COASTAL WETLANDS PLANNING, PROTECTION, AND RESTORATION ACT

17th PRIORITY PROJECT LIST REPORT (APPENDICES)

PREPARED BY:

LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION TASK FORCE

May 2008

Coastal Wetlands Planning, Protection, and Restoration Act

17th Priority Project List Report

Table of Contents

Coastal Wetlands Planning, Protection, and Restoration Act

17th Priority Project List Report

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 – H.R. 5390 (S. 2244):

SENATE REPORTS: No. 101-523 accompanying S. 2244 (Comm. On Environmental and Public Works).
CONGRESSIONAL RECORD, Vol. 136 (1990):
Oct. 1, considered and passed House.
Oct. 26, considered and passed Senate, amended, in lieu of S. 2244.
Oct. 27, House concurred in Senate amendment.
WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 26 (1990):
Nov. 29, Presidential statement.

Statement on signing the Bill on Wetland and Coastal Inland Waters Protection and Restoration Programs, November 29, 1990.

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

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

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

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

George Bush

The White House,
November 29, 1990.

Coastal Wetlands Planning, Protection, and Restoration Act

17th 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

Barrier Island Community Model

INTRODUCTION

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

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

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

VARIABLE SELECTION

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.

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.

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 variables utilized for project evaluations in 2001 included: 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.

Additional model revisions occurred during 2002 for use in evaluating the Priority Project List 12 candidates. The EnvWG agreed that projecting individual vegetative cover values for the dune, supratidal and intertidal habitats is not necessary to capture the habitat functions provided by vegetative cover on a barrier island. It was agreed that the three individual vegetative cover variables should be combined into one variable which would address the entire island. The woody cover variable would remain as a stand-alone variable.

In addition, the EnvWG agreed that the subtidal habitat variable should be omitted from the model. Project evaluations conducted during 2001 indicated that the subtidal variable played an insignificant role in determining project benefits. Variable values were unchanged from future without-project conditions to future with-project conditions for nearly all evaluations. It was agreed that most proposed projects would result in little or no change from baseline variable values. The variable was omitted from the model, however, subtidal habitat (i.e., open water habitat from 0.0 NAVD88 to –1.5 NAVD88) remains as part of the benefitted area and is included within the project=s boundary.

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 of the subaerial area that is classified as intertidal habitat; 4) percent vegetative cover of dune, supratidal, and intertidal habitats; 5) percent vegetative cover by woody species;
6) marsh edge and interspersion; and 7) 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, Asuper@ 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 Asuper@ 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_1 - Percent of the total subaerial area that is classified as dune habitat. Dune habitat is defined as subaerial habitat ≥ 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 Atypical@ 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 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_3 - 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_4 - Percent vegetative cover of dune, supratidal, and intertidal 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*).

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_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_1 Percent of the total subaerial area that is classified as dune habitat.

Supratidal Habitat

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

Intertidal Habitat

Variable V_3 Percent of the total subaerial area that is classified as intertidal habitat.

Vegetative Cover

Variable V_4 Percent vegetative cover of dune, supratidal, and intertidal habitats.

Woody Species

Variable V_5 Percent vegetative cover by woody species.

Interspersion

Variable V_6 Edge and Interspersion.

Beach Zone Habitat

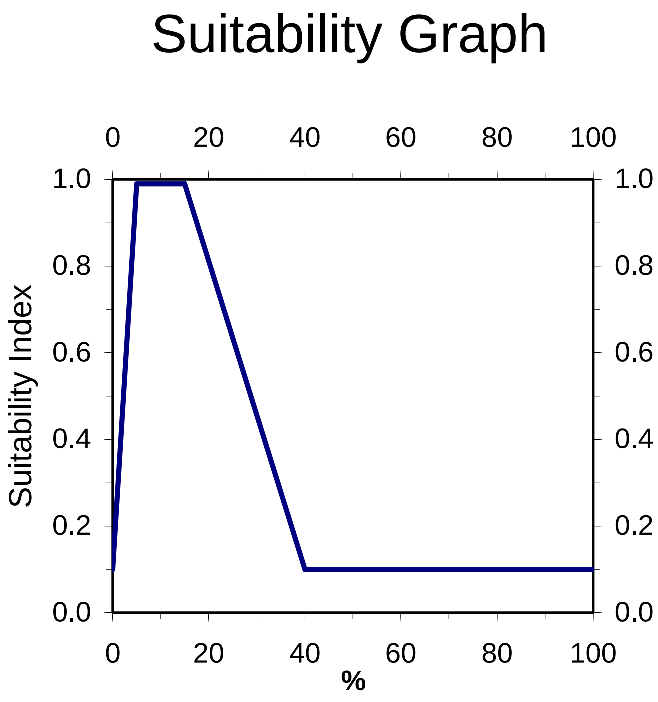
Variable V_7 Beach/surf zone features.

HSI Calculation:

$$HSI = 0.14(V_1) + 0.14(V_2) + 0.17(V_3) + 0.20(V_4) + 0.10\ (V_5) + 0.15(V_6) + 0.10(V_7)$$

BARRIER ISLAND

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

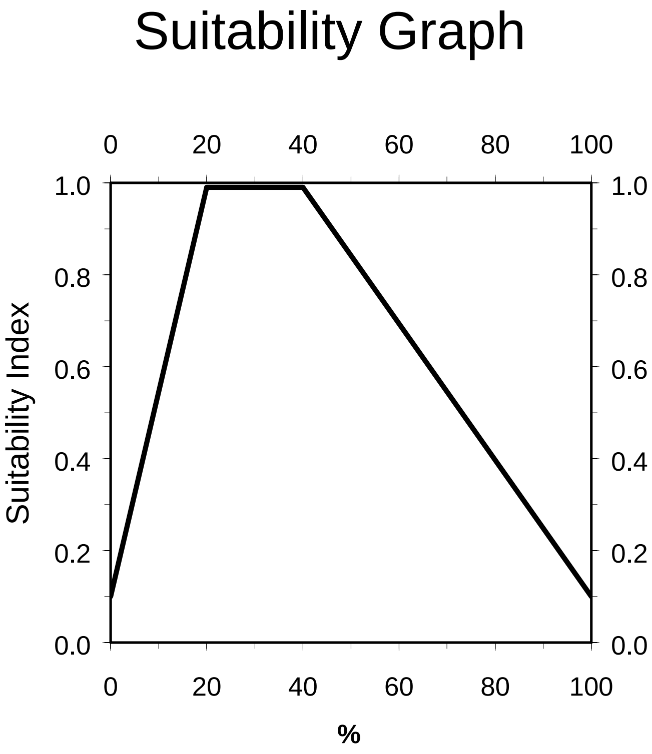


Line Formulas

If % < 5, then SI = (0.18*%) + 0.1
If 5 $\leq$ % $\leq$ 15, then SI = 1.0
If 15 < % $\leq$ 40, then SI = (-0.036*%) + 1.54
If % > 40, then SI = 0.1

BARRIER ISLAND

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

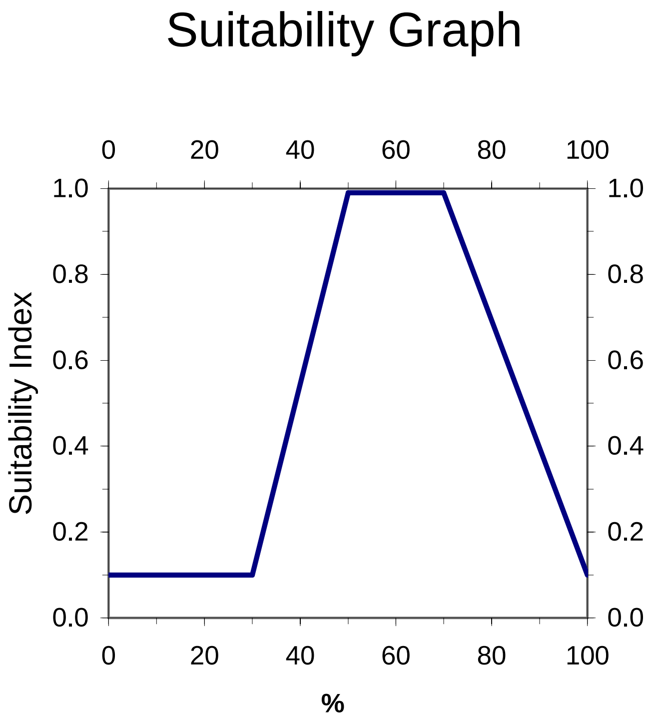


Line Formulas

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

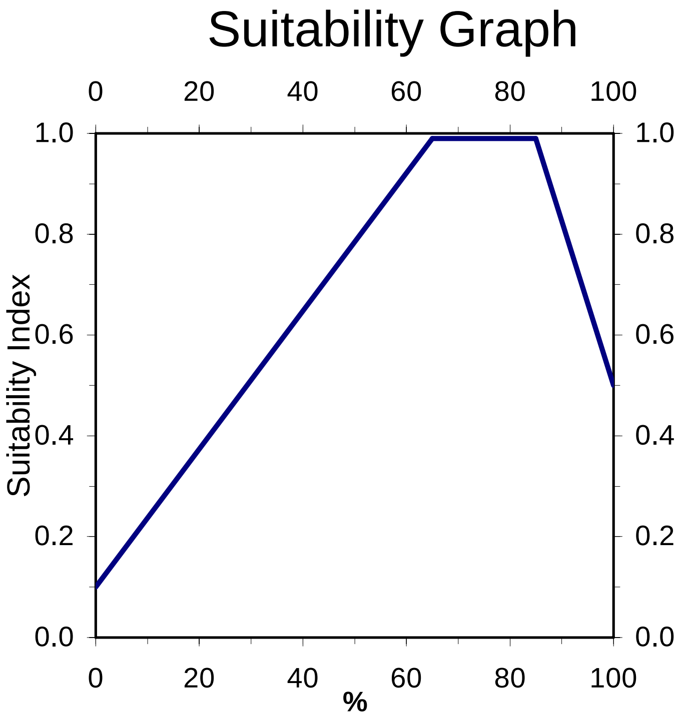
Variable V_3 Percent of the total subaerial area that is classified as intertidal habitat.



Line Formulas

If $\% < 30$, then SI = 0.1
If $30 \leq \% < 50$, then SI = $(0.045*\%) - 1.25$
If $50 \leq \% \leq 70$, then SI = 1.0
If $\% > 70$, then SI = $(-0.03*\%) + 3.1$

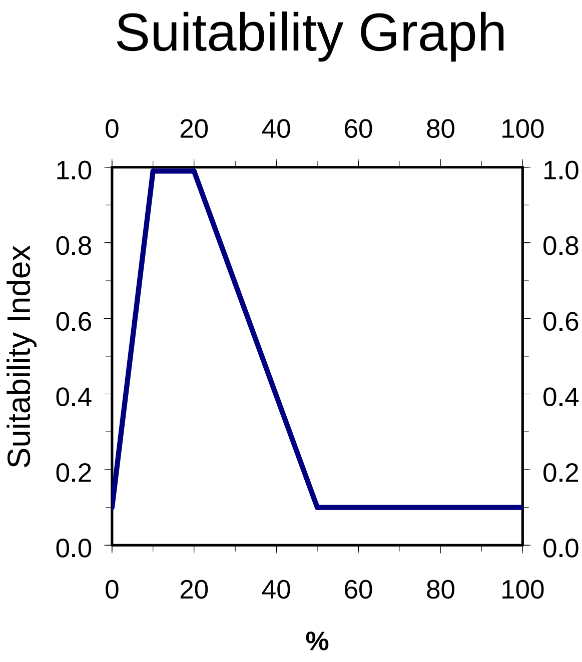
Variable V_4 Percent vegetative cover of dune, supratidal, and intertidal habitats.



Line Formulas

If % < 65, then SI = (0.0138*%) + 0.1
If 65 ≤ % ≤ 85, then SI = 1.0
If % > 85, then SI = (-0.0333*%) + 3.83

Variable V_5 Percent vegetative cover by woody species.

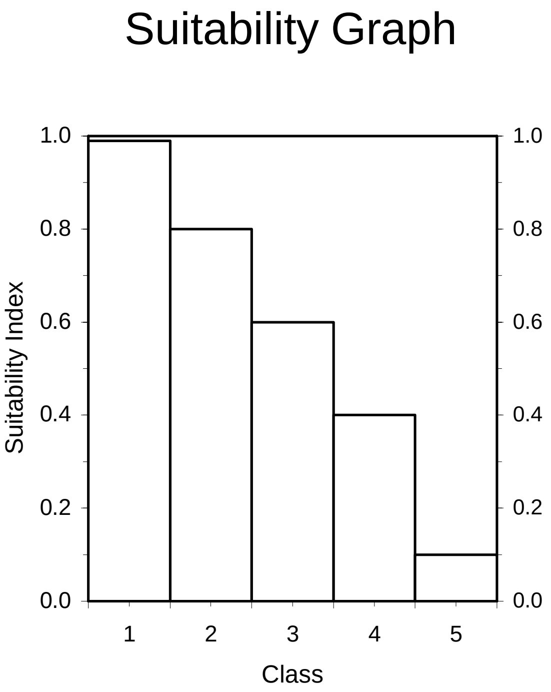


Line Formulas

If % < 10, then SI = (0.09*%) + 0.1
If $10 \leq \% \leq 20$, then SI = 1.0
If $20 < \% \leq 50$, then SI = (-0.03*%) + 1.6
If % > 50, then SI = 0.1

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

Variable V_6 Edge and interspersion.



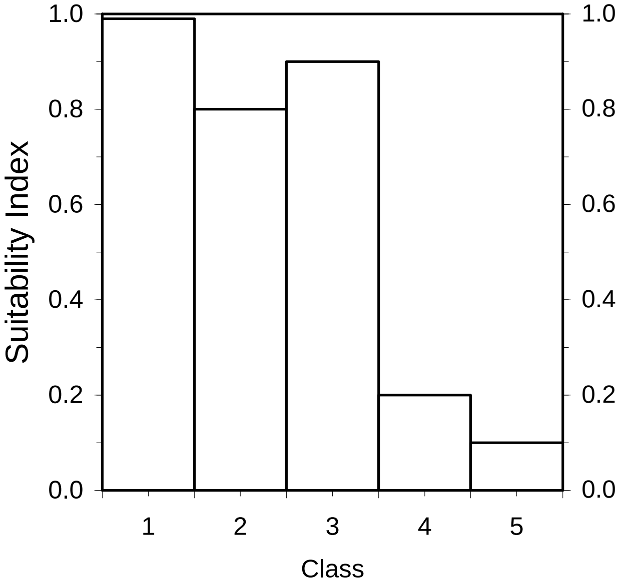
Instructions for Calculating SI for Variable V_6:

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

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

Variable V_7 Beach/surf zone features.

Suitability Graph



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

Appendix A – Marsh Edge and Interspersion Classes


Interspersion Class 3


Interspersion Class 3

II. 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.

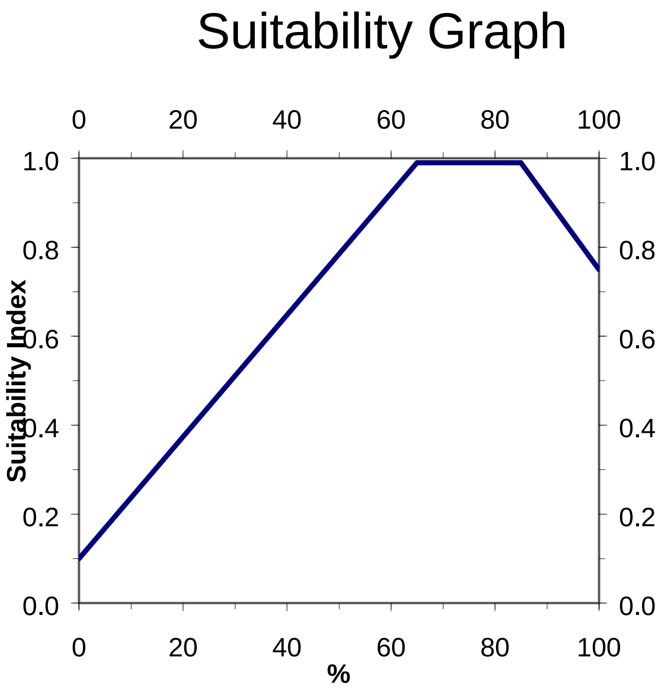
HSI Calculation: $HSI = (SIV_1 \times SIV_2 \times SIV_3)^{1/3}$

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

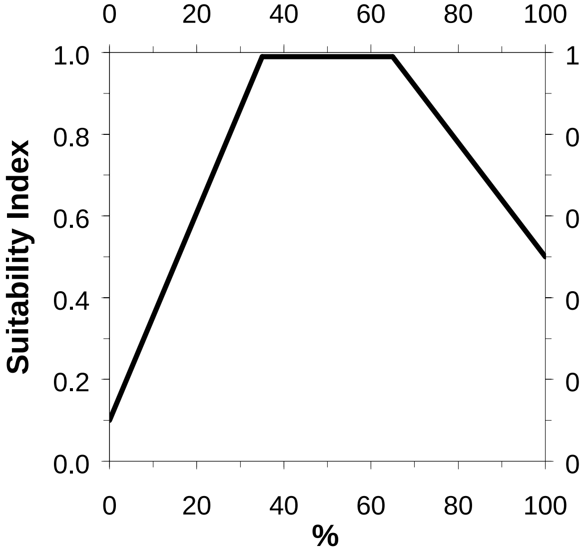
If $\% < 65$, then $SI = (0.014*\%) + 0.1$
If $65 \leq \% \leq 85$, then $SI = 1.0$
If $\% > 85$, then $SI = (-0.017*\%) + 2.445$

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

COASTAL CHENIER/RIDGE

Variable V_2 Percent Shrub/Midstory Cover

Suitability Graph



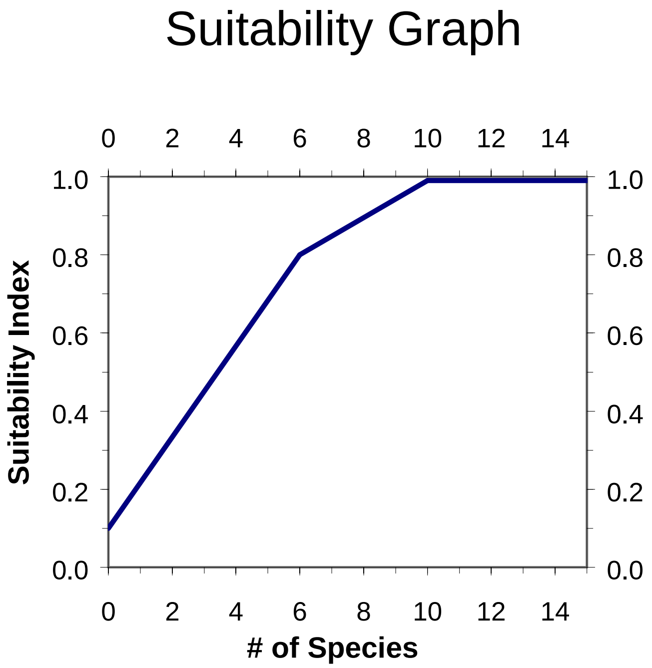
Line Formulas

If % < 35, then SI = (0.026*%) + 0.1
If 35 $\leq$ % $\leq$ 65, then SI = 1.0
If % > 65, then SI = (-0.014*%) + 1.9

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

COASTAL CHENIER/RIDGE

Variable V_3 Native Woody Species Diversity



Line Formulas

If $\% < 6$, then $SI = (0.117 * \%) + 0.1$
If $6 \leq \% < 10$, then $SI = (0.05 * \%) + 0.5$
If $\% \geq 10$, then $SI = 1.0$

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

III. FRESH SWAMP AND BOTTOMLAND HARDWOODS

INTRODUCTION

The habitat assessment models presented in this document are a modification of the U.S. Fish and Wildlife Service's Habitat Evaluation Procedures (HEP) and utilize, for each habitat type, one assemblage of variables considered important for determining the suitability of an area to support a diversity of fish and wildlife species. These models are intended to complement the Wetland Value Assessment Methodology (WVAM) models for fresh, intermediate, brackish, and saline marsh and shall be used to quantify net gains and losses of ecological value associated with permitted activities and compensatory mitigation proposals in the Louisiana Coastal Zone. (The WVAM models were developed by the Environmental Work Group for the Coastal Wetlands Planning, Protection, and restoration Act to evaluate projects proposed to be constructed pursuant to that Act.)

The models presented in this document were developed concurrently with the proposed Mitigation Regulations for the Louisiana Coastal Zone. The models were distributed for review, in draft form, on March 15, 1993, and July 17, 1993, with additional modifications distributed October 22, 1993. Reviewers of the models included representatives of state and federal agencies, environmental groups, oil and gas industry, chemical industry, real estate interests, agricultural interests, landowners, and local governments. While the proposed mitigation regulations will not go into affect until at least July 1, 1994, these models are considered applicable immediately.

Questions or comments regarding this document should be directed to Quin Kinler, Louisiana Department of Natural Resources, Office of Coastal Restoration and Management, P. O. Box 44487, Baton Rouge, LA 70804-4487, 504-342-1375.

CONCEPT/METHODOLOGY

The concept and methodology for use of these models are almost identical to the WVAM:

> "The WVA operates under the assumption that optimal conditions for general fish and wildlife habitat within a given coastal wetland type can be characterized, and that existing or predicted conditions can be compared to that optimum to provide an index of habitat quality. Habitat quality is estimated or expressed through the use of a mathematical model developed specifically for each wetland type. Each model consists of 1) a list of variables that are considered important in characterizing fish and wildlife habitat, 2) a Suitability Index graph for each variable, which defines the assumed relationship between habitat quality (Suitability Index) and different variable values, and 3) a mathematical formula that combines Suitability Index for each variable into a single value for wetland habitat quality; that single value is referred to as the Habitat Suitability Index, or HSI."

The WVAM models and the models for fresh swamp and bottomland hardwoods attempt to assess the suitability of each habitat type for providing resting, foraging, breeding, and nursery habitat to a diverse assemblage of fish and wildlife species. While the models do not specifically assess other wetland functions and values such as storm-surge protection, floodwater storage, water quality improvement, nutrient import/export, and aesthetics, it can be generally assumed that these functions and values are positively correlated with fish and wildlife habitat quality.

VARIABLE SELECTION

The selection of variables was based on review of 1) Habitat Suitability Index 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 reviewed. In general, it was concluded that those habitat variables which occurred most frequently in the various models were the most important for assessing habitat quality. The species-specific models concentrate on assessment of site-specific habitat quality features such as tree species composition, forest stand structure (understory, midstory, overstory conditions), stand maturity, and hydrology. The other models rely heavily on how a site fits into the overall "landscape." Both approaches are important and warrant consideration. The models presented in this document attempt to incorporate both approaches.

SUITABILITY INDEX GRAPHS

The concept of suitability index graphs for the subject models is identical to that for the WVAM models:

> "A Suitability Index (SI) graph is a graphical representation of how fish and wildlife habitat quality or 'suitability' of a given wetland type is predicted to change as values of the given variable change, and allows the model user to describe, through a Suitability Index, the habitat quality of a wetland area for any variable value."

In theory, each Suitability Index should range from 0.0 to 1.0, with 1.0 representing the optimal condition for the variable in question. However, because the mathematical formula that combines Suitability Indices into a single HSI involves multiplication of all Suitability Indices, a 0.0 for any Suitability index would produce 0.0 for the HSI in the models. Therefore, in practice the lowest possible Suitability Index for these draft models is 0.01. The suitability index graphs are presented in the Fresh Swamp and Bottomland Hardwoods sections that follow.

SUITABILITY INDEX GRAPH ASSUMPTIONS

Fresh Swamp Model

Fresh swamp is defined as an area 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. (See Appendix A for specific names.) If wood vegetation is present but the canopy covers less than 33 percent of the area, the fresh marsh WVAM model should be applied. If greater than 40 percent of the woody vegetation canopy consists of other tree species such as oaks, hickories, American elm, cedar elm, green ash, sweetgum, sugarberry, boxelder, common persimmon, honeylocust, red mulberry, eastern cottonwood, black willow, American sycamore, etc., the bottomland hardwood model should be applied.

Variable V_1 – Stand Structure. Fresh 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, shrub-scrub/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 fresh swamp, the loss of fresh swamp to saltwater intrusion, historical and ongoing timber harvesting within fresh swamp, and slow tree growth rate in the subsiding Coastal Zone, fresh swamps with mature sizeable trees are a unique but ecologically important feature. These older (mature) trees provide important wildlife requisites such as tree snags and nesting cavities and the medium for invertebrate (wildlife food) 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 beginning at about age 50. Therefore, stands with a canopy of trees with an average age of 50 years or greater are considered optimal for this variable (SI = 1.0). Below age 50, it is assumed that the above-mentioned wildlife requisites become more available with increasing age. When the average age of canopy-dominant and canopy-codominant trees is unknown, average tree diameter at breast height (dbh) can be used to determine the Suitability Index for this variable.

Variable V_3 – Hydrology. The primary assumption for this variable is that a natural water regime producing temporarily flooded, seasonally flooded, or semi-permanently flooded conditions is optimal. Such a water regime in fresh swamp produces ground vegetation (food, cover, detritus), crawfish, and other invertebrates; provides fish spawning and nursery habitat; and maintains water quality for fish and wildlife (SI – 1.0).

Permanently flooded fresh swamp with consistent riverine input or other water exchange provides optimal fish spawning and nursery habitat but moderate value wildlife habitat; considering both fish and wildlife components, a composite SI of 0.8 was selected for this situation.

Permanently flooded fresh swamp with little water exchange can produce poor quality water during warm weather, periodically reducing fish use and crawfish production; however, that same water can weaken certain trees producing snags, downed treetops, and invertebrates; with all factors considered, permanent flooded swamp with little water exchange is assumed to have moderate (SI = 0.4) habitat value.

Also assumed to have moderate value is a fresh swamp which is part of drainage system that allows water to remain on the site for irregular periods of time; in this situation the vegetative component of the swamp would be optimal, providing excellent habitat for many wildlife species; however, species which are heavily dependent on water would have only temporary access and fish would generally be excluded.

In an efficient forced drainage system, the vegetative component provides some habitat value, but wildlife species which are dependent on water and fish would essentially be excluded year round (SI – 0.1).

Variable V_4 – Size of Contiguous Forested Area. Although edge and diversity, which are dominant features of small forested tracts, are important for certain wildlife species, it is important to understand four concepts: 1) species which thrive in edge habitat are highly mobile and presently occur in substantial numbers, 2) because of forest fragmentation and ongoing timber harvesting by man, edge and diversity are quite available, 3) most species found in "edge" habitat are "generalists" in habitat use and are quite capable of existing in larger tracts, and 4) those species in greatest need of conservation are "specialists" in habitat use and require large forested tracts. Therefore, the basic assumption for this variable is that larger forested tracts are less common and offer higher quality habitat than smaller tracts. For this model, tracts greater than 500 acres in size are considered large enough to warrant being considered optimal.

Variable V_5 – Suitability and Traversability of Surrounding Land Uses. Many wildlife species commonly associated with fresh swamp will often use adjacent areas as temporary escape of resting cover and seasonal or diurnal food sources. Surrounding land uses which meet specific needs can render a given area of swamp more valuable to a cadre of wildlife species. Additionally, the type of surrounding land use may encourage, allow, or discourage wildlife movement between two or more desirable habitats. Land uses which allow such movement essentially increase the amount of habitat available to wildlife populations. The weighting factor assigned to various land uses reflects their estimated potential to meet specific needs and allow movement between more desirable habitats.

Variable V_6 – Disturbance. Human-induced disturbance can displace individuals, modify home ranges, interfere with reproduction, cause stress, and force animals to use important energy reserves. The effect of disturbance is a factor of the distance to disturbance and the type of disturbance. A separate Suitability Graph was developed for each of those factors and the results are combined to yield a single Suitability Index for Disturbance. If the source of a disturbance is located beyond 500 feet from the perimeter of the site or if the type of disturbance is "insignificant," the effects of disturbance are assumed to be negligible and SI = 1.0. If the source of disturbance is located within 50 feet of the perimeter of the site and the disturbance is "Constant or Major," the effects of disturbance are assumed to be maximum and SI = 0.01. Other combinations of distance to, and type of, disturbance yield moderate SI's of 0.26, 0.41, 0.5, and 0.65.

Bottomland Hardwoods Model

Bottomland hardwoods are defined as an area supporting or capable of supporting a canopy of woody vegetation of which greater than 40 percent consists of tree species such as oaks, hickories, American elm, cedar elm, green ash, sweetgum, sugarberry, boxelder, common persimmon, honeylocust, red mulberry, eastern cottonwood, black willow, American sycamore, etc. (If 60 percent of the woody canopy consists of any combination of baldcypress, tupelogum, red maple, buttonbush, and/or planertree, the fresh swamp model should be applied).

Variable V_1 – Tree Species Composition. Wildlife which utilize bottomland hardwoods depend heavily on mast, other edible seeds, and tree buds as primary sources of food. The basic assumptions for this variable are: 1) more production of mast (hard and/or soft) and other edible seeds is better than less production, and 2) because of its availability during late fall and winter and its high energy content, hard mast is more critical than soft mast, other edible seeds, and buds.

Variable V_2 – Stand Maturity. Prior to about Age 10, bottomland hardwood tree species provide only a very limited amount of wildlife food, in the form of buds and leaves. Accordingly, the SI for those early years shows a very small increase from 0.0 for a site with no trees to 0.1 for a site with 10-year-old trees. The production of soft mast and other edible seeds is expected to begin at about Age 10, increase with age, and reach maximum potential by approximately Age 50 (SI = 1.0). In general, hard mast production is expected to begin at about Age 20 (SI = 0.3), increase substantially by age 30 (SI 0.6), and reach maximum potential by approximately Age 50.

In addition to increased production of hard mast, soft mast, other edible seeds, and buds, or in stands without mast producing trees, older stands provide important wildlife requisites such as tree snags, nesting cavities, and the medium for invertebrate (wildlife food) production. Also, 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. Another factor to be considered is the rarity (and associated ecological importance) of mature stands, due to man's historical conversion of bottomland hardwoods and historical and ongoing timber harvesting. When the average age of canopy-dominant and canopy-codominant trees is unknown, average tree diameter at breast height (dbh) can be used to determine the Suitability Index for this variable.

Variable V_3 – Understory/Midstory. The understory and midstory components of bottomland hardwoods provide resting, foraging, breeding, nesting, and nursery habitat. The understory and midstory provide soft mast, other edible seeds, and vegetation as sources of food. The understory and midstory also provide the medium for invertebrate production, an additional food source. The amount of understory coverage and the amount of midstory coverage are considered equally important and are given equal weight in determining the Suitability Index for this variable.

Variable V_4 – Hydrology. Bottomland hardwood stands in the Louisiana Coastal Zone generally occur in one of four basic hydrology classes or water regimes: 1) efficient forced drainage system, 2) irregular periods of inundation due to an artificially lowered water table, 3) extended inundation or impoundment because of artificially raised water table, and 4) essentially unaltered. The optimum bottomland hardwood hydrology (SI= 1.0) is one that is essentially unaltered, allowing natural wetting and drying cycles which are beneficial to vegetation and associated fish and wildlife species. When a bottomland hardwood stand is part of an efficient forced drainage system, the vegetative component provides some habitat value, but wildlife species which are dependent on water would essentially be excluded year round, and the area would not in any way serve to promote fish production (SI = 0.1). With a moderately lowered water table, the vegetative component of the site could provide excellent habitat for many wildlife species and temporary habitat for wildlife species which are dependent on water, but fish would generally be excluded (SI = 0.5). With a raised water table, fish habitat and habitat for water-dependent wildlife could be equivalent to an unaltered system; however, other wildlife species could be adversely affected because of water-related impacts to the vegetative components of the stand (SI = 0.5).

