of emergent vegetation colonizing. The soil of the former spoil areas will most likely not be 100% recovered, but after ten years they would look more like marsh soils than they did before the project.

Monitoring Costs

· Aerial photography and analysis for 3 time periods (pre-construction baseline, 5 years postconstruction, and 10 years postconstuction)- $100,000

· Water depth and selected elevation measurements conducted 4 times- $20,000

· Vegetative measurements conducted 3 times- $6,000

· Soils sampling/analysis 3 times- $8,000

· Monitoring Report preparation- $16,000

· Total cost- $150,000

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-07**	*(Minimum of one year to complete this phase)*
Const. Start	**March-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**October-08**	

Project:	Delta Management Demo	Date:		Revised:	13-Jul-05
Computed by: Ronny Paille - FWS		*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$100,000	$100,000
2	Treatment 1 - earthen dikes	7,200	ln ft	$5.00	$36,000
3	Treatment 2 - 20" dia coconut wattles	7,200	ln ft	$22.00	$158,400
4	Treatment 3 - willow brush fences	7,200	ln ft	$20.00	$144,000
5					$0
6					$0
7					$0
8					$0

ESTIMATED CONSTRUCTION COST **$438,400**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$548,000**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$100,000			
Geotechnical Investigation	$0			
Hydrologic Modeling	$0			
Pre-construction Surveying	$20,000			
Cultural Resources (cost in Fed. S&A)	$0			
NEPA Compliance (cost in Fed. S&A	$0			
Monitoring Plan Development	$20,000			
			SubTotal:	$140,000

Supervision and Administration $55,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM and engineering review) $25,000

Easements and Land Rights

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

Monitoring

Monitoring Plan Review	$5,000			
Monitoring Protocal Cost *	$0			
			SubTotal:	$5,000

** Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Total Phase I Cost Estimate: **$248,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$548,000		
Oyster Issues (# of Leased Acres)	0 Leased AC	$0		
			SubTotal:	$548,000
Supervision and Inspection	60 days @	$933.00	per day	$55,980
Supervision and Administration				$25,000

State Costs

Supervision and Administration $25,000

Total Phase II Cost Estimate: **$653,980**

TOTAL ESTIMATED PROJECT FIRST COST **$901,980**

Delta Management Demo
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections
Annual Cost for Operations
Preventive Maintenance

Specific Intermittent Costs:

Construction Items					**Year 5**	**Year 10**	**Year 15**
Contractor Mobilization/Demobilization							
Demo Removal??					$0		
			Subtotal		$0	$0	$0
			Subtotal w/ 25% contingency		***$0***	***$0***	***$0***
State Costs							
Engineering and Design Cost					$0		
Administrative Cost					$0		
Eng Survey							
	0 days	@	$1,556	per day	$0		
Inspection							
	0 days	@	$933	per day	$0		
			Subtotal		***$0***		
Federal Costs							
Administrative Cost					$0	$0	$0
				Total	**$0**	**$0**	**$0**

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Corps Administration	**$700**	**$700**	**$700**	**$700**	**$700**
Monitoring and Reporting*	**$25,000**	**$25,000**	**$25,000**	**$25,000**	**$40,000**

** See the proposed monitoring activities and plan below.*

Monitoring Plan: Acretion rates and bathymetry/topography would be surveyed. Aerial photography might also be included to map vegetated areas.

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-06**	*(Minimum of one year to complete this phase)*
Const. Start	**March-07**	*(Requires 4 months for contracting and advertising)*
Const. End	**May-07**	

Project:	Flowable Fill Demonstration Project	Date:	11-Jul-05	Revised:	25-Jul-05
Computed by:	Loland Broussard, NRCS	*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$150,000	$150,000
2	Material Costs	1	LS	$57,822	$57,822
3	Labor/Equipment	1	LS	$156,335	$156,335
4					$0
5					$0

ESTIMATED CONSTRUCTION COST **$364,157**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$455,196**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$50,000
Geotechnical Investigation	$0
Hydrologic Modeling	$0
Data Collection	$30,000
Cultural Resources	$0
NEPA Compliance	$25,000
Monitoring Plan Development	$25,000

SubTotal: $130,000

Actual

Supervision and Administration $25,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM and engineering review) $25,000

Easements and Land Rights

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

Monitoring

Monitoring Plan Review	$5,000
Monitoring Protocal Cost *	$0

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

SubTotal: $5,000

Total Phase I Cost Estimate: **$208,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$455,196		
Oyster Issues (# of Leased Acres)	0 Leased AC	$0		
			SubTotal:	$455,196
Supervision and Inspection	50 days @	$933.00	per day	$46,650
Supervision and Administration				$25,000

State Costs

Supervision and Administration $20,000

Total Phase II Cost Estimate: **$546,846**

TOTAL ESTIMATED PROJECT FIRST COST **$754,846**

Flowable Fill Demonstration Project
Operation & Maintenance and Monitoring

Project Priority List 15
25-Jul-2005

O&M Cost Considerations:

Annual Costs:

Annual Inspections
Annual Cost for Operations
Preventive Maintenance

Specific Intermittent Costs:

Construction Items					**Year 5**	**Year 10**	**Year 15**
			Subtotal		$0	$0	$0
			Subtotal w/ 25% contingency		***$0***	***$0***	***$0***
State Costs							
Engineering and Design Cost					$0	$0	$0
Administrative Cost					$0	$0	$0
Eng Survey							
	0 days	@	$1,556	per day	$0	$0	$0
Inspection							
	0 days	@	$933	per day	$0	$0	$0
			Subtotal		***$0***	***$0***	***$0***
Federal Costs							
Administrative Cost					$0	$0	$0
				Total	**$0**	**$0**	**$0**

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Corps Administration	**$700**	**$700**	**$700**	**$700**	**$700**
Monitoring and Reporting*	**$15,000**	**$15,000**	**$15,000**	**$15,000**	**$25,000**

** See the proposed monitoring activities and plan below.*

Monitoring Plan: TY1 - 5 will involve semi-annual inspections per year and TY-5 includes close-out report. Based on 1 day survey crew w/ report on semi-annual basis. 5 cross sections per mile.

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-07**	*(Minimum of one year to complete this phase)*
Const. Start	**March-08**	*(Requires 4 months for contracting and advertising)*
Const. End	**May-08**	

Project:	Backshore and Dune Stabilization Demo	Date:	7-Jul-05	Revised:	15-Aug-05
Computed by:	Darryl Clark, USFWS	*Project Priority List 15*			
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	HESCO Materials	4,000	CY	$75.00	$300,000
2	Sand	1,500	CY	$10.00	$15,000
3	Installation	4,000	CY	$18.75	$75,000
4					$0

ESTIMATED CONSTRUCTION COST **$390,000**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$487,500**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$50,000		
Geotechnical Investigation	$20,000		
Hydrologic Modeling	$0		
Data Collection (surveys)	$10,000		
Cultural Resources	$10,000		
NEPA Compliance	$30,000		
Monitoring Plan Development	$20,000		
		SubTotal:	$140,000

Actual

Supervision and Administration $25,000

Corps Administration $3,000

State Costs

Supervision and Administration (including PM and engineering review) $25,000

Easements and Land Rights

Oyster Issues (# of Leases)	0 Leases	$0	
Land Rights		$25,000	
		SubTotal:	$25,000

Monitoring

Monitoring Plan Review	$5,000		
		SubTotal:	$5,000

* *Monitoring is now done through CRMS except on projects that an agency requests project specific monitoring and projects such as Barrier Island projects and Demo projects.*

Total Phase I Cost Estimate: **$223,000**

PHASE II

Federal Costs

Estimated Construction Cost +25% Contingency		$487,500		
Oyster Issues (# of Leased Acres)	0 Leased AC	$0		
			SubTotal:	$487,500
Supervision and Inspection	30 days @	$933.00	per day	$27,990
Supervision and Administration				$25,000

State Costs

Supervision and Administration $25,000

Total Phase II Cost Estimate: **$565,490**

TOTAL ESTIMATED PROJECT FIRST COST

Backshore and Dune Stabilization Demo Project
Operation & Maintenance and Monitoring

Project Priority List 15

O&M Cost Considerations:

Annual Costs:

Annual Inspections
Annual Cost for Operations
Preventive Maintenance

Specific Intermittent Costs:

Construction Items					**Year 5**	**Year 10**	**Year 15**
			Subtotal			$0	$0
			Subtotal w/ 25% contingency		***$0***	***$0***	***$0***
State Costs							
Engineering and Design Cost					$0	$0	$0
Administrative Cost					$0	$0	$0
Eng Survey							
	days	@	$1,556	per day	$0	$0	$0
Inspection							
	days	@	$933	per day	$0	$0	$0
			Subtotal		***$0***	***$0***	***$0***
Federal Costs							
Administrative Cost					$0	$0	$0
				Total	**$0**	**$0**	**$0**

Annual Demonstration Project Monitoring Costs:

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Corps Administration	**$700**	**$700**	**$700**	**$700**	**$700**	
Monitoring and Reporting*	**$2,931**	**$2,969**	**$3,026**	**$3,083**	**$18,142**	**$30,151**

** See the proposed monitoring activities and plan below.*

Monitoring Plan:

The Monitoring Plan will consist of annual surveys taken 100 ft seaward and landward of the dune (200 feet total per transect) taken every 500 feet for a total of 6 transects over 4,000 foot project length. Surveys will be taken from years' 2 through 5. Pre and post construction surveys will be taken during the construction phase and are not part of the Monitoring budget, but the results will be used in the monitoring reports. Photographs will also be taken annually and after major storm events to qualitatively document shoreline changes at the beach and dune.

Construction Schedule:

Planning & Design Start	**November-05**	
Planning & Design End	**November-06**	*(Minimum of one year to complete this phase)*
Const. Start	**March-07**	*(Requires 4 months for contracting and advertising)*
Const. End	**April-07**	

Coastal Wetlands Planning, Protection, and Restoration Act

15th Priority Project List Report

Appendix D

Economic Analyses For Candidate Projects

Appendix D

Economic Analyses For Candidate Projects

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Coastal Wetlands Conservation and Restoration Plan

Project Priority List 15

Bayou Lamoque Freshwater Diversion

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$3,997,398	Total Fully Funded Costs	$5,375,741

Total Charges	Present Worth	Average Annual
First Costs	$3,959,980	$327,940
Monitoring	$350,225	$29,003
State O & M Costs	$286,735	$23,746
Other Federal Costs	$27,300	$2,261
Average Annual Cost	$382,950	$382,950
Average Annual Habitat Units	560	
Cost Per Habitat Unit	$684	
Total Net Acres	620	

Coastal Wetlands Conservation and Restoration Plan

Bayou Lamoque Freshwater Diversion

Project Costs $5,375,741 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
3	2006	$313,958	$118,594	$22,917	$45,833	$1,375	$14,907	-	$0		$517,584	
2	2007	$342,500	$129,375	$25,000	$50,000	$1,500	$16,262	-	$0		$564,637	
1	2008	$28,542	$10,781	$2,083	$4,167	$125	$1,355	-	$0		$47,053	
0	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$685,000	$258,750	$50,000	$100,000	$3,000	$32,524	$0	$0	$0	$1,129,274	$1,126,274
Phase II												
1	2008	-	$1,741,000	$125,000	$75,000	$117	$0	$55,980	$108,827	$435,306	$2,541,229	
0	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$1,741,000	$125,000	$75,000	$117	$0	$55,980	$108,827	$435,306	$2,541,229	$2,541,113
Total First Costs		$685,000	$1,999,750	$175,000	$175,000	$3,117	$32,524	$55,980	$108,827	$435,306	$3,670,503	

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	Discount	2009	$27,524	$3,900	$700	$1,000
-1	Discount	2010	$27,524	$3,900	$700	$1,000
-2	Discount	2011	$27,524	$3,900	$700	$1,000
-3	Discount	2012	$27,524	$3,900	$700	$1,000
-4	Discount	2013	$27,524	$94,604	$700	$3,588
-5	Discount	2014	$27,524	$3,900	$700	$1,000
-6	Discount	2015	$27,524	$168,138	$700	$4,184
-7	Discount	2016	$27,524	$3,900	$700	$1,000
-8	Discount	2017	$27,524	$3,900	$700	$1,000
-9	Discount	2018	$27,524	$3,900	$700	$1,000
-10	Discount	2019	$27,524	$3,900	$700	$1,000
-11	Discount	2020	$27,524	$3,900	$700	$1,000
-12	Discount	2021	$27,524	$3,900	$700	$1,000
-13	Discount	2022	$27,524	$3,900	$700	$1,000
-14	Discount	2023	$27,524	$94,604	$700	$3,588
-15	Discount	2024	$27,524	$3,900	$700	$1,000
-16	Discount	2025	$27,524	$3,900	$700	$1,000
-17	Discount	2026	$27,524	$3,900	$700	$1,000
-18	Discount	2027	$27,524	$3,900	$700	$1,000
-19	Discount	2028	$27,524	$3,900	$700	$1,000
	Total		$550,480	$423,646	$14,000	$28,360

Coastal Wetlands Conservation and Restoration Plan

Bayou Lamoque Freshwater Diversion

Project Priority List 15

Present Valued Costs Total Discounted Costs $4,624,240 Amortized Costs $382,950

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.233	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.170	2006	$367,354	$138,763	$26,814	$53,628	$1,609	$17,442	$0	$0	$0	$605,611
2	1.110	2007	$380,308	$143,657	$27,760	$55,519	$1,666	$18,057	$0	$0	$0	$626,967
1	1.054	2008	$30,076	$11,361	$2,195	$4,391	$132	$1,428	$0	$0	$0	$49,582
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$777,738	$293,781	$56,769	$113,538	$3,406	$36,927	$0	$0	$0	$1,282,160
Phase II												
1	1.054	2008	$0	$1,834,579	$131,719	$79,031	$123	$0	$58,989	$114,676	$458,704	$2,677,820
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$1,834,579	$131,719	$79,031	$123	$0	$58,989	$114,676	$458,704	$2,677,820
Total First Cost			$777,738	$2,128,360	$188,488	$192,570	$3,529	$36,927	$58,989	$114,676	$458,704	$3,959,980

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.000	2009	$27,524	$3,900	$700	$1,000
-1	0.949	2010	$26,120	$3,701	$664	$949
-2	0.901	2011	$24,788	$3,512	$630	$901
-3	0.855	2012	$23,523	$3,333	$598	$855
-4	0.811	2013	$22,323	$76,729	$568	$2,910
-5	0.770	2014	$21,185	$3,002	$539	$770
-6	0.730	2015	$20,104	$122,812	$511	$3,056
-7	0.693	2016	$19,079	$2,703	$485	$693
-8	0.658	2017	$18,106	$2,565	$460	$658
-9	0.624	2018	$17,182	$2,435	$437	$624
-10	0.592	2019	$16,306	$2,310	$415	$592
-11	0.562	2020	$15,474	$2,193	$394	$562
-12	0.534	2021	$14,685	$2,081	$373	$534
-13	0.506	2022	$13,936	$1,975	$354	$506
-14	0.480	2023	$13,225	$45,455	$336	$1,724
-15	0.456	2024	$12,550	$1,778	$319	$456
-16	0.433	2025	$11,910	$1,688	$303	$433
-17	0.411	2026	$11,302	$1,601	$287	$411
-18	0.390	2027	$10,726	$1,520	$273	$390
-19	0.370	2028	$10,179	$1,442	$259	$370
		Total	$350,225	$286,735	$8,907	$18,393

Coastal Wetlands Conservation and Restoration Plan

Bayou Lamoque Freshwater Diversion

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $5,375,741 Amortized Costs $445,185

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.055	2006	$331,226	$125,116	$24,177	$48,354	$1,451	$15,727	$0	$0	$0	$546,051
2	1.076	2007	$368,564	$139,221	$26,903	$53,805	$1,614	$17,500	$0	$0	$0	$607,606
1	1.099	2008	$31,359	$11,845	$2,289	$4,578	$137	$1,489	$0	$0	$0	$51,697
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$731,149	$276,182	$53,369	$106,737	$3,202	$34,715	$0	$0	$0	$1,205,354
Phase II												
1	1.099	2008	$0	$1,912,833	$137,337	$82,402	$128	$0	$61,505	$119,567	$478,270	$2,792,044
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$1,912,833	$137,337	$82,402	$128	$0	$61,505	$119,567	$478,270	$2,792,044
Total Cost			$731,149	$2,189,016	$190,706	$189,139	$3,330	$34,715	$61,505	$119,567	$478,270	$3,997,398

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.1218	2009	$30,876	$4,375	$785	$1,122
-1	1.1453	2010	$31,524	$4,467	$802	$1,145
-2	1.1694	2011	$32,186	$4,561	$819	$1,169
-3	1.1939	2012	$32,862	$4,656	$836	$1,194
-4	1.2190	2013	$33,552	$115,323	$853	$4,374
-5	1.2446	2014	$34,257	$4,854	$871	$1,245
-6	1.2707	2015	$34,976	$213,660	$890	$5,317
-7	1.2974	2016	$35,710	$5,060	$908	$1,297
-8	1.3247	2017	$36,460	$5,166	$927	$1,325
-9	1.3525	2018	$37,226	$5,275	$947	$1,352
-10	1.3809	2019	$38,008	$5,386	$967	$1,381
-11	1.4099	2020	$38,806	$5,499	$987	$1,410
-12	1.4395	2021	$39,621	$5,614	$1,008	$1,440
-13	1.4697	2022	$40,453	$5,732	$1,029	$1,470
-14	1.5006	2023	$41,302	$141,963	$1,050	$5,384
-15	1.5321	2024	$42,170	$5,975	$1,072	$1,532
-16	1.5643	2025	$43,055	$6,101	$1,095	$1,564
-17	1.5971	2026	$43,960	$6,229	$1,118	$1,597
-18	1.6307	2027	$44,883	$6,360	$1,141	$1,631
-19	1.6649	2028	$45,825	$6,493	$1,165	$1,665
		Total	$757,712	$562,747	$19,270	$38,614

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**435,306**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**544,133**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs			
Engineering and Design			$685,000
Engineering		$175,000	
Geotechnical Investigation		$0	
Hydrologic Modeling		$150,000	
Data Collection		$150,000	
Cultural Resources		$35,000	
Monitoring Plan Development		$25,000	
NEPA Compliance		$150,000	
Supervision and Administration			$50,000
Corps Administration			$3,000
State Costs			
Supervision and Administration			$100,000
Ecological Review Costs			$0
Easements and Land Rights			$258,750
Monitoring			$32,524
Monitoring Plan Development	$5,000		
Monitoring Protocal Cost *	$27,524		
	Total Phase I Cost Estimate		**$1,129,274**

* 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				
Estimated Construction Cost +25% Contingency				$544,133
Lands or Oyster Issues	1,605	lease acres		$1,741,000
Supervision and Inspectio	60 days	@	933 per day	$55,980
Supervision and Administration				$125,000
State Costs				
Supervision and Administration				$75,000
	Total Phase II Cost Estimate			**$2,541,113**

TOTAL ESTIMATED PROJECT FIRST COST	**3,670,387**

O&M Data

Annual Costs

Annual Inspections	$4,900
Annual Cost for Operations	$0
Preventive Maintenance	$0
Engineering Monitoring @ TY1-5, 10, 15, 19	$0

Specific Intermittent Costs:

Construction Items	**Year 0**	**Year 5**	**Year 7**	**Year 15**
Mob and Demob	$0	$50,000	$50,000	$50,000
Debris Removal	$0	$19,000	$19,000	$19,000
Pile Replacement	$0	$0	$58,350	$0
0	$0	$0	$0	$0
0	$0	$0	$0	$0
0	$0	$0	$0	$0
0	$0	$0	$0	$0
Subtotal	$0	$69,000	$127,350	$69,000
Subtotal w/ 25% contin.	**$0**	$86,250	$159,188	$86,250
Engineer, Design & Administrative Costs				
Engineering and Design Cost	$0	$0	$0	$0
Administrative Cost	$0	$2,588	$3,184	$2,588
Eng Survey 0 days @ $1,556 per day	$0	$0	$0	$0
Construction 2 days @ $933 per day	$0	$1,866	$1,866	$1,866
Subtotal	**$0**	**$4,454**	**$5,050**	**$4,454**
Federal S&A	$0	$2,588	$3,184	$2,588
Total	**$0**	**$93,292**	**$167,422**	**$93,292**

Annual Project Costs:

Corps Administration	$700
Monitoring	$27,524

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	1	0	0	0	0	0	0	24
Plan & Design End	November-07											
Const. Start	May-08											
Const. End	July-08	0	0	0	2	0	0	0	0	0	0	2

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Lake Hermitage Marsh Creation

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$30,367,462	Total Fully Funded Costs	$32,673,327

Total Charges	Present Worth	Average Annual
First Costs	$29,599,307	$2,451,227
Monitoring	$0	$0
State O & M Costs	$1,222,854	$101,269
Other Federal Costs	$42,568	$3,525
Average Annual Cost	$2,556,021	$2,556,021
Average Annual Habitat Units	191	
Cost Per Habitat Unit	$13,382	
Total Net Acres	438	

Coastal Wetlands Conservation and Restoration Plan

Lake Hermitage Marsh Creation

Project Costs $32,673,327

Project Priority List 15

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
5	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
4	2006	$327,250	$34,375	$91,667	$59,583	$1,375	$0	-	$0		$514,250	
3	2007	$357,000	$37,500	$100,000	$65,000	$1,500	$0	-	$0		$561,000	
2	2008	$29,750	$3,125	$8,333	$5,417	$125	$0	-	$0		$46,750	
1	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$714,000	$75,000	$200,000	$130,000	$3,000	$0	$0	$0	$0	$1,122,000	$1,119,000
Phase II												
2	2008	-	$0	$41,667	$31,250	$292	$0	$124,789	$2,146,083	$8,584,333	$10,928,414	
1	2009	-	$0	$58,333	$43,750	$408	-	$174,704	$3,004,517	$12,018,067	$15,299,779	
0	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$100,000	$75,000	$700	$0	$299,493	$5,150,600	$20,602,400	$26,228,193	$26,227,493
Total First Costs		$714,000	$75,000	$300,000	$205,000	$3,700	$0	$299,493	$5,150,600	$20,602,400	$27,350,193	

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	Discount	2010	$0	$3,900	$700	$1,000
-1	Discount	2011	$0	$3,900	$700	$1,000
-2	Discount	2012	$0	$930,107	$700	$17,579
-3	Discount	2013	$0	$3,900	$700	$1,000
-4	Discount	2014	$0	$3,900	$700	$1,000
-5	Discount	2015	$0	$3,900	$700	$1,000
-6	Discount	2016	$0	$3,900	$700	$1,000
-7	Discount	2017	$0	$3,900	$700	$1,000
-8	Discount	2018	$0	$3,900	$700	$1,000
-9	Discount	2019	$0	$3,900	$700	$1,000
-10	Discount	2020	$0	$3,900	$700	$1,000
-11	Discount	2021	$0	$3,900	$700	$1,000
-12	Discount	2022	$0	$3,900	$700	$1,000
-13	Discount	2023	$0	$673,657	$700	$12,863
-14	Discount	2024	$0	$3,900	$700	$1,000
-15	Discount	2025	$0	$3,900	$700	$1,000
-16	Discount	2026	$0	$3,900	$700	$1,000
-17	Discount	2027	$0	$3,900	$700	$1,000
-18	Discount	2028	$0	$3,900	$700	$1,000
-19	Discount	2029	$0	$3,900	$700	$1,000
	Total		$0	$1,673,964	$14,000	$48,442

Coastal Wetlands Conservation and Restoration Plan

Lake Hermitage Marsh Creation

Project Priority List 15

Present Valued Costs Total Discounted Costs $30,864,729 Amortized Costs $2,556,021

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.299	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.233	2006	$403,487	$42,383	$113,022	$73,464	$1,695	$0	$0	$0	$0	$634,052
3	1.170	2007	$417,716	$43,878	$117,007	$76,055	$1,755	$0	$0	$0	$0	$656,411
2	1.110	2008	$33,034	$3,470	$9,253	$6,015	$139	$0	$0	$0	$0	$51,911
1	1.054	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$854,237	$89,731	$239,282	$155,533	$3,589	$0	$0	$0	$0	$1,342,373
Phase II												
2	1.110	2008	$0	$0	$46,266	$34,700	$324	$0	$138,564	$2,382,987	$9,531,950	$12,134,791
1	1.054	2009	$0	$0	$61,469	$46,102	$430	$0	$184,095	$3,166,009	$12,664,038	$16,122,142
0	1.000	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$107,735	$80,801	$754	$0	$322,659	$5,548,997	$22,195,988	$28,256,933
Total First Cost			$854,237	$89,731	$347,017	$236,335	$4,343	$0	$322,659	$5,548,997	$22,195,988	$29,599,307

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.000	2010	$0	$3,900	$700	$1,000
-1	0.949	2011	$0	$3,701	$664	$949
-2	0.901	2012	$0	$837,640	$630	$15,831
-3	0.855	2013	$0	$3,333	$598	$855
-4	0.811	2014	$0	$3,163	$568	$811
-5	0.770	2015	$0	$3,002	$539	$770
-6	0.730	2016	$0	$2,849	$511	$730
-7	0.693	2017	$0	$2,703	$485	$693
-8	0.658	2018	$0	$2,565	$460	$658
-9	0.624	2019	$0	$2,435	$437	$624
-10	0.592	2020	$0	$2,310	$415	$592
-11	0.562	2021	$0	$2,193	$394	$562
-12	0.534	2022	$0	$2,081	$373	$534
-13	0.506	2023	$0	$341,075	$354	$6,513
-14	0.480	2024	$0	$1,874	$336	$480
-15	0.456	2025	$0	$1,778	$319	$456
-16	0.433	2026	$0	$1,688	$303	$433
-17	0.411	2027	$0	$1,601	$287	$411
-18	0.390	2028	$0	$1,520	$273	$390
-19	0.370	2029	$0	$1,442	$259	$370
		Total	$0	$1,222,854	$8,907	$33,661

Coastal Wetlands Conservation and Restoration Plan

Lake Hermitage Marsh Creation

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $32,673,327 Amortized Costs $2,705,798

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.055	2006	$345,249	$36,266	$96,708	$62,860	$1,451	$0	$0	$0	$0	$542,534
3	1.076	2007	$384,168	$40,354	$107,610	$69,947	$1,614	$0	$0	$0	$0	$603,692
2	1.099	2008	$32,686	$3,433	$9,156	$5,951	$137	$0	$0	$0	$0	$51,364
1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$762,103	$80,053	$213,474	$138,758	$3,202	$0	$0	$0	$0	$1,197,590
Phase II												
2	1.099	2008	$0	$0	$45,779	$34,334	$320	$0	$137,105	$2,357,898	$9,431,591	$12,007,027
1	1.122	2009	$0	$0	$65,437	$49,077	$458	$0	$195,978	$3,370,379	$13,481,516	$17,162,845
0	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$111,216	$83,412	$779	$0	$333,083	$5,728,277	$22,913,107	$29,169,872
Total Cost			$762,103	$80,053	$324,690	$222,170	$3,981	$0	$333,083	$5,728,277	$22,913,107	$30,367,462

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.1453	2010	$0	$4,467	$802	$1,145
-1	1.1694	2011	$0	$4,561	$819	$1,169
-2	1.1939	2012	$0	$1,110,488	$836	$20,988
-3	1.2190	2013	$0	$4,754	$853	$1,219
-4	1.2446	2014	$0	$4,854	$871	$1,245
-5	1.2707	2015	$0	$4,956	$890	$1,271
-6	1.2974	2016	$0	$5,060	$908	$1,297
-7	1.3247	2017	$0	$5,166	$927	$1,325
-8	1.3525	2018	$0	$5,275	$947	$1,352
-9	1.3809	2019	$0	$5,386	$967	$1,381
-10	1.4099	2020	$0	$5,499	$987	$1,410
-11	1.4395	2021	$0	$5,614	$1,008	$1,440
-12	1.4697	2022	$0	$5,732	$1,029	$1,470
-13	1.5006	2023	$0	$1,010,889	$1,050	$19,302
-14	1.5321	2024	$0	$5,975	$1,072	$1,532
-15	1.5643	2025	$0	$6,101	$1,095	$1,564
-16	1.5971	2026	$0	$6,229	$1,118	$1,597
-17	1.6307	2027	$0	$6,360	$1,141	$1,631
-18	1.6649	2028	$0	$6,493	$1,165	$1,665
-19	1.6999	2029	$0	$6,630	$1,190	$1,700
		Total	$0	$2,220,487	$19,675	$65,703

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**20,602,400**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**25,753,000**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs			
Engineering and Design			$714,000
Engineering		$500,000	
Geotechnical Investigation		$114,000	
Hydrologic Modeling		$0	
Data Collection		$100,000	
Cultural Resources		$0	
HTRW		$0	
NEPA Compliance		$0	
Supervision and Administration			$200,000
Corps Administration			$3,000
State Costs			
Supervision and Administration			$130,000
Ecological Review Costs			$0
Easements and Land Rights			$75,000
Monitoring			$0
Monitoring Plan Development	$0		
Monitoring Protocal Cost *	$0		
Total Phase I Cost Estimate			**$1,122,000**

* 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				
Estimated Construction Cost +25% Contingency				$25,753,000
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspect	321	days @	933 per day	$299,493
Supervision and Administration				$100,000
State Costs				
Supervision and Administration				$75,000
Total Phase II Cost Estimate				**$26,227,493**

TOTAL ESTIMATED PROJECT FIRST COST	**27,349,493**

O&M Data

Annual Costs

Annual Inspections	$4,900
Annual Cost for Operations	$0
Preventive Maintenance	$0
Engineering Monitoring @ TY1-5, 10, 15, 19	$0

Specific Intermittent Costs:

Construction Items	**Year 0**	**Year 3**	**Year 7**	**Year 14**
Contractor Mobilization/Demobilization	$0	$100,000	$0	$100,000
Floatation Access Channel (50% of original volume @$3.0/cy)	$0	$243,735	$0	$243,735
Rock Dike Maintenance Lift (replace 25%of Rock @ TY3 & 10%@TY14)	$0	$319,395	$0	$127,770
Warning Signs (replace 2 signs @TY14)	$0	$0	$0	$3,000
0	$0	$0	$0	$0
0	$0	$0	$0	$0
0	$0	$0	$0	$0
Subtotal	$0	$663,130	$0	$474,505
Subtotal w/ 25% contin.	**$0**	$828,913	$0	$593,131
Engineer, Design & Administrative Costs				
Engineering and Design Cost	$0	$59,873	$0	$43,921
Administrative Cost	$0	$16,579	$0	$11,863
Eng Survey 5 days @ $1,556 per day	$0	$7,780	$0	$7,780
Constructio 14 days @ $933 per day	$0	$13,062	$0	$13,062
Subtotal	**$0**	**$97,294**	**$0**	**$76,626**
Federal S&A	$0	$16,579	$0	$11,863
Total	**$0**	**$942,786**	**$0**	**$681,620**

Annual Project Costs:

Corps Administration	$700
Monitoring	$0

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	1	0	0	0	0	0	0	24
Plan & Design End	November-07											
Const. Start	May-08											
Const. End	May-09	0	0	0	5	7	0	0	0	0	0	12

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Venice Ponds Marsh Creation and Crevasses

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$7,875,748	Total Fully Funded Costs	$8,992,955

Total Charges	Present Worth	Average Annual
First Costs	$7,995,818	$662,163
Monitoring	$0	$0
State O & M Costs	$454,414	$37,632
Other Federal Costs	$27,591	$2,285
Average Annual Cost	$702,079	$702,079
Average Annual Habitat Units	153	
Cost Per Habitat Unit	$4,589	
Total Net Acres	511	

Coastal Wetlands Conservation and Restoration Plan

Venice Ponds Marsh Creation and Crevasses

Project Costs $8,992,955 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
5	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
4	2006	$315,333	$53,029	$45,833	$45,833	$1,375	$0	-	$0		$461,404	
3	2007	$344,000	$57,850	$50,000	$50,000	$1,500	$0	-	$0		$503,350	
2	2008	$28,667	$4,821	$4,167	$4,167	$125	$0	-	$0		$41,946	
1	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$688,000	$115,700	$100,000	$100,000	$3,000	$0	$0	$0	$0	$1,006,700	$1,003,700
Phase II												
2	2008	-	$255,000	$104,167	$62,500	$292	$0	$204,167	$902,886	$3,611,546	$5,140,557	
1	2009	-	$51,000	$20,833	$12,500	$58	-	$40,833	$180,577	$722,309	$1,028,111	
0	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$306,000	$125,000	$75,000	$350	$0	$245,000	$1,083,464	$4,333,855	$6,168,669	$6,168,319
Total First Costs		$688,000	$421,700	$225,000	$175,000	$3,350	$0	$245,000	$1,083,464	$4,333,855	$7,175,369	

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	Discount	2010	$0	$3,900	$700	$1,000
-1	Discount	2011	$0	$3,900	$700	$1,000
-2	Discount	2012	$0	$3,900	$700	$1,000
-3	Discount	2013	$0	$3,900	$700	$1,000
-4	Discount	2014	$0	$3,900	$700	$1,000
-5	Discount	2015	$0	$3,900	$700	$1,000
-6	Discount	2016	$0	$338,187	$700	$5,922
-7	Discount	2017	$0	$3,900	$700	$1,000
-8	Discount	2018	$0	$3,900	$700	$1,000
-9	Discount	2019	$0	$3,900	$700	$1,000
-10	Discount	2020	$0	$3,900	$700	$1,000
-11	Discount	2021	$0	$3,900	$700	$1,000
-12	Discount	2022	$0	$3,900	$700	$1,000
-13	Discount	2023	$0	$3,900	$700	$1,000
-14	Discount	2024	$0	$338,187	$700	$5,922
-15	Discount	2025	$0	$3,900	$700	$1,000
-16	Discount	2026	$0	$3,900	$700	$1,000
-17	Discount	2027	$0	$3,900	$700	$1,000
-18	Discount	2028	$0	$3,900	$700	$1,000
-19	Discount	2029	$0	$3,900	$700	$1,000
	Total		$0	$746,575	$14,000	$29,844

Coastal Wetlands Conservation and Restoration Plan

Venice Ponds Marsh Creation and Crevasses

Project Priority List 15

Present Valued Costs Total Discounted Costs $8,477,823 Amortized Costs $702,079

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.299	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.233	2006	$388,795	$65,383	$56,511	$56,511	$1,695	$0	$0	$0	$0	$568,895
3	1.170	2007	$402,505	$67,689	$58,504	$58,504	$1,755	$0	$0	$0	$0	$588,956
2	1.110	2008	$31,831	$5,353	$4,627	$4,627	$139	$0	$0	$0	$0	$46,576
1	1.054	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$823,131	$138,425	$119,641	$119,641	$3,589	$0	$0	$0	$0	$1,204,427
Phase II												
2	1.110	2008	$0	$283,149	$115,666	$69,399	$324	$0	$226,704	$1,002,555	$4,010,221	$5,708,019
1	1.054	2009	$0	$53,741	$21,953	$13,172	$61	$0	$43,028	$190,283	$761,133	$1,083,372
0	1.000	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$336,890	$137,619	$82,571	$385	$0	$269,733	$1,192,839	$4,771,354	$6,791,391
Total First Cost			$823,131	$475,315	$257,260	$202,212	$3,975	$0	$269,733	$1,192,839	$4,771,354	$7,995,818

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.000	2010	$0	$3,900	$700	$1,000
-1	0.949	2011	$0	$3,701	$664	$949
-2	0.901	2012	$0	$3,512	$630	$901
-3	0.855	2013	$0	$3,333	$598	$855
-4	0.811	2014	$0	$3,163	$568	$811
-5	0.770	2015	$0	$3,002	$539	$770
-6	0.730	2016	$0	$247,020	$511	$4,326
-7	0.693	2017	$0	$2,703	$485	$693
-8	0.658	2018	$0	$2,565	$460	$658
-9	0.624	2019	$0	$2,435	$437	$624
-10	0.592	2020	$0	$2,310	$415	$592
-11	0.562	2021	$0	$2,193	$394	$562
-12	0.534	2022	$0	$2,081	$373	$534
-13	0.506	2023	$0	$1,975	$354	$506
-14	0.480	2024	$0	$162,492	$336	$2,845
-15	0.456	2025	$0	$1,778	$319	$456
-16	0.433	2026	$0	$1,688	$303	$433
-17	0.411	2027	$0	$1,601	$287	$411
-18	0.390	2028	$0	$1,520	$273	$390
-19	0.370	2029	$0	$1,442	$259	$370
		Total	$0	$454,414	$8,907	$18,684

Coastal Wetlands Conservation and Restoration Plan

Venice Ponds Marsh Creation and Crevasses

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $8,992,955 Amortized Costs $744,739

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.055	2006	$332,677	$55,946	$48,354	$48,354	$1,451	$0	$0	$0	$0	$486,781
3	1.076	2007	$370,178	$62,252	$53,805	$53,805	$1,614	$0	$0	$0	$0	$541,655
2	1.099	2008	$31,496	$5,297	$4,578	$4,578	$137	$0	$0	$0	$0	$46,086
1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$734,351	$123,495	$106,737	$106,737	$3,202	$0	$0	$0	$0	$1,074,522
Phase II												
2	1.099	2008	$0	$280,168	$114,448	$68,669	$320	$0	$224,318	$992,000	$3,967,999	$5,647,921
1	1.122	2009	$0	$57,210	$23,370	$14,022	$65	$0	$45,806	$202,566	$810,265	$1,153,305
0	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$337,378	$137,818	$82,691	$386	$0	$270,123	$1,194,566	$4,778,264	$6,801,226
Total Cost			$734,351	$460,873	$244,555	$189,428	$3,588	$0	$270,123	$1,194,566	$4,778,264	$7,875,748