Variable V_5 – Size of Contiguous Forested Area. Although edge and diversity, which are dominant features of small forested tracts, are important for certain wildlife species, it is important to understand four concepts: 1) species which thrive in edge habitat are highly mobile and presently occur in substantial numbers, 2) because of forest fragmentation and ongoing timber harvesting by man, edge and diversity are quite available, 3) most species found in "edge" habitat are "generalists" in habitat use and are quite capable of existing in larger tracts, and 4) those species in greatest need of conservation are "specialists" in habitat use and require large forested tracts. Therefore, the basic assumption for this variable is that larger forested tracts are less common and offer higher quality habitat than smaller tracts. For this model, tracts greater than 500 acres in size are considered large enough to warrant being considered optimal.

Variable V_6 – Suitability and Traversability of Surrounding Land Uses. Many wildlife species commonly associated with bottomland hardwoods will often use adjacent areas as temporary escape or resting cover and seasonal or diurnal food sources. Surrounding land uses which meet specific needs can render a given area of bottomland hardwoods more valuable to a cadre of wildlife species. Additionally, the type of surrounding land use may encourage, allow, or discourage wildlife movement between two or more desirable habitats. Land uses which allow such movement essentially increase the amount of habitat available to wildlife populations. The weighting factor assigned to various land uses reflects their estimated potential to meet specific needs and allow movement between more desirable habitats.

Variable V_7 – Disturbance. Human-induced disturbance can displace individuals, modify home ranges, interfere with reproduction, cause stress, and force animals to use important energy reserves. The effects of disturbance is a factor of the distance to disturbance and the type of disturbance. A separate Suitability Graph was developed for each of those factors and the results are combined to yield a single Suitability Index for Disturbance. If the source of disturbance is located beyond 500 feet from the perimeter of the site, or if the type of disturbance is "insignificant," the effects of disturbance are assumed to be negligible and SI – 1.0. If the source of disturbance is located within 50 feet of the perimeter of the site and the disturbance is “Constant or Major,” the effects of disturbance are assumed to be maximum and SI = 0.01. Other combinations of distance to, and type of, disturbance yield moderate SI’s of 0.26, 0.41, 0.5, and 0.65.

HABITAT SUITABILITY INDEX FORMULAS

As with the WVAM, the final step is developing the subject models was “to construct a mathematical formula that combines all Suitability Indices for each wetland type into a single Habitat Suitability Index (HSI) value. Because the Suitability Indices range in value from 0.01 to 1.0, the HSI also ranges from 0.01 to 1.0, and is a numerical representation of overall or ‘composite’ habitat quality of the particular wetland study area being evaluated.”

Any variable’s Suitability Index can be weighted, by raising its exponent, to increase the importance of that variable relative to the other variables in the HSI formula. A larger exponent will increase the influence of that variable on the resultant HSI. As discussed above, the draft models attempt to incorporate site-specific habitat quality features (tree species composition, forest stand structure, stand maturity, and hydrology) and “landscape” parameters (forest size, surrounding habitat, and disturbance). Because the primary application of these models is to quantify the loss of ecological values due to small and site-specific activities, the site specific variables (V_1, V_2, and V_3 for fresh swamp and V_1, V_2, V_3, and V_4 for bottomland hardwoods) are considered more important and have been “given more weight” than the “landscape” variables.

For fresh swamp, the site specific variables V_1 (Stand Structure) and V_2 (Stand Maturity) are considered to be of greatest importance; they are weighted to the power of four. Variable V_3 (Hydrology) is weighted to the power of two. The “landscape” variables (V_4, V_5, and V_6) are not weighted.

For bottomland hardwoods, the site specific variables V_1 (Tree Species Composition) and V_2 (Standard Maturity) are considered to be of greatest importance; they are weighted to the power of four. Variables V_3 (Understory/Midstory) and V_4 (Hydrology) are weighted to the power of two. The “landscape” variables (V_5, V_6, and V_7) are not weighted. In some cases, data for Variable V_3 (Understory/Midstory) may not be readily available; in those instances that variable can be deleted from the HSI formula as indicated below.

For both fresh swamp and bottomland hardwoods, stands less than 7 years of age generally do not 1) exhibit distinguishable understory, midstory, and overstory components, 2) produce substantial mast, or 3) function as part of a forested landscape; hence, the variables Stand Structure, Tree Species Composition, Size of Contiguous Forest, and Understory/Midstory are not incorporated into the HSI formulas until the stand reaches 7 years of age.

The HSI formulas fresh swamp are:

1. If Age < 7 (or if cypress dbh < 5 and tupelogum et al. dbh < 4) then:
   $HSI = (SI_{v2}^4 \text{ X } SI_{v3}^2 \text{ X } SI_{v5} \text{ X } SI_{v6})^{1/8}$, or

2. If Age > 7 (or if cypress dbh > 5 and tupelogum et al. dbh > 4) then:

$$\text{HSI} = (\text{SI}_{v1}{}^{4} \text{ X } \text{SI}_{v2}{}^{4} \text{ X } \text{SI}_{v3}{}^{2} \text{ X } \text{SI}_{v4} \text{ X } \text{SI}_{v5} \text{ X } \text{SI}_{v6})^{1/13}.$$

The HSI formulas bottomland hardwoods are:

1. If Age < 7 (or dbh < 5), then:

$$\text{HSI} = (\text{SI}_{v2}{}^{4} \text{ X } \text{SI}_{v4}{}^{2} \text{ X } \text{SI}_{v6} \text{ X } \text{SI}_{v7})^{1/8}, \text{ or}$$

2. If Age > 7 (or dbh > 5) and V3 (Understory/Midstory) data is available, then:

$$\text{HSI} = (\text{SI}_{v1}{}^{4} \text{ X } \text{SI}_{v2}{}^{4} \text{ X } \text{SI}_{v3}{}^{2} \text{ X } \text{SI}_{v4}{}^{2} \text{ X } \text{SI}_{v5} \text{ X } \text{SI}_{v6} \text{ X } \text{SI}_{v7})^{1/15}, \text{ or}$$

3. If Age > 7 (or dbh > 5) and V3 (Understory/Midstory) data is not available, then:

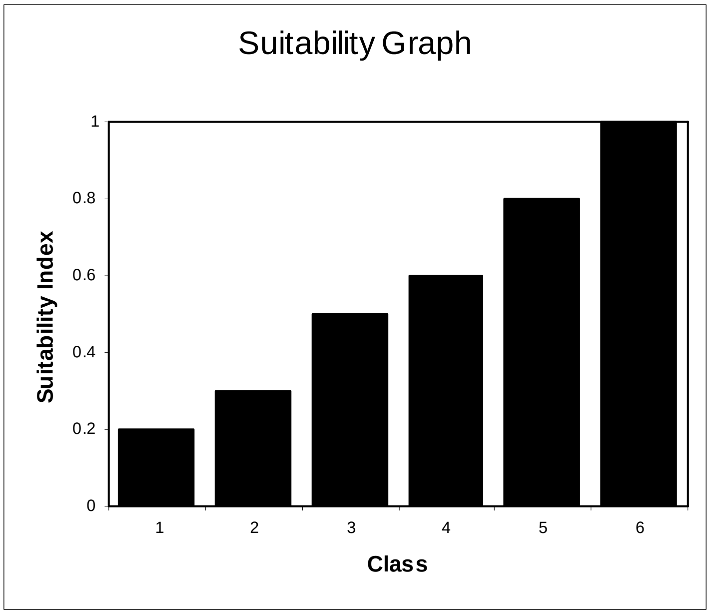
$$\text{HSI} = (\text{SI}_{v1}{}^{4} \text{ X } \text{SI}_{v2}{}^{4} \text{ X } \text{SI}_{v4}{}^{2} \text{ X } \text{SI}_{v5} \text{ X } \text{SI}_{v6} \text{ X } \text{SI}_{v7})^{1/13}.$$

FRESH SWAMP

VARIABLE V_1 – Stand Structure

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

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



FRESH SWAMP

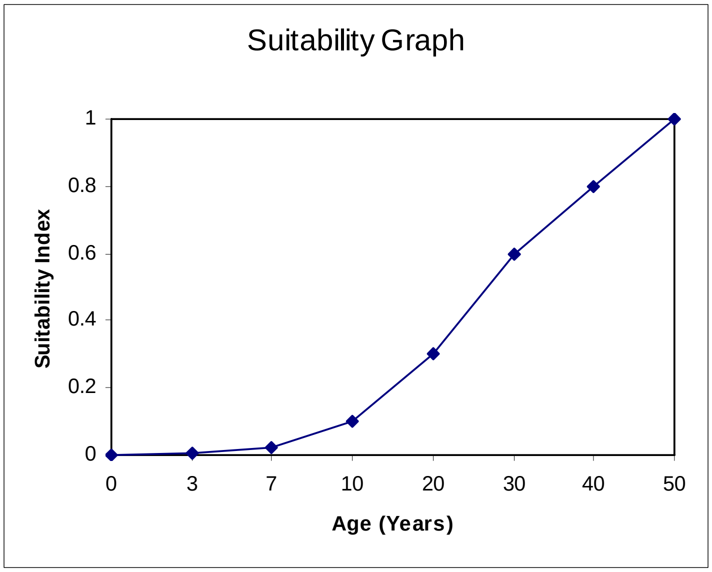
VARIBLE V_2 – Stand Maturity [i.e., average age of canopy-dominant and canopy-codominant trees]

Notes:

1. When the average age of canopy-dominant and canopy-codominant trees is unknown, average tree diameter at breast height (dbh) can be used to determine the Suitability Index for this variable.
2. Canopy-dominant and canopy co-dominant trees are those trees whose crown rises above or is an integral part of the stand's overstory. When both baldcypress and tupelogum (and other species) are present in the overstory, the average age should be weighted according to the percent canopy coverage for each species group.
3. For trees with buttress swell, dbh is the diameter measured at 12" above the swell. In baldcypress and tupelogum, this can sometimes be as high as 10-12 feet above the ground.

Line Formulas, when age is known:

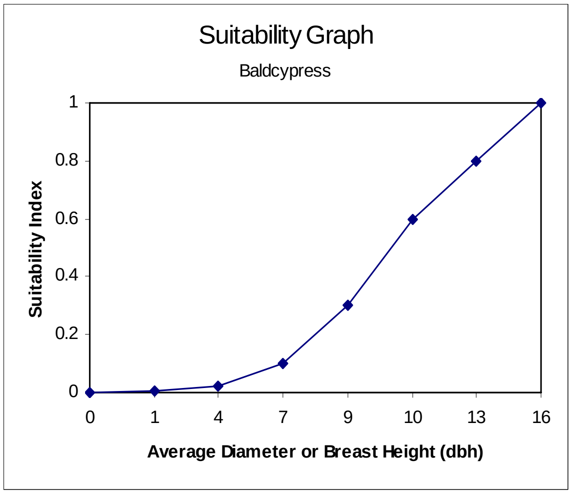
If age = 0 then SI = 0
If $0 < \text{age} \leq 3$ then SI = .0033 * age
If $3 < \text{age} \leq 7$ then SI = (.01 * age) - .02
If $7 < \text{age} \leq 10$ then SI = (.017 * age) - .07
If $10 < \text{age} \leq 20$ then SI = (.02 * age) - .1
If $20 < \text{age} \leq 30$ then SI = (.03 * age) - .3
If $30 < \text{age} \leq 50$ then SI = .02 * age
If age 50 > then SI = 1.0



FRESH SWAMP

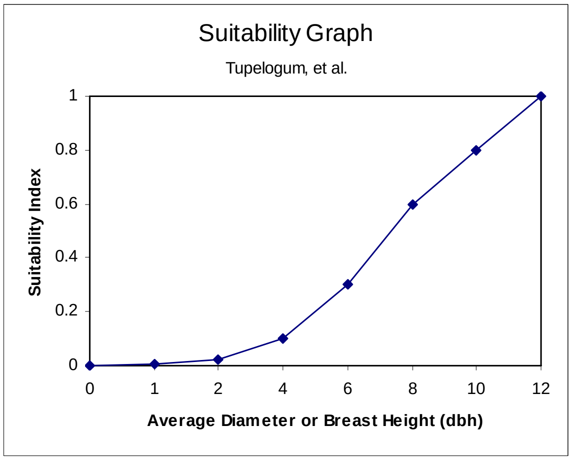
Line Formulas for baldcypress, when age is unknown:

If dbh = 0 then SI = 0
If $0 < dbh \leq 1$ then SI = .01 * dbh
If $1 < dbh \leq 4$ then SI = (.013 * dbh) - .002
If $4 < dbh \leq 7$ then SI = (.017 * dbh) - .019
If $7 < dbh \leq 9$ then SI = (.1 * dbh) - .6
If $9 < dbh \leq 11$ then SI = (.15 * dbh) - 1.05
If $11 < dbh \leq 13$ then SI = (.1 * dbh) - .5
If $13 < dbh \leq 16$ then SI = (.067 * dbh) - .071
If dbh > 16 then SI = 1.0



Line Formulas for tupelogum et al., when age is unknown:

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



FRESH SWAMP

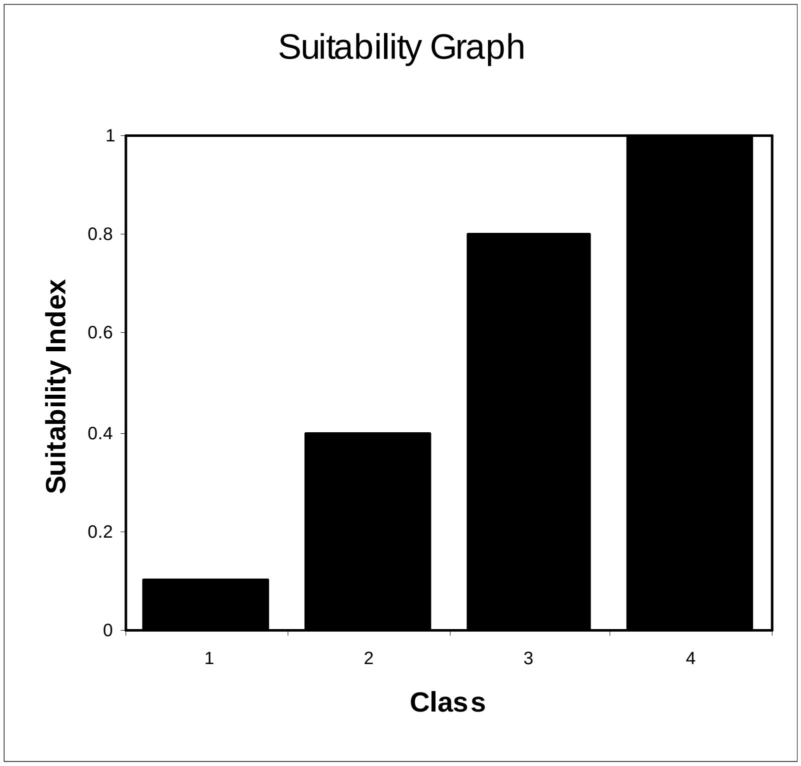
VARIABLE V_3 – Hydrology

Class 1. Forced drainage system which efficiently removes water from the surface year round.

Class 2. Permanently flooded with little or no water exchange (stagnant, impounded); OR part of forced drainage or gravity drainage system which, because of subsidence or base on current operation, allows water to remain on-site for irregular but not extended periods of time.

Class 3. Permanently flooded, but receives consistent riverine input and/or other water exchange.

Class 4. Hydrology essentially unaltered and the natural water regime produces temporarily flooded, seasonally flooded, or semi-permanently flooded conditions. (The area could contain small levees and/or canals, provided that the water regime has not been significantly altered.)

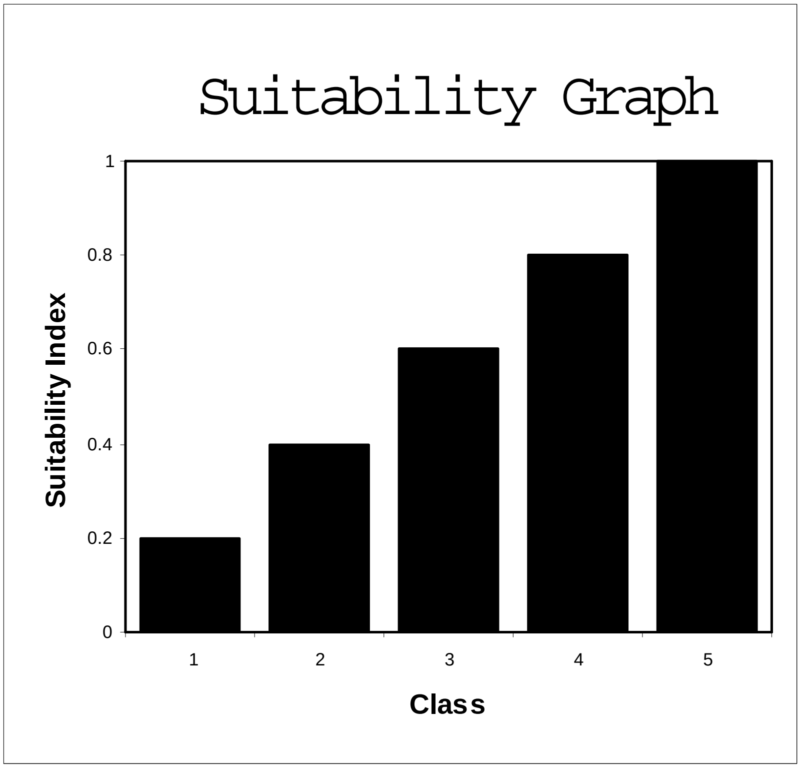


FRESH SWAMP

VARIABLE V_4 – Size of Contiguous Forested Area

Note: Corridors less than 75 feet wide do not constitute a break in the forested area contiguity.

Class 1. 0 to 5 acres.
Class 2. 5.1 to 20 acres.
Class 3. 20.1 to 100 acres
Class 4. 100.1 to 500 acres
Class 5. > 500 acres



FRESH SWAMP

VARIABLE V_5 – Suitability and Traversability of Surrounding Land Use

Within a 0.5 mile of the perimeter of the site, determine the percent of the surrounding area that is occupied by each of the following land uses (must account for 100 percent of the area). Multiply the percentage of each land use by the suitability weighting factor shown below, add the adjusted percentages and divide by 100 for a suitability index for this variable, except that if 100% of the Surrounding Habitat is considered nonhabitat, SI equals 0.01.

Land Use	**Weighting Factor**		**% of 0.5 mi. circle**		**Weighted Percent**
Bottomland hardwood, other forested areas, marsh habitat, etc.	1.0	X		=	
Abandoned agriculture, overgrown fields, dense cover, etc.	0.6	X		=	
Pasture, hayfields, etc.	0.4	X		=	
Active agriculture	0.2	X		=	
Nonhabitat: linear, residential, commercial, industrial development, etc.	0.0	X		=	
					/ **100 = SI**

FRESH SWAMP

VARIABLE V_6 – Disturbance

The effect of disturbance is a factor of the distance to, and the type of, disturbance, hence both are incorporated in the SI formula.

Note: Linear and/or large project sites may be exposed to various types of disturbances at various distances. The SI for this variable should be weighted to account for those variances; see the example calculation of a weighted SI for Disturbance following.

Distance Classes

Class 1. 0 to 50 ft.

Class 2. 50.1 to 500 ft.

Class 3. > 500 ft.

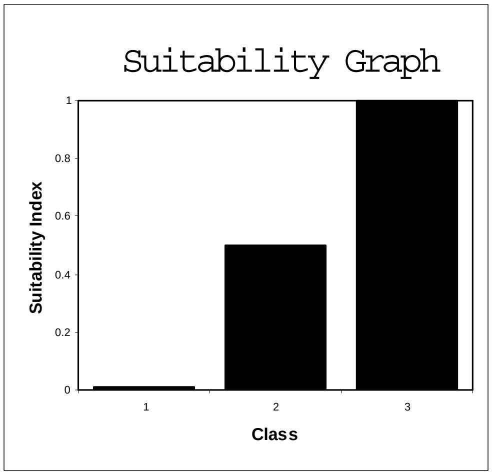
Type Classes

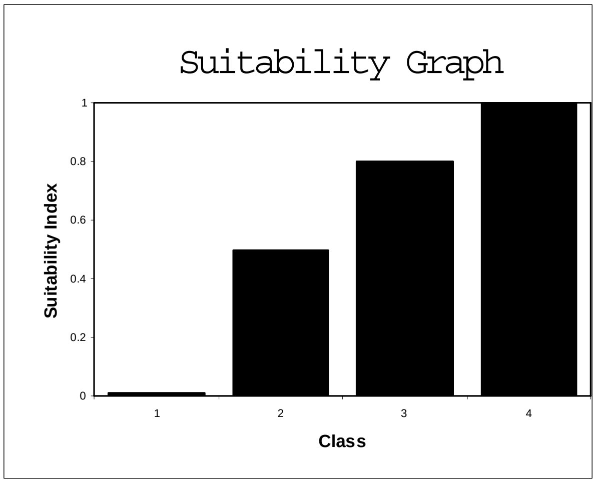
Class 1. Constant/Major. (Major highways, industrial, commercial, major navigation.)

Class 2. Frequent/Moderate. (Residential development, moderately used roads, waterways commonly used by small to mid-sized boats.)

Class 3. Seasonal/Intermittent. (Agriculture, aquaculture.)

Class 4. Insignificant. (Lightly Used roads and waterways, individual homes, levees, rights of way).





SI Formula: (Distance SI + Type SI) / 2, except that if Distance > 500 feet (Class 3) or Type is Insignificant (Class 4), HSI = 1.0.

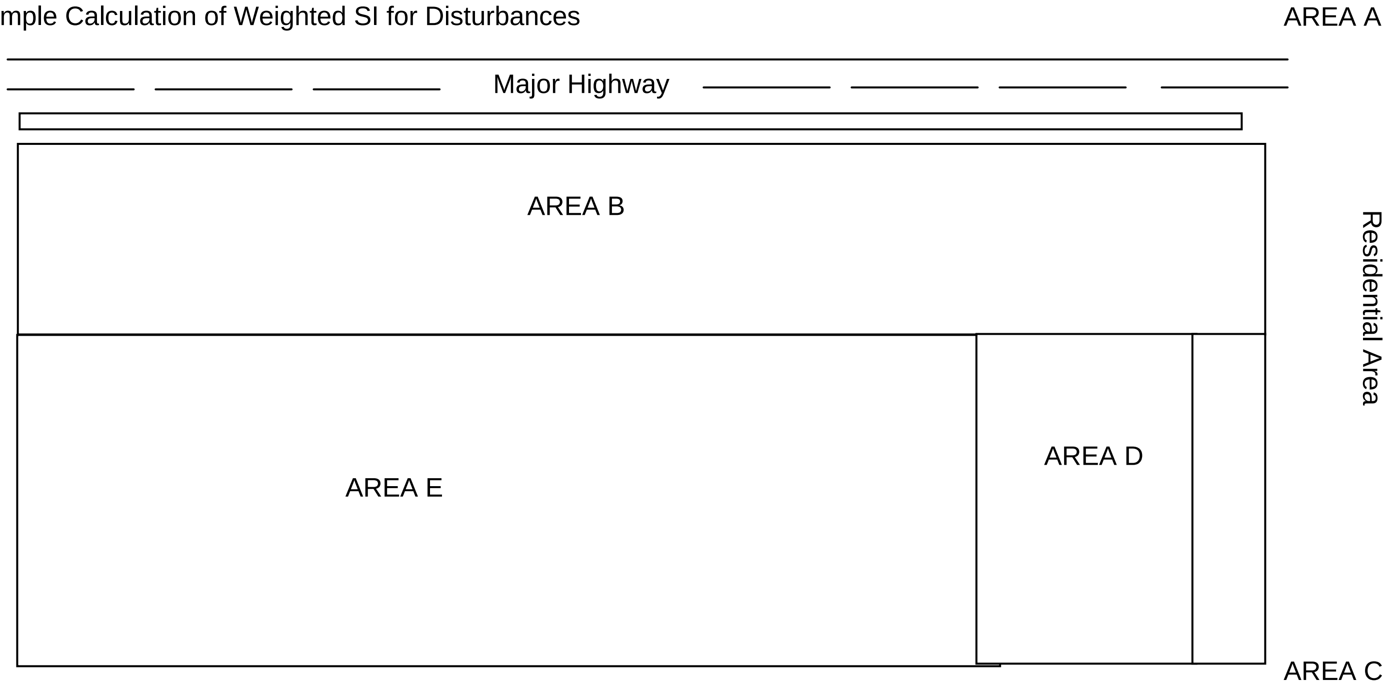
Type Class					
		1	2	3	4
	1	.01	.26	.41	1
Distance	2	.26	.50	.65	1
Class	3	1	1	1	1

FRESH SWAMP

Example: Calculation of Weighted SI for Disturbance

The example project area is 1,500 feet by 3,000 feet or 103.3 acres. To calculate the weighted SI, the area is segregated to determine the percent of the project area that would be exposed to various types disturbance at various distances. When a given portion of the project area is exposed to various type or distance classes, the type/distance combination which yields the lowest SI is utilized.

Example Calculation of Weighted SI for Disturbances



rea	Distance Class	Type Class	SI*	Area Dimensions	Acres	% of Total Area	Weighting Factor (WF)
A	1	1	.01	50' X 3000'	3.4	3.3	0.033
B	2	1	.26	450' X 3000'	31.0	30.0	0.30
C	1	2	.26	50' X 1000'	1.1	1.2	0.012
D	2	2	.50	450' X 1000'	10.3	10.0	0.10

* See table on previous page

Weighted SI = $(SI_A \text{ X } WF_A) + (SI_B \text{ X } WF_B) + (SI_C \text{ X } WF_C) + (SI_D \text{ X } WF_D) + (SI_E \text{ X } WF_E)$

$(.01 \text{ X } .033) + (.26 \text{ X } .3) + (.26 \text{ X } .012) + (.50 \text{ X } .1) + (1.0 \text{ X } .555)$

.69

BOTTOMLAND HARDWOODS

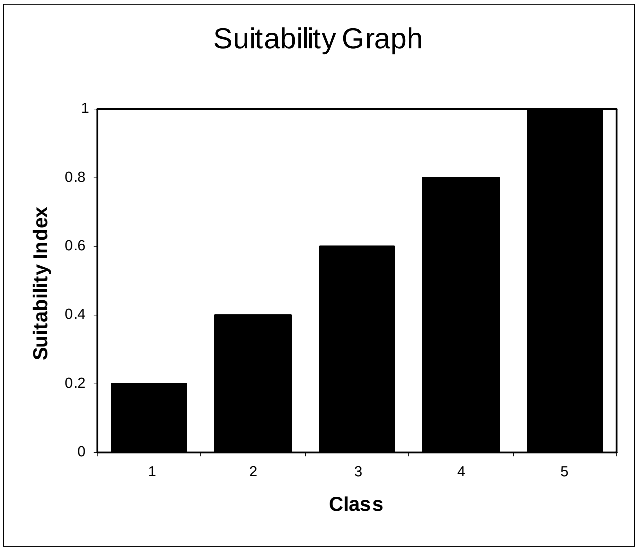
VARIABLE V_1 – Tree Species Association (see Appendix C for scientific names)

Non-mast / inedible seed producers: eastern cottonwood, black willow, American sycamore.

Hard mast producers: oaks, sweet pecan, other hickories.

Soft mast and other edible seed producers: red maple, sugarberry, green ash, boxelder, common persimmon, sweetgum, honeylocust, red mulberry, baldcypress, tupelogum, American elm, cedar elm, etc.

Class 1: Less than 25% of overstory canopy consists of mast or other edible-seed producing trees.
Class 2: 25% to 50% of overstory canopy consists of mast or other edible-seed producing trees, but hard mast producers constitute less than 10% of the canopy
Class 3: 25% to 50% of overstory canopy consists of mast other edible-seed producing trees, and hard mast producers constitute more than 10% of the canopy.
Class 4: Greater than 50% of overstory canopy consists of mast or other edible-seed producing trees, but hard mast producers constitute less than 20% of the canopy.
Class 5: Greater than 50% of overstory canopy consists of mast or other edible-seed producing trees, and hard mast producers constitute more than 20% of the canopy.



BOTTOMLAND HARDWOODS

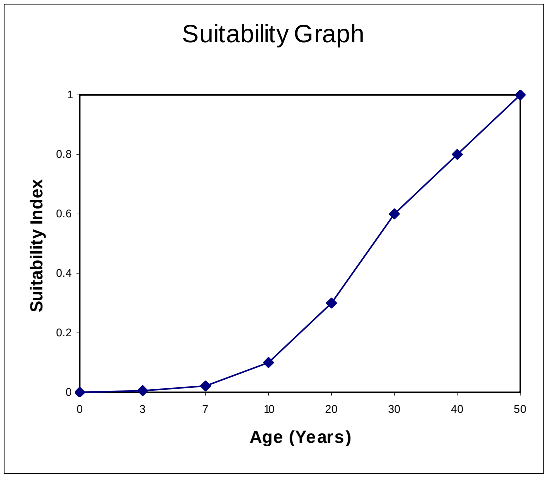
VARIBLE V_2 – Stand Maturity [i.e., average age of canopy-dominant and canopy-codominant trees]

Notes:

1. When the average age of canopy-dominant and canopy-codominant trees is unknown, average tree diameter at breast height (dbh) can be used to determine the Suitability Index for this variable.
2. Canopy-dominant and canopy co-dominant trees are those trees whose crown rises above or is an integral part of the stand's overstory.
3. For trees with buttress swell, dbh is the diameter measured at 12" above the swell.

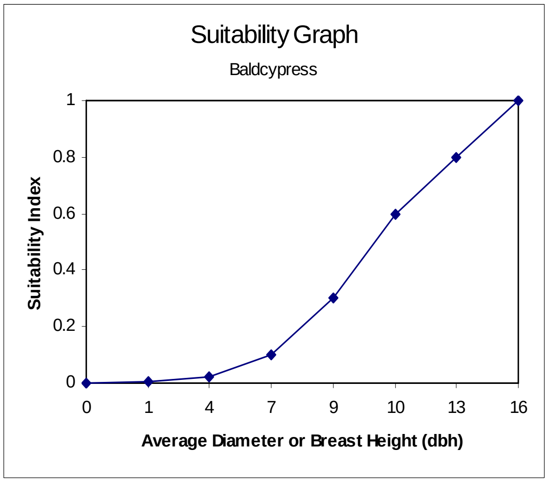
Line Formulas, when age is known:

If age = 0 then SI = 0
If $0 < \text{age} \leq 3$ then SI = .0033 * age
If $3 < \text{age} \leq 7$ then SI = (.01 * age) - .02
If $7 < \text{age} \leq 10$ then SI = (.017 * age) - .07
If $10 < \text{age} \leq 20$ then SI = (.02 * age) - .1
If $20 < \text{age} \leq 30$ then SI = (.03 * age) - .3
If $30 < \text{age} \leq 50$ then SI = .02 * age
If age 50 > then SI = 1.0



Line Formulas for bottomland hardwoods, when age is unknown:

If dbh = 0 then SI = 0
If $0 < \text{dbh} \leq 5$ then SI = .01 * dbh
If $5 < \text{dbh} \leq 8$ then SI = (.017 * dbh) - .035
If $8 < \text{dbh} \leq 11$ then SI = (.067 * dbh) - .436
If $11 < \text{dbh} \leq 14$ then SI = (.1 * dbh) - .8
If $14 < \text{dbh} \leq 20$ then SI = (.067 * dbh) - .338
If dbh > 20 then SI = 1.0



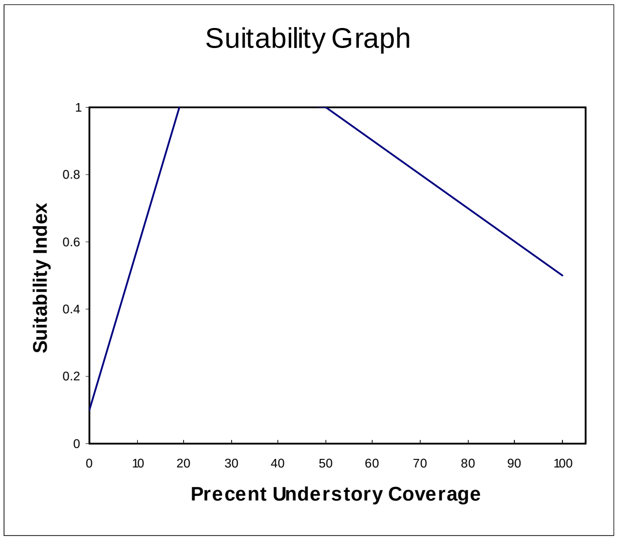
BOTTOMLAND HARDWOODS

VARIABLE V_3 – Understory / Midstory

Understory

Line Formulas for Understory Coverage:

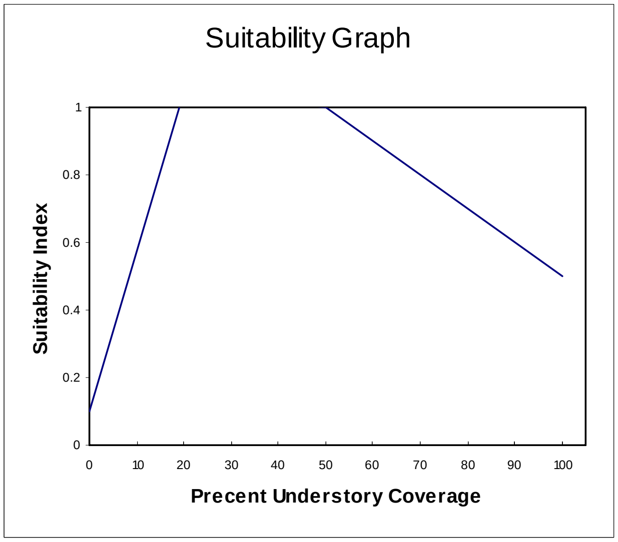
If understory % = 0 then SI = .1
If 0 < un. % $\leq$ 30 then SI = 0.03 * un. % + .1
If 30 < un. % $\leq$ 60 then SI = 1.0
If un. % > 60 then SI = (-.01 * un. %) + 1.6



Midstory

Line Formulas for Midstory Coverage:

If midstory % = 0 then SI = 0.1
If 0 < mid % $\leq$ 20 then SI = 0.45 * mid % + .1
If 20 < mid % $\leq$ 50 then SI = 1.0
If mid % > 50 then SI = (-.01 * mid %) + 1.5



Understory / Midstory SI = Understory SI + Midstory SI / 2

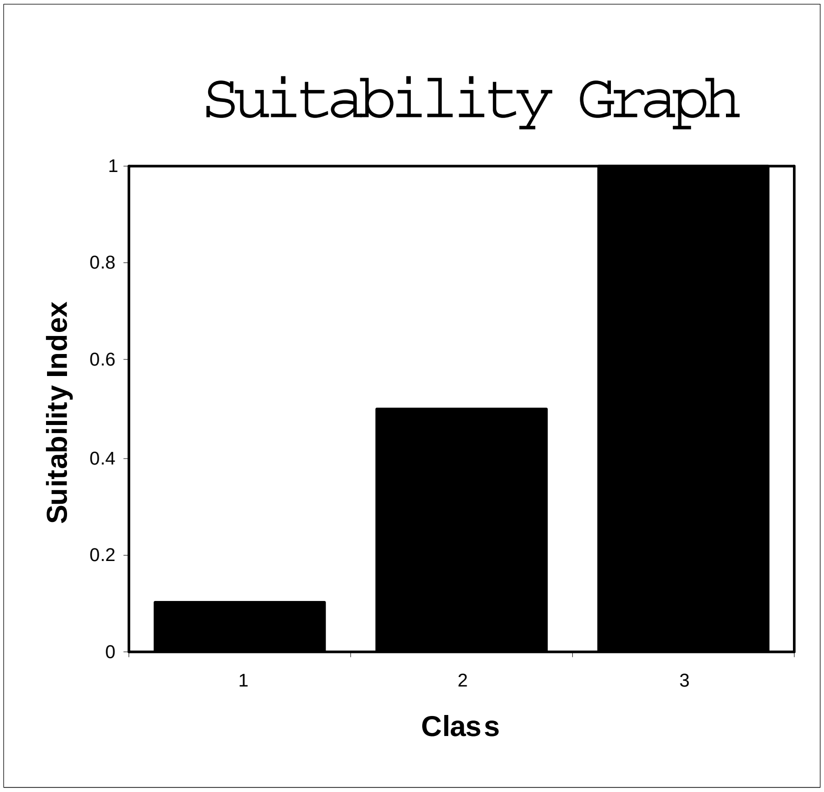
BOTTOMLAND HARDWOODS

VARIABLE V_4 – Hydrology

Class 1. Forced drainage system which efficiently removes water from the surface year round.

Class 2. Water table lowered relative to ground level so as to significantly reduce periods of inundation <u>OR</u> water table raised so as to cause extended inundation or impoundment.

Class 3. Hydrology essentially unaltered (area could contain small levees and/or ditches, provided that water regime has not been significantly altered).

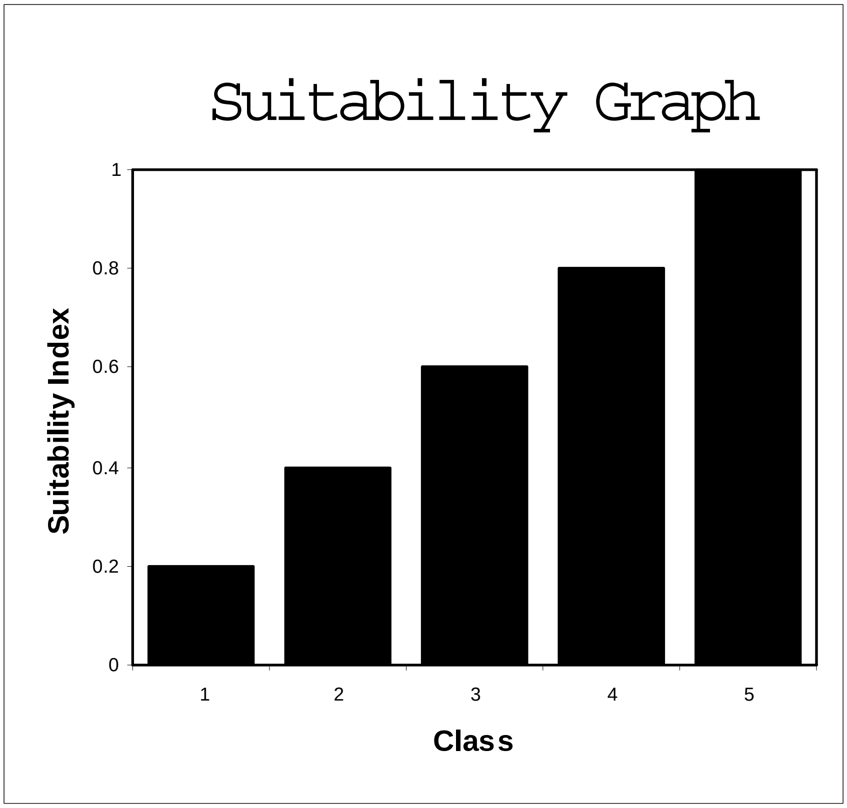


BOTTOMLAND HARDWOODS

VARIABLE V_5 – Size of Contiguous Forested Area

Note: Corridors less than 75 feet wide do not constitute a break in the forested area contiguity.

Class 1.	0 to 5 acres
Class 2.	5.1 to 20 acres
Class 3.	20.1 to 100 acres
Class 4.	100.1 to 500 acres
Class 5.	> 500 acres



BOTTOMLAND HARDWOODS

VARIABLE V_6 – Suitability and Traversability of Surrounding Land Uses

Within a 0.5 mile of the perimeter of the site, determine the percent of the area that is occupied by each of the following land uses (must account for 100 percent of the area). Multiply the percentage of each land use by the suitability weighting factor shown below, add the adjusted percentages and divide by 100 for a suitability index for this variable, except that if 100% of the Surrounding Habitat is considered nonhabitat, SI equals 0.01.

Land Use	**Weighting Factor**		**% of 0.5 mi. circle**		**Weighted Percent**
Bottomland hardwood, other forested areas, marsh habitat, etc.	1.0	X		=	
Abandoned agriculture, overgrown fields, dense cover, etc.	0.6	X		=	
Pasture, hayfields, etc.	0.4	X		=	
Active agriculture	0.2	X		=	
Nonhabitat: linear, residential, commercial, industrial development, etc.	0.0	X		=	
					/
					100 = SI

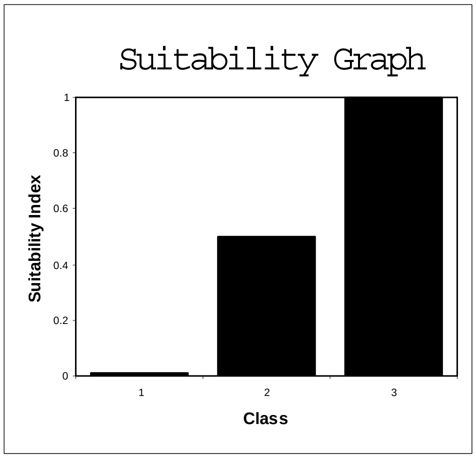
BOTTOMLAND HARDWOODS

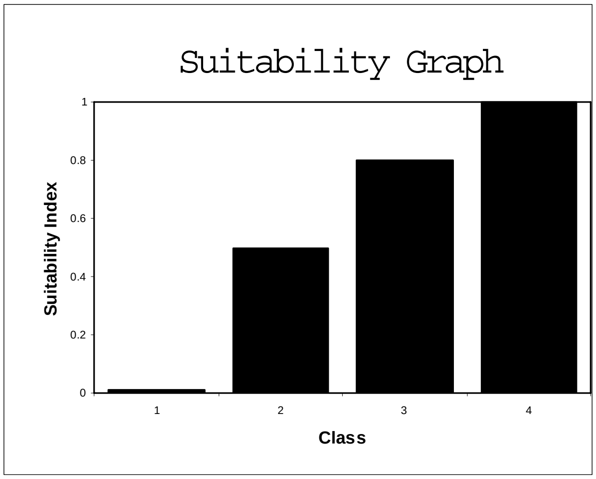
VARIABLE V_7 – Disturbance

The effect of disturbance is a factor of the distance to, and the type of, disturbance, hence both are incorporated in the SI formula.

Note: Linear and/or large project sites may be exposed to various types of disturbances at various distances. The SI for this variable should be weighted to account for those variances; see the example calculation of a weighted SI for Disturbance on page B-39.

Distance Classes	**Type Classes**
Class 1. 0 to 50 ft.	**Class 1.** Constant/Major. (Major highways, industrial, commercial, major navigation.)
Class 2. 50.1 to 500 ft.	**Class 2.** Frequent/Moderate. (Residential development, moderately used roads, waterways commonly used by small to mid-sized boats).
Class 3. > 500 ft.	**Class 3.** Seasonal/Intermittent. (Agriculture, aquaculture.)
	Class 4. Insignificant. (Lightly Used roads and waterways, individual homes, levees, rights of way).





SI Formula: (Distance SI + Type SI) / 2, except that if Distance > 500 feet (Class 3) or Type is Insignificant (Class 4), HSI = 1.0.

		Type Class			
		1	2	3	4
	1	.01	.26	.41	1
Distance	2	.26	.50	.65	1
Class	3	1	1	1	1

Appendix A: Common Names/Scientific Names

COMMON NAMES	SCIENTIFIC NAMES
American elm	Ulmus americana
American sycamore	Plantanus occidentalis
Baldcypress	Taxodium distichum
Black willow	Salix nigra
Boxelder	Acer negundo
Buttonbush	Cephalanthus occidentalis
Cedar elm	Ulmus crassifolia
Common persimmon	Diospyros virginiana
Eastern cottonwood	Populus deltoides
Green ash	Fraxinus pennsylvanica
Hickories	Carya spp.
Honeylocust	Gleditsia triacanthos
Oaks	Quercus spp.
Plantertree	Planera aquatica
Red maple	Acer rubrum
Red mulberry	Morus rubra
Sugarberry	Celtis laevigata
Sweet pecan	Carya illinoensis
Sweetgum	Liquidambar styraciflua
Tupelogum	Nyssa aquatica

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

Reptiles and Amphibians
bullfrog
slider turtle
American alligator

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

Mammals
mink
muskrat
swamp rabbit

Freshwater Fish
channel catfish
largemouth bass
red ear sunfish
bluegill

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:

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

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

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

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 HSI

Emergent Marsh HSI =

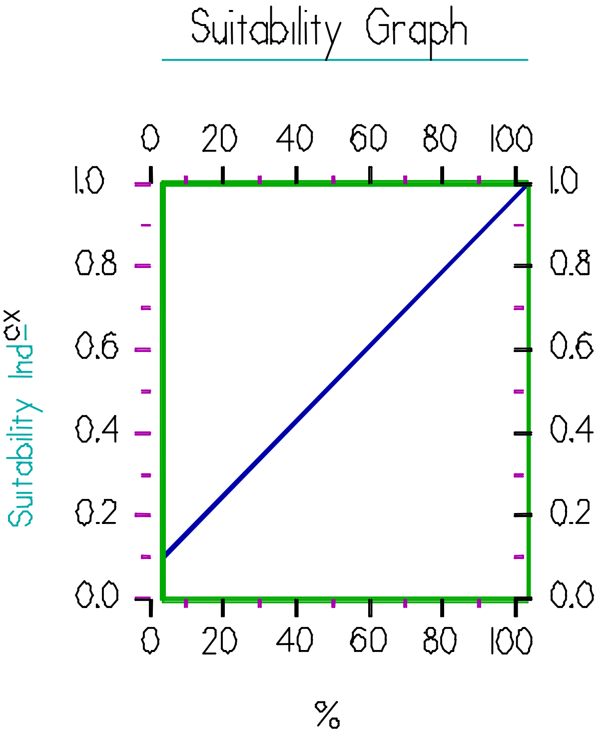
$$\frac{(3.5 \times (SIV_1^{5} \times SIV_6^{1})^{(1/6)}) + (SIV_3 + SIV_5) / 2}{4.5}$$

Open Water HSI =

$$\frac{(3.5 \times (SIV_2^{3} \times SIV_6^{1})^{(1/4)}) + (SIV_3 + SIV_4 + SIV_5) / 3}{4.5}$$

FRESH/INTERMEDIATE MARSH

Variable V_1 Percent of wetland area covered by emergent vegetation.

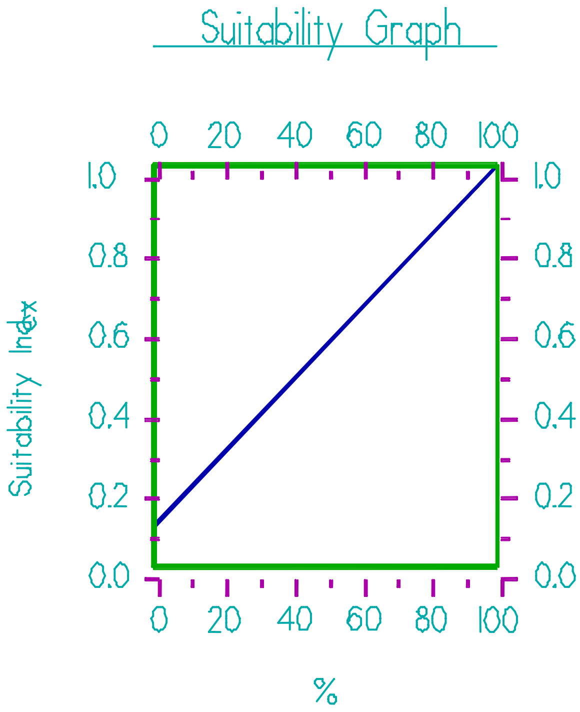


Line Formula

SI = (0.009 * %) + 0.1

FRESH/INTERMEDIATE MARSH

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

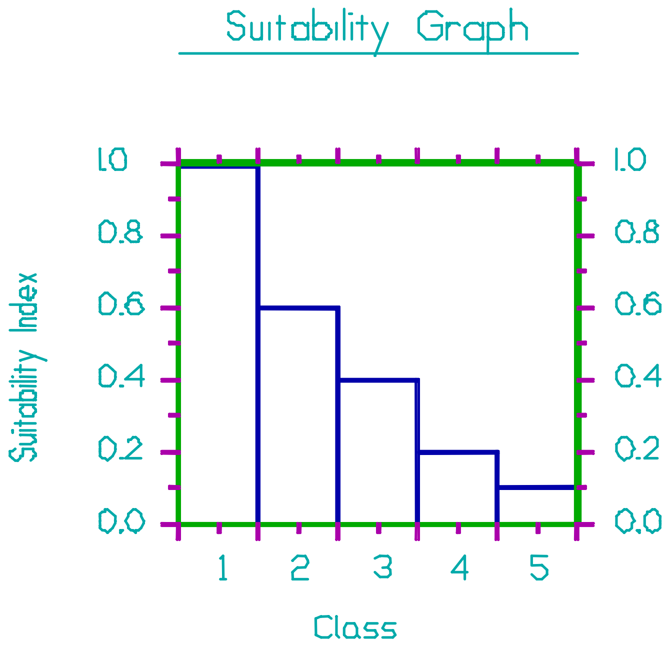


Line Formula

SI = (0.009 * %) + 0.1

FRESH/INTERMEDIATE MARSH

Variable V_3 Marsh edge and interspersion.



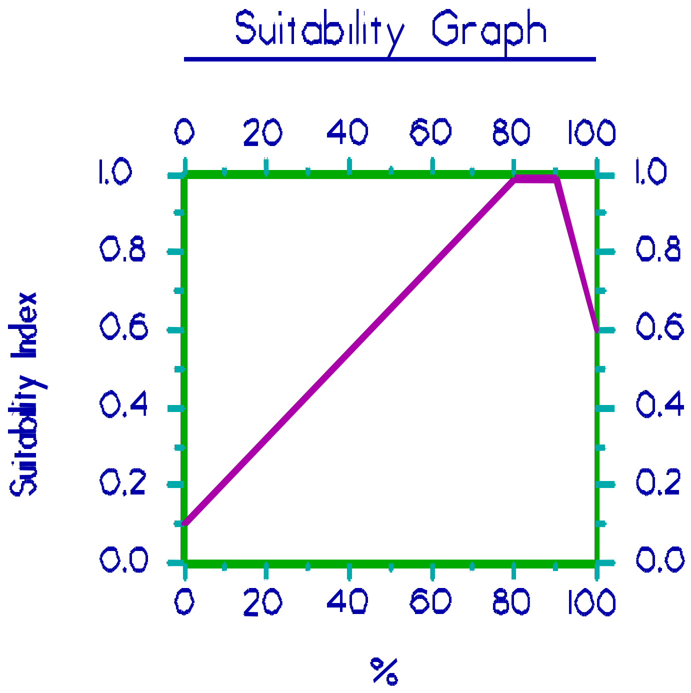
Instructions for Calculating the SI for Variable V_3:

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



Line Formulas

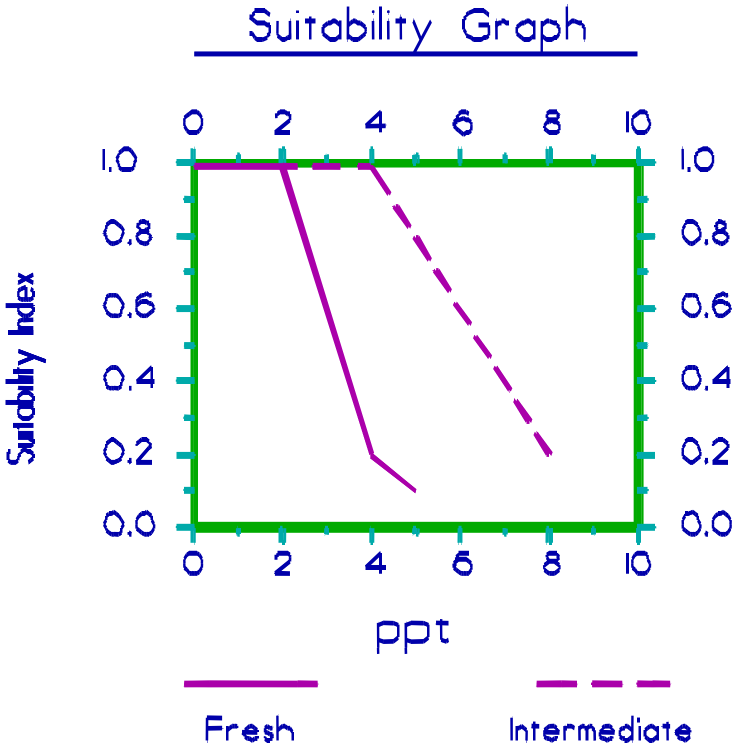
If $0 \leq \% < 80$, then SI = (0.01125 * %) + 0.1

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

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

FRESH/INTERMEDIATE MARSH

Variable 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 = $(-0.1 * ppt) + 0.6$

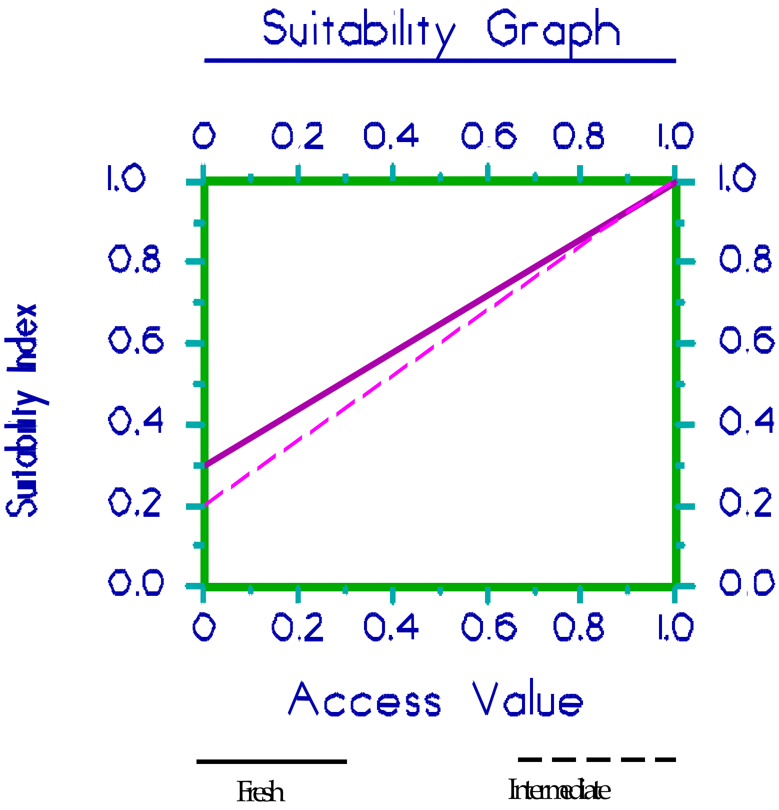
Intermediate Marsh:

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

<u>NOTE</u>: 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.

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:

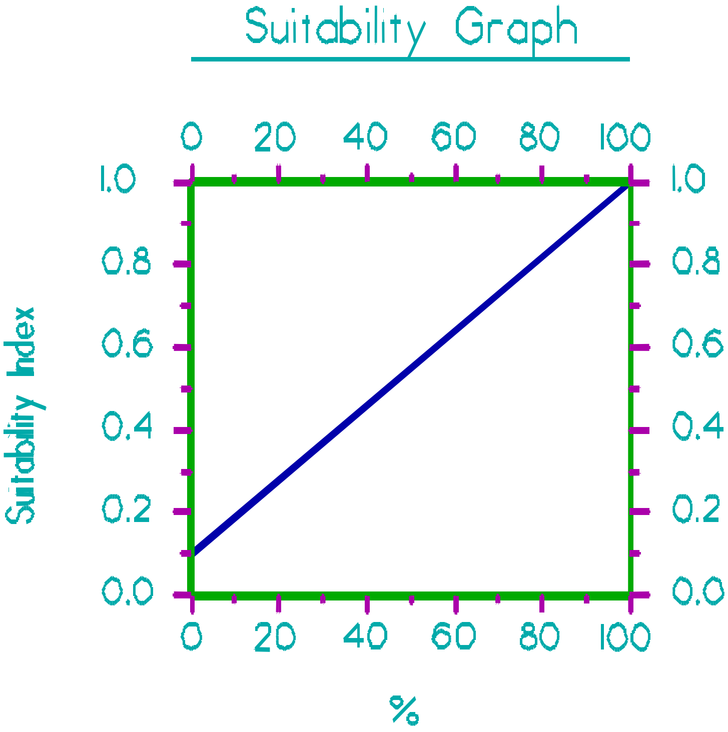
Brackish Marsh H S I

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

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

BRACKISH MARSH

Variable V_1 Percent of wetland area covered by emergent vegetation.

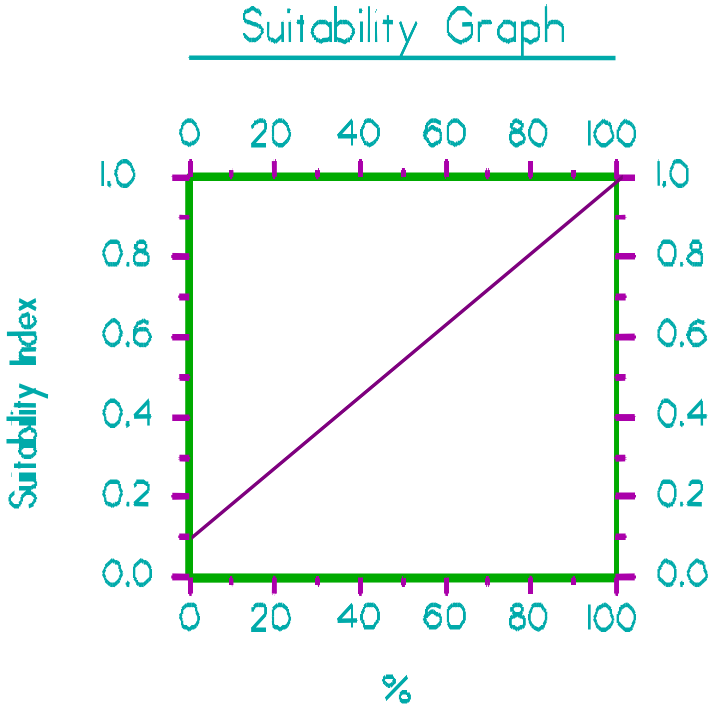


Line Formula

SI = (0.009 * %) + 0.1

BRACKISH MARSH

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

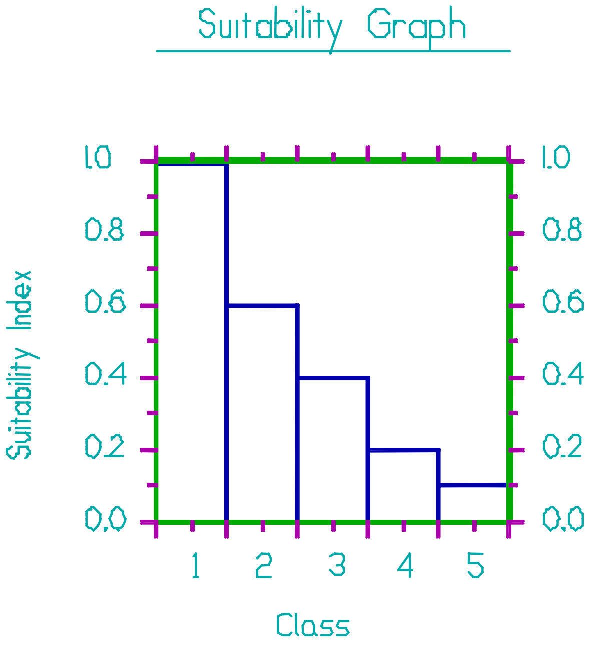


Line Formula

SI = (0.009 * %) + 0.1

BRACKISH MARSH

Variable V_3 Marsh edge and interspersion.



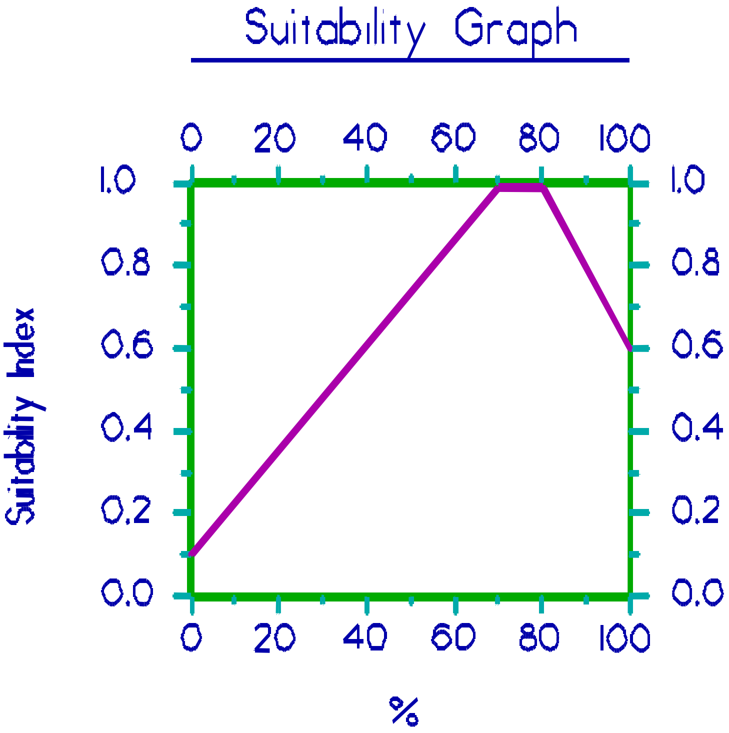
Instructions for Calculating SI for Variable V_3:

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



Line Formulas

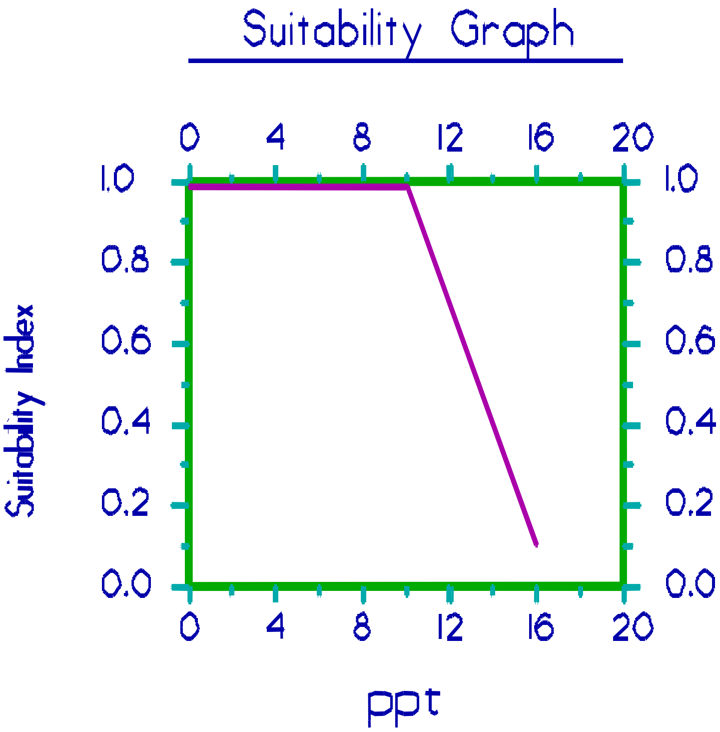
If $0 \leq \% < 70$, then SI = (0.01286 * %) + 0.1

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

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

BRACKISH MARSH

Variable V_5 Average annual salinity.