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.1453	2010	$0	$4,467	$802	$1,145
-1	1.1694	2011	$0	$4,561	$819	$1,169
-2	1.1939	2012	$0	$4,656	$836	$1,194
-3	1.2190	2013	$0	$4,754	$853	$1,219
-4	1.2446	2014	$0	$4,854	$871	$1,245
-5	1.2707	2015	$0	$4,956	$890	$1,271
-6	1.2974	2016	$0	$438,775	$908	$7,683
-7	1.3247	2017	$0	$5,166	$927	$1,325
-8	1.3525	2018	$0	$5,275	$947	$1,352
-9	1.3809	2019	$0	$5,386	$967	$1,381
-10	1.4099	2020	$0	$5,499	$987	$1,410
-11	1.4395	2021	$0	$5,614	$1,008	$1,440
-12	1.4697	2022	$0	$5,732	$1,029	$1,470
-13	1.5006	2023	$0	$5,852	$1,050	$1,501
-14	1.5321	2024	$0	$518,140	$1,072	$9,073
-15	1.5643	2025	$0	$6,101	$1,095	$1,564
-16	1.5971	2026	$0	$6,229	$1,118	$1,597
-17	1.6307	2027	$0	$6,360	$1,141	$1,631
-18	1.6649	2028	$0	$6,493	$1,165	$1,665
-19	1.6999	2029	$0	$6,630	$1,190	$1,700
		Total	$0	$1,055,498	$19,675	$42,034

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**4,333,855**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**5,417,319**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs			
Engineering and Design			$688,000
Engineering		$300,000	
Geotechnical Investigation		$163,000	
Hydrologic Modeling		$50,000	
Data Collection		$100,000	
Cultural Resources		$15,000	
HTRW		$0	
NEPA Compliance		$60,000	
Supervision and Administration			$100,000
Corps Administration			$3,000
State Costs			
Supervision and Administration			$100,000
Ecological Review Costs			$0
Easements and Land Rights			$115,700
Monitoring			$0
Monitoring Plan Development	$0		
Monitoring Protocal Cost *	$0		
Total Phase I Cost Estimate			**$1,006,700**

* 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				
Estimated Construction Cost +25% Contingency				$5,417,319
Lands or Oyster Issues	0	lease acres		$306,000
Supervision and Inspectio	0 days	@	0 per day	$245,000
Supervision and Administration				$125,000
State Costs				
Supervision and Administration				$75,000
Total Phase II Cost Estimate				**$6,168,319**

TOTAL ESTIMATED PROJECT FIRST COST	**7,175,019**

O&M Data

Annual Costs

Annual Inspections	$4,900
Annual Cost for Operations	$0
Preventive Maintenance	$0
Engineering Monitoring @ TY1-5, 10, 15, 19	$0

Specific Intermittent Costs:

Construction Items	**Year 0**	**Year 5**	**Year 7**	**Year 15**
Mob & Demob	$0	$0	$75,000	$75,000
Crevasse Maintenance Dredging (25% of original cost)	$0	$0	$64,873	$64,873
Access Restriction Structure Replacement at Site 2 (2 each at $13,000 each)	$0	$0	$26,000	$26,000
Access Restriction Structure Replacement at Site 3 (1 each at $31,000 each)	$0	$0	$31,000	$31,000
0	$0	$0	$0	$0
0	$0	$0	$0	$0
0	$0	$0	$0	$0
Subtotal	$0	$0	$196,873	$196,873
Subtotal w/ 25% contin.	**$0**	$0	$246,091	$246,091
Engineer, Design & Administrative Costs				
Engineering and Design Cost	$0	$0	$19,514	$19,514
Administrative Cost	$0	$0	$4,922	$4,922
Eng Survey 5 days @ $1,556 per day	$0	$0	$7,780	$7,780
Construction 60 days @ $933 per day	$0	$0	$55,980	$55,980
Subtotal	**$0**	**$0**	**$88,196**	**$88,196**
Federal S&A	$0	$0	$4,922	$4,922
Total	**$0**	**$0**	**$339,209**	**$339,209**

Annual Project Costs:

Corps Administration	$700
Monitoring	$0

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	1	0	0	0	0	0	0	24
Plan & Design End	November-07											
Const. Start	May-08											
Const. End	November-08	0	0	0	5	1	0	0	0	0	0	6

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
South Terrebonne Terracing

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$5,962,681	Total Fully Funded Costs	$7,477,864

Total Charges	Present Worth	Average Annual
First Costs	$6,106,153	$505,673
Monitoring	$0	$0
State O & M Costs	$500,600	$41,457
Other Federal Costs	$28,774	$2,383
Average Annual Cost	$549,512	$549,512
Average Annual Habitat Units	54	
Cost Per Habitat Unit	$10,176	
Total Net Acres	80	

Coastal Wetlands Conservation and Restoration Plan

South Terrebonne Terracing

Project Costs $7,477,864 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
5	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
4	2006	$377,667	$80,071	$28,886	$45,833	$1,375	$0	-	$0		$533,832	
3	2007	$412,000	$87,350	$31,512	$50,000	$1,500	$0	-	$0		$582,362	
2	2008	$34,333	$7,279	$2,626	$4,167	$125	$0	-	$0		$48,530	
1	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$824,000	$174,700	$63,024	$100,000	$3,000	$0	$0	$0	$0	$1,164,724	$1,161,724
Phase II												
2	2008	-	$599,167	$104,167	$62,500	$292	$0	$175,000	$525,199	$2,100,798	$3,567,122	
1	2009	-	$119,833	$20,833	$12,500	$58	-	$35,000	$105,040	$420,160	$713,424	
0	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$719,000	$125,000	$75,000	$350	$0	$210,000	$630,239	$2,520,957	$4,280,546	$4,280,196
Total First Costs		$824,000	$893,700	$188,024	$175,000	$3,350	$0	$210,000	$630,239	$2,520,957	$5,445,270	

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	Discount	2010	$0	$3,900	$700	$1,000
-1	Discount	2011	$0	$3,900	$700	$1,000
-2	Discount	2012	$0	$3,900	$700	$1,000
-3	Discount	2013	$0	$3,900	$700	$1,000
-4	Discount	2014	$0	$3,900	$700	$1,000
-5	Discount	2015	$0	$3,900	$700	$1,000
-6	Discount	2016	$0	$3,900	$700	$1,000
-7	Discount	2017	$0	$3,900	$700	$1,000
-8	Discount	2018	$0	$3,900	$700	$1,000
-9	Discount	2019	$0	$3,900	$700	$1,000
-10	Discount	2020	$0	$3,900	$700	$1,000
-11	Discount	2021	$0	$3,900	$700	$1,000
-12	Discount	2022	$0	$3,900	$700	$1,000
-13	Discount	2023	$0	$894,620	$700	$15,107
-14	Discount	2024	$0	$3,900	$700	$1,000
-15	Discount	2025	$0	$3,900	$700	$1,000
-16	Discount	2026	$0	$3,900	$700	$1,000
-17	Discount	2027	$0	$3,900	$700	$1,000
-18	Discount	2028	$0	$3,900	$700	$1,000
-19	Discount	2029	$0	$3,900	$700	$1,000
	Total		$0	$968,720	$14,000	$34,107

Coastal Wetlands Conservation and Restoration Plan

South Terrebonne Terracing

Project Priority List 15

Present Valued Costs Total Discounted Costs $6,635,527 Amortized Costs $549,512

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.299	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.233	2006	$465,649	$98,724	$35,615	$56,511	$1,695	$0	$0	$0	$0	$658,195
3	1.170	2007	$482,070	$102,206	$36,871	$58,504	$1,755	$0	$0	$0	$0	$681,406
2	1.110	2008	$38,123	$8,083	$2,916	$4,627	$139	$0	$0	$0	$0	$53,887
1	1.054	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$985,843	$209,013	$75,403	$119,641	$3,589	$0	$0	$0	$0	$1,393,488
Phase II												
2	1.110	2008	$0	$665,308	$115,666	$69,399	$324	$0	$194,318	$583,176	$2,332,703	$3,960,893
1	1.054	2009	$0	$126,274	$21,953	$13,172	$61	$0	$36,881	$110,686	$442,743	$751,771
0	1.000	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$791,582	$137,619	$82,571	$385	$0	$231,199	$693,861	$2,775,446	$4,712,664
Total First Cost			$985,843	$1,000,595	$213,021	$202,212	$3,975	$0	$231,199	$693,861	$2,775,446	$6,106,153

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.000	2010	$0	$3,900	$700	$1,000
-1	0.949	2011	$0	$3,701	$664	$949
-2	0.901	2012	$0	$3,512	$630	$901
-3	0.855	2013	$0	$3,333	$598	$855
-4	0.811	2014	$0	$3,163	$568	$811
-5	0.770	2015	$0	$3,002	$539	$770
-6	0.730	2016	$0	$2,849	$511	$730
-7	0.693	2017	$0	$2,703	$485	$693
-8	0.658	2018	$0	$2,565	$460	$658
-9	0.624	2019	$0	$2,435	$437	$624
-10	0.592	2020	$0	$2,310	$415	$592
-11	0.562	2021	$0	$2,193	$394	$562
-12	0.534	2022	$0	$2,081	$373	$534
-13	0.506	2023	$0	$452,950	$354	$7,649
-14	0.480	2024	$0	$1,874	$336	$480
-15	0.456	2025	$0	$1,778	$319	$456
-16	0.433	2026	$0	$1,688	$303	$433
-17	0.411	2027	$0	$1,601	$287	$411
-18	0.390	2028	$0	$1,520	$273	$390
-19	0.370	2029	$0	$1,442	$259	$370
		Total	$0	$500,600	$8,907	$19,867

Coastal Wetlands Conservation and Restoration Plan

South Terrebonne Terracing

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $7,477,864 Amortized Costs $619,269

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.055	2006	$398,438	$84,475	$30,475	$48,354	$1,451	$0	$0	$0	$0	$563,193
3	1.076	2007	$443,353	$93,997	$33,910	$53,805	$1,614	$0	$0	$0	$0	$626,680
2	1.099	2008	$37,722	$7,998	$2,885	$4,578	$137	$0	$0	$0	$0	$53,320
1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$879,514	$186,470	$67,270	$106,737	$3,202	$0	$0	$0	$0	$1,243,192
Phase II												
2	1.099	2008	$0	$658,303	$114,448	$68,669	$320	$0	$192,272	$577,036	$2,308,142	$3,919,190
1	1.122	2009	$0	$134,426	$23,370	$14,022	$65	$0	$39,262	$117,831	$471,323	$800,299
0	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$792,729	$137,818	$82,691	$386	$0	$231,534	$694,866	$2,779,465	$4,719,489
Total Cost			$879,514	$979,198	$205,088	$189,428	$3,588	$0	$231,534	$694,866	$2,779,465	$5,962,681

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.1453	2010	$0	$4,467	$802	$1,145
-1	1.1694	2011	$0	$4,561	$819	$1,169
-2	1.1939	2012	$0	$4,656	$836	$1,194
-3	1.2190	2013	$0	$4,754	$853	$1,219
-4	1.2446	2014	$0	$4,854	$871	$1,245
-5	1.2707	2015	$0	$4,956	$890	$1,271
-6	1.2974	2016	$0	$5,060	$908	$1,297
-7	1.3247	2017	$0	$5,166	$927	$1,325
-8	1.3525	2018	$0	$5,275	$947	$1,352
-9	1.3809	2019	$0	$5,386	$967	$1,381
-10	1.4099	2020	$0	$5,499	$987	$1,410
-11	1.4395	2021	$0	$5,614	$1,008	$1,440
-12	1.4697	2022	$0	$5,732	$1,029	$1,470
-13	1.5006	2023	$0	$1,342,466	$1,050	$22,670
-14	1.5321	2024	$0	$5,975	$1,072	$1,532
-15	1.5643	2025	$0	$6,101	$1,095	$1,564
-16	1.5971	2026	$0	$6,229	$1,118	$1,597
-17	1.6307	2027	$0	$6,360	$1,141	$1,631
-18	1.6649	2028	$0	$6,493	$1,165	$1,665
-19	1.6999	2029	$0	$6,630	$1,190	$1,700
		Total	$0	$1,446,232	$19,675	$49,276

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**2,520,957**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**3,151,196**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs			
Engineering and Design			$824,000
Engineering		$300,000	
Geotechnical Investigation		$394,000	
Terrace Analyses		$20,000	
Data Collection		$60,000	
Cultural Resources		$10,000	
HTRW		$10,000	
NEPA Compliance		$30,000	
Supervision and Administration			$63,024
Corps Administration			$3,000
State Costs			
Supervision and Administration			$100,000
Ecological Review Costs			$0
Easements and Land Rights			$174,700
Monitoring			$0
Monitoring Plan Development	$0		
Monitoring Protocal Cost *	$0		
Total Phase I Cost Estimate			**$1,164,724**

* 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				
Estimated Construction Cost +25% Contingency				$3,151,196
Lands or Oyster Issues	719	lease acres		$719,000
Supervision and Inspectio	0 days	@	0 per day	$210,000
Supervision and Administration				$125,000
State Costs				
Supervision and Administration				$75,000
Total Phase II Cost Estimate				**$4,280,196**

TOTAL ESTIMATED PROJECT FIRST COST	**5,444,920**

O&M Data

Annual Costs

Annual Inspections	$4,900
Annual Cost for Operations	$0
Preventive Maintenance	$0
Engineering Monitoring @ TY1-5, 10, 15, 19	$0

Specific Intermittent Costs:

Construction Items	**Year 0**	**Year 5**	**Year 7**	**Year 15**
Mob & Demob	$0	$0	$0	$50,000
Terracing Maintenance (25% of original cost)	$0	$0	$0	$514,253
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	$564,253
Subtotal w/ 25% contin.	**$0**	$0	$0	$705,316
Engineer, Design & Administrative Costs				
Engineering and Design Cost	$0	$0	$0	$51,557
Administrative Cost	$0	$0	$0	$14,107
Eng Survey 5 days @ $1,556 per day	$0	$0	$0	$7,780
Construction 120 days @ $933 per day	$0	$0	$0	$111,960
Subtotal	**$0**	**$0**	**$0**	**$185,404**
Federal S&A	$0	$0	$0	$14,107
Total	**$0**	**$0**	**$0**	**$904,827**

Annual Project Costs:

Corps Administration	$700
Monitoring	$0

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	1	0	0	0	0	0	0	24
Plan & Design End	November-07											
Const. Start	May-08											
Const. End	December-08	0	0	0	5	1	0	0	0	0	0	6

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Bird Island/SW Pass SP &MC

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$12,848,741	Total Fully Funded Costs	$17,765,314

Total Charges	Present Worth	Average Annual
First Costs	$12,297,391	$1,018,392
Monitoring	$0	$0
State O & M Costs	$2,671,808	$221,262
Other Federal Costs	$68,416	$5,666
Average Annual Cost	$1,245,320	$1,245,320
Average Annual Habitat Units	62	
Cost Per Habitat Unit	$20,086	
Total Net Acres	133	

Coastal Wetlands Conservation and Restoration Plan

Bird Island/SW Pass SP &MC

Project Costs $17,765,314 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	2006	$255,763	$35,000	$53,679	$53,679	$875	$0	-	$0		$398,997	
3	2007	$438,452	$60,000	$92,022	$92,022	$1,500	$0	-	$0		$683,995	
2	2008	$182,688	$25,000	$38,342	$38,342	$625	$0	-	$0		$284,998	
1	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
0	2010	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$876,903	$120,000	$184,043	$184,043	$3,000	$0	$0	$0	$0	$1,367,989	$1,364,989
Phase II												
1	2009	-	$205,000	$184,043	$184,043	$408	$0	$367,799	$1,840,432	$7,361,726	$10,143,451	
0	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2013	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$205,000	$184,043	$184,043	$408	$0	$367,799	$1,840,432	$7,361,726	$10,143,451	$10,143,043
Total First Costs		$876,903	$325,000	$368,086	$368,086	$3,408	$0	$367,799	$1,840,432	$7,361,726	$11,511,440	

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	Discount	2010	$0	$3,900	$700	$1,000
-1	Discount	2011	$0	$3,900	$700	$1,000
-2	Discount	2012	$0	$2,076,301	$700	$37,853
-3	Discount	2013	$0	$3,900	$700	$1,000
-4	Discount	2014	$0	$37,211	$700	$1,788
-5	Discount	2015	$0	$3,900	$700	$1,000
-6	Discount	2016	$0	$3,900	$700	$1,000
-7	Discount	2017	$0	$3,900	$700	$1,000
-8	Discount	2018	$0	$3,900	$700	$1,000
-9	Discount	2019	$0	$3,900	$700	$1,000
-10	Discount	2020	$0	$3,900	$700	$1,000
-11	Discount	2021	$0	$3,900	$700	$1,000
-12	Discount	2022	$0	$3,900	$700	$1,000
-13	Discount	2023	$0	$1,443,337	$700	$26,590
-14	Discount	2024	$0	$3,900	$700	$1,000
-15	Discount	2025	$0	$3,900	$700	$1,000
-16	Discount	2026	$0	$3,900	$700	$1,000
-17	Discount	2027	$0	$3,900	$700	$1,000
-18	Discount	2028	$0	$3,900	$700	$1,000
-19	Discount	2029	$0	$3,900	$700	$1,000
	Total		$0	$3,623,149	$14,000	$83,231

Coastal Wetlands Conservation and Restoration Plan

Bird Island/SW Pass SP &MC

Project Priority List 15

Present Valued Costs Total Discounted Costs $15,037,616 Amortized Costs $1,245,320

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.233	2006	$315,347	$43,154	$66,185	$66,185	$1,079	$0	$0	$0	$0	$491,949
3	1.170	2007	$513,020	$70,204	$107,672	$107,672	$1,755	$0	$0	$0	$0	$800,323
2	1.110	2008	$202,855	$27,760	$42,575	$42,575	$694	$0	$0	$0	$0	$316,458
1	1.054	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	$1,031,222	$141,118	$216,431	$216,431	$3,528	$0	$0	$0	$0	$1,608,730
Phase II												
1	1.054	2009	$0	$216,019	$193,935	$193,935	$430	$0	$387,568	$1,939,355	$7,757,419	$10,688,661
0	1.000	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2013	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$216,019	$193,935	$193,935	$430	$0	$387,568	$1,939,355	$7,757,419	$10,688,661
Total First Cost			$1,031,222	$357,137	$410,367	$410,367	$3,958	$0	$387,568	$1,939,355	$7,757,419	$12,297,391

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.000	2010	$0	$3,900	$700	$1,000
-1	0.949	2011	$0	$3,701	$664	$949
-2	0.901	2012	$0	$1,869,886	$630	$34,090
-3	0.855	2013	$0	$3,333	$598	$855
-4	0.811	2014	$0	$30,180	$568	$1,450
-5	0.770	2015	$0	$3,002	$539	$770
-6	0.730	2016	$0	$2,849	$511	$730
-7	0.693	2017	$0	$2,703	$485	$693
-8	0.658	2018	$0	$2,565	$460	$658
-9	0.624	2019	$0	$2,435	$437	$624
-10	0.592	2020	$0	$2,310	$415	$592
-11	0.562	2021	$0	$2,193	$394	$562
-12	0.534	2022	$0	$2,081	$373	$534
-13	0.506	2023	$0	$730,767	$354	$13,463
-14	0.480	2024	$0	$1,874	$336	$480
-15	0.456	2025	$0	$1,778	$319	$456
-16	0.433	2026	$0	$1,688	$303	$433
-17	0.411	2027	$0	$1,601	$287	$411
-18	0.390	2028	$0	$1,520	$273	$390
-19	0.370	2029	$0	$1,442	$259	$370
		Total	$0	$2,671,808	$8,907	$59,509

Coastal Wetlands Conservation and Restoration Plan

Bird Island/SW Pass SP &MC

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $17,765,314 Amortized Costs $1,471,211

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.055	2006	$269,830	$36,925	$56,632	$56,632	$923	$0	$0	$0	$0	$420,942
3	1.076	2007	$471,818	$64,566	$99,024	$99,024	$1,614	$0	$0	$0	$0	$736,046
2	1.099	2008	$200,719	$27,467	$42,127	$42,127	$687	$0	$0	$0	$0	$313,126
1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
0	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$942,367	$128,958	$197,783	$197,783	$3,224	$0	$0	$0	$0	$1,470,115
Phase II												
1	1.122	2009	$0	$229,963	$206,454	$206,454	$458	$0	$412,586	$2,064,542	$8,258,169	$11,378,627
0	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.219	2013	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$229,963	$206,454	$206,454	$458	$0	$412,586	$2,064,542	$8,258,169	$11,378,627
Total Cost			$942,367	$358,921	$404,237	$404,237	$3,682	$0	$412,586	$2,064,542	$8,258,169	$12,848,741

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.1453	2010	$0	$4,467	$802	$1,145
-1	1.1694	2011	$0	$4,561	$819	$1,169
-2	1.1939	2012	$0	$2,478,972	$836	$45,194
-3	1.2190	2013	$0	$4,754	$853	$1,219
-4	1.2446	2014	$0	$46,313	$871	$2,225
-5	1.2707	2015	$0	$4,956	$890	$1,271
-6	1.2974	2016	$0	$5,060	$908	$1,297
-7	1.3247	2017	$0	$5,166	$927	$1,325
-8	1.3525	2018	$0	$5,275	$947	$1,352
-9	1.3809	2019	$0	$5,386	$967	$1,381
-10	1.4099	2020	$0	$5,499	$987	$1,410
-11	1.4395	2021	$0	$5,614	$1,008	$1,440
-12	1.4697	2022	$0	$5,732	$1,029	$1,470
-13	1.5006	2023	$0	$2,165,870	$1,050	$39,901
-14	1.5321	2024	$0	$5,975	$1,072	$1,532
-15	1.5643	2025	$0	$6,101	$1,095	$1,564
-16	1.5971	2026	$0	$6,229	$1,118	$1,597
-17	1.6307	2027	$0	$6,360	$1,141	$1,631
-18	1.6649	2028	$0	$6,493	$1,165	$1,665
-19	1.6999	2029	$0	$6,630	$1,190	$1,700
		Total	$0	$4,785,410	$19,675	$111,488

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**7,361,726**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**9,202,158**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs			
Engineering and Design			$876,903
Engineering		$564,903	
Geotechnical Investigation		$150,000	
Hydrologic Modeling		$0	
Data Collection		$122,000	
Cultural Resources		$10,000	
#REF!		$30,000	
NEPA Compliance		$0	
Supervision and Administration			$184,043
Corps Administration			$3,000
State Costs			
Supervision and Administration			$184,043
Ecological Review Costs			$0
Easements and Land Rights			$120,000
Monitoring			$0
Monitoring Plan Developmen	$0		
Monitoring Protocal Cost *	$0		

Total Phase I Cost Estimate **$1,367,989**

* 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				
Estimated Construction Cost +25% Contingency				$9,202,158
Lands or Oyster Issues	205	lease acres		$205,000
Supervision and Inspectio	197 days	@	1867 per day	$367,799
Supervision and Administration				$184,043
State Costs				
Supervision and Administration				$184,043

Total Phase II Cost Estimate **$10,143,043**

TOTAL ESTIMATED PROJECT FIRST COST **11,511,032**

O&M Data

Annual Costs

Annual Inspections	$4,900
Annual Cost for Operations	$0
Preventive Maintenance	$0
Engineering Monitoring @ TY1-5, 10, 15, 19	$0

Specific Intermittent Costs:

Construction Items				**Year 0**	**Year 3**	**Year 5**	**Year 14**
Contractor Mobilization/Demobilization				$0	$100,000	$0	$100,000
Foreshore Rock Dike (25% replace @ TY3 / 10% Replace @ TY14)				$0	$750,840	$0	$300,330
Access Channel (50% of original @ $3.50/cy)				$0	$604,251	$0	$604,251
Temporary Navaids (100% of original @ TY3 & TY14)				$0	$19,000	$0	$19,000
Vegetative Plantings (30% replacement @ TY5)				$0	$0	$21,000	$0
0				$0	$0	$0	$0
0				$0	$0	$0	$0
			Subtotal	$0	$1,474,091	$21,000	$1,023,581
			Subtotal w/ 25% contin.	**$0**	$1,842,614	$26,250	$1,279,476
Engineer, Design & Administrative Costs							
Engineering and Design Cost				$0	$125,724	$2,539	$89,565
Administrative Cost				$0	$36,853	$788	$25,590
Eng Survey	3 days	@	$3,111 per day	$0	$9,333	$0	$9,333
Construction	2 days	@	$1,867 per day	$0	$57,877	$3,734	$0
							$35,473
			Subtotal	**$0**	**$229,787**	**$7,061**	**$159,961**
Federal S&A				$0	$36,853	$788	$25,590
			Total	**$0**	**$2,109,254**	**$34,099**	**$1,465,027**

Annual Project Costs:

Corps Administration	$700
Monitoring	$0

Construction Schedule:

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Plan & Design Start	March-06	7	12	5	0	0	0	0	0	0	0	24
Plan & Design End	March-08											
Const. Start	January-09											
Const. End	August-09	0	0	0	7	0	0	0	0	0	0	7

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
South Pecan Island Freshwater Introduction

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$3,802,097	Total Fully Funded Costs	$4,438,695

Total Charges	Present Worth	Average Annual
First Costs	$3,728,002	$308,729
Monitoring	$0	$0
State O & M Costs	$248,372	$20,569
Other Federal Costs	$24,547	$2,033
Average Annual Cost	$331,331	$331,331
Average Annual Habitat Units	0	
Cost Per Habitat Unit	#DIV/0!	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

South Pecan Island Freshwater Introduction

Project Costs $4,438,695 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
5	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
4	2006	$227,295	$30,556	$22,917	$30,556	$917	$0	-	$0		$312,239	
3	2007	$247,958	$33,333	$25,000	$33,333	$1,000	$0	-	$0		$340,624	
2	2008	$247,958	$33,333	$25,000	$33,333	$1,000	$0	-	$0		$340,624	
1	2009	$20,663	$2,778	$2,083	$2,778	$83	$0	-	$0		$28,385	
	TOTAL	$743,873	$100,000	$75,000	$100,000	$3,000	$0	$0	$0	$0	$1,021,873	$1,018,873
Phase II												
1	2009	-	$0	$90,000	$75,000	$233	$0	$111,960	$425,953	$1,703,811	$2,406,957	
0	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2013	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$90,000	$75,000	$233	$0	$111,960	$425,953	$1,703,811	$2,406,957	$2,406,724
Total First Costs		$743,873	$100,000	$165,000	$175,000	$3,233	$0	$111,960	$425,953	$1,703,811	$3,428,830	

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	Discount	2010	$0	$5,900	$700	$1,000
-1	Discount	2011	$0	$5,900	$700	$1,000
-2	Discount	2012	$0	$5,900	$700	$1,000
-3	Discount	2013	$0	$5,900	$700	$1,000
-4	Discount	2014	$0	$5,900	$700	$1,000
-5	Discount	2015	$0	$5,900	$700	$1,000
-6	Discount	2016	$0	$118,223	$700	$3,138
-7	Discount	2017	$0	$5,900	$700	$1,000
-8	Discount	2018	$0	$5,900	$700	$1,000
-9	Discount	2019	$0	$5,900	$700	$1,000
-10	Discount	2020	$0	$5,900	$700	$1,000
-11	Discount	2021	$0	$5,900	$700	$1,000
-12	Discount	2022	$0	$5,900	$700	$1,000
-13	Discount	2023	$0	$186,137	$700	$3,675
-14	Discount	2024	$0	$5,900	$700	$1,000
-15	Discount	2025	$0	$5,900	$700	$1,000
-16	Discount	2026	$0	$5,900	$700	$1,000
-17	Discount	2027	$0	$5,900	$700	$1,000
-18	Discount	2028	$0	$5,900	$700	$1,000
-19	Discount	2029	$0	$5,900	$700	$1,000
	Total		$0	$410,560	$14,000	$24,813

Coastal Wetlands Conservation and Restoration Plan

South Pecan Island Freshwater Introduction

Project Priority List 15

Present Valued Costs Total Discounted Costs $4,000,921 Amortized Costs $331,331

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.299	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.233	2006	$280,246	$37,674	$28,255	$37,674	$1,130	$0	$0	$0	$0	$384,979
3	1.170	2007	$290,128	$39,002	$29,252	$39,002	$1,170	$0	$0	$0	$0	$398,555
2	1.110	2008	$275,329	$37,013	$27,760	$37,013	$1,110	$0	$0	$0	$0	$378,226
1	1.054	2009	$21,774	$2,927	$2,195	$2,927	$88	$0	$0	$0	$0	$29,911
		Total	$867,478	$116,616	$87,462	$116,616	$3,498	$0	$0	$0	$0	$1,191,671
Phase II												
1	1.054	2009	$0	$0	$94,838	$79,031	$246	$0	$117,978	$448,848	$1,795,391	$2,536,331
0	1.000	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2013	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$94,838	$79,031	$246	$0	$117,978	$448,848	$1,795,391	$2,536,331
Total First Cost			$867,478	$116,616	$182,300	$195,648	$3,744	$0	$117,978	$448,848	$1,795,391	$3,728,002

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.000	2010	$0	$5,900	$700	$1,000
-1	0.949	2011	$0	$5,599	$664	$949
-2	0.901	2012	$0	$5,313	$630	$901
-3	0.855	2013	$0	$5,042	$598	$855
-4	0.811	2014	$0	$4,785	$568	$811
-5	0.770	2015	$0	$4,541	$539	$770
-6	0.730	2016	$0	$86,353	$511	$2,292
-7	0.693	2017	$0	$4,090	$485	$693
-8	0.658	2018	$0	$3,881	$460	$658
-9	0.624	2019	$0	$3,683	$437	$624
-10	0.592	2020	$0	$3,495	$415	$592
-11	0.562	2021	$0	$3,317	$394	$562
-12	0.534	2022	$0	$3,148	$373	$534
-13	0.506	2023	$0	$94,242	$354	$1,861
-14	0.480	2024	$0	$2,835	$336	$480
-15	0.456	2025	$0	$2,690	$319	$456
-16	0.433	2026	$0	$2,553	$303	$433
-17	0.411	2027	$0	$2,423	$287	$411
-18	0.390	2028	$0	$2,299	$273	$390
-19	0.370	2029	$0	$2,182	$259	$370
		Total	$0	$248,372	$8,907	$15,640

Coastal Wetlands Conservation and Restoration Plan

South Pecan Island Freshwater Introduction

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $4,438,695 Amortized Costs $367,585

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.055	2006	$239,796	$32,236	$24,177	$32,236	$967	$0	$0	$0	$0	$329,412
3	1.076	2007	$266,827	$35,870	$26,903	$35,870	$1,076	$0	$0	$0	$0	$366,546
2	1.099	2008	$272,431	$36,623	$27,467	$36,623	$1,099	$0	$0	$0	$0	$374,243
1	1.122	2009	$23,179	$3,116	$2,337	$3,116	$93	$0	$0	$0	$0	$31,842
		TOTAL	$802,233	$107,845	$80,884	$107,845	$3,235	$0	$0	$0	$0	$1,102,043
Phase II												
1	1.122	2009	$0	$0	$100,959	$84,133	$262	$0	$125,593	$477,821	$1,911,285	$2,700,054
0	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.219	2013	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$100,959	$84,133	$262	$0	$125,593	$477,821	$1,911,285	$2,700,054
Total Cost			$802,233	$107,845	$181,843	$191,978	$3,497	$0	$125,593	$477,821	$1,911,285	$3,802,097

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.1453	2010	$0	$6,757	$802	$1,145
-1	1.1694	2011	$0	$6,899	$819	$1,169
-2	1.1939	2012	$0	$7,044	$836	$1,194
-3	1.2190	2013	$0	$7,192	$853	$1,219
-4	1.2446	2014	$0	$7,343	$871	$1,245
-5	1.2707	2015	$0	$7,497	$890	$1,271
-6	1.2974	2016	$0	$153,386	$908	$4,071
-7	1.3247	2017	$0	$7,816	$927	$1,325
-8	1.3525	2018	$0	$7,980	$947	$1,352
-9	1.3809	2019	$0	$8,147	$967	$1,381
-10	1.4099	2020	$0	$8,318	$987	$1,410
-11	1.4395	2021	$0	$8,493	$1,008	$1,440
-12	1.4697	2022	$0	$8,671	$1,029	$1,470
-13	1.5006	2023	$0	$279,317	$1,050	$5,515
-14	1.5321	2024	$0	$9,039	$1,072	$1,532
-15	1.5643	2025	$0	$9,229	$1,095	$1,564
-16	1.5971	2026	$0	$9,423	$1,118	$1,597
-17	1.6307	2027	$0	$9,621	$1,141	$1,631
-18	1.6649	2028	$0	$9,823	$1,165	$1,665
-19	1.6999	2029	$0	$10,029	$1,190	$1,700
		Total	$0	$582,028	$19,675	$34,895

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**1,703,811**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**2,129,764**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs			
Engineering and Design			$743,873
Engineering		$143,873	
Geotechnical Investigation		$60,000	
Hydrologic Modeling		$300,000	
Data Collection		$200,000	
Cultural Resources		$10,000	
HTRW		$0	
NEPA Compliance		$30,000	
Supervision and Administration			$75,000
Corps Administration			$3,000
State Costs			
Supervision and Administration			$100,000
Ecological Review Costs			$0
Easements and Land Rights			$100,000
Monitoring			$0
Monitoring Plan Development	$0		
Monitoring Protocal Cost *	$0		
Total Phase I Cost Estimate			**$1,021,873**

* 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				
Estimated Construction Cost +25% Contingency				$2,129,764
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspectio	120	days @	933 per day	$111,960
Supervision and Administration				$90,000
State Costs				
Supervision and Administration				$75,000
Total Phase II Cost Estimate				**$2,406,724**

TOTAL ESTIMATED PROJECT FIRST COST	**3,428,597**

O&M Data

Annual Costs

Annual Inspections	$4,900
Annual Cost for Operations	$2,000
Preventive Maintenance	$0
Engineering Monitoring @ TY1-5, 10, 15, 19	$0

Specific Intermittent Costs:

Construction Items	**Year 0**	**Year 5**	**Year 7**	**Year 15**
Contractor Mobilization/Demobilization	$0	$0	$35,000	$35,000
Dredge conveyance channel (30% of original volume)	$0	$0	$22,000	$22,000
Replace flapgates	$0	$0	$0	$50,000
0	$0	$0	$0	$0
0	$0	$0	$0	$0
0	$0	$0	$0	$0
0	$0	$0	$0	$0
Subtotal	$0	$0	$57,000	$107,000
Subtotal w/ 25% contin.	**$0**	$0	$71,250	$133,750
Engineer, Design & Administrative Costs				
Engineering and Design Cost	$0	$0	$6,277	$11,154
Administrative Cost	$0	$0	$2,138	$2,675
Eng Survey 3 days @ $1,556 per day	$0	$0	$4,668	$4,668
Construction 30 days @ $933 per day	$0	$0	$27,990	$27,990
Subtotal	**$0**	**$0**	**$41,073**	**$46,487**
Federal S&A	$0	$0	$2,138	$2,675
Total	**$0**	**$0**	**$114,461**	**$182,912**

Annual Project Costs:

Corps Administration	$700
Monitoring	$0

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	12	1	0	0	0	0	0	36
Plan & Design End	November-08											
Const. Start	May-09											
Const. End	September-09	0	0	0	0	4	0	0	0	0	0	4

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Enhancement of Barrier Island Vegetation Demo Project

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$665,265	Total Fully Funded Costs	$845,187

Total Charges	Present Worth	Average Annual
First Costs	$672,918	$55,727
Monitoring	$156,026	$12,921
State O & M Costs	$0	$0
Other Federal Costs	$1,364	$113
Average Annual Cost	$68,761	$68,761
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Enhancement of Barrier Island Vegetation Demo Project

Project Costs $845,187 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
3	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
2	2006	$206,250	$18,333	$22,917	$22,917	$2,750	$4,583	-	$0		$277,750	
1	2007	$18,750	$1,667	$2,083	$2,083	$250	$417	-	$0		$25,250	
0	2008	$0	$0	$0	$0	$0	$0	-	$0		$0	
-1	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$225,000	$20,000	$25,000	$25,000	$3,000	$5,000	$0	$0	$0	$303,000	$300,000
Phase II												
1	2007	-	$0	$25,000	$25,000	$175	$0	$27,990	$48,500	$194,000	$320,665	
0	2008	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$25,000	$25,000	$175	$0	$27,990	$48,500	$194,000	$320,665	$320,490
Total First Costs		$225,000	$20,000	$50,000	$50,000	$3,175	$5,000	$27,990	$48,500	$194,000	$623,665	

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	Discount	2008	$72,751	$0	$700	$0
-1	Discount	2009	$87,751	$0	$700	$0
-2	Discount	2010	$0	$0	$0	$0
-3	Discount	2011	$0	$0	$0	$0
-4	Discount	2012	$0	$0	$0	$0
-5	Discount	2013	$0	$0	$0	$0
-6	Discount	2014	$0	$0	$0	$0
-7	Discount	2015	$0	$0	$0	$0
-8	Discount	2016	$0	$0	$0	$0
-9	Discount	2017	$0	$0	$0	$0
-10	Discount	2018	$0	$0	$0	$0
-11	Discount	2019	$0	$0	$0	$0
-12	Discount	2020	$0	$0	$0	$0
-13	Discount	2021	$0	$0	$0	$0
-14	Discount	2022	$0	$0	$0	$0
-15	Discount	2023	$0	$0	$0	$0
-16	Discount	2024	$0	$0	$0	$0
-17	Discount	2025	$0	$0	$0	$0
-18	Discount	2026	$0	$0	$0	$0
-19	Discount	2027	$0	$0	$0	$0
	Total		$160,502	$0	$1,400	$0