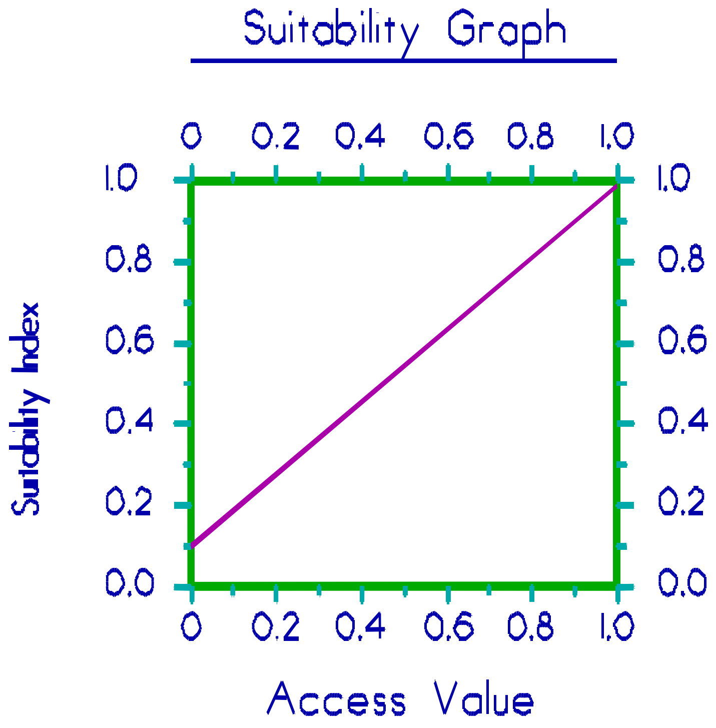
Line Formulas

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.

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:

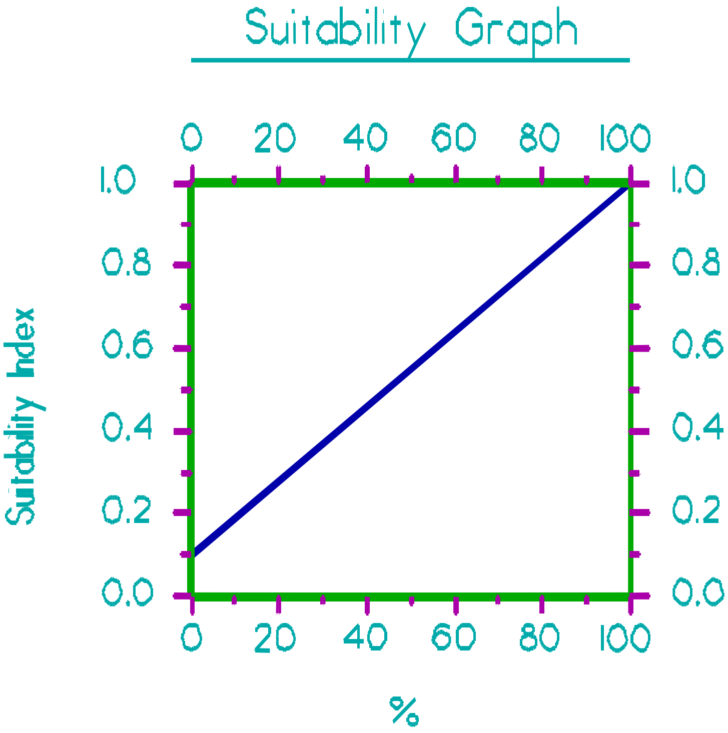
Saline Marsh H S I

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

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

SALINE MARSH

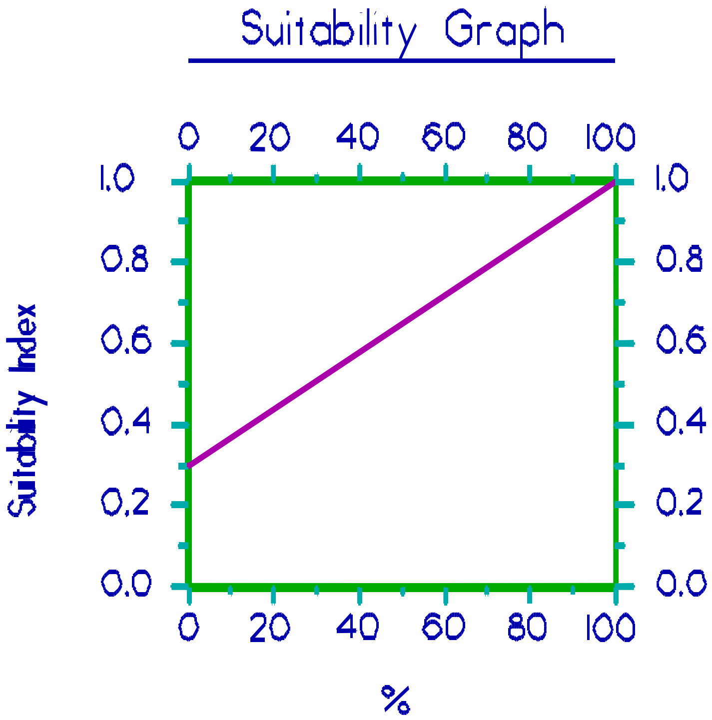
Variable V_1 Percent of wetland area covered by emergent vegetation.



Line Formula

SI = (0.009 * %) + 0.1

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

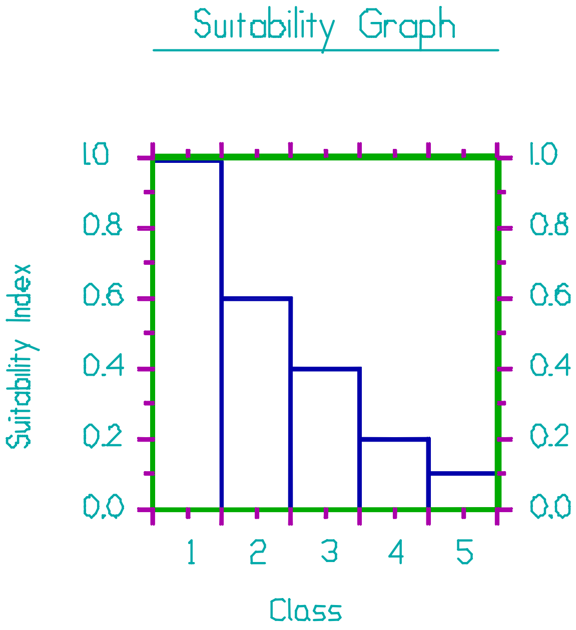


Line Formula

SI = (0.007 * %) + 0.3

SALINE MARSH

Variable V_3 Marsh edge and interspersion.



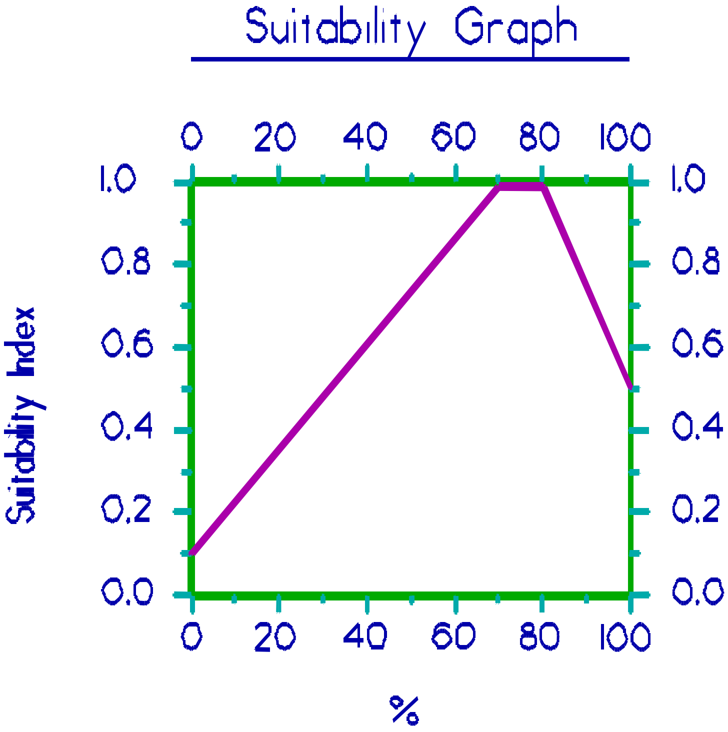
Instructions for Calculating SI for Variable V_3:

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



Line Formulas

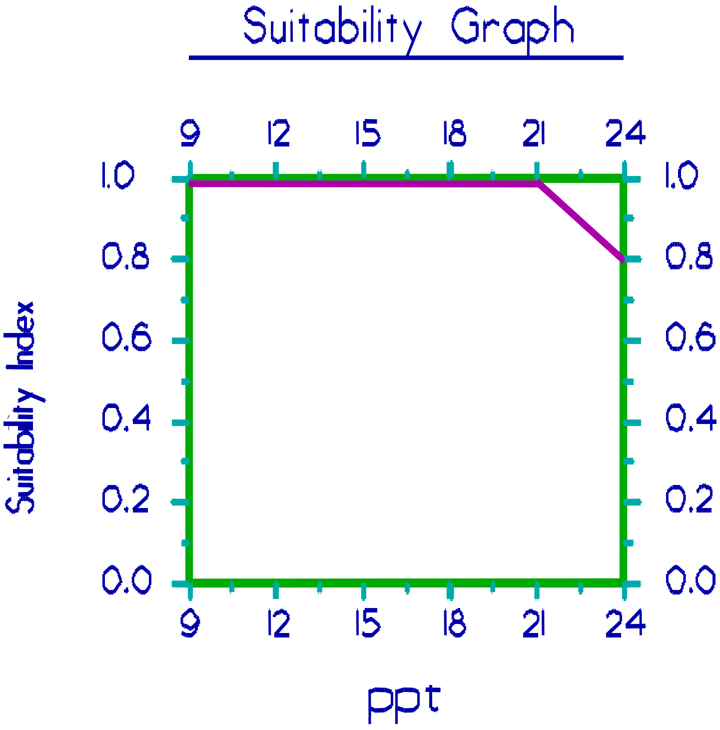
If $0 \leq \% < 70$, then SI = (0.01286 * %) + 0.1

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

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

SALINE MARSH

Variable V_5 Average annual salinity.



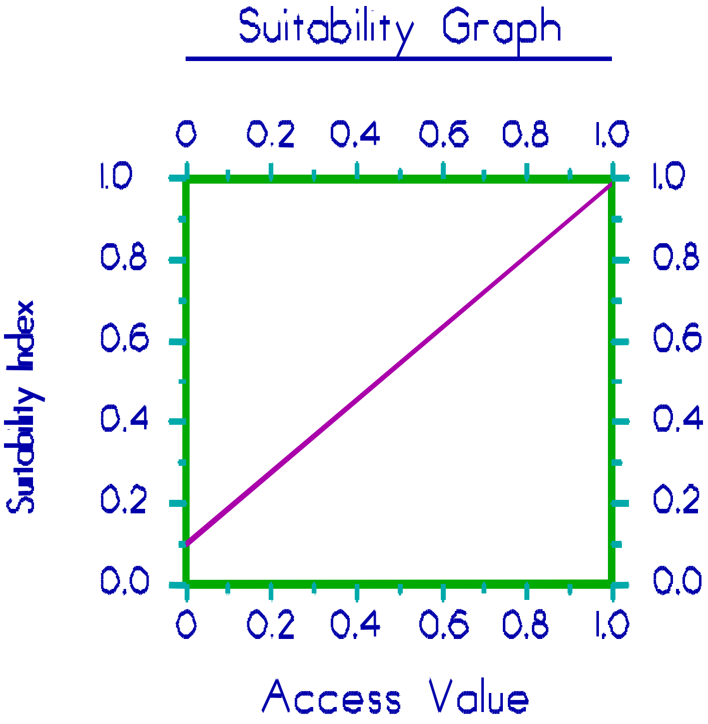
Line Formulas

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

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

SALINE MARSH

Variable V_6 Aquatic organism access.



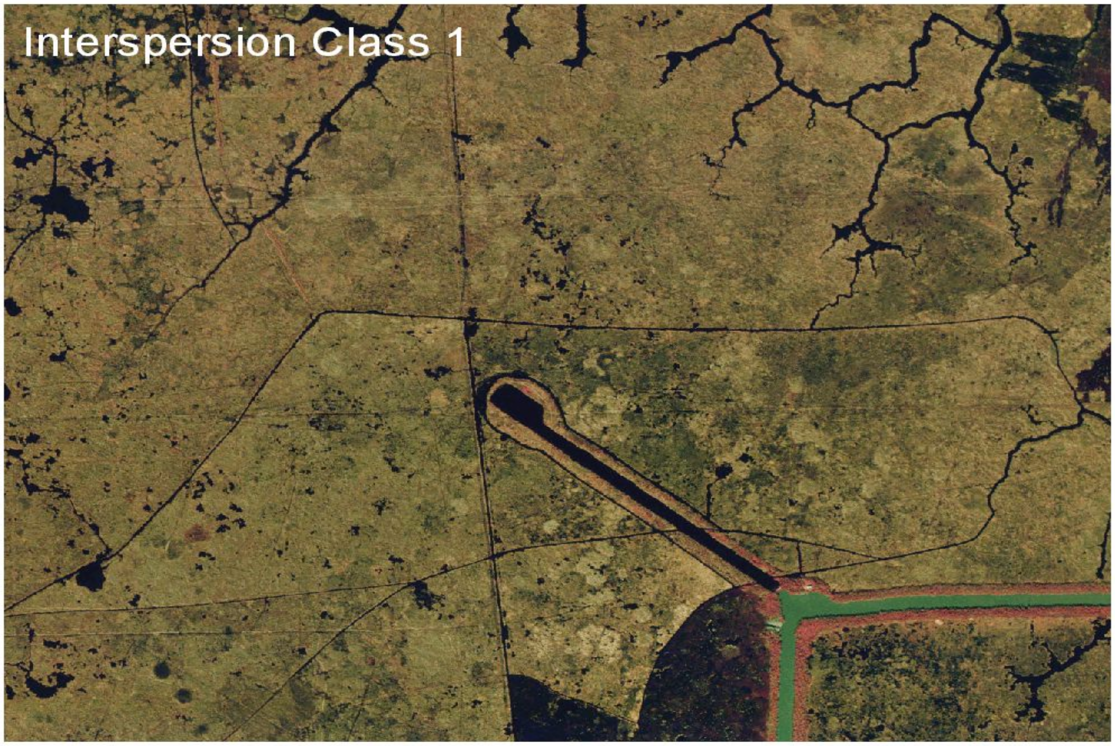
Line Formula

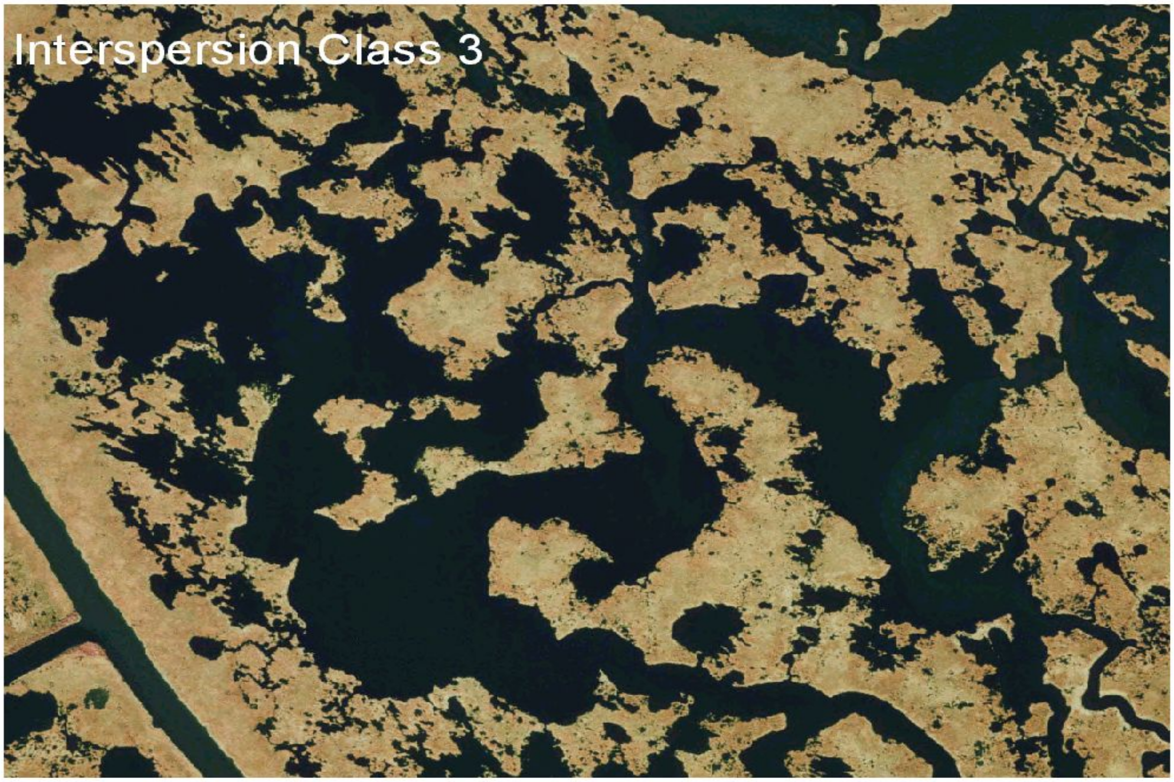
SI = (0.9 * Access Value) + 0.1

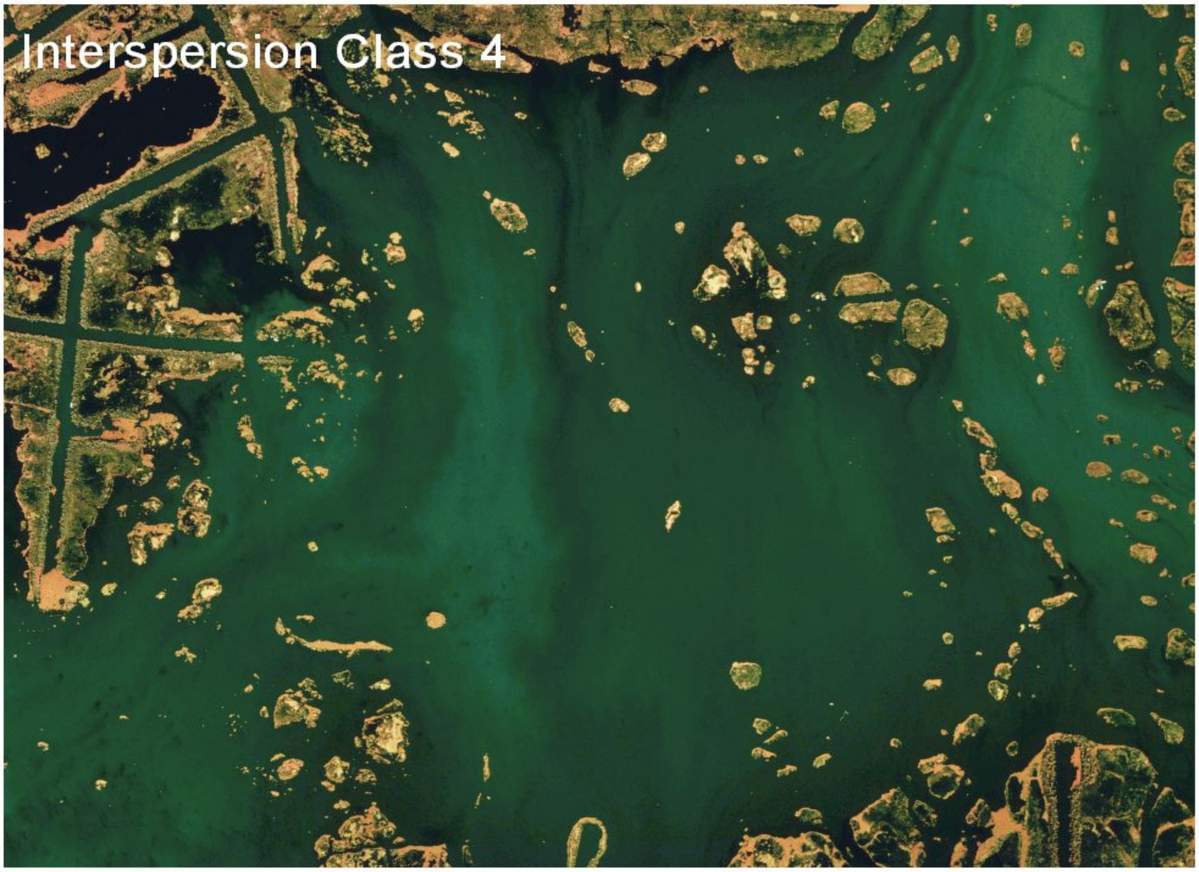
<u>Note</u>: Access Value = P * R, where "P" = percentage of wetland area considered accessible by estuarine organisms during normal tidal fluctuations, and "R" = Structure Rating.

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

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[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

Coastal Wetlands Planning, Protection, and Restoration Act

17th Priority Project List Report

Appendix C

Wetland Value Assessment for Candidate Projects

Appendix C

Wetland Value Assessment for Candidate Projects

Table of Contents

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: Irish Bayou Wetland Creation and Shoreline Protection

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

Area	AAHUs
Brackish Marsh	86.10

TOTAL BENEFITS = 86 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: Irish Bayou Wetland Creation and Shoreline Protection Project Area: 232

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	51	0.56	48	0.53	6	0.15
V2	% Aquatic	18	0.26	18	0.26	8	0.17
V3	Interspersion	%		%		%	
	Class 1	2	0.44	2	0.43		0.12
	Class 2	45		44			
	Class 3	21		21			
	Class 4	32		33		21	
	Class 5					79	
V4	%OW <= 1.5ft	34	0.54	34	0.54	13	0.27
V5	Salinity (ppt)	6	1.00	6	1.00	6	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.66**	**EM HSI =**	**0.64**	**EM HSI =**	**0.31**
	Open Water HSI =		**0.49**	**OW HSI =**	**0.49**	**OW HSI =**	**0.37**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: Irish Bayou Wetland Creation and Shoreline Protection Project Area: 232

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	51	0.56	49	0.54	59	0.63
V2	% Aquatic	18	0.26	30	0.37	30	0.37
V3	Interspersion	%		%		%	
	Class 1	2	0.44	54	0.82	54	0.82
	Class 2	45		46		46	
	Class 3	21					
	Class 4	32					
	Class 5						
V4	%OW <= 1.5ft	34	0.54	0	0.10	10	0.23
V5	Salinity (ppt)	6	1.00	6	1.00	6	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.66**	**EM HSI =**	**0.69**	**EM HSI =**	**0.75**
	Open Water HSI =		**0.49**	**OW HSI =**	**0.57**	**OW HSI =**	**0.58**

Project: Irish Bayou Wetland Creation and Shoreline Protection
FWP

Variable		TY 5		TY 20			
		Value	SI	Value	SI	Value	SI
V1	% Emergent	94	0.95	88	0.89		
V2	% Aquatic	40	0.46	45	0.51		
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 54 46	 0.82	% 54 46	 0.82	%	
V4	%OW <= 1.5ft	31	0.50	67	0.96		
V5	Salinity (ppt)	6	1.00	6	1.00		
V6	Access Value	1.00	1.00	1.00	1.00		
		EM HSI =	**0.95**	**EM HSI =**	**0.91**	**EM HSI =**	
		OW HSI =	**0.66**	**OW HSI =**	**0.72**	**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: Irish Bayou Wetland Creation and Shoreline Protection

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	118	0.66	77.53	
1	111	0.64	70.82	74.15
20	14	0.31	4.33	612.80
			AAHUs =	**34.35**

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	118	0.66	77.53	
1	114	0.69	78.28	77.92
3	136	0.75	101.67	179.50
5	219	0.95	207.40	303.55
20	205	0.91	187.39	2959.79
			AAHUs	**176.04**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	176.04
B. Future Without Project Emergent Marsh AAHUs =	34.35
Net Change (FWP - FWOP) =	**141.69**

AAHU CALCULATION - OPEN WATER

Project: Irish Bayou Wetland Creation and Shoreline Protection

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	114	0.49	56.38	
1	121	0.49	59.80	58.09
20	218	0.37	81.39	1378.41
			AAHUs =	**71.83**

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	114	0.49	56.38	
1	9	0.57	5.13	32.08
3	12	0.58	6.96	12.08
5	13	0.66	8.57	15.51
20	27	0.72	19.49	208.32
			AAHUs	**13.40**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	13.40
B. Future Without Project Open Water AAHUs =	71.83
Net Change (FWP - FWOP) =	**-58.43**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	141.69
B. Open Water Habitat Net AAHUs =	-58.43
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**86.10**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: Bayou Dupont Marsh and Ridge Restoration

The WVA for this project included 2 areas. Total benefits for this project are as follows:

Area	AAHUs
Coastal Chenier/Ridge	13.92
Brackish Marsh	107.14

TOTAL BENEFITS = 121 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: Bayou Dupont Marsh and Ridge Creation Project Area: 317

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	37	0.43	35	0.42	26	0.33
V2	% Aquatic	5	0.15	5	0.15	5	0.15
V3	Interspersion	%		%		%	
	Class 1		0.30		0.30		0.24
	Class 2						
	Class 3	50		50		20	
	Class 4	50		50		80	
	Class 5						
V4	%OW <= 1.5ft	20	0.36	20	0.36	20	0.36
V5	Salinity (ppt)	4.57	1.00	4.57	1.00	4.57	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.55**	**EM HSI =**	**0.54**	**EM HSI =**	**0.47**
	Open Water HSI =		**0.37**	**OW HSI =**	**0.37**	**OW HSI =**	**0.36**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: Bayou Dupont Marsh and Ridge Creation 317

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	37	0.43	28	0.35	64	0.68
V2	% Aquatic	5	0.15	5	0.15	40	0.46
V3	Interspersion	%		%		%	
	Class 1		0.30	100	1.00	100	1.00
	Class 2						
	Class 3	50					
	Class 4	50					
	Class 5						
V4	%OW <= 1.5ft	20	0.36	100	0.60	100	0.60
V5	Salinity (ppt)	4.57	1.00	4.57	1.00	4.57	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.55**	**EM HSI =**	**0.57**	**EM HSI =**	**0.80**
	Open Water HSI =		**0.37**	**OW HSI =**	**0.44**	**OW HSI =**	**0.68**

Project: Bayou Dupont Marsh and Ridge Creation

FWP

Variable		TY 5		TY 6		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	95	0.96	95	0.96	84	0.86
V2	% Aquatic	40	0.46	40	0.46	40	0.46
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	1.00	% 100	1.00	% 40 60	0.76
V4	%OW <= 1.5ft	100	0.60	100	0.60	80	1.00
V5	Salinity (ppt)	4.57	1.00	4.57	1.00	4.57	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		EM HSI =	**0.97**	**EM HSI =**	**0.97**	**EM HSI =**	**0.89**
		OW HSI =	**0.68**	**OW HSI =**	**0.68**	**OW HSI =**	**0.69**

AAHU CALCULATION - EMERGENT MARSH

Project: Bayou Dupont Marsh and Ridge Creation

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	117	0.55	64.70	
1	115	0.54	62.08	63.39
20	83	0.47	39.21	955.41
			AAHUs =	**50.94**

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	117	0.55	64.70	
1	83	0.57	47.36	56.13
3	193	0.80	153.96	192.99
5	284	0.97	276.31	424.96
6	285	0.97	277.29	276.80
20	253	0.89	224.07	3502.98
			AAHUs	**222.69**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	222.69
B. Future Without Project Emergent Marsh AAHUs =	50.94
Net Change (FWP - FWOP) =	**171.75**

AAHU CALCULATION - OPEN WATER

Project: Bayou Dupont Marsh and Ridge Creation

Future Without Project			**Total**	**Cummulative**
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	200	0.37	73.38	
1	202	0.37	74.12	73.75
20	234	0.36	84.82	1510.34
			AAHUs =	**79.20**

Future With Project			**Total**	**Cummulative**
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	200	0.37	73.38	
1	3	0.44	1.31	39.64
3	8	0.68	5.45	6.35
5	12	0.68	8.17	13.61
6	15	0.68	10.21	9.19
20	47	0.69	32.55	298.44
			AAHUs	**18.36**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	18.36
B. Future Without Project Open Water AAHUs =	79.20
Net Change (FWP - FWOP) =	**-60.84**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	171.75
B. Open Water Habitat Net AAHUs =	-60.84
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**107.14**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Coastal Chenier/Ridge

Project...... Bayou Dupont Marsh and Ridge Restoration Project Area.........17 acres

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Class/Value	**SI**	**Class/Value**	**SI**	**Class/Value**	**SI**
V1	Tree Canopy Cover	Percent Cover 0	0.10	Percent Cover 0	0.10	Percent Cover 0	0.10
V2	Shrub/ Midstory Cover	Percent Cover 0	0.1	Percent Cover 0	0.1	Percent Cover 0	0.1
V3	Species Diversity	Number of tree and shrub/ midstory species 0	0.10	Number of tree and shrub/ midstory species 0	0.10	Number of tree and shrub/ midstory species 0	0.10
		HSI =	**0.10**	**HSI =**	**0.10**	**HSI =**	**0.10**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Migratory Landbird - Forested Coastal Habitat

Project....... Project Area.........17 acres

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Class/Value	**SI**	**Class/Value**	**SI**	**Class/Value**	**SI**
V1	Tree Canopy Cover	Percent Cover 0	0.10	Percent Cover 0	0.10	Percent 0	0.10
V2	Shrub/ Midstory Cover	Percent Cover 0	0.1	Percent Cover 0	0.1	Percent Cover 3	0.178
V3	Species Diversity	Number of tree and shrub/ midstory species 0	0.10	Number of tree and shrub/ midstory species 0	0.10	Number of tree and shrub/ midstory species 6	0.80
		HSI =	**0.10**	**HSI =**	**0.10**	**HSI =**	**0.24**

Project....... Bayou Dupont Marsh and Ridge Restoration
FWP

Variable		TY 5		TY 6		TY 20	
		Class/Value	**SI**	**Class/Value**	**SI**	**Class/Value**	**SI**
V1	Tree Canopy Cover	Percent Cover 20	0.38	Percent Cover 65	1.00	Percent Cover 80	1.00
V2	Shrub/ Midstory Cover	Percent Cover 35	1	Percent Cover 65	1	Percent Cover 60	1
V3	Species Diversity	Number of tree and shrub/ midstory species 11	1.00	Number of tree and shrub/ midstory species 12	1.00	Number of tree and shrub/ midstory species 13	1.00
		HSI =	**0.72**	**HSI =**	**1.00**	**HSI =**	**1.00**

AAHU CALCULATION

Project: Bayou Dupont Marsh and Ridge Restoration

Future Without Project			Total	Cummulative
TY	**Acres**	**x HSI**	**HUs**	**HUs**
0	0	0.10	0.00	
1	0	0.10	0.00	0.00
20	0	0.10	0.00	0.00
			Total CHUs =	**0.00**
			AAHUs =	**0.00**

Future With Project			Total	Cummulative
TY	**Acres**	**x HSI**	**HUs**	**HUs**
0	0	0.10	0.00	
1	30	0.10	3.00	1.50
3	17	0.24	4.12	7.74
5	17	0.72	12.31	16.43
6	17	1.00	17.00	14.66
20	17	1.00	17.00	238.00
			Total CHUs =	**278.33**
			AAHUs =	**13.92**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project AAHUs =	13.92
B. Future Without Project AAHUs =	0.00
Net Change (FWP - FWOP) =	**13.92**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: Bayou Thunder Marsh Creation and Shoreline Protection

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

Area	AAHUs
Saline Marsh	100.54

TOTAL BENEFITS = 101 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Saline Marsh

Project: Bayou Thunder Marsh Creation and Shoreline Protection Project Area: 348

Condition: Future Without Project

		TY 0		TY 1		TY 20	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	50	0.55	48	0.53	27	0.34
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1		0.40		0.40		0.20
	Class 2	50		50			
	Class 3						
	Class 4	50		50		100	
	Class 5						
V4	%OW <= 1.5ft	36	0.56	36	0.56	49	0.73
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.65**	**EM HSI =**	**0.64**	**EM HSI =**	**0.48**
	Open Water HSI =		**0.70**	**OW HSI =**	**0.70**	**OW HSI =**	**0.69**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Saline Marsh