Coastal Wetlands Conservation and Restoration Plan

Enhancement of Barrier Island Vegetation Demo Project

Project Priority List 15

Present Valued Costs Total Discounted Costs $830,309 Amortized Costs $68,761

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
3	1.170	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	1.110	2006	$229,018	$20,357	$25,446	$25,446	$3,054	$5,089	$0	$0	$0	$308,411
1	1.054	2007	$19,758	$1,756	$2,195	$2,195	$263	$439	$0	$0	$0	$26,607
0	1.000	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$248,776	$22,113	$27,642	$27,642	$3,317	$5,528	$0	$0	$0	$335,018
Phase II												
1	1.054	2007	$0	$0	$26,344	$26,344	$184	$0	$29,494	$51,107	$204,428	$337,901
0	1.000	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$26,344	$26,344	$184	$0	$29,494	$51,107	$204,428	$337,901
Total First Cost			$248,776	$22,113	$53,985	$53,985	$3,501	$5,528	$29,494	$51,107	$204,428	$672,918

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.000	2008	$72,751	$0	$700	$0
-1	0.949	2009	$83,275	$0	$664	$0
-2	0.901	2010	$0	$0	$0	$0
-3	0.855	2011	$0	$0	$0	$0
-4	0.811	2012	$0	$0	$0	$0
-5	0.770	2013	$0	$0	$0	$0
-6	0.730	2014	$0	$0	$0	$0
-7	0.693	2015	$0	$0	$0	$0
-8	0.658	2016	$0	$0	$0	$0
-9	0.624	2017	$0	$0	$0	$0
-10	0.592	2018	$0	$0	$0	$0
-11	0.562	2019	$0	$0	$0	$0
-12	0.534	2020	$0	$0	$0	$0
-13	0.506	2021	$0	$0	$0	$0
-14	0.480	2022	$0	$0	$0	$0
-15	0.456	2023	$0	$0	$0	$0
-16	0.433	2024	$0	$0	$0	$0
-17	0.411	2025	$0	$0	$0	$0
-18	0.390	2026	$0	$0	$0	$0
-19	0.370	2027	$0	$0	$0	$0
		Total	$156,026	$0	$1,364	$0

Coastal Wetlands Conservation and Restoration Plan

Enhancement of Barrier Island Vegetation Demo Project

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $845,187 Amortized Costs $69,993

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
3	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	1.055	2006	$217,594	$19,342	$24,177	$24,177	$2,901	$4,835	$0	$0	$0	$293,026
1	1.076	2007	$20,177	$1,794	$2,242	$2,242	$269	$448	$0	$0	$0	$27,172
0	1.099	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$237,771	$21,135	$26,419	$26,419	$3,170	$5,284	$0	$0	$0	$320,198
Phase II												
1	1.076	2007	$0	$0	$26,903	$26,903	$188	$0	$30,120	$52,191	$208,763	$345,068
0	1.099	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$26,903	$26,903	$188	$0	$30,120	$52,191	$208,763	$345,068
Total Cost			$237,771	$21,135	$53,321	$53,321	$3,359	$5,284	$30,120	$52,191	$208,763	$665,265

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.0987	2008	$79,931	$0	$769	$0
-1	1.1218	2009	$98,437	$0	$785	$0
-2	1.1453	2010	$0	$0	$0	$0
-3	1.1694	2011	$0	$0	$0	$0
-4	1.1939	2012	$0	$0	$0	$0
-5	1.2190	2013	$0	$0	$0	$0
-6	1.2446	2014	$0	$0	$0	$0
-7	1.2707	2015	$0	$0	$0	$0
-8	1.2974	2016	$0	$0	$0	$0
-9	1.3247	2017	$0	$0	$0	$0
-10	1.3525	2018	$0	$0	$0	$0
-11	1.3809	2019	$0	$0	$0	$0
-12	1.4099	2020	$0	$0	$0	$0
-13	1.4395	2021	$0	$0	$0	$0
-14	1.4697	2022	$0	$0	$0	$0
-15	1.5006	2023	$0	$0	$0	$0
-16	1.5321	2024	$0	$0	$0	$0
-17	1.5643	2025	$0	$0	$0	$0
-18	1.5971	2026	$0	$0	$0	$0
-19	1.6307	2027	$0	$0	$0	$0
		Total	$178,368	$0	$1,554	$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**194,000**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**242,500**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs				
Engineering and Design				$225,000
Engineering			$100,000	
Geotechnical Investigation			$0	
Sampling/Analysis			$25,000	
Data Collection			$35,000	
Cultural Resources			$0	
NEPA Compliance			$30,000	
Monitoring Plan Development			$35,000	
Supervision and Administration				$25,000
Corps Administration				$3,000
State Costs				
Supervision and Administration				$25,000
Ecological Review Costs				$0
Easements and Land Rights				$20,000
Monitoring				$5,000
Monitoring Plan Development	$5,000			
Monitoring Protocal Cost *	$0			

Total Phase I Cost Estimate **$303,000**

* 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				
Estimated Construction Cost +25% Contingency				$242,500
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspectio	30 days	@	933 per day	$27,990
Supervision and Administration				$25,000
State Costs				
Supervision and Administration				$25,000

Total Phase II Cost Estimate **$320,490**

TOTAL ESTIMATED PROJECT FIRST COST **623,490**

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:

Construction Items	**Year 0**	**Year 5**	**Year 7**	**Year 15**
Year 5 mobilization	$0	$0	$0	$0
Year 5 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 mobilization	$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	$0	$0	$0
Administrative Cost	$0	$0	$0	$0
Eng Survey 7 days @ $1,460 per day	$0	$0	$0	$0
Construction 15 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	$700
Monitoring	$72,751

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	1	0	0	0	0	0	0	0	12
Plan & Design End	November-06											
Const. Start	March-07											
Const. End	June-07	0	0	3	0	0	0	0	0	0	0	3

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Barrier Island Sand Blowing Demo

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$1,847,849	Total Fully Funded Costs	$1,919,343

Total Charges	Present Worth	Average Annual
First Costs	$1,829,098	$151,474
Monitoring	$56,252	$4,658
State O & M Costs	$0	$0
Other Federal Costs	$1,995	$165
Average Annual Cost	$156,298	$156,298
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Barrier Island Sand Blowing Demo

Project Costs $1,919,343 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
3	2006	$148,958	$23,375	$34,375	$22,917	$1,375	$2,292	-	$0		$233,292	
2	2007	$162,500	$25,500	$37,500	$25,000	$1,500	$2,500	-	$0		$254,500	
1	2008	$13,542	$2,125	$3,125	$2,083	$125	$208	-	$0		$21,208	
0	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$325,000	$51,000	$75,000	$50,000	$3,000	$5,000	$0	$0	$0	$509,000	$506,000
Phase II												
1	2008	-	$25,000	$75,000	$25,000	$117	$0	$45,000	$203,450	$813,800	$1,187,367	
0	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$25,000	$75,000	$25,000	$117	$0	$45,000	$203,450	$813,800	$1,187,367	$1,187,250
Total First Costs		$325,000	$76,000	$150,000	$75,000	$3,117	$5,000	$45,000	$203,450	$813,800	$1,696,367	

Year		FY	Monitoring	O&M & State Ins	Corps Admin	Fed S&A & Insp
0	Discount	2009	$15,000	$0	$700	$0
-1	Discount	2010	$15,000	$0	$700	$0
-2	Discount	2011	$30,000	$0	$700	$0
-3	Discount	2012	$0	$0	$0	$0
-4	Discount	2013	$0	$0	$0	$0
-5	Discount	2014	$0	$0	$0	$0
-6	Discount	2015	$0	$0	$0	$0
-7	Discount	2016	$0	$0	$0	$0
-8	Discount	2017	$0	$0	$0	$0
-9	Discount	2018	$0	$0	$0	$0
-10	Discount	2019	$0	$0	$0	$0
-11	Discount	2020	$0	$0	$0	$0
-12	Discount	2021	$0	$0	$0	$0
-13	Discount	2022	$0	$0	$0	$0
-14	Discount	2023	$0	$0	$0	$0
-15	Discount	2024	$0	$0	$0	$0
-16	Discount	2025	$0	$0	$0	$0
-17	Discount	2026	$0	$0	$0	$0
-18	Discount	2027	$0	$0	$0	$0
-19	Discount	2028	$0	$0	$0	$0
	Total		$60,000	$0	$2,100	$0

Coastal Wetlands Conservation and Restoration Plan

Barrier Island Sand Blowing Demo

Project Priority List 15

Present Valued Costs Total Discounted Costs $1,887,345 Amortized Costs $156,298

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.233	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.170	2006	$174,292	$27,350	$40,221	$26,814	$1,609	$2,681	$0	$0	$0	$272,968
2	1.110	2007	$180,438	$28,315	$41,640	$27,760	$1,666	$2,776	$0	$0	$0	$282,594
1	1.054	2008	$14,270	$2,239	$3,293	$2,195	$132	$220	$0	$0	$0	$22,348
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$369,000	$57,905	$85,154	$56,769	$3,406	$5,677	$0	$0	$0	$577,910
Phase II												
1	1.054	2008	$0	$26,344	$79,031	$26,344	$123	$0	$47,419	$214,385	$857,542	$1,251,188
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$26,344	$79,031	$26,344	$123	$0	$47,419	$214,385	$857,542	$1,251,188
Total First Cost			$369,000	$84,248	$164,185	$83,113	$3,529	$5,677	$47,419	$214,385	$857,542	$1,829,098

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.000	2009	$15,000	$0	$700	$0
-1	0.949	2010	$14,235	$0	$664	$0
-2	0.901	2011	$27,018	$0	$630	$0
-3	0.855	2012	$0	$0	$0	$0
-4	0.811	2013	$0	$0	$0	$0
-5	0.770	2014	$0	$0	$0	$0
-6	0.730	2015	$0	$0	$0	$0
-7	0.693	2016	$0	$0	$0	$0
-8	0.658	2017	$0	$0	$0	$0
-9	0.624	2018	$0	$0	$0	$0
-10	0.592	2019	$0	$0	$0	$0
-11	0.562	2020	$0	$0	$0	$0
-12	0.534	2021	$0	$0	$0	$0
-13	0.506	2022	$0	$0	$0	$0
-14	0.480	2023	$0	$0	$0	$0
-15	0.456	2024	$0	$0	$0	$0
-16	0.433	2025	$0	$0	$0	$0
-17	0.411	2026	$0	$0	$0	$0
-18	0.390	2027	$0	$0	$0	$0
-19	0.370	2028	$0	$0	$0	$0
		Total	$56,252	$0	$1,995	$0

Coastal Wetlands Conservation and Restoration Plan

Barrier Island Sand Blowing Demo

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $1,919,343 Amortized Costs $158,948

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.055	2006	$157,151	$24,661	$36,266	$24,177	$1,451	$2,418	$0	$0	$0	$246,123
2	1.076	2007	$174,866	$27,441	$40,354	$26,903	$1,614	$2,690	$0	$0	$0	$273,867
1	1.099	2008	$14,878	$2,335	$3,433	$2,289	$137	$229	$0	$0	$0	$23,302
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$346,895	$54,436	$80,053	$53,369	$3,202	$5,337	$0	$0	$0	$543,292
Phase II												
1	1.099	2008	$0	$27,467	$82,402	$27,467	$128	$0	$49,441	$223,530	$894,121	$1,304,558
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$27,467	$82,402	$27,467	$128	$0	$49,441	$223,530	$894,121	$1,304,558
Total Cost			$346,895	$81,903	$162,455	$80,836	$3,330	$5,337	$49,441	$223,530	$894,121	$1,847,849

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.1218	2009	$16,827	$0	$785	$0
-1	1.1453	2010	$17,180	$0	$802	$0
-2	1.1694	2011	$35,081	$0	$819	$0
-3	1.1939	2012	$0	$0	$0	$0
-4	1.2190	2013	$0	$0	$0	$0
-5	1.2446	2014	$0	$0	$0	$0
-6	1.2707	2015	$0	$0	$0	$0
-7	1.2974	2016	$0	$0	$0	$0
-8	1.3247	2017	$0	$0	$0	$0
-9	1.3525	2018	$0	$0	$0	$0
-10	1.3809	2019	$0	$0	$0	$0
-11	1.4099	2020	$0	$0	$0	$0
-12	1.4395	2021	$0	$0	$0	$0
-13	1.4697	2022	$0	$0	$0	$0
-14	1.5006	2023	$0	$0	$0	$0
-15	1.5321	2024	$0	$0	$0	$0
-16	1.5643	2025	$0	$0	$0	$0
-17	1.5971	2026	$0	$0	$0	$0
-18	1.6307	2027	$0	$0	$0	$0
-19	1.6649	2028	$0	$0	$0	$0
		Total	$69,088	$0	$2,406	$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**813,800**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**1,017,250**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs			
Engineering and Design			$325,000
Engineering		$150,000	
Geotechnical Investigation		$0	
Logistical Study		$50,000	
Data Collection		$25,000	
Cultural Resources		$15,000	
NEPA Compliance		$60,000	
Monitoring Plan Development		$25,000	
Supervision and Administration			$75,000
Corps Administration			$3,000
State Costs			
Supervision and Administration			$50,000
Ecological Review Costs			$0
Easements and Land Rights			$51,000
Monitoring			$5,000
Monitoring Plan Development	$5,000		
Monitoring Protocal Cost *	$0		

Total Phase I Cost Estimate **$509,000**

* 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				
Estimated Construction Cost +25% Contingency				$1,017,250
Lands or Oyster Issues	0	lease acres		$25,000
Supervision and Inspectio	1 days	@	45000 per day	$45,000
Supervision and Administration				$75,000
State Costs				
Supervision and Administration				$25,000

Total Phase II Cost Estimate **$1,187,250**

TOTAL ESTIMATED PROJECT FIRST COST **1,696,250**

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:

Construction Items	**Year 0**	**Year 2**	**Year 7**	**Year 15**
Mobilization/Demobilization	$0	$0	$0	$0
Var. Density Concrete (1,600 cy @$162 per) plus Forms/Hardware-Delivered on site	$0	$0	$0	$0
Anchor system (30 @ $1500)	$0	$0	$0	$0
Navigation Aids (2 @ $2000)	$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	$0	$0	$0
Administrative Cost	$0	$0	$0	$0
Eng Survey 3 days @ $1,556 per day	$0	$0	$0	$0
Construction 50 days @ $933 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	$700
Monitoring	$15,000

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	1	0	0	0	0	0	0	24
Plan & Design End	November-07											
Const. Start	March-08											
Const. End	May-08	0	0	0	2	0	0	0	0	0	0	2

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Nourishment of Perm. Flooded Cypress Swamps Demo

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$1,216,095	Total Fully Funded Costs	$1,550,188

Total Charges	Present Worth	Average Annual
First Costs	$1,209,565	$100,168
Monitoring	$229,303	$18,989
State O & M Costs	$34,330	$2,843
Other Federal Costs	$3,911	$324
Average Annual Cost	$122,325	$122,325
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Nourishment of Perm. Flooded Cypress Swamps Demo

Project Costs $1,550,188 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
3	2006	$121,232	$34,375	$44,688	$17,188	$2,063	$3,438	-	$0		$222,982	
2	2007	$55,105	$15,625	$20,313	$7,813	$938	$1,563	-	$0		$101,355	
1	2008	$0	$0	$0	$0	$0	$0	-	$0		$0	
0	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$176,337	$50,000	$65,000	$25,000	$3,000	$5,000	$0	$0	$0	$324,337	$321,337
Phase II												
1	2008	-	$0	$25,000	$25,000	$175	$0	$55,980	$137,463	$549,850	$793,468	
0	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$25,000	$25,000	$175	$0	$55,980	$137,463	$549,850	$793,468	$793,293
Total First Costs		$176,337	$50,000	$90,000	$50,000	$3,175	$5,000	$55,980	$137,463	$549,850	$1,117,805	

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	Discount	2009	$75,000	$34,330	$700	$750
-1	Discount	2010	$40,000	$0	$700	$0
-2	Discount	2011	$40,000	$0	$700	$0
-3	Discount	2012	$75,000	$0	$700	$0
-4	Discount	2013	$20,000	$0	$700	$0
-5	Discount	2014	$0	$0	$0	$0
-6	Discount	2015	$0	$0	$0	$0
-7	Discount	2016	$0	$0	$0	$0
-8	Discount	2017	$0	$0	$0	$0
-9	Discount	2018	$0	$0	$0	$0
-10	Discount	2019	$0	$0	$0	$0
-11	Discount	2020	$0	$0	$0	$0
-12	Discount	2021	$0	$0	$0	$0
-13	Discount	2022	$0	$0	$0	$0
-14	Discount	2023	$0	$0	$0	$0
-15	Discount	2024	$0	$0	$0	$0
-16	Discount	2025	$0	$0	$0	$0
-17	Discount	2026	$0	$0	$0	$0
-18	Discount	2027	$0	$0	$0	$0
-19	Discount	2028	$0	$0	$0	$0
	Total		$250,000	$34,330	$3,500	$750

Coastal Wetlands Conservation and Restoration Plan

Nourishment of Perm. Flooded Cypress Swamps Demo

Project Priority List 15

Present Valued Costs Total Discounted Costs $1,477,108 Amortized Costs $122,325

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.233	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.170	2006	$141,850	$40,221	$52,288	$20,111	$2,413	$4,022	$0	$0	$0	$260,905
2	1.110	2007	$61,188	$17,350	$22,555	$8,675	$1,041	$1,735	$0	$0	$0	$112,544
1	1.054	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	$203,038	$57,571	$74,842	$28,786	$3,454	$5,757	$0	$0	$0	$373,449
Phase II												
1	1.054	2008	$0	$0	$26,344	$26,344	$184	$0	$58,989	$144,851	$579,404	$836,116
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$26,344	$26,344	$184	$0	$58,989	$144,851	$579,404	$836,116
Total First Cost			$203,038	$57,571	$101,186	$55,129	$3,639	$5,757	$58,989	$144,851	$579,404	$1,209,565

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.000	2009	$75,000	$34,330	$700	$750
-1	0.949	2010	$37,960	$0	$664	$0
-2	0.901	2011	$36,023	$0	$630	$0
-3	0.855	2012	$64,099	$0	$598	$0
-4	0.811	2013	$16,221	$0	$568	$0
-5	0.770	2014	$0	$0	$0	$0
-6	0.730	2015	$0	$0	$0	$0
-7	0.693	2016	$0	$0	$0	$0
-8	0.658	2017	$0	$0	$0	$0
-9	0.624	2018	$0	$0	$0	$0
-10	0.592	2019	$0	$0	$0	$0
-11	0.562	2020	$0	$0	$0	$0
-12	0.534	2021	$0	$0	$0	$0
-13	0.506	2022	$0	$0	$0	$0
-14	0.480	2023	$0	$0	$0	$0
-15	0.456	2024	$0	$0	$0	$0
-16	0.433	2025	$0	$0	$0	$0
-17	0.411	2026	$0	$0	$0	$0
-18	0.390	2027	$0	$0	$0	$0
-19	0.370	2028	$0	$0	$0	$0
		Total	$229,303	$34,330	$3,161	$750

Coastal Wetlands Conservation and Restoration Plan

Nourishment of Perm. Flooded Cypress Swamps Demo

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $1,550,188 Amortized Costs $128,377

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.055	2006	$127,899	$36,266	$47,145	$18,133	$2,176	$3,627	$0	$0	$0	$235,246
2	1.076	2007	$59,299	$16,814	$21,858	$8,407	$1,009	$1,681	$0	$0	$0	$109,068
1	1.099	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$187,198	$53,080	$69,004	$26,540	$3,185	$5,308	$0	$0	$0	$344,314
Phase II												
1	1.099	2008	$0	$0	$27,467	$27,467	$192	$0	$61,505	$151,030	$604,119	$871,781
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$27,467	$27,467	$192	$0	$61,505	$151,030	$604,119	$871,781
Total Cost			$187,198	$53,080	$96,471	$54,007	$3,377	$5,308	$61,505	$151,030	$604,119	$1,216,095

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.1218	2009	$84,133	$38,510	$785	$841
-1	1.1453	2010	$45,813	$0	$802	$0
-2	1.1694	2011	$46,775	$0	$819	$0
-3	1.1939	2012	$89,545	$0	$836	$0
-4	1.2190	2013	$24,380	$0	$853	$0
-5	1.2446	2014	$0	$0	$0	$0
-6	1.2707	2015	$0	$0	$0	$0
-7	1.2974	2016	$0	$0	$0	$0
-8	1.3247	2017	$0	$0	$0	$0
-9	1.3525	2018	$0	$0	$0	$0
-10	1.3809	2019	$0	$0	$0	$0
-11	1.4099	2020	$0	$0	$0	$0
-12	1.4395	2021	$0	$0	$0	$0
-13	1.4697	2022	$0	$0	$0	$0
-14	1.5006	2023	$0	$0	$0	$0
-15	1.5321	2024	$0	$0	$0	$0
-16	1.5643	2025	$0	$0	$0	$0
-17	1.5971	2026	$0	$0	$0	$0
-18	1.6307	2027	$0	$0	$0	$0
-19	1.6649	2028	$0	$0	$0	$0
		Total	$290,647	$38,510	$4,095	$841

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**549,850**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**687,313**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs			
Engineering and Design			$176,337
Engineering		$50,337	
Geotechnical Investigation		$51,000	
Hydrologic Modeling		$0	
Data Collection		$50,000	
Cultural Resources		$0	
HTRW		$0	
Monitoring Plan Development		$25,000	
Supervision and Administration			$65,000
Corps Administration			$3,000
State Costs			
Supervision and Administration			$25,000
Ecological Review Costs			$0
Easements and Land Rights			$50,000
Monitoring			$5,000
Monitoring Plan Development	$5,000		
Monitoring Protocal Cost *	$0		
Total Phase I Cost Estimate			**$324,337**

* 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				
Estimated Construction Cost +25% Contingency				$687,313
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspectio	60 days	@	933 per day	$55,980
Supervision and Administration				$25,000
State Costs				
Supervision and Administration				$25,000
Total Phase II Cost Estimate				**$793,293**

TOTAL ESTIMATED PROJECT FIRST COST	**1,117,630**

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:

Construction Items	**Year 0**	**Year 1**	**Year 10**	**Year 15**
Contractor Mobilization/Demobilization	$0	$10,000	$0	$0
Degrade Dikes	$0	$10,000	$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	$20,000	$0	$0
Subtotal w/ 25% contin.	**$0**	$25,000	$0	$0
Engineer, Design & Administrative Costs				
Engineering and Design Cost	$0	$0	$0	$0
Administrative Cost	$0	$0	$0	$0
Eng Survey 7 days @ $1,460 per day	$0	$0	$0	$0
Construction 10 days @ $933 per day	$0	$9,330	$0	$0
Subtotal	**$0**	**$9,330**	**$0**	**$0**
Federal S&A	$0	$750	$0	$0
Total	**$0**	**$35,080**	**$0**	**$0**

Annual Project Costs:

Corps Administration	$700
Monitoring	$75,000

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	5	0	0	0	0	0	0	0	16
Plan & Design End	March-07											
Const. Start	March-08											
Const. End	June-08	0	0	0	3	0	0	0	0	0	0	3

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Dredge Containment Demo

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$1,033,453	Total Fully Funded Costs	$1,073,163

Total Charges	Present Worth	Average Annual
First Costs	$1,027,827	$85,118
Monitoring	$29,897	$2,476
State O & M Costs	$0	$0
Other Federal Costs	$1,995	$165
Average Annual Cost	$87,759	$87,759
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Dredge Containment Demo

Project Costs $1,073,163 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
3	2006	$112,384	$11,458	$11,458	$11,458	$1,375	$2,292	-	$0		$150,426	
2	2007	$122,601	$12,500	$12,500	$12,500	$1,500	$2,500	-	$0		$164,101	
1	2008	$10,217	$1,042	$1,042	$1,042	$125	$208	-	$0		$13,675	
0	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$245,202	$25,000	$25,000	$25,000	$3,000	$5,000	$0	$0	$0	$328,202	$325,202
Phase II												
1	2008	-	$0	$25,000	$25,000	$117	$0	$32,655	$107,800	$431,200	$621,772	
0	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$25,000	$25,000	$117	$0	$32,655	$107,800	$431,200	$621,772	$621,655
Total First Costs		$245,202	$25,000	$50,000	$50,000	$3,117	$5,000	$32,655	$107,800	$431,200	$949,974	

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	Discount	2009	$5,751	$0	$700	$0
-1	Discount	2010	$5,751	$0	$700	$0
-2	Discount	2011	$20,751	$0	$700	$0
-3	Discount	2012	$0	$0	$0	$0
-4	Discount	2013	$0	$0	$0	$0
-5	Discount	2014	$0	$0	$0	$0
-6	Discount	2015	$0	$0	$0	$0
-7	Discount	2016	$0	$0	$0	$0
-8	Discount	2017	$0	$0	$0	$0
-9	Discount	2018	$0	$0	$0	$0
-10	Discount	2019	$0	$0	$0	$0
-11	Discount	2020	$0	$0	$0	$0
-12	Discount	2021	$0	$0	$0	$0
-13	Discount	2022	$0	$0	$0	$0
-14	Discount	2023	$0	$0	$0	$0
-15	Discount	2024	$0	$0	$0	$0
-16	Discount	2025	$0	$0	$0	$0
-17	Discount	2026	$0	$0	$0	$0
-18	Discount	2027	$0	$0	$0	$0
-19	Discount	2028	$0	$0	$0	$0
	Total		$32,253	$0	$2,100	$0

Coastal Wetlands Conservation and Restoration Plan

Dredge Containment Demo

Project Priority List 15

Present Valued Costs Total Discounted Costs $1,059,719 Amortized Costs $87,759

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.233	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.170	2006	$131,498	$13,407	$13,407	$13,407	$1,609	$2,681	$0	$0	$0	$176,009
2	1.110	2007	$136,135	$13,880	$13,880	$13,880	$1,666	$2,776	$0	$0	$0	$182,216
1	1.054	2008	$10,766	$1,098	$1,098	$1,098	$132	$220	$0	$0	$0	$14,410
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$278,398	$28,385	$28,385	$28,385	$3,406	$5,677	$0	$0	$0	$372,635
Phase II												
1	1.054	2008	$0	$0	$26,344	$26,344	$123	$0	$34,410	$113,594	$454,377	$655,192
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$26,344	$26,344	$123	$0	$34,410	$113,594	$454,377	$655,192
Total First Cost			$278,398	$28,385	$54,728	$54,728	$3,529	$5,677	$34,410	$113,594	$454,377	$1,027,827

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.000	2009	$5,751	$0	$700	$0
-1	0.949	2010	$5,458	$0	$664	$0
-2	0.901	2011	$18,688	$0	$630	$0
-3	0.855	2012	$0	$0	$0	$0
-4	0.811	2013	$0	$0	$0	$0
-5	0.770	2014	$0	$0	$0	$0
-6	0.730	2015	$0	$0	$0	$0
-7	0.693	2016	$0	$0	$0	$0
-8	0.658	2017	$0	$0	$0	$0
-9	0.624	2018	$0	$0	$0	$0
-10	0.592	2019	$0	$0	$0	$0
-11	0.562	2020	$0	$0	$0	$0
-12	0.534	2021	$0	$0	$0	$0
-13	0.506	2022	$0	$0	$0	$0
-14	0.480	2023	$0	$0	$0	$0
-15	0.456	2024	$0	$0	$0	$0
-16	0.433	2025	$0	$0	$0	$0
-17	0.411	2026	$0	$0	$0	$0
-18	0.390	2027	$0	$0	$0	$0
-19	0.370	2028	$0	$0	$0	$0
		Total	$29,897	$0	$1,995	$0

Coastal Wetlands Conservation and Restoration Plan

Dredge Containment Demo

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $1,073,163 Amortized Costs $88,873

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.055	2006	$118,565	$12,089	$12,089	$12,089	$1,451	$2,418	$0	$0	$0	$158,699
2	1.076	2007	$131,931	$13,451	$13,451	$13,451	$1,614	$2,690	$0	$0	$0	$176,589
1	1.099	2008	$11,225	$1,144	$1,144	$1,144	$137	$229	$0	$0	$0	$15,025
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$261,721	$26,684	$26,684	$26,684	$3,202	$5,337	$0	$0	$0	$350,313
Phase II												
1	1.099	2008	$0	$0	$27,467	$27,467	$128	$0	$35,878	$118,440	$473,759	$683,139
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$27,467	$27,467	$128	$0	$35,878	$118,440	$473,759	$683,139
Total Cost			$261,721	$26,684	$54,152	$54,152	$3,330	$5,337	$35,878	$118,440	$473,759	$1,033,453

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.1218	2009	$6,451	$0	$785	$0
-1	1.1453	2010	$6,587	$0	$802	$0
-2	1.1694	2011	$24,266	$0	$819	$0
-3	1.1939	2012	$0	$0	$0	$0
-4	1.2190	2013	$0	$0	$0	$0
-5	1.2446	2014	$0	$0	$0	$0
-6	1.2707	2015	$0	$0	$0	$0
-7	1.2974	2016	$0	$0	$0	$0
-8	1.3247	2017	$0	$0	$0	$0
-9	1.3525	2018	$0	$0	$0	$0
-10	1.3809	2019	$0	$0	$0	$0
-11	1.4099	2020	$0	$0	$0	$0
-12	1.4395	2021	$0	$0	$0	$0
-13	1.4697	2022	$0	$0	$0	$0
-14	1.5006	2023	$0	$0	$0	$0
-15	1.5321	2024	$0	$0	$0	$0
-16	1.5643	2025	$0	$0	$0	$0
-17	1.5971	2026	$0	$0	$0	$0
-18	1.6307	2027	$0	$0	$0	$0
-19	1.6649	2028	$0	$0	$0	$0
		Total	$37,304	$0	$2,406	$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**431,200**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**539,000**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs				
Engineering and Design				$245,202
Engineering			$40,202	
Geotechnical Investigation			$45,000	
Hydrologic Modeling			$0	
Data Collection			$100,000	
Cultural Resources			$10,000	
#REF!			$30,000	
NEPA Compliance			$20,000	
Supervision and Administration				$25,000
Corps Administration				$3,000
State Costs				
Supervision and Administration				$25,000
Ecological Review Costs				$0
Easements and Land Rights				$25,000
Monitoring				$5,000
Monitoring Plan Development	$5,000			
Monitoring Protocal Cost *	$0			
Total Phase I Cost Estimate				**$328,202**

* 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				
Estimated Construction Cost +25% Contingency				$539,000
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspectio	35 days	@	933 per day	$32,655
Supervision and Administration				$25,000
State Costs				
Supervision and Administration				$25,000
Total Phase II Cost Estimate				**$621,655**

TOTAL ESTIMATED PROJECT FIRST COST	**949,857**

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:

Construction Items	**Year 0**	**Year 5**	**Year 7**	**Year 15**
Year 5 mobilization	$0	$0	$0	$0
Year 5 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 mobilization	$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	$0	$0	$0
Administrative Cost	$0	$0	$0	$0
Eng Survey 7 days @ $1,460 per day	$0	$0	$0	$0
Construction 15 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:

	Year 1-2	Year 3
Corps Administration	$700	$700
Monitoring	$5,751	$20,751

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	1	0	0	0	0	0	0	24
Plan & Design End	November-07											
Const. Start	March-08											
Const. End	May-08	0	0	0	2	0	0	0	0	0	0	2

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Evaluation of Bioengineered Reef Breakwaters Demo

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$453,989	Total Fully Funded Costs	$1,421,702

Total Charges	Present Worth	Average Annual
First Costs	$465,570	$38,556
Monitoring	$174,134	$14,421
State O & M Costs	$603,749	$49,999
Other Federal Costs	$13,320	$1,103
Average Annual Cost	$104,078	$104,078
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Evaluation of Bioengineered Reef Breakwaters Demo

Project Costs $1,421,702 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
3	2006	$94,875	$6,875	$6,875	$11,458	$1,375	$2,292	-	$0		$123,750	
2	2007	$103,500	$7,500	$7,500	$12,500	$1,500	$2,500	-	$0		$135,000	
1	2008	$8,625	$625	$625	$1,042	$125	$208	-	$0		$11,250	
0	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$207,000	$15,000	$15,000	$25,000	$3,000	$5,000	$0	$0	$0	$270,000	$267,000
Phase II												
1	2008	-	$0	$15,000	$25,000	$350	$0	$9,330	$20,245	$80,980	$150,905	
0	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$15,000	$25,000	$350	$0	$9,330	$20,245	$80,980	$150,905	$150,555
Total First Costs		$207,000	$15,000	$30,000	$50,000	$3,350	$5,000	$9,330	$20,245	$80,980	$420,905	

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	Discount	2009	$63,000	$0	$700	$0
-1	Discount	2010	$27,000	$636,201	$700	$10,705
-2	Discount	2011	$27,000	$0	$700	$0
-3	Discount	2012	$27,000	$0	$700	$0
-4	Discount	2013	$47,000	$0	$700	$0
-5	Discount	2014	$0	$0	$0	$0
-6	Discount	2015	$0	$0	$0	$0
-7	Discount	2016	$0	$0	$0	$0
-8	Discount	2017	$0	$0	$0	$0
-9	Discount	2018	$0	$0	$0	$0
-10	Discount	2019	$0	$0	$0	$0
-11	Discount	2020	$0	$0	$0	$0
-12	Discount	2021	$0	$0	$0	$0
-13	Discount	2022	$0	$0	$0	$0
-14	Discount	2023	$0	$0	$0	$0
-15	Discount	2024	$0	$0	$0	$0
-16	Discount	2025	$0	$0	$0	$0
-17	Discount	2026	$0	$0	$0	$0
-18	Discount	2027	$0	$0	$0	$0
-19	Discount	2028	$0	$0	$0	$0
	Total		$191,000	$636,201	$3,500	$10,705

Coastal Wetlands Conservation and Restoration Plan

Evaluation of Bioengineered Reef Breakwaters Demo

Project Priority List 15

Present Valued Costs Total Discounted Costs $1,256,773 Amortized Costs $104,078

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.233	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.170	2006	$111,011	$8,044	$8,044	$13,407	$1,609	$2,681	$0	$0	$0	$144,796
2	1.110	2007	$114,925	$8,328	$8,328	$13,880	$1,666	$2,776	$0	$0	$0	$149,903
1	1.054	2008	$9,089	$659	$659	$1,098	$132	$220	$0	$0	$0	$11,855
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$235,024	$17,031	$17,031	$28,385	$3,406	$5,677	$0	$0	$0	$306,554
Phase II												
1	1.054	2008	$0	$0	$15,806	$26,344	$369	$0	$9,831	$21,333	$85,333	$159,016
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$15,806	$26,344	$369	$0	$9,831	$21,333	$85,333	$159,016
Total First Cost			$235,024	$17,031	$32,837	$54,728	$3,775	$5,677	$9,831	$21,333	$85,333	$465,570

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.000	2009	$63,000	$0	$700	$0
-1	0.949	2010	$25,623	$603,749	$664	$10,159
-2	0.901	2011	$24,316	$0	$630	$0
-3	0.855	2012	$23,075	$0	$598	$0
-4	0.811	2013	$38,120	$0	$568	$0
-5	0.770	2014	$0	$0	$0	$0
-6	0.730	2015	$0	$0	$0	$0
-7	0.693	2016	$0	$0	$0	$0
-8	0.658	2017	$0	$0	$0	$0
-9	0.624	2018	$0	$0	$0	$0
-10	0.592	2019	$0	$0	$0	$0
-11	0.562	2020	$0	$0	$0	$0
-12	0.534	2021	$0	$0	$0	$0
-13	0.506	2022	$0	$0	$0	$0
-14	0.480	2023	$0	$0	$0	$0
-15	0.456	2024	$0	$0	$0	$0
-16	0.433	2025	$0	$0	$0	$0
-17	0.411	2026	$0	$0	$0	$0
-18	0.390	2027	$0	$0	$0	$0
-19	0.370	2028	$0	$0	$0	$0
		Total	$174,134	$603,749	$3,161	$10,159

Coastal Wetlands Conservation and Restoration Plan

Evaluation of Bioengineered Reef Breakwaters Demo

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $1,421,702 Amortized Costs $117,736

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.055	2006	$100,093	$7,253	$7,253	$12,089	$1,451	$2,418	$0	$0	$0	$130,556
2	1.076	2007	$111,376	$8,071	$8,071	$13,451	$1,614	$2,690	$0	$0	$0	$145,274
1	1.099	2008	$9,476	$687	$687	$1,144	$137	$229	$0	$0	$0	$12,360
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$220,946	$16,011	$16,011	$26,684	$3,202	$5,337	$0	$0	$0	$288,190
Phase II												
1	1.099	2008	$0	$0	$16,480	$27,467	$385	$0	$10,251	$22,243	$88,973	$165,799
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$16,480	$27,467	$385	$0	$10,251	$22,243	$88,973	$165,799
Total Cost			$220,946	$16,011	$32,491	$54,152	$3,587	$5,337	$10,251	$22,243	$88,973	$453,989

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.1218	2009	$70,672	$0	$785	$0
-1	1.1453	2010	$30,924	$728,659	$802	$12,261
-2	1.1694	2011	$31,573	$0	$819	$0
-3	1.1939	2012	$32,236	$0	$836	$0
-4	1.2190	2013	$57,293	$0	$853	$0
-5	1.2446	2014	$0	$0	$0	$0
-6	1.2707	2015	$0	$0	$0	$0
-7	1.2974	2016	$0	$0	$0	$0
-8	1.3247	2017	$0	$0	$0	$0
-9	1.3525	2018	$0	$0	$0	$0
-10	1.3809	2019	$0	$0	$0	$0
-11	1.4099	2020	$0	$0	$0	$0
-12	1.4395	2021	$0	$0	$0	$0
-13	1.4697	2022	$0	$0	$0	$0
-14	1.5006	2023	$0	$0	$0	$0
-15	1.5321	2024	$0	$0	$0	$0
-16	1.5643	2025	$0	$0	$0	$0
-17	1.5971	2026	$0	$0	$0	$0
-18	1.6307	2027	$0	$0	$0	$0
-19	1.6649	2028	$0	$0	$0	$0
		Total	$222,698	$728,659	$4,095	$12,261