Project: Bayou Thunder Marsh Creation and Shoreline Protection Project Area: 348

Condition: Future With Project

		TY 0		TY 1		TY 3	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	50	0.55	33	0.40	71	0.74
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1		0.40	100	1.00	100	1.00
	Class 2	50					
	Class 3						
	Class 4	50					
	Class 5						
V4	%OW <= 1.5ft	36	0.56	100	0.50	100	0.50
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.65**	**EM HSI =**	**0.61**	**EM HSI =**	**0.84**
	Open Water HSI =		**0.70**	**OW HSI =**	**0.74**	**OW HSI =**	**0.74**

Project: Bayou Thunder Marsh Creation and Shoreline Protection
FWP

Variable		TY 5		TY 20			
		Value	SI	Value	SI	Value	SI
V1	% Emergent	93	0.94	74	0.77		
V2	% Aquatic	0	0.30	0	0.30		
V3	Interspersion	%		%		%	
	Class 1	100	1.00		0.60		
	Class 2			100			
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	100	0.50	75	1.00		
V5	Salinity (ppt)	20	1.00	20	1.00		
V6	Access Value	1.00	1.00	1.00	1.00		
		EM HSI =	**0.96**	**EM HSI =**	**0.81**	**EM HSI =**	
		OW HSI =	**0.74**	**OW HSI =**	**0.74**	**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: Bayou Thunder Marsh Creation and Shoreline Protection

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	173	0.65	112.85	
1	168	0.64	107.53	110.18
20	93	0.48	44.82	1409.75
			AAHUs =	**76.00**

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	173	0.65	112.85	
1	115	0.61	70.29	91.17
3	249	0.84	209.69	269.67
5	322	0.96	310.07	516.83
20	256	0.81	208.54	3865.11
			AAHUs	**237.14**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	237.14
B. Future Without Project Emergent Marsh AAHUs =	76.00
Net Change (FWP - FWOP) =	**161.14**

AAHU CALCULATION - OPEN WATER

Project: Bayou Thunder Marsh Creation and Shoreline Protection

Future Without Project			**Total**	**Cummulative**
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	175	0.70	121.94	
1	180	0.70	125.42	123.68
20	255	0.69	177.06	2874.21
			AAHUs =	**149.89**

Future With Project			**Total**	**Cummulative**
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	175	0.70	121.94	
1	5	0.74	3.68	63.94
3	16	0.74	11.79	15.47
5	26	0.74	19.15	30.94
20	92	0.74	68.45	655.76
			AAHUs	**38.31**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	38.31
B. Future Without Project Open Water AAHUs =	149.89
Net Change (FWP - FWOP) =	**-111.59**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	161.14
B. Open Water Habitat Net AAHUs =	-111.59
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	**100.54**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: Caernarvon Outfall Management and Lake Lery Shoreline Restora

The WVA for this project included 2 areas. Total benefits for this project are as follows:

Area	AAHUs
Project Area	344.27
Negative Impact Area	-41.94

TOTAL BENEFITS = 302 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Caernarvon Outfall Management and Lake Lery Shoreline Restoration - Negative Impact Area
Condition: Future Without Project

Project Area:
Fresh............
Intermediate.. 5,361

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	51	0.56	54	0.59	82	0.84
V2	% Aquatic	22	0.30	30	0.37	30	0.37
V3	Interspersion	%		%		%	
	Class 1		0.25		0.25		0.50
	Class 2					50	
	Class 3	26		26		50	
	Class 4	74		74			
	Class 5						
V4	%OW <= 1.5ft	16	0.28	16	0.28	50	0.66
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1		0.5		0.5	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.00		1.00		1.00	
	Emergent Marsh HSI	**=**	**0.62**	**EM HSI =**	**0.64**	**EM HSI =**	**0.84**
	Open Water HSI	**=**	**0.43**	**OW HSI =**	**0.48**	**OW HSI =**	**0.53**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Caernarvon Outfall Management and Lake Lery Shoreline Restoration - Negative Impact Area
Condition: Future With Project

Project Area:
Fresh............
Intermediate. 5,361

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	51	0.56	53	0.58	80	0.82
V2	% Aquatic	22	0.30	30	0.37	30	0.37
V3	Interspersion	%		%		%	
	Class 1		0.25		0.25		0.50
	Class 2					50	
	Class 3	26		26		50	
	Class 4	74		74			
	Class 5						
V4	%OW <= 1.5ft	16	0.28	16	0.28	50	0.66
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1		0.5		0.5	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.00		1.00		1.00	
	Emergent Marsh HSI	**=**	**0.62**	**EM HSI =**	**0.63**	**EM HSI =**	**0.83**
	Open Water HSI	**=**	**0.43**	**OW HSI =**	**0.48**	**OW HSI =**	**0.53**

AAHU CALCULATION - EMERGENT MARSH

Project: Caernarvon Outfall Management and Lake Lery Shoreline Restoration - Negative Impact Area

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	2743	0.62	1695.57	
1	2871	0.64	1829.83	1762.29
20	4399	0.84	3686.05	51430.31
			AAHUs =	**2659.63**

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	2743	0.62	1695.57	
1	2858	0.63	1803.30	1749.19
20	4293	0.83	3545.55	49928.28
			AAHUs	**2583.87**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	2583.87
B. Future Without Project Emergent Marsh AAHUs =	2659.63
Net Change (FWP - FWOP) =	**-75.76**

AAHU CALCULATION - OPEN WATER

Project: Caernarvon Outfall Management and Lake Lery Shoreline Restoration - Negative Impact Area

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	2618	0.43	1118.37	
1	2490	0.48	1201.34	1161.03
20	962	0.53	509.06	16474.76
			AAHUs =	**881.79**

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	2618	0.43	1118.37	
1	2503	0.48	1207.61	1164.05
20	1068	0.53	565.15	17053.46
			AAHUs	**910.88**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	910.88
B. Future Without Project Open Water AAHUs =	881.79
Net Change (FWP - FWOP) =	**29.09**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	-75.76
B. Open Water Habitat Net AAHUs =	29.09
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**-41.94**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Caernarvon Outfall Management and Lake Lery Shoreline Restoration
Condition: Future Without Project

Project Area:
Fresh............
Intermediate.. 10,899

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	65	0.69	64	0.68	49	0.54
V2	% Aquatic	22	0.30	22	0.30	21	0.29
V3	Interspersion	%		%		%	
	Class 1		0.35		0.35		0.32
	Class 2						
	Class 3	74		74		60	
	Class 4	26		26		40	
	Class 5						
V4	%OW <= 1.5ft	18	0.30	18	0.30	13	0.25
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	2		2		2	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.00		1.00		1.00	
	Emergent Marsh HSI	=	0.72	EM HSI =	0.71	EM HSI =	0.61
	Open Water HSI	=	0.44	OW HSI =	0.44	OW HSI =	0.42

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Caernarvon Outfall Management and Lake Lery Shoreline Restoration
Condition: Future With Project

Project Area:
Fresh............
Intermediate. 10,899

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	65	0.69	64	0.68	64	0.68
V2	% Aquatic	22	0.30	25	0.33	30	0.37
V3	Interspersion	%		%		%	
	Class 1		0.35	3	0.37	3	0.37
	Class 2						
	Class 3	74		72		72	
	Class 4	26		25		25	
	Class 5						
V4	%OW <= 1.5ft	18	0.30	16	0.28	16	0.28
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	2		1.5		1.5	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.00		1.00		1.00	
	Emergent Marsh HSI	=	0.72	EM HSI =	0.71	EM HSI =	0.71
	Open Water HSI	=	0.44	OW HSI =	0.46	OW HSI =	0.49

Project: Caernarvon Outfall Management and Lake Lery Shoreline Restoration
FWP

		TY 5		TY 20			
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Emergent	64	0.68	56	0.60		
V2	% Aquatic	30	0.37	30	0.37		
V3	Interspersion	%		%		%	
	Class 1	3	0.37	3	0.37		
	Class 2						
	Class 3	72		72			
	Class 4	25		25			
	Class 5						
V4	%OW <= 1.5ft	16	0.28	14	0.26		
V5	Salinity (ppt)						
	fresh		1.00		1.00		
	intermediate	1.5		1.5			
V6	Access Value						
	fresh		1.00		1.00		
	intermediate	1.00		1.00			
		EM HSI =	**0.71**	**EM HSI =**	**0.66**	**EM HSI =**	
		OW HSI =	**0.49**	**OW HSI =**	**0.49**	**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: Caernarvon Outfall Management and Lake Lery Shoreline Restoration

Future Without Project			**Total**	**Cummulative**
TY	**Marsh Acres**	**x HSI**	**HUs**	**HUs**
0	7053	0.72	5058.64	
1	6958	0.71	4947.22	5002.83
20	5353	0.61	3280.37	77663.08
			AAHUs =	**4133.30**

Future With Project			**Total**	**Cummulative**
TY	**Marsh Acres**	**x HSI**	**HUs**	**HUs**
0	7053	0.72	5058.64	
1	6954	0.71	4959.83	5009.17
3	6945	0.71	4953.41	9913.25
5	6996	0.71	4989.79	9943.20
20	6111	0.66	4051.34	67697.27
			AAHUs	**4628.14**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	4628.14
B. Future Without Project Emergent Marsh AAHUs =	4133.30
Net Change (FWP - FWOP) =	**494.85**

AAHU CALCULATION - OPEN WATER

Project: Caernarvon Outfall Management and Lake Lery Shoreline Restoration

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	3846	0.44	1676.71	
1	3941	0.44	1718.12	1697.42
20	5546	0.42	2343.67	38655.05
			AAHUs =	**2017.62**

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	3846	0.44	1676.71	
1	3646	0.46	1665.71	1671.91
3	3776	0.49	1854.23	3518.47
5	3903	0.49	1916.60	3770.83
20	4788	0.49	2343.20	31952.19
			AAHUs	**2045.67**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	2045.67
B. Future Without Project Open Water AAHUs =	2017.62
Net Change (FWP - FWOP) =	**28.05**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	494.85
B. Open Water Habitat Net AAHUs =	28.05
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**344.27**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: **Bohemia Mississippi River Reintroduction**

The WVA for this project included 4 areas. Total benefits for this project are as follows:

Area	AAHUs
Saline Marsh	-81.72
Fresh/Intermediate Marsh	1402.83
Brackish Marsh	-331.56
Bottomland Hardwoods	-2.79

TOTAL BENEFITS = 987 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Bottomland Hardwoods

Project...... Bohemia Mississippi River Reintroduction Acres: 6
Condition: Future With Project

		TY 0		TY 1		TY 3	
Variable		**Class/Value**	**SI**	**Class/Value**	**SI**	**Class/Value**	**SI**
V1	Species Assoc.	Class 5	1.00	Class 1		Class 1	
V2	Maturity (input age or dbh, not both)	Age dbh 8.7	0.15	Age 4 dbh	0.02	Age 6 dbh	0.04
V3	Understory / Midstory	Understory % 20 Midstory % 33	0.85	Understory % 25 Midstory % 10		Understory % 90 Midstory % 5	
V4	Hydrology	Class 3	1.00	Class 3	1.00	Class 3	1.00
V5	Forest Size	Class 5	1.00	Class 5		Class 5	
V6	Surrounding Land Use Forest / marsh Abandoned Ag Pasture / Hay Active Ag Development	Values % 100	1.00	Values % 100	1.00	Values % 100	1.00
V7	Disturbance Type Distance	Class 4 Class 3	1.00	Class 4 Class 3	1.00	Class 4 Class 3	1.00
		HSI =	**0.59**	**HSI =**	**0.14**		**0.20**

Project...... Bohemia Mississippi River Reintroduction
FWP

		TY 5		TY 8		TY 18	
Variable		**Class/Value**	**SI**	**Class/Value**	**SI**	**Class/Value**	**SI**
V1	Species Assoc.	Class 1	0.20	Class 5	1.00	Class 5	1.00
V2	Maturity (input age or dbh, not both)	Age 8 dbh	0.07	Age 11 dbh	0.12	Age 21 dbh	0.33
V3	Understory / Midstory	Understory % 80 Midstory % 10	0.68	Understory % 70 Midstory % 40	0.95	Understory % 30 Midstory % 40	1.00
V4	Hydrology	Class 3	1.00	Class 3	1.00	Class 3	1.00
V5	Forest Size	Class 5	1.00	Class 5	1.00	Class 5	1.00
V6	Surrounding Land Use Forest / marsh Abandoned Ag Pasture / Hay Active Ag Development	Values % 100	1.00	Values % 100	1.00	Values % 100	1.00
V7	Disturbance Type Distance	Class 4 Class 3	1.00	Class 4 Class 3	1.00	Class 4 Class 3	1.00
		HSI =	**0.30**	**HSI =**	**0.56**	**HSI =**	**0.74**

Project...... Bohemia Mississippi River Reintroduction
FWP

		TY 20		TY		TY	
Variable		**Class/Value**	**SI**	**Class/Value**	**SI**	**Class/Value**	**SI**
V1	Species Assoc.	Class 5	1.00	Class		Class	
V2	Maturity (input age or dbh, not both)	Age 23 dbh	0.39	Age dbh		Age dbh	
V3	Understory / Midstory	Understory % 25 Midstory % 40	0.93	Understory % Midstory %		Understory % Midstory %	
V4	Hydrology	Class 3	1.00	Class		Class	
V5	Forest Size	Class 5	1.00	Class		Class	
V6	Surrounding Land Use Forest / marsh Abandoned Ag Pasture / Hay Active Ag Development	Values % 100	1.00	Values %		Values %	
V7	Disturbance Type Distance	Class 4 Class 3	1.00	Class Class		Class Class	
		HSI =	**0.77**	**HSI =**		**HSI =**	

Project...... Bohemia Mississippi River Reintroduction Acres:
Condition: Future Without Project

		TY 0		TY 1		TY 20	
Variable		**Class/Value**	**SI**	**Class/Value**	**SI**	**Class/Value**	**SI**
V1	Species Assoc.	Class 5	1.00	Class 5	1.00	Class 5	1.00
V2	Maturity (input age or dbh, not both)	Age dbh 8.7	0.15	Age dbh 9	0.17	Age 33 dbh	0.66
V3	Understory / Midstory	Understory % 20 Midstory % 33	0.85	Understory % 20 Midstory % 33	0.85	Understory % 20 Midstory % 33	0.85
V4	Hydrology	Class 3	1.00	Class 3	1.00	Class 3	1.00
V5	Forest Size	Class 5	1.00	Class 5	1.00	Class 5	1.00
V6	Surrounding Land Use Forest / marsh Abandoned Ag Pasture / Hay Active Ag Development	Values % 100	1.00	Values % 100	1.00	Values % 100	1.00
V7	Disturbance Type Distance	Class 4 Class 3	1.00	Class 4 Class 3	1.00	Class 4 Class 3	1.00
		HSI =	**0.59**	**HSI =**	**0.61**	**HSI =**	**0.88**

AAHU CALCULATION, Bottomland Hardwoods

Project: Bohemia Mississippi River Reintroduction

#REF!

Future With Project			**Total**	**Cummulative**
TY	**Acres**	**x HSI**	**HUs**	**HUs**
0	6	0.59	3.52	
1	3	0.14	0.42	1.75
3	3	0.20	0.60	1.02
5	3	0.30	0.90	1.50
8	3	0.56	1.69	3.89
18	3	0.74	2.23	19.62
20	3	0.77	2.31	4.54
			Total CHUs =	**32.32**
			AAHUs =	**1.62**

Future Without Project			**Total**	**Cummulative**
TY	**Acres**	**x HSI**	**HUs**	**HUs**
0	6	0.59	3.52	
1	6	0.61	3.64	3.58
20	6	0.88	5.26	84.54
			Total CHUs =	**88.12**
			AAHUs =	**4.41**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project AAHUs =	1.62
B. Future Without Project AAHUs =	4.41
Net Change (FWP - FWOP) =	-2.79

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: Bohemia Mississippi River Reintroduciton　　Project Area: 2,510

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	87	0.88	87	0.88	85	0.87
V2	% Aquatic	1	0.11	1	0.11	1	0.11
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00	90	0.96
	Class 2					10	
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	31	0.50	31	0.50	33	0.52
V5	Salinity (ppt)	6	1.00	6	1.00	6	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.93**	**EM HSI =**	**0.93**	**EM HSI =**	**0.91**
	Open Water HSI =		**0.39**	**OW HSI =**	**0.39**	**OW HSI =**	**0.39**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: Bohemia Mississippi River Reintroduciton　　Project Area: 2,510

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	87	0.88	87	0.88	87	0.88
V2	% Aquatic	1	0.11	20	0.28	30	0.37
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00	100	1.00
	Class 2						
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	31	0.50	29	0.47	34	0.54
V5	Salinity (ppt)	6	1.00	2	1.00	2	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI =		**0.93**	**EM HSI =**	**0.93**	**EM HSI =**	**0.93**
	Open Water HSI =		**0.39**	**OW HSI =**	**0.55**	**OW HSI =**	**0.62**

Project: Bohemia Mississippi River Reintroduciton
FWP

Variable		TY 4		TY 5		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	87	0.88	56	0.60	69	0.72
V2	% Aquatic	30	0.37	6	0.15	6	0.15
V3	Interspersion	%		%		%	
	Class 1	100	1.00	50	0.60	75	0.80
	Class 2						
	Class 3						
	Class 4			50		25	
	Class 5						
V4	%OW <= 1.5ft	37	0.58	23	0.40	66	0.95
V5	Salinity (ppt)	2	1.00	2	1.00	2	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
		EM HSI =	**0.93**	**EM HSI =**	**0.71**	**EM HSI =**	**0.80**
		OW HSI =	**0.62**	**OW HSI =**	**0.40**	**OW HSI =**	**0.46**

AAHU CALCULATION - EMERGENT MARSH

Project: Bohemia Mississippi River Reintroduciton

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	2181	0.93	2026.16	
1	2179	0.93	2024.31	2025.23
20	2137	0.91	1952.05	37773.29
			AAHUs =	**1989.93**

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	2181	0.93	2026.16	
1	2178	0.93	2023.38	2024.77
3	2188	0.93	2032.67	4056.04
4	2192	0.93	2036.38	2034.52
5	1502	0.71	1059.69	1522.34
20	1866	0.80	1501.66	19119.85
			AAHUs	**1437.88**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	1437.88
B. Future Without Project Emergent Marsh AAHUs =	1989.93
Net Change (FWP - FWOP) =	**-552.05**

AAHU CALCULATION - OPEN WATER

Project: Bohemia Mississippi River Reintroduciton

Future Without Project			**Total**	**Cummulative**
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	329	0.39	128.58	
1	331	0.39	129.36	128.97
20	373	0.39	145.38	2610.21
			AAHUs =	**136.96**

Future With Project			**Total**	**Cummulative**
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	329	0.39	128.58	
1	332	0.55	181.12	154.77
3	322	0.62	198.44	379.80
4	318	0.62	196.88	197.66
5	1192	0.40	477.97	369.20
20	828	0.46	378.19	6471.97
			AAHUs	**378.67**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	378.67
B. Future Without Project Open Water AAHUs =	136.96
Net Change (FWP - FWOP) =	**241.71**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	-552.05
B. Open Water Habitat Net AAHUs =	241.71
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**-331.56**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: Bohemia Mississippi River Reintroduciton
No intermediate marsh under future without-project condition
Condition: Future Without Project

Project Area:
Fresh............
Intermediate.. 2,500

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	%		%		%	
V4	%OW <= 1.5ft						
V5	Salinity (ppt) fresh intermediate						
V6	Access Value fresh intermediate						
	Emergent Marsh HSI =			**EM HSI =**		**EM HSI =**	
	Open Water HSI =			**OW HSI =**		**OW HSI =**	

Project: Bohemia Mississippi River Reintroduciton
Intermediate marsh develops at target year 5
Condition: Future With Project

Project Area:
Fresh...........
Intermediate. 2,500

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	%		%		%	
V4	%OW <= 1.5ft						
V5	Salinity (ppt) fresh intermediate						
V6	Access Value fresh intermediate						
	Emergent Marsh HSI =			**EM HSI =**		**EM HSI =**	
	Open Water HSI =			**OW HSI =**		**OW HSI =**	

Project: Bohemia Mississippi River Reintroduciton
FWP

		TY 4		TY 5		TY 20	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent			88	0.89	90	0.91
V2	% Aquatic			30	0.37	30	0.37
V3	Interspersion	%		%		%	
	Class 1			100	1.00	100	1.00
	Class 2						
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft			31	0.45	79	0.99
V5	Salinity (ppt)						
	fresh				1.00		1.00
	intermediate			2		2	
V6	Access Value						
	fresh				1.00		1.00
	intermediate			1.00		1.00	
		EM HSI =		EM HSI =	0.93	EM HSI =	0.94
		OW HSI =		OW HSI =	0.55	OW HSI =	0.59

AAHU CALCULATION - EMERGENT MARSH

Project: Bohemia Mississippi River Reintroduciton
No intermediate marsh under future without-project condition

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0		0.00	
1	0		0.00	0.00
20	0		0.00	0.00
			AAHUs =	0.00

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0		0.00	
1	0		0.00	0.00
3	0		0.00	0.00
4	0		0.00	0.00
5	2206	0.93	2050.13	683.38
20	2262	0.94	2129.02	31341.98
			AAHUs	2001.58

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	2001.58
B. Future Without Project Emergent Marsh AAHUs =	0.00
Net Change (FWP - FWOP) =	**2001.58**

AAHU CALCULATION - OPEN WATER

Project: Bohemia Mississippi River Reintroduciton
No intermediate marsh under future without-project condition

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	0		0.00	
1	0		0.00	0.00
20	0		0.00	0.00
			AAHUs =	**0.00**

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	0		0.00	
1	0		0.00	0.00
3	0		0.00	0.00
4	0		0.00	0.00
5	294	0.55	161.81	53.94
20	238	0.59	140.51	2272.99
			AAHUs	**145.43**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	145.43
B. Future Without Project Open Water AAHUs =	0.00
Net Change (FWP - FWOP) =	**145.43**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	2001.58
B. Open Water Habitat Net AAHUs =	145.43
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**1402.83**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Bohemia Mississippi River Reintroduciton   Project Area: 2,694

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	51	0.56	51	0.56	50	0.55
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	50	0.60	50	0.60	50	0.60
	Class 2						
	Class 3						
	Class 4	50		50		50	
	Class 5						
V4	%OW <= 1.5ft	8	0.20	8	0.20	8	0.20
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	**=**	**0.68**	**EM HSI =**	**0.68**	**EM HSI =**	**0.67**
	Open Water HSI	**=**	**0.68**	**OW HSI =**	**0.68**	**OW HSI =**	**0.68**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: Bohemia Mississippi River Reintroduciton   Project Area: 2,694

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	51	0.56	51	0.56	54	0.59
V2	% Aquatic	0	0.30	6	0.34	6	0.34
V3	Interspersion	%		%		%	
	Class 1	50	0.60	50	0.60	50	0.60
	Class 2						
	Class 3						
	Class 4	50		50		50	
	Class 5						
V4	%OW <= 1.5ft	8	0.20	11	0.24	17	0.32
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	**=**	**0.68**	**EM HSI =**	**0.68**	**EM HSI =**	**0.70**
	Open Water HSI	**=**	**0.68**	**OW HSI =**	**0.71**	**OW HSI =**	**0.71**

Project: Bohemia Mississippi River Reintroduciton

FWP

Variable		TY 4		TY 5		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	55	0.60	No Saline Marsh	0.10	No Saline Marsh	0.10
V2	% Aquatic	6	0.34				
V3	Interspersion	%		%		%	
	Class 1	50	0.60				
	Class 2						
	Class 3						
	Class 4	50					
	Class 5						
V4	%OW <= 1.5ft	20	0.36				
V5	Salinity (ppt)	9	1.00				
V6	Access Value	1.00	1.00				
		EM HSI =	**0.70**	**EM HSI =**	**0.00**	**EM HSI =**	**0.00**
		OW HSI =	**0.72**	**OW HSI =**	**0.00**	**OW HSI =**	**0.00**

AAHU CALCULATION - EMERGENT MARSH

Project: Bohemia Mississippi River Reintroduciton

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1379	0.68	938.55	
1	1378	0.68	937.87	938.21
20	1351	0.67	911.27	17566.29
			AAHUs =	**925.22**

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1379	0.68	938.55	
1	1404	0.68	955.56	947.05
3	1453	0.70	1015.22	1970.49
4	1477	0.70	1040.84	1028.00
5	0	0.00	0.00	346.95
20	0	0.00	0.00	0.00
			AAHUs	**858.50**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	858.50
B. Future Without Project Emergent Marsh AAHUs =	925.22
Net Change (FWP - FWOP) =	**-66.73**

AAHU CALCULATION - OPEN WATER

Project: Bohemia Mississippi River Reintroduciton

Future Without Project			Total	Cummulative
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	1315	0.68	900.70	
1	1316	0.68	901.38	901.04
20	1343	0.68	919.87	17301.93
			AAHUs =	**910.15**

Future With Project			Total	Cummulative
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	1315	0.68	900.70	
1	1290	0.71	914.39	907.64
3	1241	0.71	886.75	1801.24
4	1217	0.72	873.08	879.93
5	0	0.00	0.00	291.03
20	0	0.00	0.00	0.00
			AAHUs	**775.97**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	775.97
B. Future Without Project Open Water AAHUs =	910.15
Net Change (FWP - FWOP) =	**-134.18**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	-66.73
B. Open Water Habitat Net AAHUs =	-134.18
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	**-81.72**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: **West Pointe a la Hache Marsh Creation**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

Area	AAHUs
Fresh/Intermediate Marsh	125.87

TOTAL BENEFITS = 126 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project: West Pointe a la Hache Marsh Creation

Project Area:
Fresh............
Intermediate.. 352

Condition: Future Without Project

		TY 0		TY 1		TY 20	
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Emergent	29	0.36	28	0.35	15	0.24
V2	% Aquatic	5	0.15	5	0.15	5	0.15
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.20
	Class 2						
	Class 3						
	Class 4	100		100		100	
	Class 5						
V4	%OW <= 1.5ft	10	0.21	10	0.21	8	0.19
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1		1		1	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.00		1.00		1.00	
	Emergent Marsh HSI	**=**	**0.47**	**EM HSI =**	**0.46**	**EM HSI =**	**0.37**
	Open Water HSI	**=**	**0.29**	**OW HSI =**	**0.29**	**OW HSI =**	**0.29**

Project: West Pointe a la Hache Marsh Creation

Project Area:
Fresh............
Intermediate. 352

Condition: Future With Project

		TY 0		TY 1		TY 3	
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Emergent	29	0.36	32	0.39	85	0.87
V2	% Aquatic	5	0.15	0	0.10	40	0.46
V3	Interspersion	%		%		%	
	Class 1		0.20	100	1.00	100	1.00
	Class 2						
	Class 3						
	Class 4	100					
	Class 5						
V4	%OW <= 1.5ft	10	0.21	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1		1		1	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.00		1.00		1.00	
	Emergent Marsh HSI	**=**	**0.47**	**EM HSI =**	**0.58**	**EM HSI =**	**0.91**
	Open Water HSI	**=**	**0.29**	**OW HSI =**	**0.33**	**OW HSI =**	**0.63**

Project: West Pointe a la Hache Marsh Creation
FWP

Variable		TY 5		TY 20			
		Value	SI	Value	SI	Value	SI
V1	% Emergent	92	0.93	73	0.76		
V2	% Aquatic	50	0.55	50	0.55		
V3	Interspersion	%		%		%	
	Class 1	100	1.00		0.60		
	Class 2			100			
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	100	0.60	80	1.00		
V5	Salinity (ppt)						
	fresh		1.00		1.00		
	intermediate	1		1			
V6	Access Value						
	fresh		1.00		1.00		
	intermediate	1.00		1.00			
		EM HSI =	**0.95**	**EM HSI =**	**0.79**	**EM HSI =**	
		OW HSI =	**0.69**	**OW HSI =**	**0.69**	**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: West Pointe a la Hache Marsh Creation

Future Without Project			Total	Cummulative
TY	**Marsh Acres**	**x HSI**	**HUs**	**HUs**
0	102	0.47	47.54	
1	99	0.46	45.46	46.49
20	54	0.37	19.76	606.32
			AAHUs =	**32.64**

Future With Project			Total	Cummulative
TY	**Marsh Acres**	**x HSI**	**HUs**	**HUs**
0	102	0.47	47.54	
1	112	0.58	64.47	55.82
3	300	0.91	273.44	316.85
5	325	0.95	309.74	582.83
20	257	0.79	204.19	3827.53
			AAHUs	**239.15**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	239.15
B. Future Without Project Emergent Marsh AAHUs =	32.64
Net Change (FWP - FWOP) =	**206.51**

AAHU CALCULATION - OPEN WATER

Project: West Pointe a la Hache Marsh Creation

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	250	0.29	71.85	
1	253	0.29	72.71	72.28
20	298	0.29	85.15	1499.86
			AAHUs =	78.61

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	250	0.29	71.85	
1	5	0.33	1.65	38.53
3	16	0.63	10.03	10.60
5	26	0.69	17.92	27.75
20	95	0.69	65.49	625.57
			AAHUs	35.12

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	35.12
B. Future Without Project Open Water AAHUs =	78.61
Net Change (FWP - FWOP) =	**-43.48**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	206.51
B. Open Water Habitat Net AAHUs =	-43.48
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**125.87**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: **Pass a Loutre Restoration**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

Area	AAHUs
Fresh/Intermediate Marsh	800.17

TOTAL BENEFITS = 800 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Project: Pass a Loutre Restoration

Condition: Future Without Project

Project Area:
Fresh............ 26,849
Intermediate..

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	38	0.44	38	0.44	34	0.41
V2	% Aquatic	25	0.33	25	0.33	25	0.33
V3	Interspersion	%		%		%	
	Class 1		0.26		0.26		0.25
	Class 2						
	Class 3	30		30		25	
	Class 4	70		70		75	
	Class 5						
V4	%OW <= 1.5ft	19	0.31	19	0.31	15	0.27
V5	Salinity (ppt)						
	fresh	1	0.90	1	0.90	1	0.90
	intermediate						
V6	Access Value						
	fresh	1.00	1.00	1.00	1.00	1.00	1.00
	intermediate						
	Emergent Marsh HSI	**=**	**0.52**	**EM HSI =**	**0.52**	**EM HSI =**	**0.49**
	Open Water HSI	**=**	**0.44**	**OW HSI =**	**0.44**	**OW HSI =**	**0.44**

Project: Pass a Loutre Restoration

Condition: Future With Project

Project Area:
Fresh........... 26,849
Intermediate.