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**80,980**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**101,225**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs				
Engineering and Design				$207,000
Engineering			$75,000	
Geotechnical Investigation			$35,000	
Hydrologic Modeling			$0	
Data Collection			$42,000	
Cultural Resources			$10,000	
NEPA Compliance			$20,000	
Monitoring Plan Development			$25,000	
Supervision and Administration				$15,000
Corps Administration				$3,000
State Costs				
Supervision and Administration				$25,000
Ecological Review Costs				$0
Easements and Land Rights				$15,000
Monitoring				$5,000
Monitoring Plan Development	$5,000			
Monitoring Protocal Cost *	$0			
Total Phase I Cost Estimate				**$270,000**

* 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				
Estimated Construction Cost +25% Contingency				$101,225
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspectio	10 days	@	933 per day	$9,330
Supervision and Administration				$15,000
State Costs				
Supervision and Administration				$25,000
Total Phase II Cost Estimate				**$150,555**

TOTAL ESTIMATED PROJECT FIRST COST	**420,555**

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:

Construction Items	**Year 0**	**Year 2**	**Year 7**	**Year 15**
Mobilization/Demobilization	$0	$120,000	$0	$0
Var. Density Concrete (1,600 cy @$162 per) plus Forms/Hardware-Delivered on site	$0	$259,200	$0	$0
Anchor system (30 @ $1500)	$0	$45,000	$0	$0
Navigation Aids (2 @ $2000)	$0	$4,000	$0	$0
0	$0	$0	$0	$0
0	$0	$0	$0	$0
0	$0	$0	$0	$0
Subtotal	$0	$428,200	$0	$0
Subtotal w/ 25% contin.	**$0**	$535,250	$0	$0
Engineer, Design & Administrative Costs				
Engineering and Design Cost	$0	$32,505	$0	$0
Administrative Cost	$0	$17,128	$0	$0
Eng Survey 3 days @ $1,556 per day	$0	$4,668	$0	$0
Construction 50 days @ $933 per day	$0	$46,650	$0	$0
Subtotal	**$0**	**$100,951**	**$0**	**$0**
Federal S&A	$0	$10,705	$0	$0
Total	**$0**	**$646,906**	**$0**	**$0**

Annual Project Costs:

Corps Administration	$700
Monitoring	$63,000

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	1	0	0	0	0	0	0	24
Plan & Design End	November-07											
Const. Start	March-08											
Const. End	September-08	0	0	0	6	0	0	0	0	0	0	6

Coastal Wetlands Conservation and Restoration Plan

Project Priority List 15

Thin Layer Nourishment Demo

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$877,669	Total Fully Funded Costs	$1,232,780

Total Charges	Present Worth	Average Annual
First Costs	$927,373	$76,799
Monitoring	$275,263	$22,796
State O & M Costs	$0	$0
Other Federal Costs	$3,257	$270
Average Annual Cost	$99,864	$99,864
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Thin Layer Nourishment Demo

Project Costs $1,232,780 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
5	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
4	2006	$121,458	$9,167	$11,458	$11,458	$1,375	$2,292	-	$0		$157,208	
3	2007	$132,500	$10,000	$12,500	$12,500	$1,500	$2,500	-	$0		$171,500	
2	2008	$11,042	$833	$1,042	$1,042	$125	$208	-	$0		$14,292	
1	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$265,000	$20,000	$25,000	$25,000	$3,000	$5,000	$0	$0	$0	$343,000	$340,000
Phase II												
2	2008	-	$0	$25,000	$25,000	$117	$0	$27,990	$77,500	$310,000	$465,607	
1	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
0	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$25,000	$25,000	$117	$0	$27,990	$77,500	$310,000	$465,607	$465,490
Total First Costs		$265,000	$20,000	$50,000	$50,000	$3,117	$5,000	$27,990	$77,500	$310,000	$808,607	

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
1	Discount	2009	$100,000	$0	$700	$0
0	Discount	2010	$0	$0	$700	$0
-1	Discount	2011	$100,000	$0	$700	$0
-2	Discount	2012	$0	$0	$700	$0
-3	Discount	2013	$100,000	$0	$700	$0
-4	Discount	2014	$0	$0	$0	$0
-5	Discount	2015	$0	$0	$0	$0
-6	Discount	2016	$0	$0	$0	$0
-7	Discount	2017	$0	$0	$0	$0
-8	Discount	2018	$0	$0	$0	$0
-9	Discount	2019	$0	$0	$0	$0
-10	Discount	2020	$0	$0	$0	$0
-11	Discount	2021	$0	$0	$0	$0
-12	Discount	2022	$0	$0	$0	$0
-13	Discount	2023	$0	$0	$0	$0
-14	Discount	2024	$0	$0	$0	$0
-15	Discount	2025	$0	$0	$0	$0
-16	Discount	2026	$0	$0	$0	$0
-17	Discount	2027	$0	$0	$0	$0
-18	Discount	2028	$0	$0	$0	$0
	Total		$300,000	$0	$3,500	$0

Coastal Wetlands Conservation and Restoration Plan

Thin Layer Nourishment Demo

Project Priority List 15

Present Valued Costs Total Discounted Costs $1,205,894 Amortized Costs $99,864

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.299	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.233	2006	$149,754	$11,302	$14,128	$14,128	$1,695	$2,826	$0	$0	$0	$193,832
3	1.170	2007	$155,035	$11,701	$14,626	$14,626	$1,755	$2,925	$0	$0	$0	$200,667
2	1.110	2008	$12,261	$925	$1,157	$1,157	$139	$231	$0	$0	$0	$15,869
1	1.054	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$317,049	$23,928	$29,910	$29,910	$3,589	$5,982	$0	$0	$0	$410,369
Phase II												
2	1.110	2008	$0	$0	$27,760	$27,760	$130	$0	$31,080	$86,055	$344,221	$517,005
1	1.054	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
-1	0.949	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$27,760	$27,760	$130	$0	$31,080	$86,055	$344,221	$517,005
Total First Cost			$317,049	$23,928	$57,670	$57,670	$3,719	$5,982	$31,080	$86,055	$344,221	$927,373

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
1	0.949	2009	$94,899	$0	$664	$0
0	1.000	2010	$0	$0	$700	$0
-1	0.949	2011	$94,899	$0	$664	$0
-2	0.901	2012	$0	$0	$630	$0
-3	0.855	2013	$85,465	$0	$598	$0
-4	0.811	2014	$0	$0	$0	$0
-5	0.770	2015	$0	$0	$0	$0
-6	0.730	2016	$0	$0	$0	$0
-7	0.693	2017	$0	$0	$0	$0
-8	0.658	2018	$0	$0	$0	$0
-9	0.624	2019	$0	$0	$0	$0
-10	0.592	2020	$0	$0	$0	$0
-11	0.562	2021	$0	$0	$0	$0
-12	0.534	2022	$0	$0	$0	$0
-13	0.506	2023	$0	$0	$0	$0
-14	0.480	2024	$0	$0	$0	$0
-15	0.456	2025	$0	$0	$0	$0
-16	0.433	2026	$0	$0	$0	$0
-17	0.411	2027	$0	$0	$0	$0
-18	0.390	2028	$0	$0	$0	$0
		Total	$275,263	$0	$3,257	$0

Coastal Wetlands Conservation and Restoration Plan

Thin Layer Nourishment Demo

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $1,232,780 Amortized Costs $102,091

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.055	2006	$128,139	$9,671	$12,089	$12,089	$1,451	$2,418	$0	$0	$0	$165,855
3	1.076	2007	$142,583	$10,761	$13,451	$13,451	$1,614	$2,690	$0	$0	$0	$184,551
2	1.099	2008	$12,131	$916	$1,144	$1,144	$137	$229	$0	$0	$0	$15,702
1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$282,853	$21,347	$26,684	$26,684	$3,202	$5,337	$0	$0	$0	$366,108
Phase II												
2	1.099	2008	$0	$0	$27,467	$27,467	$128	$0	$30,753	$85,149	$340,596	$511,561
1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
0	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$27,467	$27,467	$128	$0	$30,753	$85,149	$340,596	$511,561
Total Cost			$282,853	$21,347	$54,152	$54,152	$3,330	$5,337	$30,753	$85,149	$340,596	$877,669

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
1	1.1218	2009	$112,177	$0	$785	$0
0	1.1453	2010	$0	$0	$802	$0
-1	1.1694	2011	$116,938	$0	$819	$0
-2	1.1939	2012	$0	$0	$836	$0
-3	1.2190	2013	$121,901	$0	$853	$0
-4	1.2446	2014	$0	$0	$0	$0
-5	1.2707	2015	$0	$0	$0	$0
-6	1.2974	2016	$0	$0	$0	$0
-7	1.3247	2017	$0	$0	$0	$0
-8	1.3525	2018	$0	$0	$0	$0
-9	1.3809	2019	$0	$0	$0	$0
-10	1.4099	2020	$0	$0	$0	$0
-11	1.4395	2021	$0	$0	$0	$0
-12	1.4697	2022	$0	$0	$0	$0
-13	1.5006	2023	$0	$0	$0	$0
-14	1.5321	2024	$0	$0	$0	$0
-15	1.5643	2025	$0	$0	$0	$0
-16	1.5971	2026	$0	$0	$0	$0
-17	1.6307	2027	$0	$0	$0	$0
-18	1.6649	2028	$0	$0	$0	$0
		Total	$351,016	$0	$4,095	$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**310,000**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**387,500**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs				
Engineering and Design				$265,000
Engineering			$75,000	
Geotechnical Investigation			$60,000	
Hydrologic Modeling			$0	
Data Collection			$100,000	
Cultural Resources			$10,000	
NEPA Compliance			$0	
Monitoring Plan Development			$20,000	
Supervision and Administration				$25,000
Corps Administration				$3,000
State Costs				
Supervision and Administration				$25,000
Ecological Review Costs				$0
Easements and Land Rights				$20,000
Monitoring				$5,000
Monitoring Plan Development	$5,000			
Monitoring Protocal Cost *	$0			
		Total Phase I Cost Estimate		**$343,000**

* 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				
Estimated Construction Cost +25% Contingency				$387,500
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspectio	30 days	@	933 per day	$27,990
Supervision and Administration				$25,000
State Costs				
Supervision and Administration				$25,000
		Total Phase II Cost Estimate		**$465,490**

TOTAL ESTIMATED PROJECT FIRST COST	**808,490**

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:

Construction Items	**Year 0**	**Year 5**	**Year 7**	**Year 15**
Year 5 mobilization	$0	$0	$0	$0
Year 5 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 mobilization	$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	$0	$0	$0
Administrative Cost	$0	$0	$0	$0
Eng Survey 7 days @ $1,460 per day	$0	$0	$0	$0
Construction 15 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	$700
Monitoring	$100,000

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	1	0	0	0	0	0	0	24
Plan & Design End	November-07											
Const. Start	March-08											
Const. End	May-08	0	0	0	2	0	0	0	0	0	0	2

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Floating Wave Attenuator Demo

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$1,228,467	Total Fully Funded Costs	$1,792,804

Total Charges	Present Worth	Average Annual
First Costs	$1,212,607	$100,420
Monitoring	$458,046	$37,933
State O & M Costs	$0	$0
Other Federal Costs	$3,161	$262
Average Annual Cost	$138,615	$138,615
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Floating Wave Attenuator

Project Costs $1,792,804 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
3	2006	$105,417	$9,167	$11,458	$11,458	$1,375	$2,292	-	$0		$141,167	
2	2007	$115,000	$10,000	$12,500	$12,500	$1,500	$2,500	-	$0		$154,000	
1	2008	$9,583	$833	$1,042	$1,042	$125	$208	-	$0		$12,833	
0	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$230,000	$20,000	$25,000	$25,000	$3,000	$5,000	$0	$0	$0	$308,000	$305,000
Phase II												
1	2008	-	$0	$25,000	$25,000	$233	$0	$18,660	$150,000	$600,000	$818,893	
0	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$25,000	$25,000	$233	$0	$18,660	$150,000	$600,000	$818,893	$818,660
Total First Costs		$230,000	$20,000	$50,000	$50,000	$3,233	$5,000	$18,660	$150,000	$600,000	$1,126,893	

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	Discount	2009	$147,404	$0	$700	$0
-1	Discount	2010	$147,404	$0	$700	$0
-2	Discount	2011	$162,404	$0	$700	$0
-3	Discount	2012	$7,404	$0	$700	$0
-4	Discount	2013	$22,404	$0	$700	$0
-5	Discount	2014	$0	$0	$0	$0
-6	Discount	2015	$0	$0	$0	$0
-7	Discount	2016	$0	$0	$0	$0
-8	Discount	2017	$0	$0	$0	$0
-9	Discount	2018	$0	$0	$0	$0
-10	Discount	2019	$0	$0	$0	$0
-11	Discount	2020	$0	$0	$0	$0
-12	Discount	2021	$0	$0	$0	$0
-13	Discount	2022	$0	$0	$0	$0
-14	Discount	2023	$0	$0	$0	$0
-15	Discount	2024	$0	$0	$0	$0
-16	Discount	2025	$0	$0	$0	$0
-17	Discount	2026	$0	$0	$0	$0
-18	Discount	2027	$0	$0	$0	$0
-19	Discount	2028	$0	$0	$0	$0
	Total		$487,020	$0	$3,500	$0

Coastal Wetlands Conservation and Restoration Plan

Floating Wave Attenuator Demo

Project Priority List 15

Present Valued Costs Total Discounted Costs $1,673,814 Amortized Costs $138,615

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.233	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.170	2006	$123,345	$10,726	$13,407	$13,407	$1,609	$2,681	$0	$0	$0	$165,175
2	1.110	2007	$127,695	$11,104	$13,880	$13,880	$1,666	$2,776	$0	$0	$0	$171,000
1	1.054	2008	$10,098	$878	$1,098	$1,098	$132	$220	$0	$0	$0	$13,523
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$261,138	$22,708	$28,385	$28,385	$3,406	$5,677	$0	$0	$0	$349,698
Phase II												
1	1.054	2008	$0	$0	$26,344	$26,344	$246	$0	$19,663	$158,063	$632,250	$862,909
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$26,344	$26,344	$246	$0	$19,663	$158,063	$632,250	$862,909
Total First Cost			$261,138	$22,708	$54,728	$54,728	$3,652	$5,677	$19,663	$158,063	$632,250	$1,212,607

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.000	2009	$147,404	$0	$700	$0
-1	0.949	2010	$139,885	$0	$664	$0
-2	0.901	2011	$146,259	$0	$630	$0
-3	0.855	2012	$6,328	$0	$598	$0
-4	0.811	2013	$18,171	$0	$568	$0
-5	0.770	2014	$0	$0	$0	$0
-6	0.730	2015	$0	$0	$0	$0
-7	0.693	2016	$0	$0	$0	$0
-8	0.658	2017	$0	$0	$0	$0
-9	0.624	2018	$0	$0	$0	$0
-10	0.592	2019	$0	$0	$0	$0
-11	0.562	2020	$0	$0	$0	$0
-12	0.534	2021	$0	$0	$0	$0
-13	0.506	2022	$0	$0	$0	$0
-14	0.480	2023	$0	$0	$0	$0
-15	0.456	2024	$0	$0	$0	$0
-16	0.433	2025	$0	$0	$0	$0
-17	0.411	2026	$0	$0	$0	$0
-18	0.390	2027	$0	$0	$0	$0
-19	0.370	2028	$0	$0	$0	$0
		Total	$458,046	$0	$3,161	$0

Coastal Wetlands Conservation and Restoration Plan

Floating Wave Attenuator Demo

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $1,792,804 Amortized Costs $148,469

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.055	2006	$111,215	$9,671	$12,089	$12,089	$1,451	$2,418	$0	$0	$0	$148,931
2	1.076	2007	$123,752	$10,761	$13,451	$13,451	$1,614	$2,690	$0	$0	$0	$165,719
1	1.099	2008	$10,529	$916	$1,144	$1,144	$137	$229	$0	$0	$0	$14,100
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$245,495	$21,347	$26,684	$26,684	$3,202	$5,337	$0	$0	$0	$328,750
Phase II												
1	1.099	2008	$0	$0	$27,467	$27,467	$256	$0	$20,502	$164,805	$659,219	$899,717
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$27,467	$27,467	$256	$0	$20,502	$164,805	$659,219	$899,717
Total Cost			$245,495	$21,347	$54,152	$54,152	$3,458	$5,337	$20,502	$164,805	$659,219	$1,228,467

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.1218	2009	$165,353	$0	$785	$0
-1	1.1453	2010	$168,826	$0	$802	$0
-2	1.1694	2011	$189,912	$0	$819	$0
-3	1.1939	2012	$8,840	$0	$836	$0
-4	1.2190	2013	$27,311	$0	$853	$0
-5	1.2446	2014	$0	$0	$0	$0
-6	1.2707	2015	$0	$0	$0	$0
-7	1.2974	2016	$0	$0	$0	$0
-8	1.3247	2017	$0	$0	$0	$0
-9	1.3525	2018	$0	$0	$0	$0
-10	1.3809	2019	$0	$0	$0	$0
-11	1.4099	2020	$0	$0	$0	$0
-12	1.4395	2021	$0	$0	$0	$0
-13	1.4697	2022	$0	$0	$0	$0
-14	1.5006	2023	$0	$0	$0	$0
-15	1.5321	2024	$0	$0	$0	$0
-16	1.5643	2025	$0	$0	$0	$0
-17	1.5971	2026	$0	$0	$0	$0
-18	1.6307	2027	$0	$0	$0	$0
-19	1.6649	2028	$0	$0	$0	$0
		Total	$560,242	$0	$4,095	$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**600,000**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**750,000**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs			
Engineering and Design			$230,000
Engineering		$100,000	
Geotechnical Investigation		$35,000	
Hydrologic Modeling		$0	
Data Collection		$30,000	
Cultural Resources		$10,000	
NEPA Compliance		$30,000	
Monitoring Plan Development		$25,000	
Supervision and Administration			$25,000
Corps Administration			$3,000
State Costs			
Supervision and Administration			$25,000
Ecological Review Costs			$0
Easements and Land Rights			$20,000
Monitoring			$5,000
Monitoring Plan Development	$5,000		
Monitoring Protocal Cost *	$0		
Total Phase I Cost Estimate			**$308,000**

* 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				
Estimated Construction Cost +25% Contingency				$750,000
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspectio	20 days	@	933 per day	$18,660
Supervision and Administration				$25,000
State Costs				
Supervision and Administration				$25,000
Total Phase II Cost Estimate				**$818,660**

TOTAL ESTIMATED PROJECT FIRST COST	**1,126,660**

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:

Construction Items	**Year 0**	**Year 2**	**Year 7**	**Year 15**
Mobilization/Demobilization	$0	$0	$0	$0
Var. Density Concrete (1,600 cy @$162 per) plus Forms/Hardware-Delivered on site	$0	$0	$0	$0
Anchor system (30 @ $1500)	$0	$0	$0	$0
Navigation Aids (2 @ $2000)	$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	$0	$0	$0
Administrative Cost	$0	$0	$0	$0
Eng Survey 3 days @ $1,556 per day	$0	$0	$0	$0
Construction 50 days @ $933 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	$700
Monitoring	$147,404

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	1	0	0	0	0	0	0	24
Plan & Design End	November-07											
Const. Start	March-08											
Const. End	July-08	0	0	0	4	0	0	0	0	0	0	4

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
HESCO Concertainers Demo

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$975,390	Total Fully Funded Costs	$1,462,854

Total Charges	Present Worth	Average Annual
First Costs	$981,208	$81,257
Monitoring	$391,155	$32,393
State O & M Costs	$0	$0
Other Federal Costs	$3,161	$262
Average Annual Cost	$113,912	$113,912
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

HESCO Concertainers Demo

Project Costs $1,462,854 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
3	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
2	2006	$215,417	$45,833	$45,833	$22,917	$2,750	$4,583	-	$0		$337,333	
1	2007	$19,583	$4,167	$4,167	$2,083	$250	$417	-	$0		$30,667	
0	2008	$0	$0	$0	$0	$0	$0	-	$0		$0	
-1	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$235,000	$50,000	$50,000	$25,000	$3,000	$5,000	$0	$0	$0	$368,000	$365,000
Phase II												
1	2007	-	$25,000	$50,000	$25,000	$117	$0	$41,985	$80,585	$322,340	$545,027	
0	2008	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$25,000	$50,000	$25,000	$117	$0	$41,985	$80,585	$322,340	$545,027	$544,910
Total First Costs		$235,000	$75,000	$100,000	$50,000	$3,117	$5,000	$41,985	$80,585	$322,340	$913,027	

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	Discount	2008	$190,000	$0	$700	$0
-1	Discount	2009	$10,000	$0	$700	$0
-2	Discount	2010	$10,000	$0	$700	$0
-3	Discount	2011	$190,000	$0	$700	$0
-4	Discount	2012	$25,000	$0	$700	$0
-5	Discount	2013	$0	$0	$0	$0
-6	Discount	2014	$0	$0	$0	$0
-7	Discount	2015	$0	$0	$0	$0
-8	Discount	2016	$0	$0	$0	$0
-9	Discount	2017	$0	$0	$0	$0
-10	Discount	2018	$0	$0	$0	$0
-11	Discount	2019	$0	$0	$0	$0
-12	Discount	2020	$0	$0	$0	$0
-13	Discount	2021	$0	$0	$0	$0
-14	Discount	2022	$0	$0	$0	$0
-15	Discount	2023	$0	$0	$0	$0
-16	Discount	2024	$0	$0	$0	$0
-17	Discount	2025	$0	$0	$0	$0
-18	Discount	2026	$0	$0	$0	$0
-19	Discount	2027	$0	$0	$0	$0
	Total		$425,000	$0	$3,500	$0

Coastal Wetlands Conservation and Restoration Plan

HESCO Concertainers Demo

Project Priority List 15

Present Valued Costs Total Discounted Costs $1,375,524 Amortized Costs $113,912

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
3	1.170	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	1.110	2006	$239,196	$50,893	$50,893	$25,446	$3,054	$5,089	$0	$0	$0	$374,571
1	1.054	2007	$20,636	$4,391	$4,391	$2,195	$263	$439	$0	$0	$0	$32,315
0	1.000	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$259,832	$55,283	$55,283	$27,642	$3,317	$5,528	$0	$0	$0	$406,886
Phase II												
1	1.054	2007	$0	$26,344	$52,688	$26,344	$123	$0	$44,242	$84,916	$339,666	$574,322
0	1.000	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$26,344	$52,688	$26,344	$123	$0	$44,242	$84,916	$339,666	$574,322
Total First Cost			$259,832	$81,627	$107,971	$53,985	$3,440	$5,528	$44,242	$84,916	$339,666	$981,208

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.000	2008	$190,000	$0	$700	$0
-1	0.949	2009	$9,490	$0	$664	$0
-2	0.901	2010	$9,006	$0	$630	$0
-3	0.855	2011	$162,383	$0	$598	$0
-4	0.811	2012	$20,276	$0	$568	$0
-5	0.770	2013	$0	$0	$0	$0
-6	0.730	2014	$0	$0	$0	$0
-7	0.693	2015	$0	$0	$0	$0
-8	0.658	2016	$0	$0	$0	$0
-9	0.624	2017	$0	$0	$0	$0
-10	0.592	2018	$0	$0	$0	$0
-11	0.562	2019	$0	$0	$0	$0
-12	0.534	2020	$0	$0	$0	$0
-13	0.506	2021	$0	$0	$0	$0
-14	0.480	2022	$0	$0	$0	$0
-15	0.456	2023	$0	$0	$0	$0
-16	0.433	2024	$0	$0	$0	$0
-17	0.411	2025	$0	$0	$0	$0
-18	0.390	2026	$0	$0	$0	$0
-19	0.370	2027	$0	$0	$0	$0
		Total	$391,155	$0	$3,161	$0

Coastal Wetlands Conservation and Restoration Plan

HESCO Concertainers Demo

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $1,462,854 Amortized Costs $121,144

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
3	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	1.055	2006	$227,265	$48,354	$48,354	$24,177	$2,901	$4,835	$0	$0	$0	$355,887
1	1.076	2007	$21,074	$4,484	$4,484	$2,242	$269	$448	$0	$0	$0	$33,000
0	1.099	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$248,338	$52,838	$52,838	$26,419	$3,170	$5,284	$0	$0	$0	$388,887
Phase II												
1	1.076	2007	$0	$26,903	$53,805	$26,903	$126	$0	$45,180	$86,718	$346,870	$586,503
0	1.099	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$26,903	$53,805	$26,903	$126	$0	$45,180	$86,718	$346,870	$586,503
Total Cost			$248,338	$79,740	$106,643	$53,321	$3,296	$5,284	$45,180	$86,718	$346,870	$975,390

Year		FY	Monitoring	&M & State Ins	Corps Admin	Fed S&A & Insp
0	1.0987	2008	$208,753	$0	$769	$0
-1	1.1218	2009	$11,218	$0	$785	$0
-2	1.1453	2010	$11,453	$0	$802	$0
-3	1.1694	2011	$222,182	$0	$819	$0
-4	1.1939	2012	$29,848	$0	$836	$0
-5	1.2190	2013	$0	$0	$0	$0
-6	1.2446	2014	$0	$0	$0	$0
-7	1.2707	2015	$0	$0	$0	$0
-8	1.2974	2016	$0	$0	$0	$0
-9	1.3247	2017	$0	$0	$0	$0
-10	1.3525	2018	$0	$0	$0	$0
-11	1.3809	2019	$0	$0	$0	$0
-12	1.4099	2020	$0	$0	$0	$0
-13	1.4395	2021	$0	$0	$0	$0
-14	1.4697	2022	$0	$0	$0	$0
-15	1.5006	2023	$0	$0	$0	$0
-16	1.5321	2024	$0	$0	$0	$0
-17	1.5643	2025	$0	$0	$0	$0
-18	1.5971	2026	$0	$0	$0	$0
-19	1.6307	2027	$0	$0	$0	$0
		Total	$483,454	$0	$4,010	$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**322,340**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**402,925**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs			
Engineering and Design			$235,000
Engineering		$100,000	
Geotechnical Investigation		$30,000	
Hydrologic Modeling		$0	
Data Collection		$40,000	
Cultural Resources		$10,000	
NEPA Compliance		$30,000	
Monitoring Plan Development		$25,000	
Supervision and Administration			$50,000
Corps Administration			$3,000
State Costs			
Supervision and Administration			$25,000
Ecological Review Costs			$0
Easements and Land Rights			$50,000
Monitoring			$5,000
Monitoring Plan Development	$5,000		
Monitoring Protocal Cost *	$0		
Total Phase I Cost Estimate			**$368,000**

* 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				
Estimated Construction Cost +25% Contingency				$402,925
Lands or Oyster Issues	0	lease acres		$25,000
Supervision and Inspectio	45 days	@	933 per day	$41,985
Supervision and Administration				$50,000
State Costs				
Supervision and Administration				$25,000
Total Phase II Cost Estimate				**$544,910**

TOTAL ESTIMATED PROJECT FIRST COST	**912,910**

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:

Construction Items	**Year 0**	**Year 1**	**Year 10**	**Year 15**
Contractor Mobilization/Demobilization	$0	$0	$0	$0
Degrade Dikes	$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	$0	$0	$0
Administrative Cost	$0	$0	$0	$0
Eng Survey 7 days @ $1,460 per day	$0	$0	$0	$0
Construction 10 days @ $933 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	$700
Monitoring	$190,000

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	1	0	0	0	0	0	0	0	12
Plan & Design End	November-06											
Const. Start	March-07											
Const. End	May-07	0	0	2	0	0	0	0	0	0	0	2

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Lake Pontchartrain SP and Habitat Enhancement Demo

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$2,109,120	Total Fully Funded Costs	$2,596,584

Total Charges	Present Worth	Average Annual
First Costs	$1,994,163	$165,144
Monitoring	$391,155	$32,393
State O & M Costs	$0	$0
Other Federal Costs	$3,161	$262
Average Annual Cost	$197,799	$197,799
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Lake Pontchartrain SP and Habitat Enhancement Demo

Project Costs $2,596,584 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
3	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
2	2006	$307,083	$45,833	$68,750	$45,833	$2,750	$4,583	-	$0		$474,833	
1	2007	$27,917	$4,167	$6,250	$4,167	$250	$417	-	$0		$43,167	
0	2008	$0	$0	$0	$0	$0	$0	-	$0		$0	
-1	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$335,000	$50,000	$75,000	$50,000	$3,000	$5,000	$0	$0	$0	$518,000	$515,000
Phase II												
1	2007	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	
0	2008	-	$25,000	$75,000	$50,000	$292	-	$111,960	$231,835	$927,340	$1,421,427	
-1	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$25,000	$75,000	$50,000	$292	$0	$111,960	$231,835	$927,340	$1,421,427	$1,421,135
Total First Costs		$335,000	$75,000	$150,000	$100,000	$3,292	$5,000	$111,960	$231,835	$927,340	$1,939,427	

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	Discount	2008	$190,000	$0	$700	$0
-1	Discount	2009	$10,000	$0	$700	$0
-2	Discount	2010	$10,000	$0	$700	$0
-3	Discount	2011	$190,000	$0	$700	$0
-4	Discount	2012	$25,000	$0	$700	$0
-5	Discount	2013	$0	$0	$0	$0
-6	Discount	2014	$0	$0	$0	$0
-7	Discount	2015	$0	$0	$0	$0
-8	Discount	2016	$0	$0	$0	$0
-9	Discount	2017	$0	$0	$0	$0
-10	Discount	2018	$0	$0	$0	$0
-11	Discount	2019	$0	$0	$0	$0
-12	Discount	2020	$0	$0	$0	$0
-13	Discount	2021	$0	$0	$0	$0
-14	Discount	2022	$0	$0	$0	$0
-15	Discount	2023	$0	$0	$0	$0
-16	Discount	2024	$0	$0	$0	$0
-17	Discount	2025	$0	$0	$0	$0
-18	Discount	2026	$0	$0	$0	$0
-19	Discount	2027	$0	$0	$0	$0
	Total		$425,000	$0	$3,500	$0

Coastal Wetlands Conservation and Restoration Plan

Lake Pontchartrain SP and Habitat Enhancement Demo

Project Priority List 15

Present Valued Costs Total Discounted Costs $2,388,479 Amortized Costs $197,799

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
3	1.170	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	1.110	2006	$340,982	$50,893	$76,339	$50,893	$3,054	$5,089	$0	$0	$0	$527,250
1	1.054	2007	$29,417	$4,391	$6,586	$4,391	$263	$439	$0	$0	$0	$45,487
0	1.000	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$370,399	$55,283	$82,925	$55,283	$3,317	$5,528	$0	$0	$0	$572,737
Phase II												
1	1.054	2007	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
0	1.000	2008	$0	$25,000	$75,000	$50,000	$292	$0	$111,960	$231,835	$927,340	$1,421,427
-1	0.949	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$25,000	$75,000	$50,000	$292	$0	$111,960	$231,835	$927,340	$1,421,427
Total First Cost			$370,399	$80,283	$157,925	$105,283	$3,609	$5,528	$111,960	$231,835	$927,340	$1,994,163

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.000	2008	$190,000	$0	$700	$0
-1	0.949	2009	$9,490	$0	$664	$0
-2	0.901	2010	$9,006	$0	$630	$0
-3	0.855	2011	$162,383	$0	$598	$0
-4	0.811	2012	$20,276	$0	$568	$0
-5	0.770	2013	$0	$0	$0	$0
-6	0.730	2014	$0	$0	$0	$0
-7	0.693	2015	$0	$0	$0	$0
-8	0.658	2016	$0	$0	$0	$0
-9	0.624	2017	$0	$0	$0	$0
-10	0.592	2018	$0	$0	$0	$0
-11	0.562	2019	$0	$0	$0	$0
-12	0.534	2020	$0	$0	$0	$0
-13	0.506	2021	$0	$0	$0	$0
-14	0.480	2022	$0	$0	$0	$0
-15	0.456	2023	$0	$0	$0	$0
-16	0.433	2024	$0	$0	$0	$0
-17	0.411	2025	$0	$0	$0	$0
-18	0.390	2026	$0	$0	$0	$0
-19	0.370	2027	$0	$0	$0	$0
		Total	$391,155	$0	$3,161	$0

Coastal Wetlands Conservation and Restoration Plan

Lake Pontchartrain SP and Habitat Enhancement Demo

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $2,596,584 Amortized Costs $215,033

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
3	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	1.055	2006	$323,973	$48,354	$72,531	$48,354	$2,901	$4,835	$0	$0	$0	$500,949
1	1.076	2007	$30,041	$4,484	$6,726	$4,484	$269	$448	$0	$0	$0	$46,452
0	1.099	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$354,014	$52,838	$79,257	$52,838	$3,170	$5,284	$0	$0	$0	$547,401
Phase II												
1	1.076	2007	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
0	1.099	2008	$0	$27,467	$82,402	$54,935	$320	$0	$123,010	$254,717	$1,018,867	$1,561,719
-1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$27,467	$82,402	$54,935	$320	$0	$123,010	$254,717	$1,018,867	$1,561,719
Total Cost			$354,014	$80,305	$161,659	$107,773	$3,491	$5,284	$123,010	$254,717	$1,018,867	$2,109,120

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.0987	2008	$208,753	$0	$769	$0
-1	1.1218	2009	$11,218	$0	$785	$0
-2	1.1453	2010	$11,453	$0	$802	$0
-3	1.1694	2011	$222,182	$0	$819	$0
-4	1.1939	2012	$29,848	$0	$836	$0
-5	1.2190	2013	$0	$0	$0	$0
-6	1.2446	2014	$0	$0	$0	$0
-7	1.2707	2015	$0	$0	$0	$0
-8	1.2974	2016	$0	$0	$0	$0
-9	1.3247	2017	$0	$0	$0	$0
-10	1.3525	2018	$0	$0	$0	$0
-11	1.3809	2019	$0	$0	$0	$0
-12	1.4099	2020	$0	$0	$0	$0
-13	1.4395	2021	$0	$0	$0	$0
-14	1.4697	2022	$0	$0	$0	$0
-15	1.5006	2023	$0	$0	$0	$0
-16	1.5321	2024	$0	$0	$0	$0
-17	1.5643	2025	$0	$0	$0	$0
-18	1.5971	2026	$0	$0	$0	$0
-19	1.6307	2027	$0	$0	$0	$0
		Total	$483,454	$0	$4,010	$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**927,340**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**1,159,175**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs				
Engineering and Design				$335,000
Engineering			$150,000	
Geotechnical Investigation			$50,000	
Hydrologic Modeling			$0	
Data Collection			$50,000	
Cultural Resources			$10,000	
NEPA Compliance			$50,000	
Monitoring Plan Development			$25,000	
Supervision and Administration				$75,000
Corps Administration				$3,000
State Costs				
Supervision and Administration				$50,000
Ecological Review Costs				$0
Easements and Land Rights				$50,000
Monitoring				$5,000
Monitoring Plan Development	$5,000			
Monitoring Protocal Cost *	$0			

Total Phase I Cost Estimate **$518,000**

* 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				
Estimated Construction Cost +25% Contingency				$1,159,175
Lands or Oyster Issues	0	lease acres		$25,000
Supervision and Inspectio	120	days @	933 per day	$111,960
Supervision and Administration				$75,000
State Costs				
Supervision and Administration				$50,000

Total Phase II Cost Estimate **$1,421,135**

TOTAL ESTIMATED PROJECT FIRST COST **1,939,135**

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:

Construction Items	**Year 0**	**Year 2**	**Year 7**	**Year 15**
Mobilization/Demobilization	$0	$0	$0	$0
Var. Density Concrete (1,600 cy @$162 per) plus Forms/Hardware-Delivered on site	$0	$0	$0	$0
Anchor system (30 @ $1500)	$0	$0	$0	$0
Navigation Aids (2 @ $2000)	$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	$0	$0	$0
Administrative Cost	$0	$0	$0	$0
Eng Survey 3 days @ $1,556 per day	$0	$0	$0	$0
Construction 50 days @ $933 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	$700
Monitoring	$190,000

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	1	0	0	0	0	0	0	0	12
Plan & Design End	November-06											
Const. Start	March-07											
Const. End	August-07	0	0	0	5	0	0	0	0	0	0	5

Coastal Wetlands Conservation and Restoration Plan Demo

Project Priority List 15

Backfilling Canals to Maximize Hydrologic Rest. Demo

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$1,525,464	Total Fully Funded Costs	$1,718,766

Total Charges	Present Worth	Average Annual
First Costs	$1,561,621	$129,324
Monitoring	$121,765	$10,084
State O & M Costs	$0	$0
Other Federal Costs	$5,593	$463
Average Annual Cost	$139,871	$139,871
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Backfilling Canals to Maximize Hydrologic Rest. Demo

Project Costs $1,718,766 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
5	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
4	2006	$81,175	$13,750	$11,458	$11,458	$1,375	$2,292	-	$0		$121,509	
3	2007	$88,555	$15,000	$12,500	$12,500	$1,500	$2,500	-	$0		$132,555	
2	2008	$7,380	$1,250	$1,042	$1,042	$125	$208	-	$0		$11,046	
1	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$177,110	$30,000	$25,000	$25,000	$3,000	$5,000	$0	$0	$0	$265,110	$262,110
Phase II												
2	2008	-	$0	$21,875	$21,875	$408	$0	$122,456	$164,063	$656,250	$986,927	
1	2009	-	$0	$3,125	$3,125	$58	-	$17,494	$23,438	$93,750	$140,990	
0	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$25,000	$25,000	$467	$0	$139,950	$187,500	$750,000	$1,127,917	$1,127,450
Total First Costs		$177,110	$30,000	$50,000	$50,000	$3,467	$5,000	$139,950	$187,500	$750,000	$1,393,027	

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	Discount	2010	$50,000	$0	$700	$0
-1	Discount	2011	$0	$0	$700	$0
-2	Discount	2012	$0	$0	$700	$0
-3	Discount	2013	$0	$0	$700	$0
-4	Discount	2014	$50,000	$0	$700	$0
-5	Discount	2015	$0	$0	$700	$0
-6	Discount	2016	$0	$0	$700	$0
-7	Discount	2017	$0	$0	$700	$0
-8	Discount	2018	$0	$0	$700	$0
-9	Discount	2019	$50,000	$0	$700	$0
-10	Discount	2020	$0	$0	$0	$0
-11	Discount	2021	$0	$0	$0	$0
-12	Discount	2022	$0	$0	$0	$0
-13	Discount	2023	$0	$0	$0	$0
-14	Discount	2024	$0	$0	$0	$0
-15	Discount	2025	$0	$0	$0	$0
-16	Discount	2026	$0	$0	$0	$0
-17	Discount	2027	$0	$0	$0	$0
-18	Discount	2028	$0	$0	$0	$0
-19	Discount	2029	$0	$0	$0	$0
	Total		$150,000	$0	$7,000	$0

Coastal Wetlands Conservation and Restoration Plan

Backfilling Canals to Maximize Hydrologic Rest. Demo

Project Priority List 15

Present Valued Costs Total Discounted Costs $1,688,980 Amortized Costs $139,871

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.299	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.233	2006	$100,086	$16,953	$14,128	$14,128	$1,695	$2,826	$0	$0	$0	$149,816
3	1.170	2007	$103,616	$17,551	$14,626	$14,626	$1,755	$2,925	$0	$0	$0	$155,099
2	1.110	2008	$8,194	$1,388	$1,157	$1,157	$139	$231	$0	$0	$0	$12,266
1	1.054	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$211,896	$35,892	$29,910	$29,910	$3,589	$5,982	$0	$0	$0	$317,180
Phase II												
2	1.110	2008	$0	$0	$24,290	$24,290	$453	$0	$135,974	$182,173	$728,693	$1,095,873
1	1.054	2009	$0	$0	$3,293	$3,293	$61	$0	$18,434	$24,697	$98,789	$148,568
0	1.000	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$27,583	$27,583	$515	$0	$154,408	$206,870	$827,482	$1,244,441
Total First Cost			$211,896	$35,892	$57,493	$57,493	$4,104	$5,982	$154,408	$206,870	$827,482	$1,561,621

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.000	2009	$50,000	$0	$700	$0
-1	0.949	2010	$0	$0	$664	$0
-2	0.901	2011	$0	$0	$630	$0
-3	0.855	2012	$0	$0	$598	$0
-4	0.811	2013	$40,553	$0	$568	$0
-5	0.770	2014	$0	$0	$539	$0
-6	0.730	2015	$0	$0	$511	$0
-7	0.693	2016	$0	$0	$485	$0
-8	0.658	2017	$0	$0	$460	$0
-9	0.624	2018	$31,213	$0	$437	$0
-10	0.592	2019	$0	$0	$0	$0
-11	0.562	2020	$0	$0	$0	$0
-12	0.534	2021	$0	$0	$0	$0
-13	0.506	2022	$0	$0	$0	$0
-14	0.480	2023	$0	$0	$0	$0
-15	0.456	2024	$0	$0	$0	$0
-16	0.433	2025	$0	$0	$0	$0
-17	0.411	2026	$0	$0	$0	$0
-18	0.390	2027	$0	$0	$0	$0
-19	0.370	2028	$0	$0	$0	$0
		Total	$121,765	$0	$5,593	$0

Coastal Wetlands Conservation and Restoration Plan

Backfilling Canals to Maximize Hydrologic Rest. Demo

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $1,718,766 Amortized Costs $142,337

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
5	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	1.055	2006	$85,640	$14,506	$12,089	$12,089	$1,451	$2,418	$0	$0	$0	$128,192
3	1.076	2007	$95,294	$16,142	$13,451	$13,451	$1,614	$2,690	$0	$0	$0	$142,642
2	1.099	2008	$8,108	$1,373	$1,144	$1,144	$137	$229	$0	$0	$0	$12,136
1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$189,042	$32,021	$26,684	$26,684	$3,202	$5,337	$0	$0	$0	$282,971
Phase II												
2	1.099	2008	$0	$0	$24,034	$24,034	$449	$0	$134,542	$180,255	$721,021	$1,084,335
1	1.122	2009	$0	$0	$3,506	$3,506	$65	$0	$19,624	$26,292	$105,166	$158,158
0	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$27,540	$27,540	$514	$0	$154,166	$206,547	$826,187	$1,242,493
Total Cost			$189,042	$32,021	$54,224	$54,224	$3,716	$5,337	$154,166	$206,547	$826,187	$1,525,464

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.1218	2009	$56,089	$0	$785	$0
-1	1.1453	2010	$0	$0	$802	$0
-2	1.1694	2011	$0	$0	$819	$0
-3	1.1939	2012	$0	$0	$836	$0
-4	1.2190	2013	$60,950	$0	$853	$0
-5	1.2446	2014	$0	$0	$871	$0
-6	1.2707	2015	$0	$0	$890	$0
-7	1.2974	2016	$0	$0	$908	$0
-8	1.3247	2017	$0	$0	$927	$0
-9	1.3525	2018	$67,625	$0	$947	$0
-10	1.3809	2019	$0	$0	$0	$0
-11	1.4099	2020	$0	$0	$0	$0
-12	1.4395	2021	$0	$0	$0	$0
-13	1.4697	2022	$0	$0	$0	$0
-14	1.5006	2023	$0	$0	$0	$0
-15	1.5321	2024	$0	$0	$0	$0
-16	1.5643	2025	$0	$0	$0	$0
-17	1.5971	2026	$0	$0	$0	$0
-18	1.6307	2027	$0	$0	$0	$0
-19	1.6649	2028	$0	$0	$0	$0
		Total	$184,664	$0	$8,638	$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**750,000**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**937,500**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs				
Engineering and Design				$177,110
Engineering			$67,110	
Geotechnical Investigation			$0	
Hydrologic Modeling			$0	
Data Collection			$60,000	
Cultural Resources			$10,000	
NEPA Compliance			$20,000	
Monitoring Plan Development			$20,000	
Supervision and Administration				$25,000
Corps Administration				$3,000
State Costs				
Supervision and Administration				$25,000
Ecological Review Costs				$0
Easements and Land Rights				$30,000
Monitoring				$5,000
Monitoring Plan Development	$5,000			
Monitoring Protocal Cost *	$0			

Total Phase I Cost Estimate **$265,110**

* 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				
Estimated Construction Cost +25% Contingency				$937,500
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspectio	150 days	@	933 per day	$139,950
Supervision and Administration				$25,000
State Costs				
Supervision and Administration				$25,000

Total Phase II Cost Estimate **$1,127,450**

TOTAL ESTIMATED PROJECT FIRST COST **1,392,560**

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:

Construction Items	**Year 0**	**Year 5**	**Year 7**	**Year 15**
Year 5 mobilization	$0	$0	$0	$0
Year 5 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 mobilization	$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	$0	$0	$0
Administrative Cost	$0	$0	$0	$0
Eng Survey 7 days @ $1,460 per day	$0	$0	$0	$0
Construction 15 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	$700
Monitoring	$50,000

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	1	0	0	0	0	0	0	24
Plan & Design End	November-07											
Const. Start	March-08											
Const. End	October-08	0	0	0	7	1	0	0	0	0	0	8

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Delta Management Demo

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$965,949	Total Fully Funded Costs	$1,131,096

Total Charges	Present Worth	Average Annual
First Costs	$963,460	$79,788
Monitoring	$125,048	$10,356
State O & M Costs	$0	$0
Other Federal Costs	$3,161	$262
Average Annual Cost	$90,405	$90,405
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Delta Management Demo

Project Costs $1,131,096 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
3	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
2	2006	$128,333	$18,333	$50,417	$22,917	$2,750	$4,583	-	$0		$227,333	
1	2007	$11,667	$1,667	$4,583	$2,083	$250	$417	-	$0		$20,667	
0	2008	$0	$0	$0	$0	$0	$0	-	$0		$0	
-1	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$140,000	$20,000	$55,000	$25,000	$3,000	$5,000	$0	$0	$0	$248,000	$245,000
Phase II												
1	2007	-	$0	$25,000	$25,000	$117	$0	$55,980	$109,600	$438,400	$654,097	
0	2008	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$25,000	$25,000	$117	$0	$55,980	$109,600	$438,400	$654,097	$653,980
Total First Costs		$140,000	$20,000	$80,000	$50,000	$3,117	$5,000	$55,980	$109,600	$438,400	$902,097	

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	Discount	2008	$25,000	$0	$700	$0
-1	Discount	2009	$25,000	$0	$700	$0
-2	Discount	2010	$25,000	$0	$700	$0
-3	Discount	2011	$25,000	$0	$700	$0
-4	Discount	2012	$40,000	$0	$700	$0
-5	Discount	2013	$0	$0	$0	$0
-6	Discount	2014	$0	$0	$0	$0
-7	Discount	2015	$0	$0	$0	$0
-8	Discount	2016	$0	$0	$0	$0
-9	Discount	2017	$0	$0	$0	$0
-10	Discount	2018	$0	$0	$0	$0
-11	Discount	2019	$0	$0	$0	$0
-12	Discount	2020	$0	$0	$0	$0
-13	Discount	2021	$0	$0	$0	$0
-14	Discount	2022	$0	$0	$0	$0
-15	Discount	2023	$0	$0	$0	$0
-16	Discount	2024	$0	$0	$0	$0
-17	Discount	2025	$0	$0	$0	$0
-18	Discount	2026	$0	$0	$0	$0
-19	Discount	2027	$0	$0	$0	$0
	Total		$140,000	$0	$3,500	$0

Coastal Wetlands Conservation and Restoration Plan

Delta Management Demo

Project Priority List 15

Present Valued Costs Total Discounted Costs $1,091,669 Amortized Costs $90,405

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
3	1.170	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	1.110	2006	$142,500	$20,357	$55,982	$25,446	$3,054	$5,089	$0	$0	$0	$252,428
1	1.054	2007	$12,294	$1,756	$4,830	$2,195	$263	$439	$0	$0	$0	$21,778
0	1.000	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$154,794	$22,113	$60,812	$27,642	$3,317	$5,528	$0	$0	$0	$274,206
Phase II												
1	1.054	2007	$0	$0	$26,344	$26,344	$123	$0	$58,989	$115,491	$461,964	$689,254
0	1.000	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$26,344	$26,344	$123	$0	$58,989	$115,491	$461,964	$689,254
Total First Cost			$154,794	$22,113	$87,156	$53,985	$3,440	$5,528	$58,989	$115,491	$461,964	$963,460

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.000	2008	$25,000	$0	$700	$0
-1	0.949	2009	$23,725	$0	$664	$0
-2	0.901	2010	$22,515	$0	$630	$0
-3	0.855	2011	$21,366	$0	$598	$0
-4	0.811	2012	$32,442	$0	$568	$0
-5	0.770	2013	$0	$0	$0	$0
-6	0.730	2014	$0	$0	$0	$0
-7	0.693	2015	$0	$0	$0	$0
-8	0.658	2016	$0	$0	$0	$0
-9	0.624	2017	$0	$0	$0	$0
-10	0.592	2018	$0	$0	$0	$0
-11	0.562	2019	$0	$0	$0	$0
-12	0.534	2020	$0	$0	$0	$0
-13	0.506	2021	$0	$0	$0	$0
-14	0.480	2022	$0	$0	$0	$0
-15	0.456	2023	$0	$0	$0	$0
-16	0.433	2024	$0	$0	$0	$0
-17	0.411	2025	$0	$0	$0	$0
-18	0.390	2026	$0	$0	$0	$0
-19	0.370	2027	$0	$0	$0	$0
		Total	$125,048	$0	$3,161	$0

Coastal Wetlands Conservation and Restoration Plan

Delta Management Demo

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $1,131,096 Amortized Costs $93,670

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
3	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	1.055	2006	$135,392	$19,342	$53,190	$24,177	$2,901	$4,835	$0	$0	$0	$239,837
1	1.076	2007	$12,555	$1,794	$4,932	$2,242	$269	$448	$0	$0	$0	$22,239
0	1.099	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$147,946	$21,135	$58,122	$26,419	$3,170	$5,284	$0	$0	$0	$262,076
Phase II												
1	1.076	2007	$0	$0	$26,903	$26,903	$126	$0	$60,240	$117,941	$471,762	$703,873
0	1.099	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$26,903	$26,903	$126	$0	$60,240	$117,941	$471,762	$703,873
Total Cost			$147,946	$21,135	$85,024	$53,321	$3,296	$5,284	$60,240	$117,941	$471,762	$965,949

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.0987	2008	$27,467	$0	$769	$0
-1	1.1218	2009	$28,044	$0	$785	$0
-2	1.1453	2010	$28,633	$0	$802	$0
-3	1.1694	2011	$29,234	$0	$819	$0
-4	1.1939	2012	$47,757	$0	$836	$0
-5	1.2190	2013	$0	$0	$0	$0
-6	1.2446	2014	$0	$0	$0	$0
-7	1.2707	2015	$0	$0	$0	$0
-8	1.2974	2016	$0	$0	$0	$0
-9	1.3247	2017	$0	$0	$0	$0
-10	1.3525	2018	$0	$0	$0	$0
-11	1.3809	2019	$0	$0	$0	$0
-12	1.4099	2020	$0	$0	$0	$0
-13	1.4395	2021	$0	$0	$0	$0
-14	1.4697	2022	$0	$0	$0	$0
-15	1.5006	2023	$0	$0	$0	$0
-16	1.5321	2024	$0	$0	$0	$0
-17	1.5643	2025	$0	$0	$0	$0
-18	1.5971	2026	$0	$0	$0	$0
-19	1.6307	2027	$0	$0	$0	$0
		Total	$161,137	$0	$4,010	$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**438,400**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**548,000**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs				
Engineering and Design				$140,000
Engineering			$100,000	
Geotechnical Investigation			$0	
Hydrologic Modeling			$0	
Pre-construction Surveying			$20,000	
Cultural Resources			$0	
NEPA Compliance			$0	
Monitoring Plan Development			$20,000	
Supervision and Administration				$55,000
Corps Administration				$3,000
State Costs				
Supervision and Administration				$25,000
Ecological Review Costs				$0
Easements and Land Rights				$20,000
Monitoring				$5,000
Monitoring Plan Development	$5,000			
Monitoring Protocal Cost *	$0			

Total Phase I Cost Estimate **$248,000**

* 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				
Estimated Construction Cost +25% Contingency				$548,000
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspectio	60 days	@	933 per day	$55,980
Supervision and Administration				$25,000
State Costs				
Supervision and Administration				$25,000

Total Phase II Cost Estimate **$653,980**

TOTAL ESTIMATED PROJECT FIRST COST **901,980**

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:

Construction Items	**Year 0**	**Year 5**	**Year 7**	**Year 15**
Year 5 mobilization	$0	$0	$0	$0
Year 5 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 mobilization	$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	$0	$0	$0
Administrative Cost				$0	$0	$0	$0
Eng Survey	7 days	@	$1,460 per day	$0	$0	$0	$0
Construction	15 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	$700
Monitoring	$25,000

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	1	0	0	0	0	0	0	0	12
Plan & Design End	November-06											
Const. Start	March-07											
Const. End	May-07	0	0	2	0	0	0	0	0	0	0	2

Coastal Wetlands Conservation and Restoration Plan
Project Priority List 15
Flowable Fill Demonstration Project

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$822,960	Total Fully Funded Costs	$926,986

Total Charges	Present Worth	Average Annual
First Costs	$812,522	$67,288
Monitoring	$75,840	$6,281
State O & M Costs	$0	$0
Other Federal Costs	$3,161	$262
Average Annual Cost	$73,830	$73,830
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Flowable Fill Demonstration Project

Project Costs $926,986

Project Priority List 15

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
4	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
3	2006	$59,583	$9,167	$11,458	$11,458	$1,375	$2,292	-	$0		$95,333	
2	2007	$65,000	$10,000	$12,500	$12,500	$1,500	$2,500	-	$0		$104,000	
1	2008	$5,417	$833	$1,042	$1,042	$125	$208	-	$0		$8,667	
0	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$130,000	$20,000	$25,000	$25,000	$3,000	$5,000	$0	$0	$0	$208,000	$205,000
Phase II												
1	2008	-	$0	$25,000	$20,000	$117	$0	$46,650	$91,039	$364,157	$546,963	
0	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2012	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$25,000	$20,000	$117	$0	$46,650	$91,039	$364,157	$546,963	$546,846
Total First Costs		$130,000	$20,000	$50,000	$45,000	$3,117	$5,000	$46,650	$91,039	$364,157	$754,963	

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	Discount	2009	$15,000	$0	$700	$0
-1	Discount	2010	$15,000	$0	$700	$0
-2	Discount	2011	$15,000	$0	$700	$0
-3	Discount	2012	$15,000	$0	$700	$0
-4	Discount	2013	$25,000	$0	$700	$0
-5	Discount	2014	$0	$0	$0	$0
-6	Discount	2015	$0	$0	$0	$0
-7	Discount	2016	$0	$0	$0	$0
-8	Discount	2017	$0	$0	$0	$0
-9	Discount	2018	$0	$0	$0	$0
-10	Discount	2019	$0	$0	$0	$0
-11	Discount	2020	$0	$0	$0	$0
-12	Discount	2021	$0	$0	$0	$0
-13	Discount	2022	$0	$0	$0	$0
-14	Discount	2023	$0	$0	$0	$0
-15	Discount	2024	$0	$0	$0	$0
-16	Discount	2025	$0	$0	$0	$0
-17	Discount	2026	$0	$0	$0	$0
-18	Discount	2027	$0	$0	$0	$0
-19	Discount	2028	$0	$0	$0	$0
	Total		$85,000	$0	$3,500	$0

Coastal Wetlands Conservation and Restoration Plan

Flowable Fill Demonstration Project

Project Priority List 15

Present Valued Costs Total Discounted Costs $891,522 Amortized Costs $73,830

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.233	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.170	2006	$69,717	$10,726	$13,407	$13,407	$1,609	$2,681	$0	$0	$0	$111,547
2	1.110	2007	$72,175	$11,104	$13,880	$13,880	$1,666	$2,776	$0	$0	$0	$115,480
1	1.054	2008	$5,708	$878	$1,098	$1,098	$132	$220	$0	$0	$0	$9,133
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$147,600	$22,708	$28,385	$28,385	$3,406	$5,677	$0	$0	$0	$236,160
Phase II												
1	1.054	2008	$0	$0	$26,344	$21,075	$123	$0	$49,157	$95,933	$383,730	$576,362
0	1.000	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$26,344	$21,075	$123	$0	$49,157	$95,933	$383,730	$576,362
Total First Cost			$147,600	$22,708	$54,728	$49,460	$3,529	$5,677	$49,157	$95,933	$383,730	$812,522

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.000	2009	$15,000	$0	$700	$0
-1	0.949	2010	$14,235	$0	$664	$0
-2	0.901	2011	$13,509	$0	$630	$0
-3	0.855	2012	$12,820	$0	$598	$0
-4	0.811	2013	$20,276	$0	$568	$0
-5	0.770	2014	$0	$0	$0	$0
-6	0.730	2015	$0	$0	$0	$0
-7	0.693	2016	$0	$0	$0	$0
-8	0.658	2017	$0	$0	$0	$0
-9	0.624	2018	$0	$0	$0	$0
-10	0.592	2019	$0	$0	$0	$0
-11	0.562	2020	$0	$0	$0	$0
-12	0.534	2021	$0	$0	$0	$0
-13	0.506	2022	$0	$0	$0	$0
-14	0.480	2023	$0	$0	$0	$0
-15	0.456	2024	$0	$0	$0	$0
-16	0.433	2025	$0	$0	$0	$0
-17	0.411	2026	$0	$0	$0	$0
-18	0.390	2027	$0	$0	$0	$0
-19	0.370	2028	$0	$0	$0	$0
		Total	$75,840	$0	$3,161	$0

Coastal Wetlands Conservation and Restoration Plan

Flowable Fill Demonstration Project

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $926,986 Amortized Costs $76,767

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
4	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	1.055	2006	$62,860	$9,671	$12,089	$12,089	$1,451	$2,418	$0	$0	$0	$100,577
2	1.076	2007	$69,947	$10,761	$13,451	$13,451	$1,614	$2,690	$0	$0	$0	$111,914
1	1.099	2008	$5,951	$916	$1,144	$1,144	$137	$229	$0	$0	$0	$9,522
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$138,758	$21,347	$26,684	$26,684	$3,202	$5,337	$0	$0	$0	$222,013
Phase II												
1	1.099	2008	$0	$0	$27,467	$21,974	$128	$0	$51,254	$100,025	$400,099	$600,947
0	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.194	2012	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$27,467	$21,974	$128	$0	$51,254	$100,025	$400,099	$600,947
Total Cost			$138,758	$21,347	$54,152	$48,658	$3,330	$5,337	$51,254	$100,025	$400,099	$822,960

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.1218	2009	$16,827	$0	$785	$0
-1	1.1453	2010	$17,180	$0	$802	$0
-2	1.1694	2011	$17,541	$0	$819	$0
-3	1.1939	2012	$17,909	$0	$836	$0
-4	1.2190	2013	$30,475	$0	$853	$0
-5	1.2446	2014	$0	$0	$0	$0
-6	1.2707	2015	$0	$0	$0	$0
-7	1.2974	2016	$0	$0	$0	$0
-8	1.3247	2017	$0	$0	$0	$0
-9	1.3525	2018	$0	$0	$0	$0
-10	1.3809	2019	$0	$0	$0	$0
-11	1.4099	2020	$0	$0	$0	$0
-12	1.4395	2021	$0	$0	$0	$0
-13	1.4697	2022	$0	$0	$0	$0
-14	1.5006	2023	$0	$0	$0	$0
-15	1.5321	2024	$0	$0	$0	$0
-16	1.5643	2025	$0	$0	$0	$0
-17	1.5971	2026	$0	$0	$0	$0
-18	1.6307	2027	$0	$0	$0	$0
-19	1.6649	2028	$0	$0	$0	$0
		Total	$99,931	$0	$4,095	$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**364,157**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**455,196**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs				
Engineering and Design				$130,000
Engineering			$50,000	
Geotechnical Investigation			$0	
Hydrologic Modeling			$0	
Data Collection			$30,000	
Cultural Resources			$0	
#REF!			$25,000	
NEPA Compliance			$25,000	
Supervision and Administration				$25,000
Corps Administration				$3,000
State Costs				
Supervision and Administration				$25,000
Ecological Review Costs				$0
Easements and Land Rights				$20,000
Monitoring				$5,000
Monitoring Plan Development	$5,000			
Monitoring Protocal Cost *	$0			
		Total Phase I Cost Estimate		**$208,000**

* 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				
Estimated Construction Cost +25% Contingency				$455,196
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspectio	50 days	@	933 per day	$46,650
Supervision and Administration				$25,000
State Costs				
Supervision and Administration				$20,000
		Total Phase II Cost Estimate		**$546,846**

TOTAL ESTIMATED PROJECT FIRST COST	**754,846**

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:

Construction Items	**Year 0**	**Year 5**	**Year 7**	**Year 15**
Year 5 mobilization	$0	$0	$0	$0
Year 5 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 mobilization	$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	$0	$0	$0
Administrative Cost					$0	$0	$0	$0
Eng Survey	7 days	@	$1,460	per day	$0	$0	$0	$0
Construction	15 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:

	Year 1-4	Year 5
Corps Administration	$700	$700
Monitoring	$15,000	$25,000

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	12	1	0	0	0	0	0	0	24
Plan & Design End	November-07											
Const. Start	March-08											
Const. End	May-08	0	0	0	2	0	0	0	0	0	0	2

Coastal Wetlands Conservation and Restoration Plan

Project Priority List 15

Backshore and Dune Stabilization Demo Project

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.375%	Amortization Factor	0.08281
Fully Funded First Costs	$844,244	Total Fully Funded Costs	$883,536

Total Charges	Present Worth	Average Annual
First Costs	$842,511	$69,771
Monitoring	$25,823	$2,138
State O & M Costs	$0	$0
Other Federal Costs	$3,161	$262
Average Annual Cost	$72,172	$72,172
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Backshore and Dune Stabilization Demo Project

Project Costs $883,536 **Project Priority List 15**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost	
Phase I												
3	2005	$0	$0	$0	$0	$0	$0	-	$0		$0	
2	2006	$128,333	$22,917	$22,917	$22,917	$2,750	$4,583	-	$0		$204,417	
1	2007	$11,667	$2,083	$2,083	$2,083	$250	$417	-	$0		$18,583	
0	2008	$0	$0	$0	$0	$0	$0	-	$0		$0	
-1	2009	$0	$0	$0	$0	$0	$0	-	$0		$0	
	TOTAL	$140,000	$25,000	$25,000	$25,000	$3,000	$5,000	$0	$0	$0	$223,000	$220,000
Phase II												
1	2007	-	$0	$25,000	$25,000	$58	$0	$27,990	$97,500	$390,000	$565,548	
0	2008	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-1	2009	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-2	2010	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
-3	2011	-	$0	$0	$0	$0	-	$0	$0	$0	$0	
	TOTAL	$0	$0	$25,000	$25,000	$58	$0	$27,990	$97,500	$390,000	$565,548	$565,490
Total First Costs		$140,000	$25,000	$50,000	$50,000	$3,058	$5,000	$27,990	$97,500	$390,000	$788,548	

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	Discount	2008	$2,931	$0	$700	$0
-1	Discount	2009	$2,969	$0	$700	$0
-2	Discount	2010	$3,026	$0	$700	$0
-3	Discount	2011	$3,083	$0	$700	$0
-4	Discount	2012	$18,142	$0	$700	$0
-5	Discount	2013	$0	$0	$0	$0
-6	Discount	2014	$0	$0	$0	$0
-7	Discount	2015	$0	$0	$0	$0
-8	Discount	2016	$0	$0	$0	$0
-9	Discount	2017	$0	$0	$0	$0
-10	Discount	2018	$0	$0	$0	$0
-11	Discount	2019	$0	$0	$0	$0
-12	Discount	2020	$0	$0	$0	$0
-13	Discount	2021	$0	$0	$0	$0
-14	Discount	2022	$0	$0	$0	$0
-15	Discount	2023	$0	$0	$0	$0
-16	Discount	2024	$0	$0	$0	$0
-17	Discount	2025	$0	$0	$0	$0
-18	Discount	2026	$0	$0	$0	$0
-19	Discount	2027	$0	$0	$0	$0
	Total		$30,151	$0	$3,500	$0

Coastal Wetlands Conservation and Restoration Plan

Backshore and Dune Stabilization Demo Project

Project Priority List 15

Present Valued Costs Total Discounted Costs $871,494 Amortized Costs $72,172

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
3	1.170	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	1.110	2006	$142,500	$25,446	$25,446	$25,446	$3,054	$5,089	$0	$0	$0	$226,982
1	1.054	2007	$12,294	$2,195	$2,195	$2,195	$263	$439	$0	$0	$0	$19,582
0	1.000	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$154,794	$27,642	$27,642	$27,642	$3,317	$5,528	$0	$0	$0	$246,564
Phase II												
1	1.054	2007	$0	$0	$26,344	$26,344	$61	$0	$29,494	$102,741	$410,963	$595,947
0	1.000	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	0.949	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	0.901	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	0.855	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		Total	$0	$0	$26,344	$26,344	$61	$0	$29,494	$102,741	$410,963	$595,947
Total First Cost			$154,794	$27,642	$53,985	$53,985	$3,378	$5,528	$29,494	$102,741	$410,963	$842,511

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.000	2008	$2,931	$0	$700	$0
-1	0.949	2009	$2,818	$0	$664	$0
-2	0.901	2010	$2,725	$0	$630	$0
-3	0.855	2011	$2,635	$0	$598	$0
-4	0.811	2012	$14,714	$0	$568	$0
-5	0.770	2013	$0	$0	$0	$0
-6	0.730	2014	$0	$0	$0	$0
-7	0.693	2015	$0	$0	$0	$0
-8	0.658	2016	$0	$0	$0	$0
-9	0.624	2017	$0	$0	$0	$0
-10	0.592	2018	$0	$0	$0	$0
-11	0.562	2019	$0	$0	$0	$0
-12	0.534	2020	$0	$0	$0	$0
-13	0.506	2021	$0	$0	$0	$0
-14	0.480	2022	$0	$0	$0	$0
-15	0.456	2023	$0	$0	$0	$0
-16	0.433	2024	$0	$0	$0	$0
-17	0.411	2025	$0	$0	$0	$0
-18	0.390	2026	$0	$0	$0	$0
-19	0.370	2027	$0	$0	$0	$0
		Total	$25,823	$0	$3,161	$0

Coastal Wetlands Conservation and Restoration Plan

Backshore and Dune Stabilization Demo Project

Project Priority List 15

Fully Funded Costs Total Fully Funded Costs $883,536 Amortized Costs $73,169

Year		Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Admin	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I												
3	1.000	2005	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	1.055	2006	$135,392	$24,177	$24,177	$24,177	$2,901	$4,835	$0	$0	$0	$215,660
1	1.076	2007	$12,555	$2,242	$2,242	$2,242	$269	$448	$0	$0	$0	$19,998
0	1.099	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$147,946	$26,419	$26,419	$26,419	$3,170	$5,284	$0	$0	$0	$235,657
Phase II												
1	1.076	2007	$0	$0	$26,903	$26,903	$63	$0	$30,120	$104,920	$419,679	$608,587
0	1.099	2008	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-1	1.122	2009	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-2	1.145	2010	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-3	1.169	2011	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
		TOTAL	$0	$0	$26,903	$26,903	$63	$0	$30,120	$104,920	$419,679	$608,587
Total Cost			$147,946	$26,419	$53,321	$53,321	$3,233	$5,284	$30,120	$104,920	$419,679	$844,244

Year		FY	Monitoring	O&M & State Insp	Corps Admin	Fed S&A & Insp
0	1.0987	2008	$3,220	$0	$769	$0
-1	1.1218	2009	$3,331	$0	$785	$0
-2	1.1453	2010	$3,466	$0	$802	$0
-3	1.1694	2011	$3,605	$0	$819	$0
-4	1.1939	2012	$21,660	$0	$836	$0
-5	1.2190	2013	$0	$0	$0	$0
-6	1.2446	2014	$0	$0	$0	$0
-7	1.2707	2015	$0	$0	$0	$0
-8	1.2974	2016	$0	$0	$0	$0
-9	1.3247	2017	$0	$0	$0	$0
-10	1.3525	2018	$0	$0	$0	$0
-11	1.3809	2019	$0	$0	$0	$0
-12	1.4099	2020	$0	$0	$0	$0
-13	1.4395	2021	$0	$0	$0	$0
-14	1.4697	2022	$0	$0	$0	$0
-15	1.5006	2023	$0	$0	$0	$0
-16	1.5321	2024	$0	$0	$0	$0
-17	1.5643	2025	$0	$0	$0	$0
-18	1.5971	2026	$0	$0	$0	$0
-19	1.6307	2027	$0	$0	$0	$0
		Total	$35,282	$0	$4,010	$0

E&D and Construction Data

ESTIMATED CONSTRUCTION COST	**390,000**
ESTIMATED CONSTRUCTION + 25% CONTINGENCY	**487,500**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs				
Engineering and Design				$140,000
Engineering			$50,000	
Geotechnical Investigation			$20,000	
Hydrologic Modeling			$0	
Data Collection			$10,000	
Cultural Resources			$10,000	
NEPA Compliance			$30,000	
Monitoring Plan Development			$20,000	
Supervision and Administration				$25,000
Corps Administration				$3,000
State Costs				
Supervision and Administration				$25,000
Ecological Review Costs				$0
Easements and Land Rights				$25,000
Monitoring				$5,000
Monitoring Plan Development	$5,000			
Monitoring Protocal Cost *	$0			
		Total Phase I Cost Estimate		**$223,000**

* 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				
Estimated Construction Cost +25% Contingency				$487,500
Lands or Oyster Issues	0	lease acres		$0
Supervision and Inspectio	30 days	@	933 per day	$27,990
Supervision and Administration				$25,000
State Costs				
Supervision and Administration				$25,000
		Total Phase II Cost Estimate		**$565,490**

TOTAL ESTIMATED PROJECT FIRST COST	**788,490**

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:

Construction Items	**Year 0**	**Year 5**	**Year 7**	**Year 15**
Year 5 mobilization	$0	$0	$0	$0
Year 5 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 - 50% Cap Replacement	$0	$0	$0	$0
Year 15 mobilization	$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	$0	$0	$0
Administrative Cost	$0	$0	$0	$0
Eng Survey 7 days @ $1,460 per day	$0	$0	$0	$0
Construction 15 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	$700
Monitoring	$2,931

Construction Schedule:

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Plan & Design Start	November-05	0	11	1	0	0	0	0	0	0	0	12
Plan & Design End	November-06											
Const. Start	March-07											
Const. End	April-07	0	0	1	0	0	0	0	0	0	0	1

Coastal Wetlands Planning, Protection, and Restoration Act

15th 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: Bayou Lamoque Freshwater Diversion

The WVA for this project included 2 subareas. Total benefits for this project are as follows:

Area	AAHUs
1	1409
2	(848)

TOTAL BENEFITS =	**560**	**AAHUS**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Bayou Lamoque Freshwater Diversion
Area 1
Condition: Future Without Project

Project Area:
Fresh.....
Intermediate.. 1,492

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	91	0.92	91	0.92	91	0.92
V2	% Aquatic	10	0.19	10	0.19	10	0.19
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	90	1.00	90	1.00	90	1.00
V5	Salinity (ppt) fresh intermediate	3	1.00	3	1.00	3	1.00
V6	Access Value fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.95**	**EM HSI =**	**0.95**	**EM HSI =**	**0.95**
	Open Water HSI =		**0.45**	**OW HSI =**	**0.45**	**OW HSI =**	**0.45**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Bayou Lamoque Freshwater Diversion
Area 1
Condition: Future With Project

Project Area:
Fresh.....
Intermediate.. 1,492

Variable		TY 0		TY 1		TY 11	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	91	0.92	91	0.92	54	0.59
V2	% Aquatic	10	0.19	10	0.19	5	0.15
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 33 17 50	0.53
V4	%OW <= 1.5ft	90	1.00	90	1.00	22	0.35
V5	Salinity (ppt) fresh intermediate	3	1.00	2	1.00	4	1.00
V6	Access Value fresh intermediate	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.95**	**EM HSI =**	**0.95**	**EM HSI =**	**0.67**
	Open Water HSI =		**0.45**	**OW HSI =**	**0.45**	**OW HSI =**	**0.32**

Project: Bayou Lamoque Freshwater Diversion

FWP

Variable		TY 20 Value	TY 20 SI				
V1	% Emergent	56	0.60				
V2	% Aquatic	7	0.16				
V3	Interspersion	%		%		%	
	Class 1	35	0.56				
	Class 2	20					
	Class 3						
	Class 4	45					
	Class 5						
V4	%OW <= 1.5ft	31	0.45				
V5	Salinity (ppt)						
	fresh		1.00				
	intermediate	4					
V6	Access Value						
	fresh		1.00				
	intermediate	1.00					
		EM HSI =	**0.68**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.35**	**OW HSI =**		**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: Bayou Lamoque Freshwater Diversion
Area 1

Future Without Project TY	Marsh Acres	x HSI	Total HUs	Cummulative HUs
0	1357	0.95	1285.26	
1	1357	0.95	1285.26	1285.26
20	1357	0.95	1285.26	24419.95
			AAHUs =	**1285.26**

Future With Project TY	Marsh Acres	x HSI	Total HUs	Cummulative HUs
0	1357	0.95	1285.26	
1	1357	0.95	1285.26	1285.26
11	5048	0.67	3374.39	25012.55
20	5303	0.68	3628.80	31508.30
			AAHUs	**2890.31**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	2890.31
B. Future Without Project Emergent Marsh AAHUs =	1285.26
Net Change (FWP - FWOP) =	**1605.04**

AAHU CALCULATION - OPEN WATER

Project: Bayou Lamoque Freshwater Diversion
Area 1

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	135	0.45	60.22	
1	135	0.45	60.22	60.22
20	135	0.45	60.22	1144.13
			AAHUs =	**60.22**

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	135	0.45	60.22	
1	135	0.45	60.22	60.22
11	4387	0.32	1412.54	8243.02
20	4132	0.35	1439.26	12843.17
			AAHUs	**1057.32**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	1057.32
B. Future Without Project Open Water AAHUs =	60.22
Net Change (FWP - FWOP) =	**997.10**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	1605.04
B. Open Water Habitat Net AAHUs =	997.10
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**1408.93**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: Bayou Lamoque Freshwater Diversion
Area 2

Project Area: 7,943

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	43	0.49	43	0.49	42	0.48
V2	% Aquatic	1	0.11	1	0.11	1	0.11
V3	Interspersion	%		%		%	
	Class 1	20	0.44	20	0.44	20	0.44
	Class 2	20		20		20	
	Class 3						
	Class 4	60		60		60	
	Class 5						
V4	%OW <= 1.5ft	9	0.22	9	0.22	9	0.22
V5	Salinity (ppt)	9	1.00	9	1.00	9	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.61**	**EM HSI =**	**0.61**	**EM HSI =**	**0.60**
	Open Water HSI =		**0.33**	**OW HSI =**	**0.33**	**OW HSI =**	**0.33**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: Bayou Lamoque Freshwater Diversion Area 2 — Project Area: 7,943