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	38	0.44	38	0.44	40	0.46
V2	% Aquatic	25	0.33	35	0.42	35	0.42
V3	Interspersion	%		%		%	
	Class 1		0.26		0.26		0.26
	Class 2						
	Class 3	30		30		30	
	Class 4	70		70		70	
	Class 5						
V4	%OW <= 1.5ft	19	0.31	19	0.31	19	0.31
V5	Salinity (ppt)						
	fresh	1	0.90	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	1.00	1.00	0.98	0.99	1.00	1.00
	intermediate						
	Emergent Marsh HSI	**=**	**0.52**	**EM HSI =**	**0.53**	**EM HSI =**	**0.55**
	Open Water HSI	**=**	**0.44**	**OW HSI =**	**0.52**	**OW HSI =**	**0.52**

Project: Pass a Loutre Restoration

FWP

Variable		TY 20					
		Value	SI	Value	SI	Value	SI
V1	% Emergent	39	0.45				
V2	% Aquatic	35	0.42				
V3	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 30 70	 0.26	%		%	
V4	%OW <= 1.5ft	19	0.31				
V5	Salinity (ppt) fresh intermediate	 0.5	 1.00				
V6	Access Value fresh intermediate	 1.00	 1.00				
		EM HSI =	**0.54**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.52**	**OW HSI =**		**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: Pass a Loutre Restoration

Future Without Project			**Total**	**Cummulative**
TY	**Marsh Acres**	**x HSI**	**HUs**	**HUs**
0	10318	0.52	5394.02	
1	10258	0.52	5362.66	5378.34
20	9182	0.49	4542.75	94005.84
			AAHUs =	**4969.21**

Future With Project			**Total**	**Cummulative**
TY	**Marsh Acres**	**x HSI**	**HUs**	**HUs**
0	10318	0.52	5394.02	
1	10309	0.53	5494.33	5444.19
3	10818	0.55	5919.74	11411.65
20	10487	0.54	5668.87	98496.92
			AAHUs	**5767.64**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	5767.64
B. Future Without Project Emergent Marsh AAHUs =	4969.21
Net Change (FWP - FWOP) =	**798.43**

AAHU CALCULATION - OPEN WATER

Project: Pass a Loutre Restoration

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	16531	0.44	7338.99	
1	16591	0.44	7365.63	7352.31
20	17667	0.44	7771.35	143815.13
			AAHUs =	7558.37

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	16531	0.44	7338.99	
1	16013	0.52	8283.72	7817.69
3	16031	0.52	8315.72	16599.43
20	16362	0.52	8487.42	142826.65
			AAHUs	8362.19

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	8362.19
B. Future Without Project Open Water AAHUs =	7558.37
Net Change (FWP - FWOP) =	**803.82**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	798.43
B. Open Water Habitat Net AAHUs =	803.82
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	**800.17**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: Southeast Lake Boudreaux Marsh Creation and Terracing

The WVA for this project included 2 areas. Total benefits for this project are as follows:

Area	AAHUs
Terracing	17.68
Marsh Creation	109.68

TOTAL BENEFITS = 127 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: Southeast Lake Boudreaux Marsh Creation and Terracing Marsh Creation — Project Area: 296

Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	13	0.22	13	0.22	7	0.16
V2	% Aquatic	15	0.24	15	0.24	10	0.19
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	3	0.14	3	0.14	3	0.14
V5	Salinity (ppt)	9	1.00	9	1.00	10	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 =**	**0.33**
	Open Water HSI	**=**	**0.43**	**OW HSI =**	**0.43**	**OW HSI =**	**0.39**

Project: Southeast Lake Boudreaux Marsh Creation and Terracing Marsh Creation — Project Area: 296

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	13	0.22	21	0.29	54	0.59
V2	% Aquatic	15	0.24	0	0.10	30	0.37
V3	Interspersion	%		%		%	
	Class 1		0.20	100	1.00	100	1.00
	Class 2						
	Class 3						
	Class 4	100					
	Class 5						
V4	%OW <= 1.5ft	3	0.14	100	0.60	100	0.60
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	**=**	**0.37**	**EM HSI =**	**0.52**	**EM HSI =**	**0.74**
	Open Water HSI	**=**	**0.43**	**OW HSI =**	**0.39**	**OW HSI =**	**0.62**

Project: Southeast Lake Boudreaux Marsh Creation and Terracing
FWP

Variable		TY 5		TY 20			
		Value	SI	Value	SI	Value	SI
V1	% Emergent	93	0.94	75	0.78		
V2	% Aquatic	40	0.46	40	0.46		
V3	Interspersion	%		%		%	
	Class 1	100	1.00		0.60		
	Class 2			100			
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	100	0.60	80	1.00		
V5	Salinity (ppt)	9	1.00	10	1.00		
V6	Access Value	1.00	1.00	1.00	1.00		
		EM HSI =	**0.96**	**EM HSI =**	**0.82**	**EM HSI =**	
		OW HSI =	**0.68**	**OW HSI =**	**0.68**	**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: Southeast Lake Boudreaux Marsh Creation and Terracing
Marsh Creation

Future Without Project			**Total**	**Cummulative**
TY	**Marsh Acres**	**x HSI**	**HUs**	**HUs**
0	39	0.37	14.56	
1	38	0.37	14.19	14.38
20	22	0.33	7.17	200.55
			AAHUs =	**10.75**

Future With Project			**Total**	**Cummulative**
TY	**Marsh Acres**	**x HSI**	**HUs**	**HUs**
0	39	0.37	14.56	
1	60	0.52	31.29	22.41
3	160	0.74	118.05	142.14
5	275	0.96	264.56	374.01
20	222	0.82	181.39	3325.40
			AAHUs	**193.20**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	193.20
B. Future Without Project Emergent Marsh AAHUs =	10.75
Net Change (FWP - FWOP) =	**182.45**

AAHU CALCULATION - OPEN WATER

Project: Southeast Lake Boudreaux Marsh Creation and Terracing
Marsh Creation

Future Without Project			Total	Cummulative
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	257	0.43	109.32	
1	258	0.43	109.74	109.53
20	274	0.39	105.85	2050.09
			AAHUs =	**107.98**

Future With Project			Total	Cummulative
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	257	0.43	109.32	
1	4	0.39	1.55	53.86
3	12	0.62	7.45	8.38
5	21	0.68	14.29	21.57
20	74	0.68	50.37	484.99
			AAHUs	**28.44**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	28.44
B. Future Without Project Open Water AAHUs =	107.98
Net Change (FWP - FWOP) =	**-79.54**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	182.45
B. Open Water Habitat Net AAHUs =	-79.54
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**109.68**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: Southeast Lake Boudreaux Marsh Creation and Terracing Project Area: 416
Terracing
Condition: Future Without Project

Variable		TY 0		TY 1		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	7	0.16	7	0.16	4	0.14
V2	% Aquatic	10	0.19	10	0.19	5	0.15
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20		0.10
	Class 2						
	Class 3						
	Class 4	100		100			
	Class 5					100	
V4	%OW <= 1.5ft	3	0.14	3	0.14	3	0.14
V5	Salinity (ppt)	9	1.00	9	1.00	10	1.00
V6	Access Value	1.00	1.00	1.00	1.00	1.00	1.00
	Emergent Marsh HSI	**=**	**0.33**	**EM HSI =**	**0.33**	**EM HSI =**	**0.29**
	Open Water HSI	**=**	**0.39**	**OW HSI =**	**0.39**	**OW HSI =**	**0.34**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project: Southeast Lake Boudreaux Marsh Creation and Terracing 416
Terracing
Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	7	0.16	9	0.18	15	0.24
V2	% Aquatic	10	0.19	10	0.19	25	0.33
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	3	0.14	7	0.19	7	0.19
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	**=**	**0.33**	**EM HSI =**	**0.35**	**EM HSI =**	**0.39**
	Open Water HSI	**=**	**0.39**	**OW HSI =**	**0.39**	**OW HSI =**	**0.50**

Project: Southeast Lake Boudreaux Marsh Creation and Terracing
FWP

Variable		TY 20					
		Value	SI	Value	SI	Value	SI
V1	% Emergent	11	0.20				
V2	% Aquatic	20	0.28				
V3	Interspersion	%		%		%	
	Class 1		0.25				
	Class 2						
	Class 3	25					
	Class 4	75					
	Class 5						
V4	%OW <= 1.5ft	7	0.19				
V5	Salinity (ppt)	10	1.00				
V6	Access Value	1.00	1.00				
		EM HSI =	**0.36**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.47**	**OW HSI =**		**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: Southeast Lake Boudreaux Marsh Creation and Terracing
Terracing

Future Without Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	29	0.33	9.45	
1	28	0.33	9.13	9.29
20	16	0.29	4.64	129.40
			AAHUs =	**6.93**

Future With Project			Total HUs	Cummulative HUs
TY	Marsh Acres	x HSI		
0	29	0.33	9.45	
1	37	0.35	12.87	11.13
3	62	0.39	24.44	36.92
20	47	0.36	17.09	351.67
			AAHUs	**19.99**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	19.99
B. Future Without Project Emergent Marsh AAHUs =	6.93
Net Change (FWP - FWOP) =	**13.05**

AAHU CALCULATION - OPEN WATER

Project: Southeast Lake Boudreaux Marsh Creation and Terracing Terracing

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	387	0.39	149.50	
1	388	0.39	149.89	149.69
20	400	0.34	134.36	2702.28
			AAHUs =	142.60

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	387	0.39	149.50	
1	351	0.39	138.23	143.91
3	354	0.50	178.04	316.16
20	369	0.47	173.07	2985.90
			AAHUs	172.30

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	172.30
B. Future Without Project Open Water AAHUs =	142.60
Net Change (FWP - FWOP) =	**29.70**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	13.05
B. Open Water Habitat Net AAHUs =	29.70
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**17.68**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: Beach and Backbarrier Marsh Restoration - East Island

TOTAL BENEFITS IN AAHUs DUE TO PROJECT

Area	AAHUs
Barrier Island	247.46

TOTAL BENEFITS = 247 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Barrier Island

Project: Beach and Backbarrier Marsh Restoration - East Island

Condition: Future Without Project

		TY 0		TY 1		TY 3	
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Dune	28.4	0.52	27.8	0.54	26.8	0.58
V2	% Supratidal	38.2	1.00	38.4	1.00	38.8	1.00
V3	% Intertidal	33.4	0.25	33.7	0.27	34.4	0.30
V4	% Vegetative Cover	35	0.58	35	0.58	50	0.79
V5	% Woody Cover	15	1.00	15	1.00	15	1.00
V6	Interspersion	%	0.68	%	0.68	%	0.68
	Class 1						
	Class 2	40		40		40	
	Class 3	60		60		60	
	Class 4						
	Class 5						
V7	Beach/surf Zone	1	1.00	1	1.00	1	1.00
		HSI =	**0.674**	**HSI =**	**0.679**	**HSI =**	**0.731**

Project....... Beach and Backbarrier Marsh Restoration - East Island
FWOP

		TY 5		TY 10			
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Dune	26.1	0.60	23.5	0.69	13.2	1.00
V2	% Supratidal	38.9	1.00	39.4	1.00	41.5	0.98
V3	% Intertidal	35	0.33	37.1	0.42	45.3	0.79
V4	% Vegetative Cover	60	0.93	60	0.93	40	0.65
V5	% Woody Cover	15	1.00	15	1.00	15	1.00
V6	Interspersion	%	0.70	%	0.67	%	0.64
	Class 1	30		25		20	
	Class 2						
	Class 3	60		60		60	
	Class 4	10		15		20	
	Class 5						
V7	Beach/surf Zone	1	1.00	1	1.00	1	1.00
		HSI =	**0.770**	**HSI =**	**0.795**	**HSI =**	**0.837**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Barrier Island

Project: Beach and Backbarrier Marsh Restoration - East Island

Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Dune	28.4	0.52	24.2	0.67	23.3	0.70
V2	% Supratidal	38.2	1.00	33.5	1.00	33.7	1.00
V3	% Intertidal	33.4	0.25	42.3	0.65	43	0.69
V4	% Vegetative Cover	35	0.58	33	0.56	56.7	0.88
V5	% Woody Cover	15	1.00	15	1.00	15	1.00
V6	Interspersion	%	0.68	%	0.67	%	0.67
	Class 1						
	Class 2	40		35		35	
	Class 3	60		65		65	
	Class 4						
	Class 5						
V7	Beach/surf Zone	1	1.00	1	1.00	1	1.00
		HSI =	0.674	HSI =	0.756	HSI =	0.832

Project....... Beach and Backbarrier Marsh Restoration - East Island
FWP

Variable		TY 5		TY 10		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Dune	22.6	0.73	20.2	0.81	11	1.00
V2	% Supratidal	33.7	1.00	33.8	1.00	34.4	1.00
V3	% Intertidal	43.7	0.72	46	0.82	54.6	1.00
V4	% Vegetative Cover	65.5	1.00	65.8	1.00	48.3	0.77
V5	% Woody Cover	15	1.00	15	1.00	15	1.00
V6	Interspersion	%	0.74	%	0.71	%	0.68
	Class 1	40		35		30	
	Class 2						
	Class 3	50		50		50	
	Class 4	10		15		20	
	Class 5						
V7	Beach/surf Zone	1	1.00	1	1.00	1	1.00
		HSI =	0.875	HSI =	0.900	HSI =	0.905

AAHU CALCULATION

Project: Beach and Backbarrier Marsh Restoration - East Island

Future Without Project			**Total**	**Cummulative**
TY	**Acres**	**x HSI**	**HUs**	**HUs**
0	2077	0.674	1400.05	
1	2011	0.679	1366.26	1383.21
3	1879	0.731	1373.90	2742.44
5	1760	0.770	1355.03	2730.47
10	1453	0.795	1154.52	6280.19
20	843	0.837	705.84	9345.22
			AAHUs =	**1124.08**

Future With Project			**Total**	**Cummulative**
TY	**Acres**	**x HSI**	**HUs**	**HUs**
0	2077	0.674	1400.05	
1	2155	0.756	1629.84	1513.88
3	2035	0.832	1692.33	3325.18
5	1911	0.875	1671.17	3365.27
10	1593	0.900	1433.21	7767.63
20	947	0.905	857.33	11458.73
			AAHUs	**1371.53**

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHUs =	1371.53
B. Future Without Project AAHUs =	1124.08
Net Change (FWP - FWOP) =	**247.46**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project: **East Cove Marsh Creation**

The WVA for this project included 2 areas. Total benefits for this project are as follows:

Area	AAHUs
Western Site	111.18
Eastern Site	98.43

TOTAL BENEFITS = 210 AAHUS

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Brackish Marsh

Project: East Cove Marsh Creation Project Area: 289
Eastern Site
Condition: Future Without Project

		TY 0		TY 1		TY 3	
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Emergent	18	0.26	18	0.26	18	0.26
V2	% Aquatic	1	0.11	5	0.15	60	0.64
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	44	0.67	44	0.67	44	0.67
V5	Salinity (ppt)	7.8	1.00	7.8	1.00	7.8	1.00
V6	Access Value	0.40	0.46	0.40	0.46	0.40	0.46
	Emergent Marsh HSI =		**0.37**	**EM HSI =**	**0.37**	**EM HSI =**	**0.37**
	Open Water HSI =		**0.29**	**OW HSI =**	**0.32**	**OW HSI =**	**0.57**

Project: East Cove Marsh Creation
FWOP

		TY 20					
Variable		**Value**	**SI**	**Value**	**SI**		**SI**
V1	% Emergent	17	0.25				
V2	% Aquatic	60	0.64				
V3	Interspersion	%		%		%	
	Class 1		0.20				
	Class 2						
	Class 3						
	Class 4	100					
	Class 5						
V4	%OW <= 1.5ft	44	0.67				
V5	Salinity (ppt)	7.8	1.00				
V6	Access Value	0.40	0.46				
		EM HSI =	**0.36**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.57**	**OW HSI =**		**OW HSI =**	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Project:	East Cove Marsh Creation Eastern Site	Project Area:	289
Condition:	Future With Project		

		TY 0		TY 1		TY 3	
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Emergent	18	0.26	17	0.25	43	0.49
V2	% Aquatic	1	0.11	0	0.10	60	0.64
V3	Interspersion	%		%		%	
	Class 1		0.20	100	1.00	100	1.00
	Class 2						
	Class 3						
	Class 4	100					
	Class 5						
V4	%OW <= 1.5ft	44	0.67	0	0.10	100	0.60
V5	Salinity (ppt)	7.8	1.00	7.8	1.00	7.8	1.00
V6	Access Value	0.40	0.46	0.40	0.46	0.40	0.46
	Emergent Marsh HSI	**=**	**0.37**	**EM HSI =**	**0.45**	**EM HSI =**	**0.60**
	Open Water HSI	**=**	**0.29**	**OW HSI =**	**0.30**	**OW HSI =**	**0.63**

Project: East Cove Marsh Creation

FWP

		TY 5		TY 20			
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Emergent	99	0.99	96	0.96		
V2	% Aquatic	60	0.64	60	0.64		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2						
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	100	0.60	100	0.60		
V5	Salinity (ppt)	7.8	1.00	7.8	1.00		
V6	Access Value	0.40	0.46	0.40	0.46		
		EM HSI =	**0.87**	**EM HSI =**	**0.85**	**EM HSI =**	
		OW HSI =	**0.63**	**OW HSI =**	**0.63**	**OW HSI =**	

AAHU CALCULATION - EMERGENT MARSH

Project: East Cove Marsh Creation
Eastern Site

Future Without Project			**Total**	**Cummulative**
TY	**Marsh Acres**	**x HSI**	**HUs**	**HUs**
0	53	0.37	19.36	
1	53	0.37	19.36	19.36
3	52	0.37	19.00	38.36
20	49	0.36	17.60	311.06
			AAHUs =	**18.44**

Future With Project			**Total**	**Cummulative**
TY	**Marsh Acres**	**x HSI**	**HUs**	**HUs**
0	53	0.37	19.36	
1	50	0.45	22.41	20.93
3	124	0.60	73.91	92.67
5	286	0.87	248.22	307.45
20	277	0.85	236.65	3636.16
			AAHUs	**202.86**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	202.86
B. Future Without Project Emergent Marsh AAHUs =	18.44
Net Change (FWP - FWOP) =	**184.42**

AAHU CALCULATION - OPEN WATER

Project: East Cove Marsh Creation
Eastern Site

Future Without Project			**Total**	**Cummulative**
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	236	0.29	68.21	
1	236	0.32	74.85	71.53
3	237	0.57	136.13	210.90
20	240	0.57	137.85	2328.87
			AAHUs =	**130.56**

Future With Project			**Total**	**Cummulative**
TY	**Water Acres**	**x HSI**	**HUs**	**HUs**
0	236	0.29	68.21	
1	0	0.30	0.00	34.49
3	1	0.63	0.63	0.52
5	3	0.63	1.89	2.52
20	12	0.63	7.55	70.74
			AAHUs	**5.41**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	5.41
B. Future Without Project Open Water AAHUs =	130.56
Net Change (FWP - FWOP) =	**-125.15**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	184.42
B. Open Water Habitat Net AAHUs =	-125.15
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	**98.43**

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: East Cove Marsh Creation
Western Site
Condition: Future Without Project

Project Area: 315

		TY 0		TY 1		TY 3	
Variable		**Value**	**SI**	**Value**	**SI**	**Value**	**SI**
V1	% Emergent	8	0.17	8	0.17	8	0.17
V2	% Aquatic	1	0.31	5	0.34	60	0.72
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	60	0.87	60	0.87	60	0.87
V5	Salinity (ppt)	11.3	1.00	11.3	1.00	11.3	1.00
V6	Access Value	0.40	0.46	0.40	0.46	0.40	0.46
	Emergent Marsh HSI =		**0.30**	**EM HSI =**	**0.30**	**EM HSI =**	**0.30**
	Open Water HSI =		**0.47**	**OW HSI =**	**0.48**	**OW HSI =**	**0.56**

Project: East Cove Marsh Creation
FWOP

		TY 20					
Variable		**Value**	**SI**	**Value**	**SI**		**SI**
V1	% Emergent	7	0.16				
V2	% Aquatic	60	0.72				
V3	Interspersion	%		%		%	
	Class 1		0.20				
	Class 2						
	Class 3						
	Class 4	100					
	Class 5						
V4	%OW <= 1.5ft	60	0.87				
V5	Salinity (ppt)	11.3	1.00				
V6	Access Value	0.40	0.46				
		EM HSI =	**0.30**	**EM HSI =**		**EM HSI =**	
		OW HSI =	**0.56**	**OW HSI =**		**OW HSI =**	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Project: East Cove Marsh Creation Project Area: 315
Western Site
Condition: Future With Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	8	0.17	8	0.17	13	0.22
V2	% Aquatic	1	0.31	5	0.34	0	0.30
V3	Interspersion	%		%		%	
	Class 1		0.20		0.20	100	1.00
	Class 2						
	Class 3						
	Class 4	100		100			
	Class 5						
V4	%OW <= 1.5ft	60	0.87	60	0.87	0	0.10
V5	Salinity (ppt)	11.3	1.00	11.3	1.00	11.3	1.00
V6	Access Value	0.40	0.46	0.40	0.46	0.40	0.46
	Emergent Marsh HSI	**=**	**0.30**	**EM HSI =**	**0.30**	**EM HSI =**	**0.43**
	Open Water HSI	**=**	**0.47**	**OW HSI =**	**0.48**	**OW HSI =**	**0.47**

Project: East Cove Marsh Creation
FWP

Variable		TY 5		TY 7		TY 20	
		Value	SI	Value	SI	Value	SI
V1	% Emergent	35	0.42	99	0.99	96	0.96
V2	% Aquatic	60	0.72	60	0.72	60	0.72
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00	100	1.00
	Class 2						
	Class 3						
	Class 4						
	Class 5						
V4	%OW <= 1.5ft	100	0.50	100	0.50	100	0.50
V5	Salinity (ppt)	11.3	1.00	11.3	1.00	11.3	1.00
V6	Access Value	0.40	0.46	0.40	0.46	0.40	0.46
		EM HSI =	**0.55**	**EM HSI =**	**0.86**	**EM HSI =**	**0.85**
		OW HSI =	**0.59**	**OW HSI =**	**0.59**	**OW HSI =**	**0.59**

AAHU CALCULATION - EMERGENT MARSH

Project: East Cove Marsh Creation
Western Site

Future Without Project			**Total**	**Cummulative**
TY	**Marsh Acres**	**x HSI**	**HUs**	**HUs**
0	24	0.30	7.31	
1	24	0.30	7.31	7.31
3	24	0.30	7.31	14.61
20	22	0.30	6.55	117.72
			AAHUs =	**6.98**

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	24	0.30	7.31	
1	24	0.30	7.31	7.31
3	41	0.43	17.46	24.08
5	111	0.55	61.43	75.91
7	312	0.86	267.83	308.82
20	303	0.85	256.15	3405.63
			AAHUs	**191.09**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	191.09
B. Future Without Project Emergent Marsh AAHUs =	6.98
Net Change (FWP - FWOP) =	**184.11**

AAHU CALCULATION - OPEN WATER

Project: East Cove Marsh Creation
Western Site

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	291	0.47	137.41	
1	291	0.48	139.75	138.58
3	291	0.56	162.99	302.74
20	293	0.56	164.11	2780.28
			AAHUs =	**161.08**

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	291	0.47	137.41	
1	291	0.48	139.75	138.58
3	1	0.47	0.47	139.45
5	2	0.59	1.18	1.62
7	3	0.59	1.78	2.96
20	12	0.59	7.10	57.70
			AAHUs	**17.02**

NET CHANGE IN AAHUs DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	17.02
B. Future Without Project Open Water AAHUs =	161.08
Net Change (FWP - FWOP) =	**-144.06**

TOTAL BENEFITS IN AAHUs DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	184.11
B. Open Water Habitat Net AAHUs =	-144.06
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	**111.18**

Coastal Wetlands Planning, Protection, and Restoration Act

17th Priority Project List Report

Appendix D

Economic Analyses for Candidate Projects

Appendix D

Economic Analyses for Candidate Projects

Table of Contents

Coastal Wetlands Conservation and Restoration Plan

Irish Bayou Shoreline Protection and Marsh Creation

Project Priority List 17 (ver.060407)

Project Construction Years:	0	Total Project Years	20
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$16,443,923	Total Fully Funded Costs	$19,647,483

Total Charges	Present Worth	Average Annual
First Costs	$16,168,099	$1,283,655
Monitoring	$0	$0
State O & M Costs	$1,544,878	$122,655
Other Federal Costs	$75,837	$6,021
Average Annual Cost	$1,412,331	$1,412,331
Average Annual Habitat Units	86	
Cost Per Habitat Unit	$16,422	
Total Net Acres	191	

Coastal Wetlands Conservation and Restoration Plan

Bayou Dupont Ridge Creation and Marsh Restoration

Project Priority List 17 (ver.060407)

Project Construction Years:	1	Total Project Years	21
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$19,015,177	Total Fully Funded Costs	$21,626,767

Total Charges	Present Worth	Average Annual
First Costs	$18,793,580	$1,492,103
Monitoring	$81,772	$6,492
State O & M Costs	$955,705	$75,878
Other Federal Costs	$64,052	$5,085
Average Annual Cost	$1,579,559	$1,579,559
Average Annual Habitat Units	121	
Cost Per Habitat Unit	$13,054	
Total Net Acres	187	

Coastal Wetlands Conservation and Restoration Plan

Bayou Thunder Marsh Creation and Shoreline Protection

Project Priority List 17 (ver.060407)

Project Construction Years:	0	Total Project Years	20
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$17,870,775	Total Fully Funded Costs	$20,920,120

Total Charges	Present Worth	Average Annual
First Costs	$18,037,829	$1,432,101
Monitoring	$193,526	$15,365
State O & M Costs	$799,852	$63,504
Other Federal Costs	$71,034	$5,640
Average Annual Cost	$1,516,609	$1,516,609
Average Annual Habitat Units	101	
Cost Per Habitat Unit	$15,016	
Total Net Acres	163	

Coastal Wetlands Conservation and Restoration Plan

Caernarvon Outfall Management/Lake Lery SR

PPL 17

Project Construction Years:	0	Total Project Years	20
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$24,770,743	Total Fully Funded Costs	$25,137,149

Total Charges	Present Worth	Average Annual
First Costs	$24,423,578	$1,939,093
Monitoring	$0	$0
State O & M Costs	$158,584	$12,591
Other Federal Costs	$50,827	$4,035
Average Annual Cost	$1,955,719	$1,955,719
Average Annual Habitat Units	302	
Cost Per Habitat Unit	$6,476	
Total Net Acres	652	

Coastal Wetlands Conservation and Restoration Plan

Project Priority List 17 (ver.051607)

Bohemia Mississippi River Reintroduction

Project Construction Years:	1	Total Project Years	21
Interest Rate	5.125%	Amortization Factor	0.08110
Fully Funded First Costs	$6,388,911	Total Fully Funded Costs	$6,923,792

Total Charges	Present Worth	Average Annual
First Costs	$6,416,631	$520,358
Monitoring	$0	$0
State O & M Costs	$206,208	$16,722
Other Federal Costs	$51,478	$4,175
Average Annual Cost	$541,255	$541,255
Average Annual Habitat Units	989	
Cost Per Habitat Unit	$547	
Total Net Acres	635	

Coastal Wetlands Conservation and Restoration Plan

West Point a la Hache Increment

PPL 17

Project Construction Years:	0	Total Project Years	20
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$15,668,932	Total Fully Funded Costs	$16,136,639

Total Charges	Present Worth	Average Annual
First Costs	$15,518,856	$1,232,109
Monitoring	$0	$0
State O & M Costs	$227,156	$18,035
Other Federal Costs	$52,625	$4,178
Average Annual Cost	$1,254,322	$1,254,322
Average Annual Habitat Units	126	
Cost Per Habitat Unit	$9,955	
Total Net Acres	203	

Coastal Wetlands Conservation and Restoration Plan

Pass a Loutre Restoration Project

Project Priority List 17 (ver.060407)

Project Construction Years:	0	Total Project Years	20
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$26,412,934	Total Fully Funded Costs	$26,591,033

Total Charges	Present Worth	Average Annual
First Costs	$26,265,521	$2,085,333
Monitoring	$0	$0
State O & M Costs	$38,307	$3,041
Other Federal Costs	$48,214	$3,828
Average Annual Cost	$2,092,202	$2,092,202
Average Annual Habitat Units	800	
Cost Per Habitat Unit	$2,615	
Total Net Acres	1,305	

Coastal Wetlands Conservation and Restoration Plan

SE Lake Boudreaux Marsh Creation & Terracing

Project Priority List 17 (ver.060407)

Project Construction Years:	0	Total Project Years	20
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$19,470,057	Total Fully Funded Costs	$20,431,032

Total Charges	Present Worth	Average Annual
First Costs	$19,420,325	$1,541,863
Monitoring	$0	$0
State O & M Costs	$486,992	$38,664
Other Federal Costs	$50,466	$4,007
Average Annual Cost	$1,584,535	$1,584,535
Average Annual Habitat Units	127	
Cost Per Habitat Unit	$12,477	
Total Net Acres	231	

Coastal Wetlands Conservation and Restoration Plan

Beach & Back Barrier Marsh Restor. - East Island

Project Priority List 17 (ver.051607)

Project Construction Years:	0	Total Project Years	20
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$18,813,783	Total Fully Funded Costs	$19,535,422

Total Charges	Present Worth	Average Annual
First Costs	$18,499,078	$1,468,722
Monitoring	$0	$0
State O & M Costs	$366,058	$29,063
Other Federal Costs	$66,463	$5,277
Average Annual Cost	$1,503,061	$1,503,061
Average Annual Habitat Units	247	
Cost Per Habitat Unit	$6,085	
Total Net Acres	92	

Coastal Wetlands Conservation and Restoration Plan

East Cove Marsh Creation Project

Project Priority List 17 (ver.060407)

Project Construction Years:	0	Total Project Years	20
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$9,538,850	Total Fully Funded Costs	$18,413,579

Total Charges	Present Worth	Average Annual
First Costs	$9,348,482	$742,216
Monitoring	$232,530	$18,462
State O & M Costs	$269,787	$21,420
Other Federal Costs	$948,644	$75,317
Average Annual Cost	$857,414	$857,414
Average Annual Habitat Units	210	
Cost Per Habitat Unit	$4,083	
Total Net Acres	509	

Coastal Wetlands Conservation and Restoration Plan

Project Name: Bio-Engineered Oyster Reef-DEMO

Project Priority List 17 (ver.051607)

Project Construction Years:	0	Total Project Years	20
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$1,737,174	Total Fully Funded Costs	$1,981,822

Total Charges	Present Worth	Average Annual
First Costs	$1,741,779	$138,287
Monitoring	$170,552	$13,541
State O & M Costs	$13,213	$1,049
Other Federal Costs	$16,630	$1,320
Average Annual Cost	$154,198	$154,198
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Sediment Containment System for Marsh Creation Demo

PPL 17

Project Construction Years:	0	Total Project Years	20
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$1,076,319	Total Fully Funded Costs	$1,163,343

Total Charges	Present Worth	Average Annual
First Costs	$1,083,243	$86,003
Monitoring	$30,101	$2,390
State O & M Costs	$31,714	$2,518
Other Federal Costs	$11,131	$884
Average Annual Cost	$91,795	$91,795
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Conservation and Restoration Plan

Positive Displacement Pump Demo

Project Priority List 17 (ver.060407)

Project Construction Years:	0	Total Project Years	20
Interest Rate	4.875%	Amortization Factor	0.07939
Fully Funded First Costs	$3,031,451	Total Fully Funded Costs	$3,069,108

Total Charges	Present Worth	Average Annual
First Costs	$3,121,824	$247,855
Monitoring	$20,054	$1,592
State O & M Costs	$5,665	$450
Other Federal Costs	$7,130	$566
Average Annual Cost	$250,463	$250,463
Average Annual Habitat Units	0	
Cost Per Habitat Unit	$0	
Total Net Acres	0	

Coastal Wetlands Planning, Protection, and Restoration Act

17th Priority Project List Report

Appendix E

CWPPRA Prioritization Criteria

PRIORITIZATION CRITERIA FOR UNCONSTRUCTED PROJECTS
March 14, 2007

I. Cost-effectiveness

Scoring for this criterion should be based on the current estimated total fully-funded project cost and the net acres created/protected/restored at Target Year (TY) 20. The fully-funded cost estimate (100%) must be reviewed and approved by the Engineering and Economics Workgroups. Monitoring costs should be removed from the fully funded cost estimate, unless the project has a project-specific monitoring cost. The net acreage figure must be derived from the official WVA conducted for the project and any new figures must be reviewed and approved by the Environmental Workgroup.

Less than $11,500/ net acre	10
Between $11,500 and $42,000/net acre	7.5
Between $42,000 and $85,000/net acre	5
Between $85,000 and $140,000/net acre	2.5
More than $140,000/net acre	1

Alternate Net Acres for Swamps: The “cost/net acre” approach used above does not work for swamp projects because the wetland loss rates estimated for Louisiana coastal wetlands using historical and recent aerial photography have not detected losses for swamps. However, future loss rates for swamps have been estimated by Coast 2050 mapping unit. This information, combined with other information regarding project details/benefits can be used to provide an “alternate net acres” estimate for swamp projects. *Attachment 1* contains a description of how alternate net acres will be derived for the purposes of assessing the cost-effectiveness of swamp projects, along with the assessment of alternate net acres for two listed swamp projects.