Condition: Future With Project

Variable		TY 0		TY 1		TY 10	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	43	0.49	43	0.49	46	0.51
V2	% Aquatic	1	0.11	1	0.11	5	0.15
V3	Interspersion	%		%		%	
	Class 1	20	0.44	20	0.44	20	0.44
	Class 2	20		20		20	
	Class 3						
	Class 4	60		60		60	
	Class 5						
V4	%OW <= 1.5ft	9	0.22	10	0.23	19	0.34
V5	Salinity (ppt)	9	1.00	5	1.00	5	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.61**	**EM HSI =**	**0.61**	**EM HSI =**	**0.63**
	Open Water HSI =		**0.33**	**OW HSI =**	**0.33**	**OW HSI =**	**0.38**

AAHU CALCULATION - EMERGENT MARSH

Project: Bayou Lamoque Freshwater Diversion Area 2

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	3380	0.61	2052.31	
1	3377	0.61	2050.48	2051.40
20	3326	0.60	1998.33	38462.69
			AAHUs =	**2025.70**

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	3380	0.61	2052.31	
1	3408	0.61	2069.31	2060.81
10	3663	0.63	2293.56	19625.67
11	0	0.00	0.00	764.52
20	0	0.00	0.00	0.00
			AAHUs	**1122.55**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	1122.55
B. Future Without Project Emergent Marsh AAHUs =	2025.70
Net Change (FWP - FWOP) =	**-903.15**

AAHU CALCULATION - OPEN WATER

Project: Bayou Lamoque Freshwater Diversion
Area 2

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	4563	0.33	1498.42	
1	4566	0.33	1499.40	1498.91
20	4617	0.33	1516.15	28647.72
			AAHUs =	**1507.33**

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	4563	0.33	1498.42	
1	4535	0.33	1493.54	1495.98
10	4280	0.38	1610.71	13987.11
11	0	0.00	0.00	536.90
20	0	0.00	0.00	0.00
			AAHUs	**801.00**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	801.00
B. Future Without Project Open Water AAHUs =	1507.33
Net Change (FWP - FWOP) =	**-706.33**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	-903.15
B. Open Water Habitat Net AAHUs =	-706.33
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**-848.48**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: Lake Hermitage Marsh Creation

The WVA for this project included 1 subarea. Total benefits for this project are as follows:

Area	AAHUs
1	191

TOTAL BENEFITS =	**191**	**AAHUS**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: Lake Hermitage Marsh Creation Project Area: 1,581

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	29	0.36	28	0.35	16	0.24
V2	% Aquatic	10	0.19	10	0.19	5	0.15
V3	Interspersion	%		%		%	
	Class 1		0.32		0.32		0.20
	Class 2						
	Class 3	61		61			
	Class 4	39		39		100	
	Class 5						
V4	%OW <= 1.5ft	18	0.33	18	0.33	10	0.23
V5	Salinity (ppt)	2.3	1.00	2.3	1.00	2.3	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.50**	**EM HSI =**	**0.50**	**EM HSI =**	**0.40**
	Open Water HSI =		**0.41**	**OW HSI =**	**0.41**	**OW HSI =**	**0.35**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: Lake Hermitage Marsh Creation Project Area: 1,581

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	29	0.36	24	0.32	31	0.38
V2	% Aquatic	10	0.19	20	0.28	20	0.28
V3	Interspersion	%		%		%	
	Class 1		0.32	38	0.59	38	0.59
	Class 2						
	Class 3	61		43		43	
	Class 4	39		19		19	
	Class 5						
V4	%OW <= 1.5ft	18	0.33	27	0.45	27	0.45
V5	Salinity (ppt)	2.3	1.00	2.3	1.00	2.3	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.50**	**EM HSI =**	**0.50**	**EM HSI =**	**0.55**
	Open Water HSI =		**0.41**	**OW HSI =**	**0.51**	**OW HSI =**	**0.51**

Project: Lake Hermitage Marsh Creation

FWP

Variable		TY 5		TY 20			
		Value	SI	Value	SI	Value	SI
V1	% Emergent	54	0.59	43	0.49		
V2	% Aquatic	20	0.28	15	0.24		
V3	Interspersion	%		%		%	
	Class 1	38	0.59	25	0.50		
	Class 2			13			
	Class 3	43		22			
	Class 4	19		40			
	Class 5						
V4	%OW <= 1.5ft	25	0.42	20	0.36		
V5	Salinity (ppt)	2.3	1.00	2.3	1.00		
V6	Access Value	1.00	1.00	1.00	1.00		
		EM HSI =	0.69	EM HSI =	0.61	EM HSI =	
		OW HSI =	0.51	OW HSI =	0.46	OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Lake Hermitage Marsh Creation

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	455	0.50	228.45	
1	442	0.50	218.90	223.66
20	247	0.40	97.84	2947.90
			AAHUs =	158.58

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	455	0.50	228.45	
1	378	0.50	187.98	208.15
3	484	0.55	263.98	450.26
5	861	0.69	596.04	841.57
20	685	0.61	420.19	7587.04
			AAHUs	454.35

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	454.35
B. Future Without Project Emergent Marsh AAHUs =	158.58
Net Change (FWP - FWOP) =	**295.77**

AAHU CALCULATION - OPEN WATER

Project: Lake Hermitage Marsh Creation

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1126	0.41	461.24	
1	1139	0.41	466.57	463.91
20	1334	0.35	466.88	8904.56
			AAHUs =	**468.42**

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	1126	0.41	461.24	
1	657	0.51	337.22	407.33
3	693	0.51	355.70	692.92
5	720	0.51	368.19	723.90
20	896	0.46	415.28	5897.07
			AAHUs	**386.06**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	386.06
B. Future Without Project Open Water AAHUs =	468.42
Net Change (FWP - FWOP) =	**-82.36**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	295.77
B. Open Water Habitat Net AAHUs =	-82.36
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**190.74**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: Venice Ponds Marsh Creation and Crevasses

The WVA for this project included 4 subareas. Total benefits for this project are as follows:

Area	AAHUs
1	23
2	41
3	39
4	50

TOTAL BENEFITS =	**153**	**AAHUS**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Venice Ponds Marsh Creation and Crevasses
Area 1
Condition: Future Without Project

Project Area:
Fresh..... 51
Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	0	0.10	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.10	% 100	0.10	% 100	0.10
V4	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10
V5	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.00
V6	Access Value fresh intermediate	0.50	0.65	0.50	0.65	0.50	0.65
	Emergent Marsh HSI =		**0.23**	**EM HSI =**	**0.23**	**EM HSI =**	**0.23**
	Open Water HSI =		**0.21**	**OW HSI =**	**0.21**	**OW HSI =**	**0.21**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Venice Ponds Marsh Creation and Crevasses
Area 1
Condition: Future With Project

Project Area:
Fresh..... 51
Intermediate..

Variable		TY 0		TY 1		TY 2	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	50	0.55	98	0.98
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.10	% 100	1.00	% 100	1.00
V4	%OW <= 1.5ft	0	0.10	0	0.10	100	0.60
V5	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.00
V6	Access Value fresh intermediate	0.50	0.65	0.50	0.65	0.50	0.65
	Emergent Marsh HSI =		**0.23**	**EM HSI =**	**0.66**	**EM HSI =**	**0.94**
	Open Water HSI =		**0.21**	**OW HSI =**	**0.28**	**OW HSI =**	**0.32**

Project: Venice Ponds Marsh Creation and Crevasses

FWP

Variable		TY 20 Value	TY 20 SI				
V1	% Emergent	80	0.82				
V2	% Aquatic	40	0.46				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.60	%		%	
V4	%OW <= 1.5ft	100	0.60				
V5	Salinity (ppt) fresh intermediate	1	1.00				
V6	Access Value fresh intermediate	0.50	0.65				
		EM HSI =	**0.79**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.55**	**OW HSI =**		**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: Venice Ponds Marsh Creation and Crevasses
Area 1

Future Without Project TY	Marsh Acres	x HSI	Total HUs	Cummulative HUs
0	0	0.23	0.00	
1	0	0.23	0.00	0.00
20	0	0.23	0.00	0.00
			AAHUs =	**0.00**

Future With Project TY	Marsh Acres	x HSI	Total HUs	Cummulative HUs
0	0	0.23	0.00	
1	26	0.66	17.21	6.73
2	50	0.94	46.76	30.90
20	41	0.79	32.44	708.97
			AAHUs	**37.33**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	37.33
B. Future Without Project Emergent Marsh AAHUs =	0.00
Net Change (FWP - FWOP) =	**37.33**

AAHU CALCULATION - OPEN WATER

Project: Venice Ponds Marsh Creation and Crevasses
Area 1

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	51	0.21	10.87	
1	51	0.21	10.87	10.87
20	51	0.21	10.87	206.47
			AAHUs =	10.87

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	51	0.21	10.87	
1	0	0.28	0.00	6.00
2	1	0.32	0.32	0.15
20	10	0.55	5.53	46.25
			AAHUs	2.62

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	2.62
B. Future Without Project Open Water AAHUs =	10.87
Net Change (FWP - FWOP) =	**-8.25**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	37.33
B. Open Water Habitat Net AAHUs =	-8.25
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**22.63**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Venice Ponds Marsh Creation and Crevasses
Area 2
Condition: Future Without Project

Project Area:
Fresh..... 283
Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	17	0.25	17	0.25	11	0.20
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.20	% 100	0.20	% 100	0.20
V4	%OW <= 1.5ft	10	0.21	10	0.21	10	0.21
V5	Salinity (ppt) fresh intermediate	1	1.00	1	1.00	1	1.00
V6	Access Value fresh intermediate	0.0001	0.30	0.0001	0.30	0.0001	0.30
	Emergent Marsh HSI =		**0.34**	**EM HSI =**	**0.34**	**EM HSI =**	**0.30**
	Open Water HSI =		**0.21**	**OW HSI =**	**0.21**	**OW HSI =**	**0.21**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Venice Ponds Marsh Creation and Crevasses
Area 2
Condition: Future With Project

Project Area:
Fresh..... 283
Intermediate..

Variable		TY 0		TY 1		TY 2	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	17	0.25	31	0.38	45	0.51
V2	% Aquatic	0	0.10	0	0.10	20	0.28
V3	Interspersion	%		%		%	
	Class 1		0.20	30	0.44	30	0.44
	Class 2						
	Class 3						
	Class 4	100		70		70	
	Class 5						
V4	%OW <= 1.5ft	10	0.21	23	0.36	23	0.36
V5	Salinity (ppt)						
	fresh	1	1.00	1	1.00	1	1.00
	intermediate						
V6	Access Value						
	fresh	0.0001	0.30	1.00	1.00	1.00	1.00
	intermediate						
	Emergent Marsh HSI =		**0.34**	**EM HSI =**	**0.51**	**EM HSI =**	**0.60**
	Open Water HSI =		**0.21**	**OW HSI =**	**0.27**	**OW HSI =**	**0.43**

Project: Venice Ponds Marsh Creation and Crevasses
FWP

Variable		TY 20					
		Value	SI	Value	SI	Value	SI
V1	% Emergent	35	0.42				
V2	% Aquatic	30	0.37				
V3	Interspersion	%		%		%	
	Class 1		0.30				
	Class 2	24					
	Class 3						
	Class 4	76					
	Class 5						
V4	%OW <= 1.5ft	23	0.36				
V5	Salinity (ppt)						
	fresh	1	1.00				
	intermediate						
V6	Access Value						
	fresh	1.00	1.00				
	intermediate						
	EM HSI =		**0.52**	**EM HSI =**		**EM HSI =**	
	OW HSI =		**0.49**	**OW HSI =**		**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: Venice Ponds Marsh Creation and Crevasses Area 2

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	48	0.34	16.12	
1	47	0.34	15.78	15.95
20	31	0.30	9.27	236.15
			AAHUs =	12.60

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	48	0.34	16.12	
1	89	0.51	45.08	29.43
2	127	0.60	76.22	60.06
20	98	0.52	50.74	1135.44
			AAHUs	61.25

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	61.25
B. Future Without Project Emergent Marsh AAHUs =	12.60
Net Change (FWP - FWOP) =	**48.64**

AAHU CALCULATION - OPEN WATER

Project: Venice Ponds Marsh Creation and Crevasses Area 2

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	235	0.21	48.64	
1	236	0.21	48.85	48.75
20	252	0.21	52.16	959.64
			AAHUs =	50.42

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	235	0.21	48.64	
1	152	0.27	41.28	45.85
2	156	0.43	67.49	54.28
20	185	0.49	90.94	1420.72
			AAHUs	76.04

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	76.04
B. Future Without Project Open Water AAHUs =	50.42
Net Change (FWP - FWOP) =	**25.62**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	48.64
B. Open Water Habitat Net AAHUs =	25.62
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**41.22**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Venice Ponds Marsh Creation and Crevasses
Area 3
Condition: Future Without Project

Project Area:
Fresh..... 444
Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	20	0.28	19	0.27	11	0.20
V2	% Aquatic	50	0.55	50	0.55	50	0.55
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.20
	Class 2						
	Class 3						
	Class 4	100		100		100	
	Class 5						
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 =		**0.40**	**EM HSI =**	**0.40**	**EM HSI =**	**0.34**
	Open Water HSI =		**0.60**	**OW HSI =**	**0.60**	**OW HSI =**	**0.60**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Venice Ponds Marsh Creation and Crevasses
Area 3
Condition: Future With Project

Project Area:
Fresh..... 444
Intermediate..

Variable		TY 0		TY 1		TY 2	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	20	0.28	26	0.33	32	0.39
V2	% Aquatic	50	0.55	50	0.55	60	0.64
V3	Interspersion	%		%		%	
	Class 1		0.20	10	0.28	10	0.28
	Class 2						
	Class 3						
	Class 4	100		90		90	
	Class 5						
V4	%OW <= 1.5ft	10	0.21	20	0.33	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 =		**0.40**	**EM HSI =**	**0.45**	**EM HSI =**	**0.50**
	Open Water HSI =		**0.60**	**OW HSI =**	**0.62**	**OW HSI =**	**0.68**

Project: Venice Ponds Marsh Creation and Crevasses

FWP

Variable		TY 20 Value	TY 20 SI				
V1	% Emergent	53	0.58				
V2	% Aquatic	70	0.73				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 40 60	0.36	%		%	
V4	%OW <= 1.5ft	40	0.55				
V5	Salinity (ppt) fresh intermediate	1	1.00				
V6	Access Value fresh intermediate	1.00	1.00				
		EM HSI =	0.64	EM HSI =		EM HSI =	
		OW HSI =	0.76	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Venice Ponds Marsh Creation and Crevasses
Area 3

Future Without Project TY	Marsh Acres	x HSI	Total HUs	Cummulative HUs
0	88	0.40	35.43	
1	86	0.40	34.00	34.71
20	48	0.34	16.12	469.02
			AAHUs =	25.19

Future With Project TY	Marsh Acres	x HSI	Total HUs	Cummulative HUs
0	88	0.40	35.43	
1	116	0.45	52.68	43.81
2	141	0.50	69.88	61.10
20	237	0.64	152.38	1957.89
			AAHUs	103.14

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	103.14
B. Future Without Project Emergent Marsh AAHUs =	25.19
Net Change (FWP - FWOP) =	77.95

AAHU CALCULATION - OPEN WATER

Project: Venice Ponds Marsh Creation and Crevasses
Area 3

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	356	0.60	214.09	
1	358	0.60	215.29	214.69
20	396	0.60	238.14	4307.60
			AAHUs =	**226.11**

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	356	0.60	214.09	
1	307	0.62	189.00	201.66
2	303	0.68	204.65	196.86
20	207	0.76	156.44	3272.94
			AAHUs	**183.57**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	183.57
B. Future Without Project Open Water AAHUs =	226.11
Net Change (FWP - FWOP) =	**-42.54**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	77.95
B. Open Water Habitat Net AAHUs =	-42.54
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**39.08**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Venice Ponds Marsh Creation and Crevasses
Area 4

Condition: Future Without Project

Project Area:
Fresh..... 1,166
Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	18	0.26	19	0.27	24	0.32
V2	% Aquatic	50	0.55	50	0.55	50	0.55
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.32
	Class 2						
	Class 3					60	
	Class 4	100		100		40	
	Class 5						
V4	%OW <= 1.5ft	40	0.55	40	0.55	50	0.66
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 =		**0.39**	**EM HSI =**	**0.40**	**EM HSI =**	**0.44**
	Open Water HSI =		**0.63**	**OW HSI =**	**0.63**	**OW HSI =**	**0.64**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Venice Ponds Marsh Creation and Crevasses
Area 4
Condition: Future With Project

Project Area:
Fresh..... 1,166
Intermediate..

Variable		TY 0		TY 1		TY 2	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	18	0.26	20	0.28	21	0.29
V2	% Aquatic	50	0.55	50	0.55	60	0.64
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.20	% 100	0.20	% 100	0.20
V4	%OW <= 1.5ft	40	0.55	40	0.55	45	0.61
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 =		**0.39**	**EM HSI =**	**0.40**	**EM HSI =**	**0.41**
	Open Water HSI =		**0.63**	**OW HSI =**	**0.63**	**OW HSI =**	**0.69**

Project: Venice Ponds Marsh Creation and Crevasses
FWP

Variable		TY 20					
		Value	SI	Value	SI	Value	SI
V1	% Emergent	42	0.48				
V2	% Aquatic	70	0.73				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 80 20	0.36	%		%	
V4	%OW <= 1.5ft	80	1.00				
V5	Salinity (ppt) fresh intermediate	1	1.00				
V6	Access Value fresh intermediate	1.00	1.00				
	EM HSI =		**0.57**	**EM HSI =**		**EM HSI =**	
	OW HSI =		**0.79**	**OW HSI =**		**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: Venice Ponds Marsh Creation and Crevasses Area 4

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	215	0.39	83.44	
1	219	0.40	86.58	85.00
20	281	0.44	124.90	1999.39
			AAHUs =	104.22

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	215	0.39	83.44	
1	229	0.40	92.19	87.78
2	243	0.41	99.58	95.87
20	495	0.57	282.92	3320.16
			AAHUs	175.19

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	175.19
B. Future Without Project Emergent Marsh AAHUs =	104.22
Net Change (FWP - FWOP) =	**70.97**

AAHU CALCULATION - OPEN WATER

Project: Venice Ponds Marsh Creation and Crevasses Area 4

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	951	0.63	595.68	
1	947	0.63	593.17	594.42
20	885	0.64	569.58	11049.48
			AAHUs =	582.20

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	951	0.63	595.68	
1	937	0.63	586.91	591.29
2	923	0.69	637.17	612.19
20	671	0.79	529.46	10574.39
			AAHUs	588.89

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	588.89
B. Future Without Project Open Water AAHUs =	582.20
Net Change (FWP - FWOP) =	**6.70**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	70.97
B. Open Water Habitat Net AAHUs =	6.70
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**50.24**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: South Terrebonne Terracing

The WVA for this project included 4 subareas. Total benefits for this project are as follows:

Area	AAHUs
1	25
2	5
3	25

TOTAL BENEFITS =	**54**	**AAHUS**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: South Terrebonne Terracing Area 1 — Project Area: 529

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	24	0.32	24	0.32	19	0.27
V2	% Aquatic	1	0.11	1	0.11	1	0.11
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.20
	Class 2						
	Class 3						
	Class 4	100		100		100	
	Class 5						
V4	%OW <= 1.5ft	5	0.16	5	0.16	5	0.16
V5	Salinity (ppt)	9	1.00	9	1.00	11	0.85
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.45**	**EM HSI =**	**0.45**	**EM HSI =**	**0.40**
	Open Water HSI =		**0.31**	**OW HSI =**	**0.31**	**OW HSI =**	**0.30**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: South Terrebonne Terracing Area 1 — Project Area: 529

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	24	0.32	25	0.33	27	0.34
V2	% Aquatic	1	0.11	5	0.15	20	0.28
V3	Interspersion	%		%		%	
	Class 1		0.20		0.25		0.25
	Class 2						
	Class 3			25		25	
	Class 4	100		75		75	
	Class 5						
V4	%OW <= 1.5ft	5	0.16	6	0.18	6	0.18
V5	Salinity (ppt)	9	1.00	9	1.00	9	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.45**	**EM HSI =**	**0.47**	**EM HSI =**	**0.48**
	Open Water HSI =		**0.31**	**OW HSI =**	**0.35**	**OW HSI =**	**0.47**

Project: South Terrebonne Terracing

FWP

Variable		TY 14		TY 20			
		Value	SI	Value	SI	Value	SI
V1	% Emergent	25	0.33	24	0.32		
V2	% Aquatic	20	0.28	18	0.26		
V3	Interspersion	%		%		%	
	Class 1		0.25		0.25		
	Class 2						
	Class 3	25		25			
	Class 4	75		75			
	Class 5						
V4	%OW <= 1.5ft	6	0.18	6	0.18		
V5	Salinity (ppt)	10	1.00	11	0.85		
V6	Access Value	1.00	1.00	1.00	1.00		
		EM HSI =	0.47	EM HSI =	0.44	EM HSI =	
		OW HSI =	0.47	OW HSI =	0.44	OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: South Terrebonne Terracing
Area 1

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	129	0.45	58.56	
1	127	0.45	57.65	58.11
20	99	0.40	39.75	920.72
			AAHUs =	48.94

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	129	0.45	58.56	
1	133	0.47	62.05	60.30
3	144	0.48	69.18	131.17
14	132	0.47	61.58	718.85
20	125	0.44	55.36	350.64
			AAHUs	63.05

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	63.05
B. Future Without Project Emergent Marsh AAHUs =	48.94
Net Change (FWP - FWOP) =	14.11

AAHU CALCULATION - OPEN WATER

Project: South Terrebonne Terracing
Area 1

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	400	0.31	122.72	
1	402	0.31	123.33	123.03
20	430	0.30	127.14	2380.51
			AAHUs =	**125.18**

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	400	0.31	122.72	
1	383	0.35	134.00	128.48
3	385	0.47	180.21	314.14
14	397	0.47	185.83	2013.23
20	404	0.44	178.90	1094.35
			AAHUs	**177.51**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	177.51
B. Future Without Project Open Water AAHUs =	125.18
Net Change (FWP - FWOP) =	**52.33**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	14.11
B. Open Water Habitat Net AAHUs =	52.33
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**24.73**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: South Terrebonne Terracing
Area 2

Project Area: 302

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	17	0.25	17	0.25	16	0.24
V2	% Aquatic	2	0.31	2	0.31	2	0.31
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.20
	Class 2						
	Class 3						
	Class 4	100		100		100	
	Class 5						
V4	%OW <= 1.5ft	30	0.49	30	0.49	30	0.49
V5	Salinity (ppt)	9	1.00	9	1.00	12	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.41**	**EM HSI =**	**0.41**	**EM HSI =**	**0.40**
	Open Water HSI =		**0.68**	**OW HSI =**	**0.68**	**OW HSI =**	**0.68**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Saline Marsh

Project: South Terrebonne Terracing Area 2 — Project Area: 302

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	17	0.25	19	0.27	22	0.30
V2	% Aquatic	2	0.31	5	0.34	10	0.37
V3	Interspersion	%		%		%	
	Class 1		0.20		0.22		0.22
	Class 2						
	Class 3			10		10	
	Class 4	100		90		90	
	Class 5						
V4	%OW <= 1.5ft	30	0.49	23	0.40	23	0.40
V5	Salinity (ppt)	9	1.00	9	1.00	9	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.41**	**EM HSI =**	**0.43**	**EM HSI =**	**0.45**
	Open Water HSI =		**0.68**	**OW HSI =**	**0.69**	**OW HSI =**	**0.71**

Project: South Terrebonne Terracing FWP

Variable		TY 14		TY 20			
		Value	SI	Value	SI	Value	SI
V1	% Emergent	21	0.29	21	0.29		
V2	% Aquatic	10	0.37	8	0.36		
V3	Interspersion	%		%		%	
	Class 1		0.22		0.22		
	Class 2						
	Class 3	10		10			
	Class 4	90		90			
	Class 5						
V4	%OW <= 1.5ft	23	0.40	23	0.40		
V5	Salinity (ppt)	11	1.00	12	1.00		
V6	Access Value	1.00	1.00	1.00	1.00		
	EM HSI =		**0.44**	**EM HSI =**	**0.44**	**EM HSI =**	
	OW HSI =		**0.71**	**OW HSI =**	**0.70**	**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: South Terrebonne Terracing
Area 2

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	52	0.41	21.36	
1	52	0.41	21.36	21.36
20	48	0.40	19.36	386.77
			AAHUs =	20.41

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	52	0.41	21.36	
1	56	0.43	23.95	22.64
3	66	0.45	29.65	53.53
14	64	0.44	28.30	318.68
20	63	0.44	27.85	168.45
			AAHUs	28.17

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	28.17
B. Future Without Project Emergent Marsh AAHUs =	20.41
Net Change (FWP - FWOP) =	**7.76**

AAHU CALCULATION - OPEN WATER

Project: South Terrebonne Terracing
Area 2

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	250	0.68	170.88	
1	250	0.68	170.88	170.88
20	254	0.68	173.61	3272.60
			AAHUs =	172.17

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	250	0.68	170.88	
1	236	0.69	162.54	166.72
3	236	0.71	166.41	328.95
14	238	0.71	167.82	1838.27
20	239	0.70	166.99	1004.45
			AAHUs	166.92

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	166.92
B. Future Without Project Open Water AAHUs =	172.17
Net Change (FWP - FWOP) =	**-5.25**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	7.76
B. Open Water Habitat Net AAHUs =	-5.25
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	**4.87**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: South Terrebonne Terracing Area 3 — Project Area: 538

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	13	0.22	12	0.21	5	0.15
V2	% Aquatic	2	0.12	2	0.12	2	0.12
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.20
	Class 2						
	Class 3						
	Class 4	100		100		100	
	Class 5						
V4	%OW <= 1.5ft	5	0.16	5	0.16	5	0.16
V5	Salinity (ppt)	7	1.00	7	1.00	7	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.37**	**EM HSI =**	**0.37**	**EM HSI =**	**0.31**
	Open Water HSI =		**0.32**	**OW HSI =**	**0.32**	**OW HSI =**	**0.32**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: South Terrebonne Terracing Area 3 — Project Area: 538

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	13	0.22	14	0.23	17	0.25
V2	% Aquatic	2	0.12	5	0.15	20	0.28
V3	Interspersion	%		%		%	
	Class 1		0.20		0.22		0.22
	Class 2						
	Class 3			10		10	
	Class 4	100		90		90	
	Class 5						
V4	%OW <= 1.5ft	5	0.16	5	0.16	5	0.16
V5	Salinity (ppt)	7	1.00	7	1.00	7	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.37**	**EM HSI =**	**0.38**	**EM HSI =**	**0.41**
	Open Water HSI =		**0.32**	**OW HSI =**	**0.35**	**OW HSI =**	**0.46**

Project: South Terrebonne Terracing

FWP

Variable		TY 14 Value	TY 14 SI	TY 20 Value	TY 20 SI		
V1	% Emergent	14	0.23	12	0.21		
V2	% Aquatic	20	0.28	18	0.26		
V3	Interspersion	%		%		%	
	Class 1		0.22		0.20		
	Class 2						
	Class 3	10					
	Class 4	90		100			
	Class 5						
V4	%OW <= 1.5ft	5	0.16	5	0.16		
V5	Salinity (ppt)	7	1.00	7	1.00		
V6	Access Value	1.00	1.00	1.00	1.00		
		EM HSI =	0.38	EM HSI =	0.37	EM HSI =	
		OW HSI =	0.46	OW HSI =	0.45	OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: South Terrebonne Terracing
Area 3

Future Without Project TY	Marsh Acres	x HSI	Total HUs	Cummulative HUs
0	69	0.37	25.77	
1	66	0.37	24.14	24.95
20	25	0.31	7.74	295.51
			AAHUs =	16.02

Future With Project TY	Marsh Acres	x HSI	Total HUs	Cummulative HUs
0	69	0.37	25.77	
1	76	0.38	29.13	27.44
3	94	0.41	38.14	67.14
14	77	0.38	29.51	371.42
20	64	0.37	23.41	158.54
			AAHUs	31.23

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	31.23
B. Future Without Project Emergent Marsh AAHUs =	16.02
Net Change (FWP - FWOP) =	15.20

AAHU CALCULATION - OPEN WATER

Project: South Terrebonne Terracing
Area 3

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	469	0.32	148.59	
1	472	0.32	149.54	149.07
20	513	0.32	162.53	2964.70
			AAHUs =	155.69

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	469	0.32	148.59	
1	437	0.35	151.51	150.21
3	444	0.46	206.42	357.65
14	461	0.46	214.32	2314.09
20	474	0.45	212.95	1282.03
			AAHUs	205.20

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	205.20
B. Future Without Project Open Water AAHUs =	155.69
Net Change (FWP - FWOP) =	**49.51**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	15.20
B. Open Water Habitat Net AAHUs =	49.51
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**24.73**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: Bird Island/Southwest Pass Marsh Creation and Shoreline Protection

The WVA for this project included 1 subarea. Total benefits for this project are as follows:

Area	AAHUs
1	62

TOTAL BENEFITS =	**62**	**AAHUS**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: Bird Island/Southwest Pass Marsh Creation and Shoreline Protection Project Area: 149

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	47	0.52	45	0.51	2	0.12
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	47	0.58	47	0.58		0.20
	Class 2						
	Class 3						
	Class 4	53		53		100	
	Class 5						
V4	%OW <= 1.5ft	64	0.92	66	0.95	39	0.60
V5	Salinity (ppt)	5.2	1.00	5.2	1.00	5.2	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.65**	**EM HSI =**	**0.63**	**EM HSI =**	**0.28**
	Open Water HSI =		**0.38**	**OW HSI =**	**0.38**	**OW HSI =**	**0.33**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: Bird Island/Southwest Pass Marsh Creation and Shoreline Protection Project Area: 149

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	47	0.52	52	0.57	67	0.70
V2	% Aquatic	0	0.10	0	0.10	2	0.12
V3	Interspersion	%		%		%	
	Class 1	47	0.58	100	1.00	100	1.00
	Class 2						
	Class 3						
	Class 4	53					
	Class 5						
V4	%OW <= 1.5ft	64	0.92	61	0.88	66	0.95
V5	Salinity (ppt)	5.2	1.00	5.2	1.00	5.2	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.65**	**EM HSI =**	**0.73**	**EM HSI =**	**0.82**
	Open Water HSI =		**0.38**	**OW HSI =**	**0.41**	**OW HSI =**	**0.43**

Project: Bird Island/Southwest Pass Marsh Creation and Shoreline Protection

FWP

Variable		TY 5 Value	TY 5 SI	TY 20 Value	TY 20 SI	Value	SI
V1	% Emergent	94	0.95	91	0.92		
V2	% Aquatic	2	0.12	2	0.12		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	85	0.88		
	Class 2						
	Class 3						
	Class 4			15			
	Class 5						
V4	%OW <= 1.5ft	70	1.00	81	0.98		
V5	Salinity (ppt)	5.2	1.00	5.2	1.00		
V6	Access Value	1.00	1.00	1.00	1.00		
		EM HSI =	0.97	EM HSI =	0.94	EM HSI =	
		OW HSI =	0.44	OW HSI =	0.43	OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: Bird Island/Southwest Pass Marsh Creation and Shoreline Protection

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	70	0.65	45.33	
1	67	0.63	42.54	43.93
20	3	0.28	0.85	341.03
			AAHUs =	19.25

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	70	0.65	45.33	
1	77	0.73	55.87	50.51
3	100	0.82	81.53	136.72
5	141	0.97	136.42	215.87
20	136	0.94	127.53	1979.24
			AAHUs	119.12

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	119.12
B. Future Without Project Emergent Marsh AAHUs =	19.25
Net Change (FWP - FWOP) =	99.87

AAHU CALCULATION - OPEN WATER

Project: Bird Island/Southwest Pass Marsh Creation and Shoreline Protection

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	79	0.38	30.06	
1	82	0.38	31.36	30.71
20	146	0.33	48.01	764.81
			AAHUs =	39.78

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	79	0.38	30.06	
1	6	0.41	2.45	16.60
3	7	0.43	3.04	5.49
5	8	0.44	3.50	6.54
20	13	0.43	5.56	68.10
			AAHUs	4.84

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	4.84
B. Future Without Project Open Water AAHUs =	39.78
Net Change (FWP - FWOP) =	**-34.94**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	99.87
B. Open Water Habitat Net AAHUs =	-34.94
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**62.42**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: South Pecan Island Freshwater Introduction

The WVA for this project included 1 subarea. Total benefits for this project are as follows:

Area	AAHUs
1	100

TOTAL BENEFITS =	**100**	**AAHUS**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: South Pecan Island Freshwater Introduction Project Area: 7,005

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	35	0.42	35	0.42	29	0.36
V2	% Aquatic	30	0.37	30	0.37	30	0.37
V3	Interspersion	%		%		%	
	Class 1		0.34		0.34		0.30
	Class 2	10		10			
	Class 3	50		50		50	
	Class 4	40		40		50	
	Class 5						
V4	%OW <= 1.5ft	70	1.00	70	1.00	65	0.94
V5	Salinity (ppt)	2.8	1.00	2.8	1.00	2.8	1.00
V6	Access Value	0.25	0.33	0.25	0.33	0.25	0.33
	Emergent Marsh HSI	**=**	**0.45**	**EM HSI =**	**0.45**	**EM HSI =**	**0.42**
	Open Water HSI	**=**	**0.45**	**OW HSI =**	**0.45**	**OW HSI =**	**0.44**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: South Pecan Island Freshwater Introduction Project Area: 7,005

Condition: Future With Project

Variable		TY 0		TY 1		TY 5	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	35	0.42	35	0.42	34	0.41
V2	% Aquatic	30	0.37	30	0.37	50	0.55
V3	Interspersion	%		%		%	
	Class 1		0.34		0.34		0.34
	Class 2	10		10		10	
	Class 3	50		50		50	
	Class 4	40		40		40	
	Class 5						
V4	%OW <= 1.5ft	70	1.00	70	1.00	70	1.00
V5	Salinity (ppt)	2.8	1.00	1.5	1.00	1.5	1.00
V6	Access Value	0.25	0.33	0.25	0.33	0.25	0.33
	Emergent Marsh HSI	**=**	**0.45**	**EM HSI =**	**0.45**	**EM HSI =**	**0.45**
	Open Water HSI	**=**	**0.45**	**OW HSI =**	**0.45**	**OW HSI =**	**0.52**

Project: South Pecan Island Freshwater Introduction

FWP

Variable		TY 20 Value	TY 20 SI				
V1	% Emergent	31	0.38				
V2	% Aquatic	50	0.55				
V3	Interspersion	%		%		%	
	Class 1		0.30				
	Class 2						
	Class 3	50					
	Class 4	50					
	Class 5						
V4	%OW <= 1.5ft	65	0.94				
V5	Salinity (ppt)	1.5	1.00				
V6	Access Value	0.25	0.33				
		EM HSI =	0.43	EM HSI =		EM HSI =	
		OW HSI =	0.51	OW HSI =		OW HSI =	

AAHU CALCULATION - EMERGENT MARSH

Project: South Pecan Island Freshwater Introduction

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	2478	0.45	1124.92	
1	2455	0.45	1114.48	1119.70
20	2051	0.42	858.34	18696.37
			AAHUs =	990.80

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	2478	0.45	1124.92	
1	2460	0.45	1116.75	1120.83
5	2391	0.45	1073.22	4379.71
20	2149	0.43	921.81	14950.72
			AAHUs	1022.56

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	1022.56
B. Future Without Project Emergent Marsh AAHUs =	990.80
Net Change (FWP - FWOP) =	31.76

AAHU CALCULATION - OPEN WATER

Project: South Pecan Island Freshwater Introduction

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	4527	0.45	2021.60	
1	4550	0.45	2031.87	2026.73
20	4954	0.44	2174.08	39966.35
			AAHUs =	**2099.65**

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	4527	0.45	2021.60	
1	4545	0.45	2029.63	2025.62
5	4614	0.52	2398.96	8853.82
20	4856	0.51	2487.34	36651.97
			AAHUs	**2376.57**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	2376.57
B. Future Without Project Open Water AAHUs =	2099.65
Net Change (FWP - FWOP) =	**276.92**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	31.76
B. Open Water Habitat Net AAHUs =	276.92
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**99.86**

Coastal Wetlands Planning, Protection, and Restoration Act

15th Priority Project List Report

Appendix F

Public Support For Candidate Projects

Public Support for Candidate Projects
for the
15th Priority Project List

South Pecan Island Freshwater Introduction

Randy Moertle, M.O. Miller Estates property owner
WP Edwards III, Vermilion Corporation and Vermilion Parish
Ms. Vicki Dufour, Jefferson Parish
Mr. Greg Currier, M.O. Miller Estates property owner
Mr. Tom Hess, LA Department of Wildlife and Fisheries Biologist at Rockefeller Refuge

Bird Island/Southwest Pass Marsh Creation and Shoreline Protection

Sherrill Sagrera, Vermilion Parish Coastal Advisory Committee

South Terrebonne Terracing
Kerry St. Pe, Barataria-Terrebonne National Estuary Program (BTNEP)
Barry Blackwell, Parish manager for Terrebonne Parish
Al Levron, Terrebonne Parish
Leslie Swazo, Director of Coastal Restoration for Terrebonne
Nolan Bergeron, Terrebonne Parish CZM
James Miller, Terrebonne Parish CZM
John W. Woodward, Apache Louisiana Minerals, Inc.
Jerome Zeringue, Terrebonne Levee District
Nolan Bergeron, Terrebonne Parish CZM
Don Schwab, Terrebonne Parish President
Reggie Dupre, Louisiana Senator
Butch Gautreaux, Louisiana Senator
Damon Baldone, Louisiana State Representative
Carla Dartez, Louisiana State Representative
Gordon Dove, Louisiana State Representative
Paul Labat, Terrebonne Parish Council
Kandy Theriot, Houma Terrebonne Chamber of Commerce
Ms. Leslie Suazo, Director of Coastal Restoration for Terrebonne Parish

Bayou Lamoque Freshwater Diversion

WP Edwards III, Vermilion Corporation
Kerry St. Pe, Barataria-Terrebonne National Estuary Program (BTNEP)
Kathy Haggar, St. Bernard Parish Emergency Support Function (ESF)
Dr. John Lopez, Lake Pontchartrain Basin Foundation
Mr. Andrew MacInnes, Plaquemines Parish

Lake Hermitage Marsh Creation Project

Kerry St. Pé, Barataria-Terrebonne National Estuary Program (BTNEP)

Mr. Andrew MacInnes, Plaquemines Parish
Ms. Marnie Winter, Jefferson Parish Environmental Department

Venice Ponds Marsh Creation and Crevasses Project
Kerry St. Pé Barataria-Terrebonne National Estuary Program (BTNEP)
Mr. Andrew MacInnes, Plaquemines Parish

Nourishment of Permanently Flooded Cypress Swamps through Dedicated Dredging Project

Kerry St. Pé, Barataria-Terrebonne National Estuary Program (BTNEP)

Bird Island/Southwest Pass Marsh Creation and Shoreline Protection
Mr. Timothy Vincent, Vermilion Parish

Coastal Wetlands Planning, Protection, and Restoration Act

15th Priority Project List Report

Appendix G

Project Status Summary Report from 1st through 15th Priority Project Lists

by Lead Agency, by Basin and by Priority List

Appendix G

Project Status Summary Report from 1st through 15th Priority Project Lists

By Lead Agency, Basin and Priority List

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COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

PROJECT STATUS SUMMARY REPORT

09 May 2006

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)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Lead Agency: DEPT. OF THE ARMY, CORPS OF ENGINEERS										
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	$1,167,832	66.4	$1,167,832 $1,167,832
	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	$3,817,929	85.6	$3,907,890 $3,835,143
	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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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 !	$1,990,665 $1,837,487

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.

The Task Force approved a revised project estimate of $2,500,000; however, current estimate is less.

Condemnation of real estate easements was required because of unclear ownership titles and significantly lengthened the project schedule. Construction was completed in February 1996.

Complete.

West Bay Sediment Diversion	DELTA	PLAQ	9,831	29-Aug-2002 A	10-Sep-2003 A	28-Nov-2003 A	$8,517,066	$22,792,876	267.6 !	$16,195,642 $7,349,763

Status: Post-construction aerial photographs and surveys indicate that 186 acres of new marsh were created with the beneficial use of the diversion channel dredged material. LDNR surveyed the area in March 2004 and found ~70% vegetative coverage from natural colonization of the marsh creation site. Flow measurements taken in December 2004 recorded a discharge of 27,000 cfs of Mississippi River water 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.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		1	10,544				$16,323,624	$29,860,376	182.9	$23,320,781 $14,248,977

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

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 !	$3,517,443 $2,898,376

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.

Complete.

West Belle Pass Headland Restoration	TERRE	LAFOU	474	27-Dec-1996 A	10-Feb-1998 A	30-Sep-2005 *	$4,854,102	$6,751,444	139.1 !	$5,888,833 $5,510,909

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.

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.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		2	1,541				$6,595,412	$10,447,532	158.4	$9,406,276 $8,409,285

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

Priority List 3

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	$855,315 $682,320

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.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	SCHEDULES CSA	Const Start	Const End	ESTIMATES Baseline	Current	%	Actual Obligations/ Expenditures
Pass-a-Loutre Crevasse [DEAUTHORIZED]	DELTA	PLAQ					$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.									
Total Priority List		3	1,691				$4,178,385	$1,321,965	31.6	$1,288,296 $1,115,301

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					$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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		4					$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	$2,589,403	101.3	$2,537,565 $2,255,809

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	$2,589,403	101.3	$2,537,565 $2,255,809

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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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	$1,911,487	119.5	$1,904,514 $1,863,952
	Status:	CSA executed May 31, 2002. Construction completed June 21, 2002. 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". 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.								
Marsh Creation East of the Atchafalaya River-Avoca Island [DEAUTHORIZED]	TERRE	STMRY					$6,438,400	$66,869	1.0	$66,869 $66,869
	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. Project deauthorized July 23, 1998.								
Marsh Island Hydrologic Restoration	TECHE	IBERI	408	01-Feb-2001 A	25-Jul-2001 A	12-Dec-2001 A	$4,094,900	$5,143,288	125.6 !	$4,971,196 $3,951,683
	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. Revised design of closures from earthen to rock because soil borings indicate highly organic material in borrow area.								
Total Priority List		6	408				$12,133,300	$7,121,644	58.7	$6,942,578 $5,882,504

3 Project(s)
2 Cost Sharing Agreements Executed
2 Construction Started
2 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 8

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Sabine Refuge Marsh Creation, Cycle 1	CA/SB	CAMER	214	09-Mar-2001 A	15-Aug-2001 A	26-Feb-2002 A	$15,724,965	$3,421,671	21.8	$3,436,921 $3,436,921

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.

Sabine Refuge Marsh Creation, Cycle 2	CA/SB	CAMER	261	17-Feb-2005 A	01-Jun-2007	01-Jun-2008	$9,266,842	$9,266,842	100.0	$597,280 $597,612

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 the summer of 2007. Cycle 3 would be constructed in 2008. Upon completion of Cycle 2, the COE and LDNR will ask the Task Force for construction approval for Cycles 4 and 5.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Sabine Refuge Marsh Creation, Cycle 3	CA/SB	CAMER	187	28-Mar-2005 A	15-Jan-2008	15-May-2008	$3,629,333	$3,629,333	100.0	$0
										$0

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 at the end of 2006. Cycle 3 would be constructed in 2007. Upon completion of Cycle 2, the COE and LDNR will ask the Task Force for construction approval for Cycles 4 and 5.

Sabine Refuge Marsh Creation, Cycle 4	CA/SB	CAMER	163				$0	$0	#Num! #	$0
										$0

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 at the end of 2006. Cycle 3 would be constructed in 2007. Upon completion of Cycle 2, the COE and LDNR will ask the Task Force for construction approval for Cycles 4 and 5.

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

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Sabine Refuge Marsh Creation, Cycle 5	CA/SB	CAMER	168				$0	$0	#Num! #	$0 $0
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 at the end of 2006. Cycle 3 would be constructed in 2007. Upon completion of Cycle 2, the COE and LDNR will ask the Task Force for construction approval for Cycles 4 and 5.									
Total Priority List		8	993				$28,621,140	$16,317,846	57.0	$4,034,201 $4,034,533

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

Priority List 9

Freshwater Bayou Bank Stabilization - Belle Isle Canal to Lock	TECHE	VERMI	241	30-Jan-2007	01-Apr-2007	30-Jun-2008	$1,498,967	$1,498,967	100.0	$1,070,911 $1,069,222
Status: A site visit was held in January 2001 with the Local Sponsor and landowner. Right of entry for surveys and borings was obtained March 14, 2001, and data collection followed. The USACE team met with LDNR staff after survey data was processed and obtained consensus on cross-sections and depth contours. A 30% design review was held in June 2002. The project was revised to include Area A - shoreline protection work only dropping a hydrologic restoration feature. A 95% design review was completed in January 2004. Phase II authorization will be sought again in January 2007.										

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Opportunistic Use of the Bonnet Carre Spillway	PONT	STCHA	177	31-Jan-2007	01-May-2007	01-Nov-2007	$150,706	$188,383	125.0 !	$106,932 $82,248
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 January 2007 Task Force meeting. A draft model CSA is in review. 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. This project involves no physical construction.										
Periodic Intro of Sediment and Nutrients at Selected Diversion Sites Demo (DEMO)	COAST	VARY		15-May-2006	01-Sep-2006	01-Nov-2006	$1,502,817	$1,502,817	100.0	$31,726 $31,726
Status: Field site investigations have been completed. Sediment capacities of the Carnearvon Diversion Outfall Canal have been developed. Several methods of introducing the sediment into the diversion are being investigated by the team.										
Weeks Bay MC and SP/Commercial Canal/Freshwater Redirection	TECHE	IBERI	278				$1,229,337	$1,229,337	100.0	$518,983 $506,653
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. 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.										
Total Priority List		9	696				$4,381,827	$4,419,504	100.9	$1,728,552 $1,689,849

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

Priority List 10

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

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Benneys Bay Diversion	DELTA	PLAQ	5,706	30-Jan-2007	01-Mar-2007	01-Nov-2008	$1,076,328	$1,076,328	100.0	$806,047 $801,239
	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 with the proposed design except for one feature (SREDs - sediment retention enhancement devices) which were removed at the request of the local sponsor. A Final Design Report has been developed and is being reviewed by the LDNR. A revised WVA and design cost estimate are in preparation for review at the CWPPRA working groups. The project is scheduled to complete all design work in 2006 in preparation for a Phase II funding request.								
Delta Building Diversion at Myrtle Grove	BARA	JEFF	8,891				$3,002,114	$3,002,114	100.0	$1,940,194 $1,947,158
	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 compliled. 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-Oct-2004 *	01-Nov-2007		$1,155,200	$1,444,000	125.0	$895,688 $893,747
	Status:	30 % Design Review held 25 July 2005.								
Total Priority List		10	15,098				$5,233,642	$5,522,442	105.5	$3,641,929 $3,642,144

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

Priority List 11

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Grand Lake Shoreline Protection	MERM	CAMER	540	31-Jan-2007	01-Aug-2007	01-Jun-2008	$1,049,029	$1,049,029	100.0	$689,968 $684,906
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 were completed and a preliminary design was performed and subsequently finalized. Successful 30% and 95% design review meetings were held on May 11, 2004 and August 16, 2004, respectively. The EA for the project was prepared for public review and resulted in a signed FONSI. The project was not selected for construction authorization by the Task Force at the October 2004 meeting or January 2006 meeting. The project will be considered again for construction authorization at the next annual funding approval meeting of the Task Force in January 2007.									
Total Priority List	11	540					$1,049,029	$1,049,029	100.0	$689,968 $684,906

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-Jan-2007	15-Jul-2007	15-Jun-2008	$2,229,876	$2,229,876	100.0	$1,279,833 $1,275,256
Status: This project was approved for Phase I design on PPL12 in January 2003. A kickoff meeting and site visit were 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 and extended in August 2004. Site surveys began in December 2003 and were completed in May 2004. Initial geotechnical field work completed in April 2004. An initial cultural resources and environmental assessment is complete and final coordination with the SHPO is underway. Field data for hydrologic modeling is complete and model runs have been conducted. A draft Preliminary Design Report was prepared in late 2004 and the LDNR and USACE are working to complete the report incorporating additional data and analysis. The project design team is investigating the addition of a marsh creation component to increase project wetland benefits. Additional surveys and soil borings were collected to refine the proposed designs. A 30% design review is targeted for late spring 2006.									

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Lake Borgne and MRGO Shoreline Protection	PONT	STBER	266	30-Jan-2007	30-Mar-2007	30-Nov-2007	$1,348,345	$1,348,345	100.0	$1,013,299 $1,004,144
	Status:	This project was approved for Phase I design on PPL12 in January 2003. A kickoff meeting and site visit were 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 was held in August 2004. A 95% design review was held on March 29, 2005. A request for Phase II construction approval from the Task Force is scheduled for January 2007.								
Mississippi River Sediment Trap	DELTA	PLAQ	1,190	30-Jan-2007	01-Aug-2008	01-Mar-2009	$1,880,376	$1,880,376	100.0	$155,393 $152,290
	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 plan reformulation meeting with the LA Dept. of Natural Resources and Corps of Engineers design teams.								
South White Lake Shoreline Protection	MERM	VERMI	844	24-Mar-2005 A	01-Nov-2005 A	01-Feb-2007	$19,673,929	$15,712,059	79.9	$10,169,463 $2,574,639
	Status:	project under construction								
Total Priority List		12	2,443				$25,132,526	$21,170,656	84.2	$12,617,989 $5,006,329

4 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 13

Shoreline Protection Foundation Improvements Demonstration (DEMO)	COAST	COAST		24-Mar-2005 A	01-Nov-2005 A	15-Apr-2006 *	$1,000,000	$1,055,000	105.5	$803,927 $243,291
	Status:	Project under construction								

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

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Spanish Pass Diversion	DELTA	PLAQ	433	31-Jan-2007	01-Jun-2008		$1,137,344	$1,421,680	125.0	$204,659 $227,257
Status: The Task Force gave Phase 1 approval on January 28, 2004. The project delivery team has been assembled. A kickoff meeting and field trip were held on March 29, 2004. The work plan was developed and submitted to the P&E Subcommittee prior to April 30, 2004. The project delivery team has obtained rights of entry to install gages and conduct surveys in the project area. Gages were installed on November 18, 2004 and the survey work is completed. Modeling is underway.										
Total Priority List		13	433				$2,137,344	$2,476,680	115.9	$1,008,586 $470,548

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

Priority List 15

Bayou Lamoque Freshwater Diversion	BRET	PLAQ	620				$1,205,354	$1,205,354	100.0	$3,202 $0
Status:										
Venice Ponds Marsh Creation and Crevasses	DELTA	PLAQ	511				$1,074,522	$1,074,522	100.0	$3,202 $0
Status:										

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
	Total Priority List	15	1,131				$2,279,876	$2,279,876	100.0	$6,404 $0

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**		**35,593**				**$113,390,042**	**$104,701,009**	**92.3**	**$67,347,181** **$47,564,240**

37 Project(s)
18 Cost Sharing Agreements Executed
15 Construction Started
12 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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Lead Agency: ENVIRONMENTAL PROTECTION AGENCY, REGION 6										
Priority List Conservation Plan										
State of Louisiana Wetlands Conservation Plan	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

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 !	$8,751,493 $8,612,076
	Status:	This phase of the Isles Dernieres restoration project was combined with Isles Dernieres, Phase I (Trinity Island), a priority list 2 project. Additional funds to cover the increased construction cost on lowest bid received were approved at the January 16, 1998 Task Force meeting. 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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		1	9				$6,345,468	$8,762,416	138.1	$8,751,493 $8,612,076

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 !	$10,788,861 $10,759,515

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.

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.

Total Priority List	2	109				$6,907,897	$10,774,974	156.0	$10,788,861 $10,759,515

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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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 !	$7,107,061 $7,009,758
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	$7,639,016 $7,541,712

2 Project(s)
2 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 4

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.										

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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

Bayou Lafourche Siphon	TERRE	IBERV		19-Feb-1997 A		$24,487,337	$1,500,000	6.1	$1,500,000 $1,500,000

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.

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.

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.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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	$4,973,561 $2,500,266

Status: The 30% E&D report is currently in draft form and is expected to be completed and available for agency review within the next few weeks.

Total Priority List		5.1	988				$9,700,000	$9,700,000	100.0	$4,973,561 $2,500,266

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					$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.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		6					$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

LA Highway 1 Marsh Creation [DEAUTHORIZED]	BARA	LAFOU		05-Oct-2000 A			$1,151,484	$343,551	29.8	$387,696 $253,316
	Status: The project was deauthorized at the February 17, 2005 Task Force meeting.									
New Cut Dune and Marsh Restoration	TERRE	TERRE	102	01-Sep-2000 A	01-Jun-2006		$7,393,626	$10,384,057	140.4 !	$9,145,709 $908,124
	Status: State plans to advertise for construction bids on Friday, March 17, 2006. Mandatory pre-bid meeting and site visit scheduled for Thursday, April 6, 2006. Bids are due Friday, April 14, 2006 with construction expected to begin May/June 2006.									
Timbalier Island Dune and Marsh Restoration	TERRE	TERRE	273	05-Oct-2000 A	01-Jun-2004 A	30-Jun-2005 A	$16,234,679	$20,175,019	124.3	$18,784,006 $14,758,565
	Status: An additional row of sand fencing will be placed on eastern most end of project area. Contract has been awarded to place an additional 42,000 containers of native vegetation April/May 2006.									
Total Priority List		9	375				$24,779,789	$30,902,627	124.7	$28,317,411 $15,920,005

3 Project(s)
3 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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Priority List 10										
Lake Borgne Shoreline Protection	PONT	STBER	165	02-Oct-2001 A	01-Jun-2006	01-Dec-2006	$18,378,900	$18,285,599	99.5	$13,603,804 $865,389
	Status:	95% Design Review Conference is scheduled for November 29, 2005 in Baton Rouge. Oyster leases within the project footprint may present an impediment in receiving Phase II construction funding, delaying and/or jeopardizing construction authorization.								
Small Freshwater Diversion to the Northwestern Barataria Basin	BARA	STJAM	941	08-Oct-2001 A	01-May-2008	01-May-2010	$1,899,834	$2,362,687	124.4	$2,065,965 $501,591
	Status:	Difficulties with land rights combined with recent cypress logging activity require EPA and LDNR to re-evaluate the future of the current benefit area/potential diversion alignments considered to date. The original project proposal included several alternate benefit areas and alternate diversion alignments. All monitoring gages are being removed.								
Total Priority List	10		1,106				$20,278,734	$20,648,286	101.8	$15,669,769 $1,366,980

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-May-2008	01-May-2010	$5,434,288	$6,780,307	124.8	$5,735,194 $1,966,393
	Status:	Complex hydrodynamic modeling has resulted in additional delays, but modeling is expected to be completed by September, 2006. Actual engineering and design will commence immediately following that, assuming that modeling supports moving forward with the project. NEPA work continues. Preliminary water quality analysis is complete. HTRW assessment nearly complete. ESA and other biological studies ongoing. Additional studies to support ESA assessment, water quality assessment,and alternatives analysis beginning or being scoped. Chapter 1 of EIS (Purpose & Need) drafted and soon to be distributed for review/comment.								
Ship Shoal: Whiskey West Flank Restoration	TERRE	TERRE	195	17-Mar-2004 A	01-May-2007	01-Feb-2008	$2,998,960	$3,742,053	124.8	$3,296,957 $1,642,891
	Status:	The project E&D is complete. This project competed for funding at the December 2005 Tech Committee meeting but was not selected for construction funding.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		11	5,633				$8,433,248	$10,522,360	124.8	$9,032,151 $3,609,284

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

Priority List 12

Bayou Dupont Sediment Delivery System	BARA	PLAQ	400	21-Mar-2004 A	01-Mar-2008	01-Sep-2008	$2,192,735	$2,731,479	124.6	$2,382,964 $209,550
	Status:	No work to report.								
Total Priority List		12	400				$2,192,735	$2,731,479	124.6	$2,382,964 $209,550

1 Project(s)
1 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	29-Sep-2004 A	01-Apr-2007		$2,293,893	$2,751,494	119.9	$2,408,293 $35,263
	Status:	The firm T. Baker Smith and Sons was selected to perform the Engineering and Deign on this project. DNR is currently negotiating a scope of services with the firm.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		13	272				$2,293,893	$2,751,494	119.9	$2,408,293
										$35,263

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 14

East Marsh Island Marsh Creation	TECHE	IBERI	189	01-Aug-2008	01-Jul-2009	$1,193,606	$1,193,606	100.0	$1,063,053
									$0

Status: Planning and Design is underway. A 30% project review meeting is projected for June 2007.

Total Priority List		14	189			$1,193,606	$1,193,606	100.0	$1,063,053
									$0

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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total ENVIRONMENTAL PROTECTION AGENCY, REGION 6			10,320				$112,566,446	$107,514,978	95.5	$92,977,221 $52,505,300

18 Project(s)
16 Cost Sharing Agreements Executed
4 Construction Started
4 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: U.S. Geological Survey (FWS)

PROJECT	BASIN	PARISH	ACRES	SCHEDULES CSA	SCHEDULES Const Start	SCHEDULES Const End	ESTIMATES Baseline	ESTIMATES Current	ESTIMATES %	Actual Obligations/ Expenditures
Lead Agency: DEPT. OF THE INTERIOR, FISH & WILDLIFE SERVICE										
Priority List 0.1										
CRMS - Wetlands	COAST	COAST		08-Jun-2004 A	14-Aug-2003 A		$66,890,300	$10,306,335	15.4	$7,423,492 $631,294
	Status:	3/30/2006								
	DNR has secured landrights on 422 of the 612 stations. DNR signed and approved the contract with Coastal Estuary Services, LLC on February 1, 2005. DNR and USGS trained CES on the workflow implementation plan that outlines their responsibilities and DNR/USGS QA/QC responsibilities. The workflow entails preliminary site characterizations, site construction, data collection and site servicing and data management. DNR selected Hydrolab, Inc as the low bid CRMS equipment provider (hydrographic data recorders, rod surface elevation tables and collars, shaft encoders and loggers). Hydrolab has completed delivery of year 1 equipment. To date, CES has completed site characterizations on 269 sites, site construction of 72 sites (but awaiting final surveys and approval), and data collection on 13 sites. Data from the 13 sites is posted within the DNR SONRIS database. Coastwide aerial photography and satellite imagery was acquired in October and November 2005 and will be available in Spring/Summer 2006. A filemaker database has been developed for tracking CRMS budgets, expenditures, deliverables and reports. The CRMS project information is maintained on the LCA website and is used to support information transfer and status of CRMS activities.									
Total Priority List	0.1						$66,890,300	$10,306,335	15.4	$7,423,492 $631,294

1 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 0.2										
Monitoring Contingency Fund	COAST	COAST		22-Sep-2004 A			$1,500,000	$1,500,000	100.0	$79,387 $100,462
	Status:	The CSA between DNR and USGS for this project was finalized on September 22, 2004. No contingency requests under this CSA to date.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: U.S. Geological Survey (FWS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		0.2					$1,500,000	$1,500,000	100.0	$79,387 $100,462

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

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	$1,625,290 $1,199,578
	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 !	$956,717 $756,045
	Status: The Fish and Wildlife Service and the LA Dept.of Natural Resources are finalizing a draft Operation and Maintenance Plan. The LDNR will be responsible for project maintenance.									
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	$1,197,797 $1,023,797
	Status: The Fish and Wildlife Service and the LA Dept.of Natural Resources are finalizing a draft Operation and Maintenance Plan. The LDNR will be responsible for project maintenance									
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	$1,552,881 $1,295,352
	Status: The Fish and Wildlife Service and the LA Dept.of Natural Resources are finalizing a draft Operation and Maintenance Plan. The LDNR will be responsible for project maintenance									

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		1	8,204				$8,391,616	$5,451,267	65.0	$5,332,685 $4,274,772

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

Priority List 2

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	$1,555,525 $1,252,372
	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	$1,555,525 $1,252,372

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: DEPT. OF THE INTERIOR (FWS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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	$4,376,287 $3,368,139

Status:

Sabine Refuge Structure Replacement Project

Status July 2005

Construction began the week of November 1, 1999, and was originally projected to be completed by June 2001. The project was dedicated in December 2000. The structures were installed and semi-operational by the following dates: Headquarters Canal structure - February 9, 2000; Hog Island Gully structure - August 2000; and the West Cove structure - June 2001.

Initial structure electrical problems were caused because the 3-Phase electrical service to the structures was not the proper 3-Phase; the structure motors and logic controllers required three hot electrical wire connections. Transformers and filters were added to the structures in December 2001, but operation was not totally satisfactory. On March 12, 2002, the Rotorque logic controller representative corrected problems (motors running in reverse) with the Hog Island Gully Structure. Department of Agriculture, NRCS engineers in June 2002 determined that the structures continued to operate incorrectly in the automatic mode. The logic controllers were causing motor malfunctions even with filters and transformers in place because those controllers were able to determine that motor power was not the correct "3-Phase."

A contracted electrical engineering consulting firm recommended installation of "rotary phase converters" at each structure to solve the 3-phase electrical problem. The converters provide “3-phase” output with balanced voltage. The better voltage balance of the rotary phase converters, installed in September 2003, eliminated motor reversal and other problems for an estimated cost of $20,000 to install them at both the Hog Island Gully and West Cove structure sites.

Continued Problems at the Hog Island Gully Structure during 2004

All structures, except for one bay of the Hog Island Gully structure, were fully operational until late October 2004. But since that time, both the Hog Island Gully and the West Cove structures have been having operation problems. DNR is currently contracting for maintenance at those structures. An Operation and Maintenance meeting was held on November 15, 2004, among the USFWS, NRCS and DNR to discuss the above maintenance problems and their solutions and to transfer all but minor maintenance responsibilities to DNR.

Current Structure Operations

The West Cove and Hog Island Gully structure operations are in restrictive mode at this time (May 2005) with only one 3.5 ft wide gate opened on each structure.

Hog Island Gully Structure Operation April 22, 2005 - Operation is in restrictive mode because salinities that trigger inflow restrictions were exceeded (BN - 2 ppt target exceeded; 5R - 5 ppt target exceeded). Only gate 3 (3.5 ft wide) was open for ingress and egress. Gate 1 was open 42% but with flapgate, Gate 2 open but with flapgate, Gates 4 and 5 were closed, and Gate 6 was 84 to 91% opened but

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
				flapping. Hog Island Gully Gates 1, 3, 5 and 6 are not operating properly. West Cove Structure Operation April 22, 2005 - Restrictive inflow conditions were in effect (salinities exceeded 4 ppt at station BC and 8 ppt at station C). Gates 1 and 5 (both with flapgates) were open but flapping thus closed to estuarine organism ingress. Gate 2 (3.5 ft wide) was open for ingress and Gate 4 closed. Gate 3B on the West Cove structure was not operating as of April 22, but it may have been recently repaired. Note that 4 of the 6 gates on the Hog Island Gully structure are not operation properly and one of the West Cove gates was not operating properly, but that gate has since been repaired. Phone Modems The phone modems that transmit salinity and water level information to Sabine Refuge Headquarters are no longer operating and Sabine NWR has ordered radio transmitters to replace them. They have not arrived and the refuge staff has had to collect discrete salinities and water levels for structure operations since February 2005 due to loss of cellular phone service in the area. The phone modems were located at six continuous recorder stations essential for structure operations. The Monitoring Plan was approved on June 17, 1999. The Operation and Maintenance Plan was approved by the FWS and DNR in June 23, 2004. The Service will be responsible for all structure operations and minor maintenance and DNR will be responsible for the larger maintenance items.					
Total Priority List		3	953				$4,581,454	$4,528,915	98.9	$4,376,287 $3,368,139

1 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 5

Grand Bayou Hydrologic Restoration	TERRE	LAFOU	199	28-May-2004 A	01-Mar-2008	01-Dec-2008	$5,135,468	$8,209,722	159.9 !	$2,471,264 $1,036,664
	Status: A scope of work for model calibration & verification is days away from being sent to the contractor. A scope for project model runs has been prepared and will be issued after successful model calibration and verification.									

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

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		5	199				$5,135,468	$8,209,722	159.9	$2,471,264 $1,036,664

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 6

Lake Boudreaux Freshwater Introduction	TERRE	TERRE	603	22-Oct-1998 A	01-May-2008	01-May-2009	$9,831,306	$10,519,383	107.0	$1,781,335 $1,067,444

Status: After clearing several obstacles and a last minute change in the channel design/footprint, landrights for the property where the conveyance would cross the high ground of the Grand Caillou ridge have been acquired. That agreement will be used as a template for negotiations with the remaining landowners and contact with those remaining landowners is underway.

Nutria Harvest for Wetland Restoration (DEMO)	COAST	COAST		27-Oct-1998 A	20-Sep-1998 A	30-Oct-2003 A	$2,140,000	$804,683	37.6	$1,227,194 $806,220

Status:

Nutria Harvest Demonstration Project

Status July 2005

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.

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.

This project was completed in October 2003. The project sponsors have completed project close-out activities.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		6	603				$11,971,306	$11,324,066	94.6	$3,008,529 $1,873,664

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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Freshwater Introduction South of Highway 82	MERM	CAMER	296	12-Sep-2000 A	01-Sep-2005 A	01-Jun-2006	$6,051,325	$5,083,583	84.0	$4,279,937 $625,680

Status:

Highway 82 Freshwater Introduction

Status July 2005

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.

A hydrologic study of the project area entitled, “Analysis of Water Level Data from Rockefeller Refuge and the Grand and White Lakes Basin” was submitted by Erick Swenson (LSU Coastal Ecology Institute) 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 ahs been modeled by Fenstermaker and Associates as described below.

Hydrodynamic Modeling Study

Fenstermaker and Associates began a hydrodynamic modeling study of the project on January 28, 2002. A model set-up interagency meeting was held May 24, 2002. The one-dimensional "Mike 11" model was used for the analysis. Model calibration and verification were completed November 21, 2002, and December 12, 2002 respectively. A draft modeling report was presented in April 2003, and a final report was presented in September 2003.

Model Results

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.

30% Design Review Meeting

A favorable 30% Design Review meeting was held on May 14, 2003 with USFWS concurrence to proceed to final design. On July 10, 2003 the LA Department of Natural Resources gave concurrence to proceed with project construction.

NEPA Review

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
				The Corps and LA Dept of Natural Resources permit and consistency applications were submitted on January 30, 2004. DNR's initial and modified Consistency Determinations were received on March 11, 2004, and June 3, 2004 respectively. The modified Corps permit applications were submitted May 27, 2004. The Corps public notices were issued on June 18, 2004. LA Dept. of Transportation letters of no objection were received on October 2, 2003, February 2, 2004, and April 19, 2004. The Corps Section 404 permits were received on March 10 and March 18, 2005. The draft Environmental Assessment was submitted for agency review on September 10, 2004, and the Final Environmental Assessment and Finding of No Significant Impact was distributed on April 12, 2005.						
				Phase II Construction Items						
				A successful 95% Design Review Meeting was held on August 11, 2004. The NRCS Overgrazing Determination was received December 1, 2003. The Corps Section 303(e) Determination received from the Corps on May 6, 2004. Landrights were certified by the LA DNR as completed on May 10, 2004.						
				Phase II construction funding approval was received at the October 2004 Task Force meeting.						
				Construction bids were received by June 21, 2005. Construction is anticipated to begin by July 15, 2005.						
Mandalay Bank Protection Demonstration (DEMO)	TERRE	TERRE		06-Dec-2000 A	25-Apr-2003 A	01-Sep-2003 A	$1,194,495	$1,767,214	147.9 !	$1,838,390 $1,612,938
	Status:	Construction was completed 9/1/2003.								
Total Priority List		9	296				$7,245,820	$6,850,797	94.5	$6,118,327 $2,238,618

2 Project(s)
2 Cost Sharing Agreements Executed
2 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	26-Apr-2006 *	01-Oct-2006	$3,183,940	$2,055,705	64.6	$1,700,053 $346,921
	Status:	Bid advertisement is complete and bids were opened on February 21, 2006. The low bid was within budget and a construction contract should be awarded by April 21, 2006 and construction should begin in early summer 2006.								

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
East Sabine Lake Hydrologic Restoration	CA/SB	CAMER	225	17-Jul-2001 A	01-Dec-2004 A	01-Jul-2008	$6,490,751	$5,496,580	84.7	$5,288,911 $2,837,639

Status:

East Sabine Lake Hydrologic Restoration Project

Status June 2005

Phase I funding was approved by the Task Force on January 10, 2001, and Phase II construction funding for Construction Unit 1 was approved by the Task Force in November 2003. A joint FWS, DNR and the NRCS cost-share agreement was completed on July 17, 2001.

Hydrodynamic Modeling Study

FTN was contracted for hydrodynamic modeling services. Phase I hydrodynamic modeling consists of reconnaissance, gathering of existing data, model selection and model geometry establishment. Phase II model calibration and without-project scenario model runs were completed. The "East Sabine Lake Hydrologic Restoration Hydrodynamic Modeling Study Phase II: Calibration and Verification Report" was completed October 5, 2004. The "Historical Data Review Modeling Phase III Data and Final Report" and the "Phase III Determination of Boundary Conditions for Evaluating Project Alternatives" were also completed in October 2004.

Phase II with-project model runs are currently being conducted. The first run will include fixed crest weirs with boat bays (10 feet wide by 4 feet deep) at Willow, Three, Greens and Right Prong Black Bayous.

Surveys and Data Recorders

A survey of monument control points was contracted by DNR in December 2001. Nine data recorders were deployed for a 16-month period (February 2002 to June 2003) for modeling data collecting purposes. DNR and FTN installed or contracted 9 continuous water level and salinity recorders in September 2001 and spring of 2002. Benchmark and cross sectional surveys were completed in March 2002; marsh elevation surveys were completed by May 2002. NRCS completed cross sectional surveys by July 2002.

The project will be completed as two construction units. Construction Unit 1 includes construction of 171,000 linear feet of earthen terraces in the Greens Lake area, 3,000 feet of Sabine Lake shoreline stabilization near Willow Bayou, and minor hydrologic structures; Construction Unit 2 will include construction of four larger hydrologic restoration structures are currently being modeled. Those structures could be located at Willow, Three, Greens and Right Prong Black Bayous. Landrights work was initiated in February 2002 and is completed. Most of project is located on the Federal Sabine National Wildlife Refuge.

Construction Unit 1 Construction

The existing Sabine NWR “duck-wing” terrace design was determined favorable for use as a CU 1 terrace component by the project management team. Favorable Construction Unit 1 interagency 30% Design Review and 95% Design Review Conferences were held March 25, 2003, and July 8, 2003, respectively. Corps permits and LA Department of Natural Resources Coastal Zone Consistencies have been received. The Draft and Final Environmental Assessment and Finding of No Significant Impact (FONSI) are completed as well as

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

other Phase II construction requirements. The Task Force approved construction in November 2003. The contract for CU 1 was awarded in December 2004 and the Notice to Proceed was issued in March 2005.

A 7,500 linear feet test of smooth cordgrass plantings located along the Sabine Lake shoreline conducted by the State Soil and Water Conservation District and the NRCS proved unsuccessful, thus the project sponsors removed the 11 miles (58,100 linear feet) of shoreline plantings as a project feature and added earthen terraces with the vegetation funding.

Construction Unit 1 construction began on March 9, 2005, with construction completion for that phase projected for September 2005.

Construction Unit 2 components are currently being modeled under the Engineering and Design phase.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Grand-White Lake Landbridge Restoration	MERM	CAMER	213	24-Jul-2001 A	10-Jul-2003 A	01-Oct-2004 A	$9,635,224	$5,804,928	60.2	$4,562,449 $3,554,682

Status:

Grand-White Lakes Land Bridge Restoration

Status July 2005

Phase 1 engineering and design funding was approved by the Task Force 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 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 project construction contract for Construction Unit 1 (Grand Lake rock shoreline stabilization) was awarded in June 2003, the Notice to Proceed was issued on July 10, 2003, and construction for that phase was completed in October 2003. Construction Unit 2 (Collicon Lake Terraces) construction began in early July 2004 and was completed in October 2004. The project ground breaking was held August 15, 2003.

Operation and maintenance post construction field trips in February and April 2005 indicated that Construction Unit 1 - the Grand Lake shoreline rock dike and marsh creation is performing well. The rock has not subsided and a small strip of wetland was created between the rock and the shoreline with spoil from access channel dredging. Construction Unit 2 terraces have experienced post construction erosion. The Collicon Lake lake-ward terrace tops have eroded approximately 66% since project construction. Most of the lake-ward planted giant cutgrass vegetation has eroded and a cut bank remains. Most of the inner shoreward terraces are holding up well with giant cutgrass vegetation growing and expanding. Nutria herbivory of the planted vegetation on the northern and northwestern Collicon Lake terraces has been observed.

North Lake Mechant Landbridge Restoration	TERRE	TERRE	604	16-May-2001 A	01-Apr-2003 A	01-Feb-2007	$31,727,917	$29,009,771	91.4	$1,226,979 $723,171

Status: Oyster lease impacts issues remain unresolved. DNR hoped for a legislative fix during the past Special Session of the Louisiana legislature. Because that session was swamped with hurricane recovery issues, DNR was unable to present their proposed legislation. Consequently, project construction remains on hold until the oyster issues are resolved.

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Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Terrebonne Bay Shore Protection Demonstration (DEMO)	COAST	TERRE		24-Jul-2001 A	01-Jun-2006	01-Dec-2006	$2,006,373	$2,503,768	124.8	$2,087,709 $351,995
	Status:	Preliminary responses from affected oyster lease holders appear to be positive. A re-evaluaiton of the site conditions will be performed after all oyster leases are cleared.								
Total Priority List		10	1,309				$53,044,205	$44,870,752	84.6	$14,866,102 $7,814,408

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

Priority List 11

Dedicated Dredging on the Barataria Basin Landbridge	BARA	JEFF	605	03-Apr-2002 A	01-Aug-2007	01-Aug-2008	$2,294,410	$463,942	20.2	$387,101 $351,877
	Status:	The project was not approved for Phase 2 construction funds at the February 8, 2006 Task Force meeting. Phase 2 funds will be requested again at the January 2007 Task Force meeting.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
South Grand Chenier Hydrologic Restoration	MERM	CAMER	440	03-Apr-2002 A	01-Jun-2007	01-Mar-2008	$2,358,420	$2,358,420	100.0	$1,143,421 $301,187

Status:

South Grand Chenier Hydrologic Restoration Project

Status July 2005

The project was approved by the Task Force in January 2002. An implementation meeting and field trip was held on March 13, 2002 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, a hydrodynamic modeling and surveying contract was awarded to Fenstermaker and Associates on June 14, 2002; and a modeling work plan was submitted in July 2002. Elevation surveys and the installation of continuous water level and salinity recorders were completed and installed by August 2002. Preliminary and final model “Set Up” meetings were held on June 11, 2003, and August 6, 2003 respectively. Model calibration was completed by September 5, 2004 and validation was completed by September 30, 2003. Model run presentation was made on May 11, 2004.