II. Address area of need, high loss area

The purpose of this criterion is to encourage the funding of projects that are located in areas undergoing the greatest loss. Additionally, projects should be located, to the maximum extent practicable, in localized “hot spots” of loss where they are likely to substantially reduce or reverse that loss. The scoring category should be based on the project’s Future Without Project (FWOP) loss rate. Either the interior loss rate or shoreline erosion rate or a combination of both (pro-rating) should be used for scoring depending upon what type of loss rates were developed for use in the WVA.

For project areas affected by both internal loss and shoreline loss, the score shall be a weighted average which reflects the proportion of the total emergent marsh acreage affected by each loss rate. *Example: The total emergent marsh acreage in the project area is 1,000 acres of which 200 acres experience a shoreline erosion rate of 30 feet/yr, and 800 acres experience an internal loss rate of -0.1%/yr. The project would receive a weighted score of (0.2*10)+(0.8*1) = 2.8*

Scoring Categories for Interior and Shoreline Erosion Rates

Interior Loss Rate (%/yr)	**Shoreline Erosion Rate (ft/yr)**	**Score**
>3.5	>25	10
>2.5 to 3.5	>15 to 25	7.5
>1.5 to 2.5	>10 to 15	5
>0.5 to 1.5	>5 to 10	2.5
0 to 0.5	0 to 5	1

III. Implementability

Implementability is defined as the expectation that a project has no serious impediment(s) precluding its timely implementation. Impediments include issues such as design-related issues, landrights, infrastructure relocations, and major public concerns. The Workgroups will, by consensus or vote, agree on impediments which will warrant a point-score deduction. Other issues which sponsoring agencies believe may significantly affect implementability may also be identified.

The predominant landrights issue affecting implementability is identified as non-participating landowners (i.e., demonstrated unwillingness to execute required servitudes, rights-of-way, etc.) of tracts critical to major project features, *unless* the project is sponsored by an agency with condemnation authority which has confirmed its willingness to use such authority. Other difficult or time-consuming landrights issues (e.g., reclamation issues, tracts with many owners/undivided interests) are not defined as issues affecting implementability unless identified as such by the agency procuring landrights for the project. Infrastructure issues are generally limited to modifications/relocations for which project-specific funding is not included in estimated project costs, or if the infrastructure operator/owner has confirmed its unwillingness to have its operations/structures relocated/modified.

Significant concerns include issues such as large-scale flooding increases, significant navigation impacts, basin-wide ecological changes which would significantly affect productivity or distribution of economically- or socially-important coastal resources.

The project has no obvious issues affecting implementability	10 pts

Subtract 3 points for each identified implementability issue, negative scores are possible.

IV. Certainty of benefits

The Adaptive Management review indicated that some types of projects are more effective in producing the anticipated benefits. Factors that influence the certainty of benefits include soil substrate, operational problems, lack of understanding of causative factors of loss, success of engineering and design as well as construction, etc. Scoring for this criterion should be based on selecting project types which reflect the planned project features. If a project contains more than one type of feature, the relative contribution of each type should be weighed in the scoring, as in the example below.

*Example: A project in the Chenier Plain with two major project components: inland shoreline protection and hydrologic restoration. Approximately 80% of the anticipated benefits (i.e., net acres at TY20) are expected to result from shoreline protection features and approximately 20% of the benefits (i.e. net acres at TY 20) are anticipated to result from hydrologic restoration. Scoring for this project should be (0.8*10)+(0.2*5) = 9*

Certainty of Benefits Scores by Project Type

Inland shoreline protection - chenier plain	10
River diversions- deltaic plain	9
Terracing - chenier plain	8
Inland shoreline protection - deltaic plain	8
Marsh creation - chenier plain	7
Marsh creation - deltaic plain	7
Barrier island projects*	7
Gulf shoreline protection - chenier plain**	6
Gulf shoreline protection - deltaic plain**	5
Freshwater diversion -chenier plain	5
Freshwater diversion - deltaic plain	5
Hydrologic restoration - chenier plain	5
Vegetative plantings (low energy area)	5
Terracing - deltaic plain	3
Hydrologic restoration - deltaic plain	2
Vegetative plantings (high energy area)	2

* Refers to traditional barrier island projects which create marsh and dune habitats by dedicated dredging. If shoreline protection is a project component, then the score should be weighted by apportioning the benefits between shoreline protection (score of 5) and traditional dedicated dredging techniques (score of 7).

****** Gulf shoreline protection means typical structures currently being used around the state and nation such as breakwaters, revetments, concrete mats, etc. Does not include experimental structures being tested at various locations.

V. Sustainability of benefits

This criterion should be scored as follows:

> The TY20 net acres (i.e., TY20 FWP acres – TY20 FWOP acres) should be projected through TY30 based on application of FWOP conditions (i.e., internal loss). The percent decrease in net acres from TY20 to TY30 is used in the matrix below to produce an indicator of sustainability. After TY20, project features such as water control structures and controlled diversions and siphons would be considered on a case-by-case basis as to the potential for them to continue to be operated in a manner

consistent with the original intent of the project. Selected project types (e.g., uncontrolled sediment diversions) may be considered for continued application of FWP conditions provided that a valid rationale is provided.

Shoreline protection structures would only provide full protection until the next projected maintenance event would be necessary (i.e., FWP conditions would continue from TY20 until the next maintenance event would be required). For shoreline protection projects in the Deltaic Plain, effectiveness will be reduced by 50% from the year the next scheduled maintenance event is required until TY30. For shoreline protection projects in the Chenier Plain, effectiveness will be reduced by 25% from the year the next scheduled maintenance event is required until TY30. The effectiveness of shoreline protection projects utilizing concrete panels will be reduced by 10%. A 50% reduction in effectiveness will also be applied to barrier island projects using rock shoreline protection. Vegetative plantings used for shoreline protection return to FWOP erosion rates after TY20. For all shoreline protection projects, it is critical that information be provided to substantiate when the next projected maintenance event would occur.

Sustainability Scoring Categories

% decrease in net acres between TY20 and TY30	Score
0 to 5% (or gain)	10
6 to 10%	8
11 to 15%	6
16 to 20%	4
21 to 30%	2
> 30%	1

VI. Consistent with hydrogeomorphic objective of increasing riverine input in the deltaic plain or freshwater input and saltwater penetration limiting in the Chenier plain

DELTAIC PLAIN PROJECTS

The project would significantly increase direct riverine input into the benefited wetlands (structure capable of diverting $\geq$ 2,500 cfs)	10
The project would result in the direct riverine input of between 2,500 cfs and 1,000 cfs into the benefited wetlands	7
The project would result in some minor increases of direct riverine flows into the benefited wetlands (structure or diversion <1,000 cfs)	4

The project would result in an increase of indirect riverine flows into the benefited wetlands	2
The project will not result in increases in riverine flows	0

CHENIER PLAIN PROJECTS

The project will divert freshwater from an area where excess water adversely impacts wetland health to an area which would be benefited from freshwater inputs OR the project will provide a significant level of salinity control to an area where it is in need	6
The project will result in increases in freshwater inflow to an area where it is in need OR the project may provide some minor and/or local salinity control benefits	3
The project will not affect freshwater inflow or salinity	0

VII. Consistent with hydrogeomorphic objective of increased sediment input

The purpose of this criterion is to encourage projects that bring in sediment from exterior sources (i.e., Atchafalaya River north of the delta, Mississippi River, Ship Shoal, or other exterior sources). Therefore, for projects to score on this criterion, they must have some outside sediment sources as project components. Large river diversions similar to Benny's Bay (i.e. >-12 ft bottom elevation) and large marsh creation projects (i.e. ≥ 5 million cubic yards) can be expected to input a substantial amount of sediment into areas of need and should rank higher than diversions and marsh creation projects of smaller magnitude. Quantities of sediment deposited by river diversions must be reviewed and approved by the Engineering Workgroup. Mining sediment from outside systems should receive emphasis. Large scale mining of river sediments such as proposed in the Sediment Trap project represents a major input of sediment from outside the system. Major mining of Ship Shoal for use on barrier islands should also be considered to be more beneficial than dredging minor volumes of sediment for placement on barrier islands. Mining ebb tidal deltas should also receive less emphasis than major mining of Ship Shoal due to the limited quantity of high quality sand available from ebb tidal deltas. Ebb tidal deltas are sediment sinks disconnected from input into the system and should be emphasized over flood tidal deltas or other similar interior bay borrow sites. In all cases, to receive any points, the source of the sediment should be considered to be exterior to, and have no natural sediment input into, the basin in which the project is located. Because of the recognized differences in logistics between river-source marsh creation projects/diversions and barrier island projects, a separate scoring category is used for barrier island projects. Projects which do not supply sediment from external sources cannot receive points for this criterion.

Scoring categories for diversions and marsh creation projects utilizing the Mississippi River or Atchafalaya River as a sediment source:

The project will result in the significant placement of sediment (≥ 5 million cubic yards) from exterior sources	10
The project will input some sediment (< 5 million cubic yards) from external sources	5
The project will not increase sediment input over that presently occurring	0

Scoring categories for barrier island projects utilizing offshore and ebb tidal delta sediment sources:

The project will result in the significant placement of sediment (≥ 1 million cubic yards) from an offshore sediment source	10
The project will input some sediment (> 2 million cubic yards) from an ebb tidal delta source	5
The project will not increase sediment input over that presently occurring	0

VIII. Consistent with hydrogeomorphic objective of maintaining or establishing landscape features

Certain landscape features provide critical benefits to maintaining the integrity of the coastal ecosystem. Such features include: 1) barrier islands, 2) barrier headlands, 3) Gulf shoreline, 4) lake and bay rims/shorelines, 5) forested coastal ridges (e.g., cheniers), 6) natural levee ridges, and 7) landbridges (officially recognized by agency and/or local planning efforts). Projects which do not protect or create at least one of those features cannot receive points for this criterion.

If the project includes features which protect or create one of the above landscape features, then a determination should be made as to how critical or how important that feature is. Certain features are considered by most coastal scientists, project planners, and agencies as **critical** landscape features which form an important part of the skeletal framework of the coastal zone. Those features are seen as the first line of defense against storms in reducing storm surges and reducing wave energy to interior marsh. Those features include barrier islands, barrier headlands, the gulf shoreline, and forested coastal ridges which are located along the gulf shoreline. Projects which significantly protect or create any of those features shall receive a score of “10”.

Certain areas within some coastal basins have been identified by interagency/local planning groups as critical to maintaining the integrity of the basin (i.e., hydrologically and/or ecologically), protecting an important metropolitan area, and/or protecting important infrastructure. Such areas have been commonly referred to as landbridges. Recognized landbridges include the Barataria Basin Landbridge, Grand-White Lakes Landbridge, Pontchartrain-Maurepas Landbridge, and East Orleans Landbridge. Projects which protect or create wetlands and other habitats on those landbridges and which significantly contribute to maintaining the integrity of the landbridge, shall receive a score of “10”.

Projects which protect or create one of the above landscape features but are not associated with those areas described in #1 and #2 above, shall receive a score of “5”.

Criteria Scoring

Once the projects have been evaluated and scored by the Environmental and Engineering Work Groups, each score will be weighted using the following table and the following formula to calculate a final score. A maximum of 100 points is possible.

1.	Cost-Effectiveness	20%
2.	Area of Need	15%
3.	Implementability	15%
4.	Certainty of Benefits	10%
5.	Sustainability	10%
6.	HGM Riverine Input	10%
7.	HGM Sediment Input	10%
8.	HGM Structure and Function	10%
	TOTAL	**100%**

$$(C1*2.0) + (C2*1.5) + (C3*1.5) + (C4*1.0) + (C5*1.0) + (C6*1.0) + (C7*1.0) + (C8*1.0)$$

Attachment 1

COST / “ALTERNATE NET ACRES” (SWAMP)

“COST / NET ACRE” does not work for swamp projects because the wetland loss rates estimated for Louisiana coastal wetlands using historical and recent aerial photography, have not detected losses for swamps. In spite of this, swamp ecologists and others know that the condition of many of swamps is very poor, and that the trend is for rapid decline. They also know that the ultimate result of this trend will be conversion of the swamps to open water. This conversion is expected to happen very quickly when swamp health reaches some critical low threshold. Because of this, it is not possible to estimate “net acres” as is done for marsh projects. However, future loss rates for swamps have been estimated by Coast 2050 mapping unit (Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority 1998). This information, combined with other information regarding project details/benefits can be used to provide an **“alternate net acres”** estimate for swamp projects.

EXAMPLES

Maurepas Diversion Project: Wetland loss rates for the Coast 2050 Amite/Blind Rivers mapping unit for 1974-90 were estimated by USACE to be 0.83% per year for the swamps, and 0.02% per year for fresh marsh. Based on these rates, about 50% of the swamp, and 1.2% of the fresh marsh will be lost in 60 years (LCWCRTF 1998. Appendix C). For the purposes of this example, in order to be consistent with other approaches, one can estimate the acres that would be lost in the project area in 20 years without the project. The project area is 36,121 acres (Lee Wilson & Associates 2001). The Amite/Blind Rivers mapping unit consisted of 138,900 acres of swamp and 3,440 acres of fresh marsh in 1990 (LCWCRTF 1998. Appendix C). Since we don’t have an estimate of the proportion of swamp and fresh marsh in our study area, we will assume the same proportions as in the Amite/Blind Rivers mapping unit, 98% swamp, 2% fresh marsh. Applying these proportions and the loss rates for the mapping unit, to the project area, about 17,699 acres of swamp and about 9 acres of fresh marsh will be lost in 60 years in the Maurepas project area, without the project. With the project, we assume none of this will be lost. Assuming a linear rate of loss (not really the case for swamps), 5,900 acres of swamp and 3 acres of fresh marsh will be lost in 20 years without the project. With the project, we assume none of this will be lost, so the “alternate net acres” for this project are 5,903. COST / “ALTERNATE NET ACRES” is equal to the project cost estimate, $57,500,000, divided by 5,903 = $9,741. This then would fall within the “Less than $20,000 / net acre” category for a score of 10.

Small Diversion into NW Barataria Basin: This project is in the Coast 2050 Des Allemands mapping unit. It is estimated that 60% of the swamp and 30% of the marsh in this unit will be lost in 60 years (LCWCRTF 1998. Appendix D). The project area includes 4,057 acres of swamp and 20 acres of fresh marsh (USGS & LDNR 2000). Applying the estimated future loss rates from Coast 2050 to this project area, we estimate that 2,434 acres of swamp and 6 acres of fresh marsh will be lost in 60 years without the project. Assuming a linear rate of loss (not really the case for swamps), we estimate that 811 acres of swamp and 2 acres of fresh marsh will be lost in 20 years without the project. With the project, we assume none of this will be lost. In addition, this project will restore 200 acres of existing open water to swamp (U.S. EPA 2000), for a total “alternate net acres” for this project of 1,013 acres. COST / “ALTERNATE NET ACRES” is equal to the project cost estimate, $7,913,519, divided by 1,013 = $7,812. This then would fall within the “Less than $20,000 / net acre” category for a score of 10.

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U.S. EPA Region 6. 2000. Wetland Value Assessment Project Information Sheet- Small Freshwater Diversion to the Northwestern Barataria Basin.

USGS & LDNR. 2000. Northwestern Barataria Basin Habitat Analysis.

Coastal Wetlands Planning, Protection, and Restoration Act

17th Priority Project List Report

Appendix F

Public Support for Candidate Projects

Public Support for Candidate Projects

17th Priority Project List

Irish Bayou Wetland Creation and Shoreline Protection

Written Comments

- Kenneth L. Odinet, District 103 Representative
- Norbert C. White, concerned citizen
- Walker Saik, concerned citizen
- Louise Saik, concerned citizen
- Donna Marak Riess, concerned citizen
- John V. Baus, Jr., concerned citizen
- Sandra Davis, concerned citizen
- Gregory D. Tilton, MD, concerned citizen
- Lisa Ludwig, concerned citizen
- Carol Jane Barbir, concerned citizen
- Col. Terry J. Ebbert, Director of Homeland Security for the City of New Orleans
- C. Ray Nagin, Mayor of New Orleans
- Mr. and Mrs. William Hope, concerned citizens
- Kim B. Stovall, concerned citizen
- Lissa A. Lyncker, biological science graduate student at Univ. of New Orleans
- Lisa Stafford, concerned citizen
- Lake Bullard Homeowners Association, concerned citizens
- Margrett Butler, concerned citizen
- Maria T. Rivas, concerned citizen
- Barry M. Walton, concerned citizen
- Micaela Weaver, concerned citizen
- Shederick Warren, concerned citizen
- Halston Hayes, concerned citizen
- Patricia Weaver, concerned citizen
- Connie Baker, concerned citizen
- Marian Wallis, concerned citizen
- Phil Julien, concerned citizen
- Andrea Durdes-Wescott, concerned citizen
- Charlene Pazore, concerned citizen
- Sue Cappella, concerned citizen
- Michael Murphy, concerned citizen
- Guerry O. Holm, Jr., concerned citizen
- Dan Favre, concerned citizen
- J. Collen Morgan, concerned citizen
- Hope Herron, concerned citizen
- Vaughn C. Breuman, concerned citizen
- Craig M. Cortello, concerned citizen

- Jordan Schneicler, concerned citizen
- Jennifer Pipitone, concerned citizen
- Monica Pasos, concerned citizen
- Robert Vitrano, concerned citizen
- Joyce Atkins, concerned citizen
- Lisa S. Rubeinl, concerned citizen
- Pamela M. Davis, concerned citizen
- Sharon Hillard, concerned citizen
- Michelle Duroncelet, concerned citizen
- Serda A. Anderson, concerned citizen
- Louis Martinez, Jr., concerned citizen
- Herbert Roy Williams III, concerned citizen
- Kenya J. H. Smith, concerned citizen
- David Robinson-Morris, concerned citizen
- Cheryl Mendy, concerned citizen
- Tyrone Smith, concerned citizen
- Heather Szapary, concerned citizen
- Jennifer Day, concerned citizen
- Katherine Dolese, concerned citizen
- Meridith Hathorn, concerned citizen
- Nathan Champagne, concerned citizen
- Telley S. Madina, concerned citizen
- Tonya Durden, concerned citizen
- Reginald Jackson, concerned citizen
- Shantrice N. Dial, concerned citizen
- Stacey L. Jackson, concerned citizen
- Barry Q. Moore, concerned citizen
- Malaina Jones-Moore, concerned citizen
- Corliss B. Guidry, concerned citizen
- M. Von Nkosi, concerned citizen
- Tiffany Caju, concerned citizen
- Corcherrie Washington, concerned citizen
- Jeanette Delery, concerned citizen
- Nora Ann Winbush, concerned citizen
- Belinda Little-Wood, concerned citizen
- Tracey Jackson, concerned citizen
- Chase Story, concerned citizen
- Daphne Cola, concerned citizen
- Ernest Gethers, concerned citizen
- Alvin G. Porter, concerned citizen
- Patricia A. Smith, concerned citizen
- Carrie Q., concerned citizen
- Leo F. Richardson II, Board Member/Executive Director of Lake Catherine Civic Association, Inc.

- Audrey Charlot, Associate Broker at Latter and Blum Inc./Realtors
- Rose. M. Powell, concerned citizen
- Chris Schieble, Research Associate III at Pontchartrain Institute for Environmental Sciences, University of New Orleans
- Marilyn M. Malone, concerned citizen

Oral Comments

- Wynecta Fisher, City of New Orleans, Orleans Parish Government, New Orleans Public Meeting held 30 Aug 07
- Billy Marchal, Flood Protection Alliance, New Orleans Public Meeting held 30 Aug 07
- James Harris, USFWS Refuge Manager, South East Region, New Orleans Public Meeting held 30 Aug 07
- Bill Kappel, Coastal Environments Incorporated (on behalf of Lee Richardson), New Orleans Public Meeting held 30 Aug 07

Bayou Dupont Marsh and Ridge Creation

Written Comments

- Timothy P. Kerner, Mayor, Town of Jean Lafitte
- Edward Perrin, Land Owner
- Louis Parria, Land Owner
- Floyd Adam, Land Owner
- Shelby and Dwight Adam, Land Owners
- Adrian Ruttley, Land Owner
- Woody Crews, Chair, Coalition to Restore Coastal Louisiana and Jefferson Parish Marine Advisory Board, Wetlands Committee
- Aaron Broussard, Jefferson Parish president
- Jefferson Parish Council of Jefferson Parish
- Jason Smith, Coastal Programs Supervisor, Jefferson Parish Department of Environmental Affairs
- Tracy Kuhns, Executive Director of Louisiana Bayoukeeper, Inc.
- Vickie Duffourc, President of Bayou Segnette Community and Boaters Assoc.
- Mr. Roberts, Jefferson Parish Council of Jefferson Parish, Louisiana
- Mr. Capella, Jefferson Parish Council of Jefferson Parish, Louisiana

Oral Comments

- John Hebert, Algiers and Waggaman Land Owner, New Orleans Public Meeting held 30 Aug 07
- Jason Smith, Jefferson Parish Department of Environmental Affairs, Marine Fisheries Advisory Board Coordinator, New Orleans Public Meeting held 30 Aug 07
- Pete Chocheles, Jefferson Parish Economic Development Commission (JEDCO), Jefferson Parish Port District, New Orleans Public Meeting held 30 Aug 07
- Marnie Winter, Director of Jefferson Parish Department of Environmental Affairs, New Orleans Public Meeting held 30 Aug 07
- Marietta Green, Land Manager, Madison Land Company, New Orleans Public Meeting held 30 Aug 07
- Chris Areas, concerned citizen, New Orleans Public Meeting held 30 Aug 07

- Vickie Duffourc, Bayou Signet Boaters Association, SCI Jefferson Parish, New Orleans Public Meeting held 30 Aug 07

Bayou Thunder Marsh Creation and Shoreline Protection
Written Comments
No comments were received.
Oral Comments

- Jason Smith, Jefferson Parish Department of Environmental Affairs, Marine Fisheries Advisory Board Coordinator, New Orleans Public Meeting held 30 Aug 07
- Pete Chocheles, Jefferson Parish Economic Development Commission(JEDCO), Jefferson Parish Port District, New Orleans Public Meeting held 30 Aug 07

Caernarvon Outfall Management/Lake Lery Shoreline Restoration
Written Comments
No comments were received.
Oral Comments

- Chris Areas, concerned citizen, New Orleans Public Meeting held 30 Aug 07
- John Hebert, Algiers and Waggaman Land Owner, New Orleans Public Meeting held 30 Aug 07

Bohemia Mississippi River Reintroduction
Written Comments

- Jeff Raasch, Chairperson of the Gulf Coast Joint Venture

Oral Comments
No comments were received.

West Pointe a la Hache Marsh Creation
Written Comments
No comments were received.
Oral Comments

- John Hebert, Algiers and Waggaman Land Owner, New Orleans Public Meeting held 30 Aug 07
- George Seymour, concerned citizen, New Orleans Public Meeting held 30 Aug 07
- Chris Areas, concerned citizen, New Orleans Public Meeting held 30 Aug 07

Pass a Loutre Restoration
Written Comments

- Ken Litzenberger, U.S. Fish and Wildlife Service, Project Leader
- Jeff Raasch, Chairperson of the Gulf Coast Joint Venture

Oral Comments

- Todd Baker, Louisiana Department of Wildlife and Fisheries (LDWF), New Orleans Public Meeting held 30 Aug 07
- James Harris, USFWS Refuge Manager, South East Region, New Orleans Public Meeting held 30 Aug 07
-

Southeast Lake Boudreaux Marsh Creation and Terracing
Written Comments

- Coastal Zone Management and Restoration Advisory Committee

Oral Comments

- Leslie Suazo, Coastal Restoration and Preservation Director, Terrebonne Parish, New Orleans Public Meeting held 30 Aug 07

Beach and Back Barrier Marsh Restoration – East Island
Written Comments

- Coastal Zone Management and Restoration Advisory Committee
- Jeff Raasch, Chairperson of the Gulf Coast Joint Venture

Oral Comments

- Leslie Suazo, Coastal Restoration and Preservation Director, Terrebonne Parish, New Orleans Public Meeting held 30 Aug 07

East Cove Marsh Creation
No written or oral comments were received.

Bioengineered Oyster Reef Demo
Written Comments
No written comments were received.
Oral Comments

- Sherrill Sagrera, Vermilion Parish Coastal Advisory Board, Abbeville Public Meeting held 29 Aug 07

Sediment Containment System for Marsh Creation Demo
No written or oral comments were received.

Positive Displacement Pump Demo
Written Comments
No written comments were received.
Oral Comments

- Mike Carlos, Program Manager for Louisiana Department of Wildlife and Fisheries, Abbeville Public Meeting held 29 Aug 07
- Tom Hess, concerned citizen, Abbeville Public Meeting held 29 Aug 07
- Sherrill Sagrera, Vermilion Parish Coastal Advisory Board, Abbeville Public Meeting held 29 Aug 07
- John Hebert, Algiers and Waggaman Land Owner, New Orleans Public Meeting held 30 Aug 07

Coastal Wetlands Planning, Protection, and Restoration Act

17th Priority Project List Report

Appendix G

Project Status Summary Report from 1st through 17th Priority Project Lists

by Lead Agency, by Basin and by Priority List

Appendix G

Project Status Summary Report from 1st through 17th Priority Project Lists

By Lead Agency, Basin and Priority List

Table of Contents

DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

PROJECT STATUS SUMMARY REPORT

30 January 2008

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

Lead Agency: DEPT. OF THE ARMY, CORPS OF ENGINEERS

Priority List 1

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	**BASIN**	**PARISH**	**ACRES**	**CSA**	**Const Start**	**Const End**	**Baseline**	**Current**	**%**	**Obligations/ Expenditures**
Barataria Bay Waterway Wetland Creation	BARA	JEFF	445	24-Apr-1995 A	22-Jul-1996 A	15-Oct-1996 A	$1,759,257	$1,172,896	66.7	$1,172,896 $1,172,896

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	$3,850,699 $3,777,952

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.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	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 !	$2,005,235 $1,852,057

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	$22,312,761	262.0 !	$15,877,986 $14,901,980

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.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
	Total Priority List	1	10,544				$16,323,624	$29,385,325	180.0	$22,965,568 $21,763,637

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 !	$3,523,254 $2,904,188

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.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
West Belle Pass Headland Restoration	TERRE	LAFOU	474	27-Dec-1996 A	10-Feb-1998 A	30-Sep-2007 *	$4,854,102	$6,751,441	139.1 !	$6,699,986 $6,290,693

Status: Status: Original project construction completed July 1998. Supplemental disposal for wetland creation anticipated September 2006.

Problems: Construction of the original project started in February 1998, and pumping of dredged material into the project area for wetland creation began in May 1998. Project area conditions were sub-optimal at the time of disposal due to unforeseen weather patterns. In 1998, the area experienced frequent storm activity with sustained winds, high-energy waves, and large amounts of rainfall. Southerly winds heightened tides and raised water levels in the project area to such an extent that dewatering of the dredged material was greatly inhibited. Slurry heights were difficult to determine and therefore, estimates of the amount and height of the material placed in the project area were uncertain at best. In addition, winds from the west battered the project area making the integrity of dike between Timbalier Bay and Bay Toulouse extremely difficult to maintain. The material for the dike had to be layered in geotextile to hold it together and, shortly after disposal was discontinued, the dike breached from the high water and waves affecting the project area. As a result, once the project’s disposal areas dewatered and settled shallow open water still remained in much of the project area where emergent wetlands were anticipated. Therefore, with the 2006 scheduled maintenance of the inland portion of Bayou Lafourche and Belle Pass upcoming, CEMVN plans to once again deposit maintenance material from these channels into the West Belle Pass project area in an effort to complete the wetland restoration anticipated under the original project.

All the dredged material containment features and rock protection of the project were constructed during the original construction. However, refurbishment of the westernmost retainment dike and reconstruction of the closure between Timberlier Bay and Bay Toulouse would be necessary to achieve a second disposal into the project area.

Restoration Strategy: Dredged material from Bayou Lafourche and Belle Pass would be deposited in the bays and canals of the project area to an elevation between +3.5 to +4.0 feet (ft) MLG, so that the settled elevation would be approximately the same as nearby healthy marsh, which occurs between +2.0 and +2.5 ft MLG.

Progress to Date: Supplemental Environmental Assessment # 271B is currently out on public review. Construction of the project is anticipated to begin in mid September.

Total Priority List		2	1,541				$6,595,412	$10,447,529	158.4	$10,223,241 $9,194,881

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

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

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	$860,674 $687,679

Status: Cost increase was due to additional project management costs, by both Federal and Local Sponsor.

Surveys identified a pipeline in the crevasse area which would be negatively impacted by the project. US Fish & Wildlife Service reviewed their permit for the pipeline and determined that Shell Pipeline was required to lower it at their own cost. USFWS requested a modification to the alignment on USFWS-owned lands.

Construction complete.

MRGO Disposal Area Marsh Protection	PONT	STBER	755	17-Jan-1997 A	25-Jan-1999 A	29-Jan-1999 A	$512,198	$313,145	61.1	$313,145 $313,145

Status: Completed scope of work greatly reduced. Work was to be performed via a simplified acquisition contract as estimated construction cost is under $100,000. Bids received were higher than Government estimate by 25%. Subsequently received an in-house labor estimate from Vicksburg District. Vicksburg District completed construction on 29 January 1999.

Cost increase was due to additional project management costs, environmental investigations and local sponsor activities not included in the baseline estimate. Further title research indicates that private ownership titles are unclear, requiring condemnation. This accounts for the long period between CSA execution and project construction.

Pass-a-Loutre Crevasse [DEAUTHORIZED]	DELTA	PLAQ					$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.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Total Priority List		3	1,691				$4,178,385	$1,321,965	31.6	$1,293,655 $1,120,660

3 Project(s)
2 Cost Sharing Agreements Executed
2 Construction Started
2 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 4

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	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

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
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	$2,552,951 $2,273,584

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.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	5	75				$2,555,029	$2,589,403	101.3	$2,552,951 $2,273,584

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	0	31-May-2002 A	03-Jun-2002 A	21-Jun-2002 A	$1,600,000	$1,909,020	119.3	$1,906,489 $1,865,928

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.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Marsh Island Hydrologic Restoration	TECHE	IBERI	408	01-Feb-2001 A	25-Jul-2001 A	12-Dec-2001 A	$4,094,900	$5,143,323	125.6 !	$5,033,029 $4,060,769

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	$7,119,212	58.7	$7,006,387 $5,993,566

3	Project(s)
2	Cost Sharing Agreements Executed
2	Construction Started
2	Construction Completed
1	Project(s) Deferred/Deauthorized

Priority List 8

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	$3,421,671 $3,421,671

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.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Sabine Refuge Marsh Creation, Cycle 2	CA/SB	CAMER	261	17-Feb-2005 A	15-Jan-2008 *	01-Dec-2009	$9,266,842	$11,583,553	125.0 !	$1,296,811 $1,268,002

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 beginning of 2008. Acquisition of the land rights required for the pipeline corridor is underway. The placement of dredged material in Cycle 3 is completed, and upon settlement, the dikes will be degraded to mimic natural hydrologic conditions. Upon completion of Cycle 2, the COE and DNR will ask the Task Force for construction approval for Cycles 4 and 5.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Sabine Refuge Marsh Creation, Cycle 3	CA/SB	CAMER	187	28-Mar-2005 A	25-Oct-2006 A	01-Oct-2008	$3,629,333	$4,536,666	125.0	$2,651,519 $2,643,850

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 beginning of 2008. Cycle 3 consists of the creation of 232 acres of marsh platform using material dredged from the Calcasieu River Ship Channel. Between February 12 and March 31, 2007, 828,767 cubic yards of dredged sediment material were placed into the Sabine Refuge Cycle 3 marsh creation area. Lower level earthen overflow weirs were constructed to assist in the dewatering of the marsh creation disposal area and to create fringe marsh with the overflow. The dredged slurry has been placed between elevations 2.03 NAVD 88 and 2.71 NAVD 88. Construction of low level weirs and breaching of the retention dikes surrounding Cycle 3 will allow 10 to 20 percent of the dredged material to splay into the surrounding area.