The model results indicated that the project would be successful in introducing freshwater across Highway 82, in the vicinity of Grand Chenier, to assist marshes south of that highway in the Hog Bayou Watershed in reducing saltwater intrusion due to the Mermentau Ship Channel. The draft and final draft model reports entitled, "Hydrodynamic Modeling of the ME-29 South Grand Chenier Hydrologic Restoration Project" was completed in July 2004 and April 2005 respectfully.

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. A second round of landowner modeling meetings showing the modeling results may begin by September 2005.

The project 30% Design Review meeting may be held in the spring of 2006 with the 95% Design Review meeting tentatively scheduled for the summer of 2006. Construction could begin in the summer of 2007 if Task Force approval is received in January 2007.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT
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PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
West Lake Boudreaux Shoreline Protection and Marsh Creation	TERRE	TERRE	277	03-Apr-2002 A	01-Aug-2006	01-Feb-2008	$17,519,731	$15,976,954	91.2	$1,114,411 $754,411
	Status:	NRCS hopes to complete their draft Final Plans and Specs in May 2006 and will hope to have them back form DNR by June. We would like to go to construction sometime this fall. We are in the process of securing an agreement with a pipeline company which would be affected by this project. There are less than twenty landowners to be contacted out of nearly 300. As we continue to contact those landowners a due diligence agreement has been initiated by DNR. We have had only one uncooperative landowner and we have altered the plans and specs slightly to accommodate them. The Draft EA has also been submitted along with a draft monitoring plan. The permit has been submitted to the Corps and has been out for public comment. We have also received our 303(e) approval from the Corps, our water quality certification from DEQ, our consistency approval from DNR, and overgrazing letter form NRCS.								
Total Priority List		11	1,322				$22,172,561	$18,799,316	84.8	$2,644,932 $1,407,475

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	STTAM	436	14-May-2004 A	01-Mar-2007	01-Nov-2008	$1,930,596	$1,730,596	89.6	$35,735 $25,108
	Status:	Surveys and geotechnical investigations of the marsh creation sites and borrow sites have been completed. However, survey and geotech reports have not been provided to the project sponsors. The project is still on schedule to request Phase 2 funds at the January 2007 Task Force meeting.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		13	436				$1,930,596	$1,730,596	89.6	$35,735 $25,108

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 15

Lake Hermitage Marsh Creation	BARA	PLAQ	438				$1,197,590	$1,197,590	100.0	$13,202 $0
	Status:									
Total Priority List		15	438				$1,197,590	$1,197,590	100.0	$13,202 $0

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

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PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total DEPT. OF THE INTERIOR, FISH & WILDLIFE SERVICE			15,040				$185,512,951	$116,411,908	62.8	$47,925,466 $24,022,976

23 Project(s)
22 Cost Sharing Agreements Executed
13 Construction Started
9 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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Lead Agency: DEPT. OF COMMERCE, NATIONAL MARINE FISHERIES SERVICE										
Priority List 1										
Fourchon Hydrologic Restoration [DEAUTHORIZED]	TERRE	LAFOU					$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		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						$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

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 !	$2,506,102 $2,075,362
	Status:	Project cost increase was approved by the Task Force at the January 16, 1998 meeting. Construction project complete. First costs accounting underway.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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 !	$7,056,505 $6,650,666
	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	$3,235,208	302.5 !	$3,091,951 $2,696,759
	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	$12,844,759	210.1	$12,654,558 $11,422,788

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

Priority List 3

Bayou Perot/Bayou Rigolettes Marsh Restoration [DEAUTHORIZED]	BARA	JEFF		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.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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 !	$3,753,213 $3,674,131
	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 !	$5,835,609 $5,071,689
	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	$2,810,353	194.5 !	$3,056,804 $2,801,782
	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.								
Total Priority List		3	2,422				$9,475,828	$11,940,889	126.0	$12,666,590 $11,568,566

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 !	$7,617,696 $7,525,873
	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.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Eden Isles East Marsh Restoration [DEAUTHORIZED]	PONT	STTAM					$5,018,968	$39,025	0.8	$39,025 $39,025
	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. Deauthorized.								
Total Priority List		4	215				$10,771,372	$7,639,888	70.9	$7,656,722 $7,564,898

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	$892,042 $660,094
	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	$489,103	3.2	$481,803 $481,803
	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.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		5	1,560				$16,466,015	$1,375,133	8.4	$1,373,845 $1,141,897

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

Priority List 6

Black Bayou Hydrologic Restoration	CA/SB	CAMER	3,594	28-May-1998 A	01-Jul-2001 A	03-Nov-2003 A	$6,316,800	$5,972,613	94.6	$5,982,655 $4,791,617
	Status:	The O&M event has been delayed as a result of Hurricane Rita. The contractor is expected to resume activity by November 30, with 14 days needed to complete the tasks.								
Delta Wide Crevasses	DELTA	PLAQ	2,386	28-May-1998 A	21-Jun-1999 A	31-Dec-2014	$5,473,934	$4,752,653	86.8	$4,530,870 $1,796,292
	Status:	3-05 Construction on Phase 2 (of three phases) completed. Final Inspection conducted 3/17/2005.								
Sediment Trapping at "The Jaws"	TECHE	STMAR	1,999	28-May-1998 A	14-Jul-2004 A	19-May-2005 A	$3,167,400	$3,392,135	107.1	$3,215,213 $1,228,567
	Status:	Construction of earthen terraces was completed on December 4, 2004, with final acceptance on December 7, 2004. Rye grass seeding was done on terraces on December 15, 2004 by the planting contractor. Vegetative plantings will begin in mid-to-late April 2005. It is anticipated to take approximately 14 working days to complete.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		6	7,979				$14,958,134	$14,117,401	94.4	$13,728,738 $7,816,477

3 Project(s)
3 Cost Sharing Agreements Executed
3 Construction Started
2 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	$493,753	53.2	$501,364 $345,292
	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.									
Pecan Island Terracing	MERM	VERMI	442	01-Apr-1999 A	15-Dec-2002 A	10-Sep-2003 A	$2,185,900	$2,391,953	109.4	$2,395,414 $2,151,159
	Status: Terrace construction was completed August 26, 2003, with plantings completed September 10, 2003.									
Total Priority List		7	569				$3,114,795	$2,885,706	92.6	$2,896,778 $2,496,452

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

Priority List 8

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Bayou Bienvenue Pump Station Diversion and Terracing [DEAUTHORIZED]	PONT	STBER		01-Jun-2000 A			$3,295,574	$212,142	6.4	$212,153 $212,153
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	15-Jan-2005 A	$2,179,491	$2,432,958	111.6	$2,312,796 $1,333,338
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 construction was initiated in March 2004. COnstruction was completed in January 2005, and the project is currently being operated by St. Bernard Parish under a cooperative agreement with the Louisiana Department of Natural Resources.										
Total Priority List		8	134				$5,475,065	$2,645,100	48.3	$2,524,949 $1,545,491

2 Project(s)
2 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 9

Castille Pass Channel Sediment Delivery	ATCH	STMRY	577	29-Sep-2000 A	15-Jun-2007	01-Apr-2008	$1,484,633	$1,846,326	124.4	$1,835,761 $1,532,779
Status: Castille Pass was not selected for Phase 2 funding in December 2005. The NMFS will re-submit the project, as designed, for Phase 2 funding consideration in the fall 2006.										

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Chandeleur Islands Marsh Restoration	PONT	STBER	220	10-Sep-2000 A	01-Jun-2001 A	31-Jul-2001 A	$1,435,066	$937,977	65.4	$911,369 $819,259
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 Grand Terre Island Restoration	BARA	JEFF	335	21-Sep-2000 A	01-May-2007	01-Dec-2007	$1,856,203	$2,312,023	124.6	$2,276,531 $2,080,020
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. Preliminary design review is anticipated in April 2005. Final design, environmental documentation and revised WVA will be completed during Summer 2005. Phase 2 request is anticipated in January, 2006									
Four Mile Canal Terracing and Sediment Trapping	TECHE	VERMI	167	25-Sep-2000 A	10-Jun-2003 A	23-May-2004 A	$5,086,511	$2,325,230	45.7	$2,033,268 $1,978,017
Status:	Construction for this project was completed on May 23, 2004. Post-construction monitoring is underway.									
LaBranche Wetlands Terracing, Planting, and Shoreline Protection	PONT	STCHA	489	21-Sep-2000 A			$821,752	$306,836	37.3	$306,836 $306,836
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.									

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		9	1,788				$10,684,165	$7,728,392	72.3	$7,363,764 $6,716,910

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

Priority List 10

Rockefeller Refuge Gulf Shoreline Stabilization	MERM	CAMER	920	27-Sep-2001 A	15-Jul-2007	01-Feb-2008	$1,929,888	$2,408,478	124.8	$2,189,418 $1,028,444
	Status:	Rockefeller Refuge Test Sections were not selected for Phase 2 funding by the Task Force. The NMFS plans on re-submitting the project for Phase 2 funding, as designed, in the fall of 2006.								
Total Priority List		10	920				$1,929,888	$2,408,478	124.8	$2,189,418 $1,028,444

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 11

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Barataria Barrier Island: Pelican Island and Pass La Mer to Chaland Pass	BARA	PLAQ	534	06-Aug-2002 A	25-Mar-2006 A	01-Sep-2006	$61,995,587	$66,493,789	107.3	$57,267,683 $4,308,213
	Status:	Oyster lease acquisition for Chaland Headland was completed in February 2005. Pending re-evaluation of project feasibility and anticipated construction costs, a construction contract will be re-advertised for Chaland Headland in April 2005. Advertisement of a construction contract for Pelican Island is pending oyster acquisition as well as limited geotechincal investigations and a minor permit modification.								
Little Lake Shoreline Protection/Dedicated Dredging near Round Lake	BARA	LAFOU	713	06-Aug-2002 A	04-Aug-2005 A	31-Jan-2007	$35,994,929	$33,991,940	94.4	$28,876,048 $955,228
	Status:	Project started on August 4, 2005. The contract is for 575 construction days.								
Pass Chaland to Grand Bayou Pass Barrier Shoreline Restoration	BARA	PLAQ	263	06-Aug-2002 A	01-Apr-2007	01-Oct-2007	$29,753,880	$29,248,688	98.3	$22,812,668 $1,661,970
	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 were complete in fall 2003. The Preliminary design review was held in September 2004. The project has undergone a change in scope due to the need to add beach and dune restoration in order to prevent breaching of the shoreline. Final design will proceed pending the Task Force's approval of the change in project scope. Phase 2 request is anticipated in January 2006. Critical Phase 1 issues include identification of sand sources, landrights (numerous undivided heirships and potential reclamation issues) and oysters.								
Total Priority List		11	1,510				$127,744,396	$129,734,417	101.6	$108,956,400 $6,925,411

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

Priority List 14

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Riverine Sand Mining/Scofield Island Restoration	BARA	PLAQ	234	04-Oct-2005 A			$3,221,887	$3,221,887	100.0	$2,740,886 $2,281
	Status:									
Total Priority List		14	234				$3,221,887	$3,221,887	100.0	$2,740,886 $2,281

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 15

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
South Pecan Island Freshwater Introduction	MERM	VERMI	98				$1,102,043	$1,102,043	100.0	$936,735 $0
	Status:									
Total Priority List		15	98				$1,102,043	$1,102,043	100.0	$936,735 $0

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 COMMERCE (NMFS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total DEPT. OF COMMERCE, NATIONAL MARINE FISHERIES SERVICE			21,596				$213,003,819	$197,751,422	92.8	$175,796,711 $58,336,944

31 Project(s)
28 Cost Sharing Agreements Executed
18 Construction Started
15 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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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	$8,648,864 $7,025,633
	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 !	$222,332 $203,777
	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	$293,124	78.7	$316,302 $297,747
	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	$271,486 $253,505
	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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		1	175				$9,063,612	$9,769,356	107.8	$9,550,995 $7,872,675

5 Project(s)
5 Cost Sharing Agreements Executed
5 Construction Started
5 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 2

Brown Lake Hydrologic Restoration	CA/SB	CAMER	282	28-Mar-1994 A	01-Feb-2007	01-Jan-2008	$3,222,800	$3,201,890	99.4	$1,549,372 $762,081
	Status:	Project is being re-evaluated by LDNR and NRCS Project Team. Revisions are scheduled to be sent to Design Section by March 2006.								
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 !	$4,194,185 $3,081,670
	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	$4,095,936	141.1 !	$3,261,286 $2,626,067
	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.								
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	$3,330,368 $2,623,371
	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. Project construction is complete. Maintenance contract underway to repair rock dike.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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	$2,091,781 $1,490,337
Status:	O&M plan executed January 29, 2003.									
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 !	$1,010,652 $742,840
Status:	Construction start slipped from November 1997 to July 1999 because of landright issues. All landright agreements signed. Construction complete January 7, 2000. O&M plan executed. Maintenance contract complete. Minor damage from Hurricane Lili to be repaired. Contract in preparation.									
Jonathan Davis Wetland Restoration	BARA	JEFF	510	05-Jan-1995 A	22-Jun-1998 A	01-Sep-2006	$3,398,867	$28,886,616	849.9 !	$26,699,793 $7,449,976
Status:	Construction Unit #4 was revised due to storm activity, construction is now scheduled to begin June 2006 and is scheduled to be completed in May 2007.									
Vermilion Bay/Boston Canal 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	$983,087 $842,369
Status:	Complete.									
Total Priority List	2		6,275				$19,575,334	$48,448,623	247.5	$43,120,525 $19,618,712

8 Project(s)
8 Cost Sharing Agreements Executed
7 Construction Started
6 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 3

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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	$5,118,188 $4,207,534
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		$3,719,926	$3,736,718	100.5	$4,056,874 $910,187
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	$7,889,103	152.5 !	$5,899,734 $5,430,057
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	$104,064 $103,468
Status:	Complete. Project deauthorized.									
Violet Freshwater Distribution [DEAUTHORIZED]	PONT	STBER		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.									
West Pointe a la Hache Outfall Management	BARA	PLAQ	1,087	05-Jan-1995 A			$881,148	$4,068,045	461.7 !	$516,431 $439,346
Status:	The project team is re-evaluating the features of this project based on the modeling results. A decision regarding this project's future is pending the results of the re-evaluation.									

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
White's Ditch Outfall Management [DEAUTHORIZED]	BRET	PLAQ		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	6,209				$17,195,698	$21,238,381	123.5	$15,856,780 $11,252,081

7 Project(s)
7 Cost Sharing Agreements Executed
4 Construction Started
3 Construction Completed
3 Project(s) Deferred/Deauthorized

Priority List 4

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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 !	$2,920,452 $2,349,196
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	LAFOU		23-Jun-1997 A			$2,418,676	$371,232	15.3	$371,232 $371,232
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.										
Flotant Marsh Fencing Demonstration (DEMO) [DEAUTHORIZED]	TERRE	TERRE		16-Jul-1999 A			$367,066	$106,960	29.1	$106,960 $106,960
Status: Difficulty in locating an appropriate site for demonstration and difficulty in addressing engineering constraints. 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 ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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	$2,218,413 $1,819,383
	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	$323,959 $314,811
	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	1,435				$7,501,368	$6,106,289	81.4	$5,941,016 $4,961,583

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	$2,489,400 $2,004,647
	Status:	The local cost share is being paid by Acadian Gas Company. Contract was awarded January 14, 1998. Construction is complete.								
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 !	$2,107,362 $1,322,128
	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.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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	$1,790,069 $1,744,834
	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	$4,242,995	88.4	$4,126,747 $3,324,145
	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	1,391				$11,983,322	$10,763,123	89.8	$10,513,578 $8,395,754

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

Priority List 6

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	$5,106,696 $4,033,332
	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	$624,999	125.0	$624,227 $592,954
	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.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
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	$2,925,216	123.5	$2,836,595 $2,053,250
	Status:	O&M Plan in draft.								
Penchant Basin Natural Resources Plan, Increment 1	TERRE	TERRE	1,155	23-Apr-2002 A	01-Feb-2007	01-Jan-2008	$14,103,051	$14,103,051	100.0	$2,362,903 $1,437,683
	Status:	Additional model runs were completed in September 2005. No further modeling will be done on this project. The final preferred alternatives are being sent to Design in November 2005. Design is projected to be completed in May 2006.								
Total Priority List	6		1,532				$21,990,651	$22,877,743	104.0	$10,930,422 $8,117,218

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

Priority List 7

Barataria Basin Landbridge Shoreline Protection, Phase 1 and 2	BARA	JEFF	1,304	16-Jul-1999 A	01-Dec-2000 A	01-May-2007	$17,515,029	$29,429,358	168.0 !	$28,986,510 $4,466,439
	Status:	Construction Unit #4 was awarded on May 26, 2005. Construction began in July, and is scheduled to be completed in February 2007. Construction Unit #5 was approved for construction by the Task Force, and is currently scheduled for construction to begin in January 2006, with an anticipated completion date of May 2007.								
Thin Mat Floating Marsh Enhancement Demonstration (DEMO)	TERRE	TERRE		16-Oct-1998 A	15-Jun-1999 A	10-May-2000 A	$460,222	$540,283	117.4	$527,981 $515,899
	Status:	Construction complete. Monitoring ongoing.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		7	1,304				$17,975,251	$29,969,641	166.7	$29,514,491 $4,982,338

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	$1,568,748 $791,526
	Status:	Construction complete March 2003.								
Lake Portage Land Bridge	TECHE	VERMI	24	07-Apr-2000 A	15-Feb-2003 A	15-May-2004 A	$1,013,820	$1,206,317	119.0	$1,179,691 $1,007,438
	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.								
Upper Oak River Freshwater Siphon [DEAUTHORIZED]	BRET	PLAQ					$2,500,239	$56,476	2.3	$56,476 $56,476
	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. 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. Deauthorization procedures initiated.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		8	402				$5,040,195	$2,793,605	55.4	$2,804,915 $1,855,440

3 Project(s)
2 Cost Sharing Agreements Executed
2 Construction Started
2 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	01-Jul-2007	$15,204,620	$12,819,526	84.3	$10,088,458 $3,970,906
	Status:	Construction Unit #7 is planned for construction from August 2006 to July 2007; subject to funding approval at January 2006 Task Force Meeting.								
Black Bayou Culverts Hydrologic Restoration	CA/SB	CAMER	540	25-Jul-2000 A	25-May-2005 A	01-Sep-2006	$5,900,387	$5,387,703	91.3	$4,891,954 $1,685,078
	Status:	Construction began in May 2005, and is scheduled for completion in September 2006.								
Little Pecan Bayou Hydrologic Restoration	MERM	CAMER	144	25-Jul-2000 A	01-Aug-2007	01-Jul-2008	$1,245,278	$1,556,598	125.0 !	$1,095,590 $443,981
	Status:	Modeling has been completed. A final Modeling Report is scheduled to be available in December 2005. Planning and Design is ongoing. A 30% Project Review meeting is projected for June 2006.								
Perry Ridge West Bank Stabilization	CA/SB	CAMER	83	25-Jul-2000 A	01-Nov-2001 A	31-Jul-2002 A	$3,742,451	$1,746,831	46.7	$1,705,286 $1,620,007
	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.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
South Lake Decade Freshwater Introduction	TERRE	TERRE	202	25-Jul-2000 A	01-Aug-2007	01-Jan-2008	$396,489	$670,611	169.1 !	$551,762 $457,993
	Status:	This project was separated into two construction units. Construction Unit #1 contains the shoreline protection component of the project. Construction Unit #2 contains the freshwater introduction component of the project. Construction Unit #1 of this project did not get selected for Phase 2 funding at the October 2004 Task Force meeting. CU#1 will be presented for proposed construction funding at the January 2006 Task Force meeting. If funded, the construction is planned for August 2006 to January 2007. CU#2 is currently in planning and design phase. A 30% Project Review meeting is projected for June 2006.									
Total Priority List		9	1,233				$26,489,225	$22,181,269	83.7	$18,333,049 $8,177,965

5 Project(s)
5 Cost Sharing Agreements Executed
3 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-Aug-2007	01-Nov-2008	$1,735,983	$1,735,983	100.0	$1,132,152 $863,684
	Status:	This project did not get selected for Phase 2 funding at the October 2004 Task Force meeting. Project will be presented for proposed construction funding at the January 2006 Task Force meeting. If funded, the construction is planned for August 2006 to November 2007.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		10	366				$1,735,983	$1,735,983	100.0	$1,132,152 $863,684

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	27-Apr-2005 A	01-Apr-2006 *	$22,787,951	$16,921,527	74.3	$15,186,696 $5,705,053
Status:	Construction Unit #6 began construction on April 27, 2005 and is scheduled to be completed in April 2006.									
Coastwide Nutria Control Program	COAST	COAST	14,963	26-Feb-2002 A	20-Nov-2002 A		$68,864,870	$17,738,500	25.8	$7,007,786 $5,296,872
Status:	In Year 3 (2004-05 Trapping Season), 297,835 nutria tails were collected. Project was approved for three more years of funding at the November 2005 Task Force meeting.									
Raccoon Island Shoreline Protection/Marsh Creation, Ph 2	TERRE	TERRE	16	23-Apr-2002 A	13-Dec-2005 A	01-Jul-2008	$7,797,791	$7,867,083	100.9	$7,356,423 $774,698
Status:	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. Construction Unit #1 is scheduled to begin in November 2006 and is scheduled to be completed in June 2006. Construction Unit #2 is currently in design. A geotechnical investigation is underway to identify potential borrow sources. A 30% Project Review meeting is projected for June 2006.									

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		11	15,235				$99,450,612	$42,527,110	42.8	$29,550,906 $11,776,624

3 Project(s)
3 Cost Sharing Agreements Executed
3 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	$19,252,500	$14,130,233	73.4	$14,110,812 $13,566,903

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.

Total Priority List		11.1	330				$19,252,500	$14,130,233	73.4	$14,110,812 $13,566,903

1 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 12

Freshwater Floating Marsh Creation Demonstration (DEMO)	COAST	COAST		12-Jun-2003 A	01-Jul-2004 A	01-Jan-2009	$1,080,891	$1,080,891	100.0	$595,525 $29,806

Status: Draft Environmental Assessment was completed in September 2005.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List		12					$1,080,891	$1,080,891	100.0	$595,525 $29,806

1 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 13

Bayou Sale Shoreline Protection	TECHE	STMRY	329	16-Jun-2004 A	01-Aug-2007	01-Jul-2008	$2,254,912	$2,254,912	100.0	$1,711,885 $96,999
	Status:	Design is anticipated to begin in October 2006. Project will request funding approval for construction at the January 2007 Task Force meeting.								
Total Priority List		13	329				$2,254,912	$2,254,912	100.0	$1,711,885 $96,999

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 14

South Shore of the Pen Shoreline Protection and Marsh Creation	BARA	JEFF	116	07-Dec-2005 A	01-Aug-2008	01-Jul-2009	$1,311,146	$1,311,146	100.0	$1,100,617 $17,242
	Status:									

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
White Ditch Resurrection	BRET	PLAQ	189	11-Aug-2005 A	01-Aug-2008	01-Jul-2009	$1,595,677	$1,595,677	100.0	$1,319,599 $68,420
	Status:	Planning and Design has begun. A 30% Project Review meeting is projected for June 2007.								
Total Priority List		14	305				$2,906,823	$2,906,823	100.0	$2,420,216 $85,661

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

Total	**DEPT. OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE**		**36,521**				**$263,496,377**	**$238,783,982**	**90.6**	**$196,087,266** **$101,653,442**

52 Project(s)
51 Cost Sharing Agreements Executed
38 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 ******** Baseline	Current	%	Actual Obligations/ Expenditures
SUMMARY	Total All Projects	119,070	$887,969,635	$765,163,299	86.2	$580,133,845 $284,082,901

161 Project(s)

136 Cost Sharing Agreements Executed

89 Construction Started

70 Construction Completed

20 Project(s) Deferred/Deauthorized

Total Available Funds

Federal Funds	$584,979,930
Non/Federal Funds	$122,284,465
Total Funds	$707,264,395

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	$8,726,028
Priority List:	**9**	1	577	1	0	0	0	$1,484,633	$1,846,326	$1,532,779
Basin Total		3	4,369	3	2	2	0	$6,528,500	$11,455,877	$10,258,807
Basin: Barataria										
Priority List:	**1**	3	620	3	3	3	0	$9,960,769	$10,142,716	$8,252,217
Priority List:	**2**	1	510	1	1	0	0	$3,398,867	$28,886,616	$7,449,976
Priority List:	**3**	3	1,087	3	1	1	1	$4,160,823	$6,899,361	$3,262,092
Priority List:	**4**	2	232	2	1	1	1	$4,611,094	$3,384,598	$2,720,428
Priority List:	**5**	2	1,752	2	1	1	0	$17,212,815	$2,670,530	$1,803,931
Priority List:	**6**	1	217	1	1	1	0	$5,019,900	$5,224,477	$4,033,332
Priority List:	**7**	2	1,431	2	2	1	0	$18,443,924	$29,923,111	$4,811,731
Priority List:	**9**	3	599	3	1	0	1	$18,212,307	$15,475,100	$6,304,242
Priority List:	**10**	2	9,832	1	0	0	0	$4,901,948	$5,364,801	$2,448,749
Priority List:	**11**	5	2,371	5	3	0	0	$152,826,757	$147,119,886	$12,982,341
Priority List:	**12**	1	400	1	0	0	0	$2,192,735	$2,731,479	$209,550
Priority List:	**14**	2	350	2	0	0	0	$4,533,033	$4,533,033	$19,523
Priority List:	**15**	1	438	0	0	0	0	$1,197,590	$1,197,590	$0
Basin Total		28	19,839	26	14	8	3	$246,672,562	$263,553,298	$54,298,112

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Breton Sound										
Priority List:	**2**	1	802	1	1	1	0	$2,522,199	$4,536,000	$3,081,670
Priority List:	**3**	1		1	0	0	1	$756,134	$32,862	$32,862
Priority List:	**4**	1		0	0	0	1	$2,468,908	$65,747	$65,747
Priority List:	**8**	1		0	0	0	1	$2,500,239	$56,476	$56,476
Priority List:	**10**	2	768	1	0	0	0	$4,339,140	$3,499,705	$1,240,667
Priority List:	**14**	1	189	1	0	0	0	$1,595,677	$1,595,677	$68,420
Priority List:	**15**	1	620	0	0	0	0	$1,205,354	$1,205,354	$0
Basin Total		8	2,379	4	1	1	3	$15,387,651	$10,991,821	$4,545,842
Basin: Calcasieu/Sabine										
Priority List:	**1**	3	6,407	3	3	3	0	$5,770,187	$2,852,755	$2,304,902
Priority List:	**2**	4	3,019	4	3	3	0	$8,568,462	$12,052,469	$7,029,365
Priority List:	**3**	2	3,555	2	2	1	0	$8,301,380	$8,265,633	$4,278,326
Priority List:	**4**	3	1,203	3	2	2	1	$2,893,802	$2,870,122	$2,389,585
Priority List:	**5**	1	247	1	1	1	0	$4,800,000	$4,242,995	$3,324,145
Priority List:	**6**	1	3,594	1	1	1	0	$6,316,800	$5,972,613	$4,791,617
Priority List:	**8**	5	993	3	1	1	0	$28,621,140	$16,317,846	$4,034,533
Priority List:	**9**	2	623	2	2	1	0	$9,642,838	$7,134,534	$3,305,085
Priority List:	**10**	1	225	1	1	0	0	$6,490,751	$5,496,580	$2,837,639
Priority List:	**11.1**	1	330	1	1	1	0	$19,252,500	$14,130,233	$13,566,903
Basin Total		23	20,196	21	17	14	1	$100,657,860	$79,335,778	$47,862,101

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: Coastal Basins										
Priority List:	**Cons Plan**	1		1	1	1	0	$238,871	$191,807	$191,807
Priority List:	**0.1**	1		1	1	0	0	$66,890,300	$10,306,335	$631,294
Priority List:	**0.2**	1		1	0	0	0	$1,500,000	$1,500,000	$100,462
Priority List:	**6**	1		1	1	1	0	$2,140,000	$804,683	$806,220
Priority List:	**9**	1		0	0	0	0	$1,502,817	$1,502,817	$31,726
Priority List:	**10**	1		1	0	0	0	$2,006,373	$2,503,768	$351,995
Priority List:	**11**	1	14,963	1	1	0	0	$68,864,870	$17,738,500	$5,296,872
Priority List:	**12**	1		1	1	0	0	$1,080,891	$1,080,891	$29,806
Priority List:	**13**	1		1	1	0	0	$1,000,000	$1,055,000	$243,291
Basin Total		9	14,963	8	6	2	0	$145,224,122	$36,683,801	$7,683,473
Basin: Miss. River Delta										
Priority List:	**1**	1	9,831	1	1	1	0	$8,517,066	$22,792,876	$7,349,763
Priority List:	**3**	2	936	1	1	1	1	$3,666,187	$1,008,820	$802,155
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	$6,664,140	$3,660,244
Priority List:	**10**	1	5,706	0	0	0	0	$1,076,328	$1,076,328	$801,239
Priority List:	**12**	1	1,190	0	0	0	0	$1,880,376	$1,880,376	$152,290
Priority List:	**13**	1	433	0	0	0	0	$1,137,344	$1,421,680	$227,257
Priority List:	**15**	1	511	0	0	0	0	$1,074,522	$1,074,522	$0
Basin Total		10	20,993	5	4	3	2	$24,725,757	$35,977,051	$13,051,258

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: Mermentau										
Priority List:	**1**	2	247	2	2	2	1	$1,368,671	$1,319,135	$1,115,809
Priority List:	**2**	1	1,593	1	1	1	0	$2,770,093	$3,455,303	$2,623,371
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	$2,004,647
Priority List:	**7**	1	442	1	1	1	0	$2,185,900	$2,391,953	$2,151,159
Priority List:	**8**	1	378	1	1	1	0	$1,526,136	$1,530,812	$791,526
Priority List:	**9**	2	440	2	1	0	0	$7,296,603	$6,640,181	$1,069,661
Priority List:	**10**	2	1,133	2	1	1	0	$11,565,112	$8,213,406	$4,583,127
Priority List:	**11**	2	980	1	0	0	0	$3,407,449	$3,407,449	$986,093
Priority List:	**12**	1	844	1	1	0	0	$19,673,929	$15,712,059	$2,574,639
Priority List:	**15**	1	98	0	0	0	0	$1,102,043	$1,102,043	$0
Basin Total		15	6,666	13	10	8	2	$55,020,917	$46,419,123	$18,003,501

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	$5,448,122	$5,034,721
Priority List:	**2**	2	2,320	2	2	2	0	$4,500,424	$3,844,225	$2,742,709
Priority List:	**3**	3	755	3	1	1	2	$2,683,636	$912,272	$973,727
Priority List:	**4**	1		0	0	0	1	$5,018,968	$39,025	$39,025
Priority List:	**5**	1	75	1	1	1	0	$2,555,029	$2,589,403	$2,255,809
Priority List:	**8**	2	134	2	1	1	1	$5,475,065	$2,645,100	$1,545,491
Priority List:	**9**	3	886	2	1	1	0	$2,407,524	$1,433,196	$1,208,343
Priority List:	**10**	1	165	1	0	0	0	$18,378,900	$18,285,599	$865,389
Priority List:	**11**	1	5,438	1	0	0	0	$5,434,288	$6,780,307	$1,966,393
Priority List:	**12**	1	266	0	0	0	0	$1,348,345	$1,348,345	$1,004,144
Priority List:	**13**	1	436	1	0	0	0	$1,930,596	$1,730,596	$25,108
Basin Total		18	12,228	15	8	8	4	$55,851,784	$45,056,191	$17,660,858
Basin: Teche / Vermilion										
Priority List:	**1**	1	65	1	1	1	0	$1,526,000	$2,022,987	$1,837,487
Priority List:	**2**	1	378	1	1	1	0	$1,008,634	$1,012,649	$842,369
Priority List:	**3**	1	2,223	1	1	1	0	$5,173,062	$7,889,103	$5,430,057
Priority List:	**5**	1	441	1	1	1	0	$940,065	$886,030	$660,094
Priority List:	**6**	4	2,567	4	4	4	0	$10,130,000	$12,085,639	$7,826,454
Priority List:	**8**	1	24	1	1	1	0	$1,013,820	$1,206,317	$1,007,438
Priority List:	**9**	3	686	1	1	1	0	$7,814,815	$5,053,534	$3,553,892
Priority List:	**13**	1	329	1	0	0	0	$2,254,912	$2,254,912	$96,999
Priority List:	**14**	1	189	0	0	0	0	$1,193,606	$1,193,606	$0
Basin Total		14	6,902	11	10	10	0	$31,054,914	$33,604,776	$21,254,791

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Terrebonne										
Priority List:	**1**	5	9	4	3	3	2	$8,809,393	$9,372,152	$9,220,929
Priority List:	**2**	3	958	3	3	2	0	$12,831,588	$20,761,626	$18,967,183
Priority List:	**3**	4	3,958	4	4	4	0	$15,758,355	$21,495,717	$19,963,112
Priority List:	**4**	2	215	2	1	1	1	$6,119,470	$7,707,823	$7,632,833
Priority List:	**5**	3	199	3	1	1	0	$31,120,343	$11,505,110	$4,281,497
Priority List:	**5.1**	0	988	1	0	0	0	$9,700,000	$9,700,000	$2,500,266
Priority List:	**6**	4	1,758	2	0	0	2	$30,522,757	$24,692,755	$2,575,447
Priority List:	**7**	1		1	1	1	0	$460,222	$540,283	$515,899
Priority List:	**9**	4	577	4	2	2	0	$25,219,289	$32,996,901	$17,737,620
Priority List:	**10**	2	970	2	1	0	0	$33,463,900	$30,745,754	$1,586,855
Priority List:	**11**	3	488	3	1	0	0	$28,316,482	$27,586,090	$3,172,000
Priority List:	**12**	1	143	0	0	0	0	$2,229,876	$2,229,876	$1,275,256
Priority List:	**13**	1	272	1	0	0	0	$2,293,893	$2,751,494	$35,263
Basin Total		34	10,535	30	17	14	5	$206,845,568	$202,085,582	$89,464,159
Total All Basins		161	119,070	136	89	70	20	$887,969,635	$765,163,299	$284,082,901

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

09-May-2006

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	$9,426,964	$39,933,317	$53,751,404	$46,863,942	$34,916,488
2	15	13,372	15	2	12	$28,173,110	$13,838,517	$40,644,134	$84,158,439	$77,525,745	$51,462,671
3	11	12,514	11	1	9	$29,939,100	$7,535,992	$32,879,168	$45,730,980	$40,888,662	$33,908,089
4	4	1,650	4	0	4	$29,957,533	$2,158,691	$10,468,030	$13,228,959	$13,080,520	$12,009,263
5	9	3,225	9	0	6	$33,371,625	$2,443,738	$60,627,171	$24,437,381	$18,396,251	$14,330,124
5.1	0	988	1	0	0	$0	$4,850,000	$9,700,000	$9,700,000	$4,973,561	$2,500,266
6	11	10,522	11	1	8	$39,134,000	$5,544,431	$54,614,991	$55,373,986	$34,543,397	$23,622,995
7	4	1,873	4	1	3	$42,540,715	$4,928,302	$21,090,046	$32,855,347	$32,411,269	$7,478,790
8	8	1,529	6	0	4	$41,864,079	$3,263,483	$33,340,587	$21,487,933	$9,095,435	$7,166,835
9	18	4,388	14	3	5	$47,907,300	$10,812,388	$72,429,342	$71,739,038	$61,473,407	$34,490,031
10	12	18,799	9	2	1	$47,659,220	$11,277,891	$82,222,452	$75,185,941	$37,499,370	$14,715,660
11	12	24,240	11	5	0	$57,332,369	$30,394,835	$258,849,846	$202,632,232	$150,874,356	$24,403,699
11.1	1	330	1	0	1	$0	$7,077,617	$19,252,500	$14,130,233	$14,110,812	$13,566,903
12	6	2,843	3	2	0	$51,938,097	$3,747,454	$28,406,152	$24,983,026	$15,596,478	$5,245,685
13	5	1,470	4	1	0	$54,023,130	$1,382,052	$8,616,745	$9,213,682	$5,164,499	$627,918
14	4	728	3	0	0	$53,054,752	$1,098,347	$7,322,316	$7,322,316	$6,224,155	$87,943
15	4	1,667	0	0	0		$686,926	$4,579,509	$4,579,509	$956,341	$0
Active Projects	138	119,070	120	18	67	$584,979,930	$120,467,628	$784,976,306	$750,510,406	$569,678,201	$280,533,356
Deauthorized Projects	20		13	0	2			$34,364,158	$2,654,751	$2,760,958	$2,625,982
Total Projects	158	119,070	133	18	69	$584,979,930	$120,467,628	$819,340,464	$753,165,157	$572,439,159	$283,159,338
Conservation Plan	1		1	0	1	$0	$45,886	$238,871	$191,807	$191,807	$191,807
CRMS - Wetlands	1		1	1	0	$0	$1,545,950	$66,890,300	$10,306,335	$7,423,492	$631,294
MCF	1		1	0	0	$0	$225,000	$1,500,000	$1,500,000	$79,387	$100,462
Total Construction Program	161	119,070	136	19	70	$584,979,930	$122,284,465	$887,969,635	$765,163,299	$580,133,845	$284,082,901
						$707,264,395					

CEMVN-PM-C

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

09-May-2006

Project Summary Report by Priority List

NOTES:
1. Total of 161 projects includes 138 active construction projects, 20 deauthorized projects, the CRMS-Wetlands Monitoring project, the Monitoring Contingency Fund, and the State of Louisiana's Wetlands Conservation Plan.
2. Federal funding for FY06 is expected to be $58,059,645 for the construction program..
3. Total construction program funds available is $707,264,395 .
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, beause 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 esimates for these priority lists reflect only approved, funded estimates. Both baseline and current estimates are revised as funding is approved.