Upon completion of Cycle 2, the COE and DNR 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 scheduled for constructed at the beginning of 2008. Cycle 3 is currently under construction. Upon completion of Cycle 2, the COE and LDNR will ask the Task Force for construction approval for Cycles 4 and 5.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual Obligations/
PROJECT	**BASIN**	**PARISH**	**ACRES**	**CSA**	**Const Start**	**Const End**	**Baseline**	**Current**	**%**	**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 scheduled for constructed at the beginning of 2008. Cycle 3 is currently under construction. 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	$19,541,890	68.3	$7,370,001 $7,333,522

5 Project(s)
3 Cost Sharing Agreements Executed
2 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	01-Apr-2008	01-Apr-2008	30-Jun-2009	$1,498,967	$1,498,967	100.0	$1,094,353 $1,095,142

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.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Opportunistic Use of the Bonnet Carre Spillway [DEAUTHORIZED]	PONT	STCHA					$150,706	$188,383	125.0 !	$106,932 $82,248
	Status:	At the June 27, 2007 CWPPRA Task Force meeting, the Task Force voted to begin the deauthorization process for this project. In accordance with the CWPPRA Project Standard Operating Procedures Manual, notices were sent out in July 2007 to all interested parties requesting their comments and advising them that, at the next CWPPRA Task Force meeting (currently scheduled for October 25, 2007), a final decision on deauthorization will be made.								
Periodic Intro of Sediment and Nutrients at Selected Diversion Sites Demo (DEMO)	COAST	VARY	0	01-Apr-2008	01-Apr-2008	01-Apr-2009	$1,502,817	$1,502,817	100.0	$31,726 $31,726
	Status:	In August 2005, project was stalled due to Katrina workload. In November 2006 team began coordinating with 4th Supplemental project, Modification to Caenarvon, to ensure consistency. Currently the team needs to fully develop Preliminary Design Report. Team is working on updating costs to reflect post-Katrina price levels. Also, the team is working on developing benefits of a thin layer of sediment versus marsh creation.								
Weeks Bay MC and SP/Commercial Canal/Freshwater Redirection	TECHE	IBERI	278				$1,229,337	$1,229,337	100.0	$532,636 $520,305
	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	519				$4,381,827	$4,419,504	100.9	$1,765,646 $1,729,421

4	Project(s)
0	Cost Sharing Agreements Executed
0	Construction Started
0	Construction Completed
1	Project(s) Deferred/Deauthorized

Priority List 10

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Benneys Bay Diversion	DELTA	PLAQ	5,706	01-Apr-2008	01-Mar-2009	01-Nov-2010	$1,076,328	$1,076,328	100.0	$944,736 $904,744
	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	$2,242,413 $2,064,734
	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-Apr-2008	01-Dec-2009		$1,155,200	$1,444,000	125.0	$1,046,391 $1,099,400
	Status:	95% desgin review anticipated July 25, 2007.								
Total Priority List		10	15,098				$5,233,642	$5,522,442	105.5	$4,233,540 $4,068,878

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

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

Priority List 11

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Grand Lake Shoreline Protection, O&M Only [CIAP]	MERM	CAMER					$8,382,494	$5,667,387	67.6	$0 $0
	Status:									
Grand Lake Shoreline Protection, Tebo Point	MERM	CAMER	530	01-Apr-2008	01-Nov-2007 *	01-Jun-2008	$11,811,039	$4,381,643	37.1	$759,564 $756,718
	Status:	The Grand Lake project, excluding the Tebo Point Extention, is included in the State's Coastal Impact Assistance Plan as a Tier 1 project that the state will construct. The Tebo Point Extension portion of the project was approved for construction under the CWPPRA Program by the Task Force in January 2007.								
Total Priority List	11		530				$20,193,533	$10,049,030	49.8	$759,564 $756,718

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

Priority List 12

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Avoca Island Diversion and Land Building	TERRE	STMRY	143	01-Apr-2008	15-Jul-2009	15-Jun-2010	$2,229,876	$2,229,876	100.0	$1,468,421 $1,519,815

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. 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 second draft 30% Preliminary Design Report was submitted to LDNR for review on 25 May 2007. On 10 Jul 2007 the Corps met with LDNR to discuss the 25 May 2007 draft 30% Report and LDNR submitted a request for additional information (mostly geotechnical concerns). The Corps' geotechs completed their input on 15 Jan 08 and the info is being reviewed before release to LDNR. Release is expected by the end of Jan 2008. A meeting will be set up with LDNR if more information is needed. A 30% design review is tentatively set for midMarch 2008.

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	01-Apr-2008	30-Mar-2008	30-Nov-2008	$1,348,345	$1,348,345	100.0	$1,077,012 $1,067,733

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.

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Mississippi River Sediment Trap	DELTA	PLAQ	1,190	01-Apr-2008	01-Aug-2009	01-Mar-2010	$1,880,376	$1,880,376	100.0	$334,436 $309,673

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.

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
South White Lake Shoreline Protection	MERM	VERMI	844	24-Mar-2005 A	01-Nov-2005 A	29-Aug-2006 A	$19,673,929	$15,714,410	79.9	$10,439,184 $10,424,954

Status: Project construction near complete. Construction of dike and beneficial use of dredge material to construct marsh behind dike going very well.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	12	2,443				$25,132,526	$21,173,007	84.2	$13,319,054 $13,322,175

4 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 13

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Shoreline Protection Foundation Improvements Demonstration (DEMO)	COAST	COAST	0	24-Mar-2005 A	01-Nov-2005 A	29-Aug-2006 A	$1,000,000	$1,055,000	105.5	$645,036 $585,316

Status: All instruments, dredging, sand, fabric and rock installed. Contractor is monitoring instruments and submitting data.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Spanish Pass Diversion	DELTA	PLAQ	433	01-Apr-2008	01-Jun-2010		$1,137,344	$1,421,680	125.0	$295,564 $269,186

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. Hydraulic modeling work was completed and a Dec 2006 progress report revealed that the project as proposed would not attain originally anticipated wetland benefits. Various alternatives to revise the project scope are being developed in conjunction with Plaquemines Parish officials. Most recent meeting with Parish officials and LDNR occurred on 1 May 07. Last contact with Plaquemines Parish occurred on 19 Sep 2007 in attempt to meet and discuss future direction for this project. Efforts addressing the Cost Share Agreement issue are ongoing between LDNR and the COE.

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
	Total Priority List	13	433				$2,137,344	$2,476,680	115.9	$940,600 $854,502

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

Priority List 15

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Bayou Lamoque Freshwater Diversion [TRANSFER]	BRET	PLAQ					$1,205,354	$1,205,291	100.0	$9,452 $9,304

Status: The project received Phase I approval from the Task Force on Priority Project List 15 in February 2006. The Corps of Engineers, the Environmental Protection Agency, and the LA Department of Natural Resources are currently developing a work plan of Phase I activities.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Venice Ponds Marsh Creation and Crevasses	DELTA	PLAQ	511				$1,074,522	$1,074,522	100.0	$382,878 $25,492

Status:

- Investigations are continuing in the development of marsh creation site design. From the original proposed project, marsh creation sites 1 and 2 are recommended to be removed and marsh creation site 3 is recommended to be enhanced. The planned improvements for Site 4 are unchanged.
- The EPA and LNDR cooperative agreement is under development.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	15	511				$2,279,876	$2,279,813	100.0	$392,331 $34,796

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

Priority List 16

Alligator Bend Marsh Restoration and Shoreline Protection	PONT	ORL	330				$1,660,985	$1,660,985	100.0	$2,000 $8,830
	Status:									
Southwest LA Gulf Shoreline Nourishment and Protection	MERM	CAMER	888	01-Apr-2008	01-Jul-2010	08-Jul-2011	$1,266,842	$1,266,842	100.0	$2,000 $7,325
	Status:	This project was approved for Phase 1 design in Oct 2006. The COE internal project delivery team (PDT) has been assembled. Upon attainment of a Cost Share Agreement with LDNR, a Phase 1 work plan will be developed and a kickoff meeting/site visit scheduled. Efforts addressing the Cost Share Agreemment issue are ongoing between LDNR and the COE.								
	Total Priority List	16	1,218				$2,927,827	$2,927,827	100.0	$4,000 $16,156

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

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)

	PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total	DEPT. OF THE ARMY, CORPS OF ENGINEERS			36,004				$135,462,373	$119,377,684	88.1	**$72,950,594** $68,586,552

40 Project(s)
18 Cost Sharing Agreements Executed
16 Construction Started
14 Construction Completed
6 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

Lead Agency: ENVIRONMENTAL, REGION 6

Priority List Conservation Plan

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

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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.

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

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
	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

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Red Mud Demo [DEAUTHORIZED]	PONT	STJON		03-Nov-1994 A			$350,000	$470,500	134.4 !	$520,129 $520,129
	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 !	$7,134,864 $7,037,560
	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	$7,654,993 $7,557,689

2 Project(s)
2 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 4

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Compost Demonstration (DEMO) [DEAUTHORIZED]	CA/SB	CAMER		22-Jul-1996 A			$370,594	$213,645	57.6	$213,645 $213,645

Status: Plans and specifications have been finalized. All permits and construction approvals have been obtained.

The amount of compost vegetation needed has not yet been supplied. A smaller sized demonstration has been designed. Advertisement for construction bids has been made.

The Task Force approved deauthorization on January 16, 2002.

Total Priority List	4	$370,594	$213,645	57.6	$213,645 $213,645

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 5

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Bayou Lafourche Siphon [DEAUTHORIZED]	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.

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
1 Project(s) Deferred/Deauthorized

Priority List 5.1

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Mississippi River Reintroduction into Bayou Lafourche [DEAUTHORIZED]	TERRE	IBERV		23-Jul-2003 A			$9,700,000	$9,700,000	100.0	$6,933,440 $6,893,521

Status: The Mississippi River Reintroduction into Bayou Lafourche Project (BA-25b) has been proposed for de-authorization from the CWPPRA program. However, recognizing the importance of this project, the State of Louisiana, through the Louisiana Department of Natural Resources, has committed to developing this project and is continuing final design efforts toward completion beyond its authorization under the CWPPRA program.

Total Priority List 5.1	$9,700,000	$9,700,000	100.0	$6,933,440 $6,893,521

0 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 6

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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.

				*********** SCHEDULES ***********			******** ESTIMATES ********			
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	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

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
LA Highway 1 Marsh Creation [DEAUTHORIZED]	BARA	LAFOU		05-Oct-2000 A			$1,151,484	$343,551	29.8	$377,520 $243,140
	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-Oct-2006 A	30-Dec-2007 *	$7,393,626	$13,107,798	177.3 !	$11,509,044 $6,588,066
	Status:	A project review/lessons learned meeting is planned for Spring 2008.								
Timbalier Island Dune and Marsh Restoration	TERRE	TERRE	273	05-Oct-2000 A	01-Jun-2004 A	30-Nov-2007 *	$16,234,679	$16,659,416	102.6	$15,774,577 $15,089,565
	Status:	A project review/lessons learned meeting is planned for Spring 2008.								
Total Priority List	9		375				$24,779,789	$30,110,765	121.5	$27,661,141 $21,920,771

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

Priority List 10

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Lake Borgne Shoreline Protection	PONT	STBER	165	02-Oct-2001 A	01-Aug-2007 A	30-Dec-2008	$18,378,900	$25,212,993	137.2 !	$21,542,790 $1,124,520
	Status:	Installation of sheetpiles at Bayou Dupre has begun. Surveys are underway to finalize rock alignment.								
Small Freshwater Diversion to the Northwestern Barataria Basin	BARA	STJAM	941	08-Oct-2001 A	13-May-2011	13-May-2013	$1,899,834	$2,362,687	124.4	$2,134,449 $593,756
	Status:	Percieved unwillingess of new landowner to authorize landrights for the project seems to have changed very significantly. Cypress logging no longer appears to be a threat due to regulatory enforcement some time ago. The Parish continues to be extremely supportive, assisting the State and EPA in discussions with the landowner, and making commitments to actually purchase swampland in the area, including tracts that will directly support the project. The landowner has a pending proposal for using the project area as a mitigation bank, adopting some of the secondary features of the CWPPRA project to generate the benefits. EPA will ensure that the appropriate secondary features of our CWPPRA project, and associated benefits, are removed from the CWPPRA project in the future. Should the landowners' proposal be accepted by the agencies, both projects will be complementary. EPA and DNR are documenting the current support and formulating an aggressive strategy for progress on this excellent small diversion project.								
	Total Priority List	10	1,106				$20,278,734	$27,575,680	136.0	$23,677,239 $1,718,276

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

Priority List 11

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
River Reintroduction into Maurepas Swamp	PONT	STJON	5,438	04-Apr-2002 A	01-Jun-2010	01-Dec-2011	$5,434,288	$6,780,307	124.8	$5,743,276 $2,338,230
	Status:	Actual engineering and design is proceeding rapidly. Landrights costs greatly exceed the available budget, and so landrights will probably not be acquired in Phase 1. NEPA effort is complex and has not progressed as rapidly as engineering and design.								

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Ship Shoal: Whiskey West Flank Restoration	TERRE	TERRE	195	17-Mar-2004 A	01-May-2008	01-Feb-2009	$2,998,960	$3,742,053	124.8	$3,333,699 $1,961,270

Status: The project's cost data was revised. The Phase 2 request package was updated and presented at the January 2008 TC to request construction funds.

Total Priority List	11	5,633	$8,433,248	$10,522,360	124.8	$9,076,975 $4,299,500

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

Priority List 12

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Bayou Dupont Sediment Delivery System	BARA	PLAQ	326	21-Mar-2004 A	01-May-2008	01-Nov-2008	$2,192,735	$2,731,221	124.6	$2,441,335 $577,311

Status: 1/23/08
95% Design Review Meeting was held November 7, 2007.
Technical Committee recommended authorization of Phase 2 construction on January 16, 2008 pending Task Force approval.

Total Priority List	12	326	$2,192,735	$2,731,221	124.6	$2,441,335 $577,311

1	Project(s)
1	Cost Sharing Agreements Executed
0	Construction Started
0	Construction Completed
0	Project(s) Deferred/Deauthorized

Priority List 13

				************ SCHEDULES ************			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Whiskey Island Back Barrier Marsh Creation	TERRE	TERRE	272	29-Sep-2004 A	01-Apr-2008		$2,293,893	$2,754,889	120.1	$2,402,319 $1,011,661

Status: A favorable 30% E&D review was held on August 28, 2007, and a favorable 95% E&D review was held on November 7, 2007. The project was recommended for Phase 2 approval on January 16, 2008, by the Techical Committee.

Total Priority List	13	272	$2,293,893	$2,754,889	120.1	$2,402,319 $1,011,661

1	Project(s)
1	Cost Sharing Agreements Executed
0	Construction Started
0	Construction Completed
0	Project(s) Deferred/Deauthorized

Priority List 14

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
East Marsh Island Marsh Creation	TECHE	IBERI	189		01-Aug-2009	01-Jul-2010	$1,193,606	$1,193,606	100.0	$1,063,053 $61,724

Status: Field data collection is complete. Geotech analysis scheduled to be completed in April 2008. The 30% and 95% E&D reviews are planned for Spring and Summer 2008, repectively.

Total Priority List	14	189	$1,193,606	$1,193,606	100.0	$1,063,053 $61,724

1	Project(s)
0	Cost Sharing Agreements Executed
0	Construction Started
0	Construction Completed
0	Project(s) Deferred/Deauthorized

Priority List 16

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Enhancement of Barrier Island Vegetation Demo [DEMO]	VARY	MULTI	0	27-Jul-2007 A	01-Apr-2008		$919,599	$919,599	100.0	$789,983 $1,601
	Status:	Contract awarded and work plan to accomplish demonstration is under development.								
	Total Priority List	16	0				$919,599	$919,599	100.0	$789,983 $1,601

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 17

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Bohemia Mississippi River Reintroduction	BRET	PLAQ	637				$1,359,699	$1,359,699	100.0	$0 $0
	Status:									
	Total Priority List	17	637				$1,359,699	$1,359,699	100.0	$0 $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)

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Total ENVIRONMENTAL, REGION 6			9,895				$114,845,744	$115,891,199	100.9	**$103,149,736** $65,322,549

20	Project(s)
17	Cost Sharing Agreements Executed
6	Construction Started
3	Construction Completed
6	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

Lead Agency: DEPT. OF THE INTERIOR, FISH & WILDLIFE SERVICE

Priority List 0.1

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
CRMS - Wetlands	COAST	COAST		08-Jun-2004 A	14-Aug-2003 A	01-Mar-2008	$66,890,300	$18,189,968	27.2	$7,423,492 $1,787,383

Status: The status of the 390 stations (as of January 23, 2008) is as follows: 386 have approved landrights; 386 have preliminary site characterizations; 271 full site constructions; 93 site constructions without final survey; and 282 sites currently with data collection. Data from the 282 sites is posted within the DNR SONRIS database, USGS or CWPPRA web sites. The data available includes hydrologic (164 sites), vegetation (256 sites), elevation/accretion (122 sites), and soil properties (152 sites). Coastwide aerial photography and satellite imagery was acquired in October and November 2005 and is available at http://www.lacoast.gov/maps/2005 doqq/index.htm. Land:water analyses have been completed on 361 sites with 183 in editorial and peer-review. Maps are posted on the CRMS site on LaCoast. A new CRMS web page on LaCoast is being designed to facilitate easier access to data and products. This site should be up and available in April 2008. CRMS analytical teams were established for landscape, hydrology, vegetation and soils data as well as a data delivery team to develop ecological indices for evaluations at project and landscape levels. Draft indices were developed based on feedback received from the CWPPRA agencies in the June-July 2007 meetings, and they will be provided to the CWPPRA Monitoring WorkGroup for technical review in March 2008.

Total Priority List 0.1	$66,890,300	$18,189,968	27.2	$7,423,492 $1,787,383

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	08-Dec-1999 A		$1,500,000	$1,500,000	100.0	$79,387 $79,387

Status: No contingency fund requests since May 14, 2007.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	0.2					$1,500,000	$1,500,000	100.0	$79,387 $79,387

1 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 0.3

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Storm Recovery Assessment Fund	COAST	COAST		16-Oct-2007 A	18-Oct-2006 A	18-Oct-2006 A	$303,359	$303,359	100.0	$0 $0

Status: The cooperative agreement between DNR and USGS was signed on October 16, 2007. The first invoice for $203,358.92 was submitted by DNR and approved by USGS in December 2007 for the Hurricane Katrina and Rita assessment activities.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	0.3					$303,359	$303,359	100.0	$0 $0

1 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 1

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
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	$1,661,914 $1,237,683

Status: FWS and LDNR are presently developing a project Operation and Maintenance Plan.

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Cameron Creole Plugs	CA/SB	CAMER	865	17-Apr-1993 A	01-Oct-1996 A	28-Jan-1997 A	$660,460	$1,039,192	157.3 !	$987,982 $787,846
	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	$1,207,523 $1,033,982
	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	$1,555,273 $1,297,744
	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								
Total Priority List		1	8,204				$8,391,616	$5,499,164	65.5	$5,412,692 $4,357,254

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

Priority List 2

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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	$1,566,181 $1,265,778
	Status:	FWS and LDNR are presently developing a project Operation and Maintenance Plan.								

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
	Total Priority List	2	1,280				$1,452,035	$1,642,552	113.1	$1,566,181 $1,265,778

1 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 3

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	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	$4,528,418	98.8	$4,425,448 $3,447,819

Status: Sabine Refuge Structure Replacement Project

Status January 2008

Construction began the week of November 1, 1999, dedicated in December 2000, and completed June 2001. 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.

Initially electrical problems were caused because the 3-Phase electrical service to the structures was not the proper 3-Phase. Transformers and filters were added to the structures in December 2001. Problems continued with motors running in reverse until 2002. The structures continued to operate incorrectly in the automatic mode because the correct "3-Phase" electricity was not available.

Rotary phase converters, installed in September 2003, eliminated motor reversal and other problems for an estimated cost of $20,000 for 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.

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.

Current Structure Operations and Repair Post Hurricane Rita

Hurricane Rita in October 2005 overtopped the structures and damaged the electric motors, guard rails and other equipment. The structures have been operated in the partially open mode until repairs can be made. Some FEMA funds have been received by DNR for repair of Hurricane Rita damage. Other funds from the Fish and Wildlife Service are also being used for structure repair and upgrade. Repair and upgrading is currently in contracting with the TVA handling contract administration for the Service.

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
	Total Priority List	3	953				$4,581,454	$4,528,418	98.8	$4,425,448 $3,447,819

1 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 5

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Grand Bayou Hydrologic Restoration	TERRE	LAFOU	199	28-May-2004 A	01-Jul-2009	01-Dec-2009	$5,135,468	$8,209,722	159.9 !	$2,530,545 $1,370,030

Status: The first batch of model runs has been completed and is being evaluated. A meeting with Louisiana Department of Wildlife and Fisheries personnel was held on August 24th to get opinions from the staff of Pointe au Chene Wildlife Management Area regarding model predicted salinities. They will compile actual area salinties so that they may be compared against predicted salinities to assess the accuracy of the model.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
	Total Priority List	5	199				$5,135,468	$8,209,722	159.9	$2,530,545 $1,370,030

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 6

				*********** SCHEDULES ***********			******** ESTIMATES ********			
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Lake Boudreaux Freshwater Introduction	TERRE	TERRE	603	22-Oct-1998 A	01-Sep-2009	01-Mar-2010	$9,831,306	$10,519,383	107.0	$1,830,813 $1,117,402
	Status:	At the June 27, 2007, Task Force meeting, project managers were charged with developing revised project costs and benefits for the April 2008 Task Force meeting. On August 27, a meeting was held to identify project features for which revised project costs would be prepared. Once DNR submits a task order to T. Baker Smith, Inc., efforts to revise project costs will begin. Requirements for updating the project's Wetland Value Assessment were discussed in preparation for completing that work.								
Nutria Harvest for Wetland Restoration (DEMO)	COAST	COAST	0	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.								
	Total Priority List	6	603				$11,971,306	$11,324,066	94.6	$3,058,007 $1,923,622

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

Priority List 9

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Freshwater Introduction South of Highway 82	MERM	CAMER	296	12-Sep-2000 A	01-Sep-2005 A	13-Dec-2006 A	$6,051,325	$5,085,091	84.0	$1,936,594 $1,460,667

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

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.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Mandalay Bank Protection Demonstration (DEMO)	TERRE	TERRE	0	06-Dec-2000 A	25-Apr-2003 A	01-Sep-2003 A	$1,194,495	$1,767,214	147.9 !	$1,849,725 $1,624,273
	Status:	Construction was completed 9/1/2003.								
	Total Priority List	9	296				$7,245,820	$6,852,305	94.6	$3,786,319 $3,084,941

2 Project(s)
2 Cost Sharing Agreements Executed
2 Construction Started
2 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 INTERIOR (FWS)

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Delta Management at Fort St. Philip	BRET	PLAQ	267	16-May-2001 A	19-Jun-2006 A	14-Dec-2006 A	$3,183,940	$2,080,118	65.3	$930,894 $400,982

Status: This project was completed on December 14, 2006. The terraces have become well vegetated from plantings of smooth cordgrass and seashore paspalum as well as from natural colonization. Future monitoring of the crevasses should indicate whether or not the receiving areas are filling.

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	$5,498,431	84.7	$5,313,321 $3,913,126

Status:

East Sabine Lake Hydrologic Restoration Project

Status January 2008

A joint FWS- NRCS-DNR cost-share agreement was completed on July 17, 2001. Phase I E&D funding and Phase II construction funding were approved by the Task Force on January 10, 2001, and November 2003 respectively.

Hydrodynamic Modeling Study

FTN completed hydrodynamic modeling for the proposed water control structures at Right Prong, Greens, Three and Willow Bayous. Phase I hydrodynamic modeling consisted of reconnaissance, data acquisition, model selection, and model geometry establishment. Nine data recorders were deployed for a 16-month period (February 2002 to June 2003) for modeling purposes. Surveys were completed by May 2002.
The "East Sabine Lake Hydrologic Restoration Hydrodynamic Modeling Study Phase II: Calibration and Verification Report," "Historical Data Review Modeling Phase III Data and Final Report," and the "Phase III Determination of Boundary Conditions for Evaluating Project Alternatives" were completed October 5, 2004. With-project model runs that included modeling of fixed crest weirs with boat bays (10 feet wide by 4 feet deep) at Willow, Three, Greens and Right Prong Black Bayous were completed.

Hydrodynamic modeling results predicted that the proposed structures would have very little effects in reducing project area salinities.

Construction

The construction contract was awarded in December 2004, and the first portion of Construction Unit 1 was completed in October 2006. The following project features have been constructed: 1) Pines Ridge Bayou weir, 2) Bridge Bayou culverts, 3) 171,000 linear feet of earthen terraces in the Greens Lake area, 4) 3,000 linear feet of rock breakwater, with 50-foot wide gaps, at the eastern Sabine Lake shoreline beginning at Willow Bayou, and, 5) a rock weir in SE Section 16.

Project Modifications

11 miles (58,100 linear feet) of planned Sabine Lake shoreline plantings were removed and more earthen terraces were added using vegetative planting funds because of an unsuccessful 7,500 linear foot test planting along the Sabine Lake shoreline conducted by the State Soil and Water Conservation District and the NRCS.

The CWPPRA Task Force approved adding 50,000 linear feet of terraces, constructing 4, 50-foot-wide gaps in the rock breakwater, and deleting Construction Unit 2 components in October 2006. Discontinuing further CU 2 design was based on recent hydrodynamic modeling results, an examination of historic salinity data, and possible structure negative impacts.

Current Construction

The Pines Bayou weir was rehabilitated in August 2007 due to heavy damage caused by Hurricane Rita. Four 50-foot wide gaps were also installed in August 2007, in the 3,000 foot-long rock breakwater near Willow Bayou. A contract for 50,000 linear feet of additional earthen terraces was advertised in fall 2007 and the low bidder notified in January 2008. Construction should begin in spring 2008.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	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	$4,761,907	49.4	$4,573,271 $3,609,201

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.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
North Lake Mechant Landbridge Restoration	TERRE	TERRE	604	16-May-2001 A	01-Apr-2003 A	01-Nov-2009	$31,727,917	$37,037,846	116.7	$1,322,355 $819,425
	Status:	Additional construction funds have been received for CU 2. DNR completed all oyster surveys and appraisals along with finalizing the bid package in late fall of 2007. We are currently awaiting the release of that bid package and look forward to starting construction sometime in the early summer of 2008.								
Terrebonne Bay Shore Protection Demonstration (DEMO)	COAST	TERRE		24-Jul-2001 A	25-Aug-2007 A	01-Dec-2007 *	$2,006,424	$2,718,767	135.5 !	$2,147,308 $435,174
	Status:	Final inspection of this project was completed by FWS and DNR on December 19, 2007 and we could find no apparent problems. Since that date, the landowner has requested additional navigation aids in the form of PVC pipe with reflective tape. This will be done ASAP. I would have to say that this project faced some particularly difficult problems in getting a bid that was within budget (went to bid 4 times right after the hurricanes). DNR/Thibobaux Field Office was up for the job I would like to say that they worked quickly on all aspects of this project. I would like to personally thank them for not giving up on the project and for what I would consider a job very well done.... THANK YOU for a great job.								
Total Priority List	10		1,309				$53,044,256	$52,097,069	98.2	$14,287,150 $9,177,908

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

Priority List 11

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Dedicated Dredging on the Barataria Basin Landbridge	BARA	JEFF	605	03-Apr-2002 A	01-May-2008	01-Feb-2009	$2,294,410	$15,695,084	684.1 !	$433,994 $387,460
	Status:	Bid advertisement should occur in March 2008 with construction anticipated to begin in May 2008.								

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	**BASIN**	**PARISH**	**ACRES**	**CSA**	**Const Start**	**Const End**	**Baseline**	**Current**	**%**	**Obligations/ Expenditures**
South Grand Chenier Hydrologic Restoration	MERM	CAMER	440	03-Apr-2002 A	01-Jun-2009	01-Jun-2010	$2,358,420	$2,358,420	100.0	$1,190,744 $408,325

Status:

Status January 2008

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, landowner representatives, and consulting engineers. In September 2004, the final hydrodynamic modeling report was completed; in September 2005, Hurricane Rita heavily impacted area landowners; in March 2006 a modeling results and project feature landowner meeting was held; in December 2006, we received key landowner approval to flow water across Hwy 82 to the project area south of Grand Chenier; in February 2007, we conducted an engineering survey field trip of the project area; and in August 2007 design surveying began, after receipt of landowner approvals.
Surveying was been completed by September 2007. A wave analysis model should be completed by the end of January 2008, for a proposed borrow area in the Gulf of Mexico for the marsh creation component. Geotechnical investigations will be able to begin in February 2008.

Hydrodynamic Modeling

A modeling and surveying contract was awarded to Fenstermaker and Associates on June 14, 2002. Elevation surveys and the installation of continuous water level and salinity recorders were completed and installed by August 2002. Preliminary and final model Ã¢â‚¬Å“Set UpÃ¢â‚¬Â   meetings were held on June 11, 2003, and August 6, 2003, respectively. Model calibration and validation was completed on September 30, 2003, and September 5, 2004, respectively.

The model results indicated that the project would be successful in flowing freshwater across Highway 82, at Grand Chenier, to reduce higher salinities in marshes south of the highway in the Hog Bayou Watershed caused by the Mermentau Ship Channel without impact of creating high water levels.

The model indicated that benefit Area A north of Hog Bayou and south of Hwy 82 near Lower Mud Lake would not receive significant salinity lowering benefits. The project team decided to remove the Area A features from the project. This would reduce the freshwater introduction component by 126 cfs (50%), leaving 126 cfs to benefit eastern marshes south of the Dr. Miller Canal.

The draft and final draft model reports entitled, "Hydrodynamic Modeling of the ME-29 South Grand Chenier Hydrologic Restoration Project" were 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, on January 16, 2003, at Rockefeller Refuge, and in March 2006, at Cameron Prairie National Wildlife Refuge to present modeling results and project features. Landrights approval for surveying and geotechnical sampling were received in August 2007.

Project Schedule

Design surveying and geotechnical field work should be completed by May 2008, and a geotechnical report submitted by July 2008. 30% and 95 % Design Review meetings could be scheduled by August 2008, and October 2008 respectively. The Phase II construction approval request is scheduled for Technical Committee approval in December 2008, and Task Force approval in February 2009.

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	24-Jul-2007 A	01-Jun-2008	$17,519,731	$17,895,502	102.1	$15,886,996 $1,978,505

Status: Construction on the rock shoreline protection component of this project has been completed for the northern and central sections of the project and construction of the rock dike has begun on the southern section. All of the marsh containment dikes have been completed as of December 20th. Inland Dredging Co. has indicated that the dredge would be on site in mid March to early April. No major problems have occurred with this project to date.

Total Priority List	11		1,322				$22,172,561	$35,949,006	162.1	$17,511,733 $2,774,290

3 Project(s)
3 Cost Sharing Agreements Executed
1 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 13

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Goose Point/Point Platte Marsh Creation	PONT	STTAM	436	14-May-2004 A	01-Apr-2008	01-Nov-2008	$21,067,777	$20,720,519	98.4	$101,264 $90,022

Status: The project is currently being advertised for bids. A pre-bid meeting with contractors is scheduled for February 15, 2008. Construction should begin in April 2008.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
				*********** SCHEDULES ***********			******** ESTIMATES ********			
	Total Priority List	13	436				$21,067,777	$20,720,519	98.4	$101,264 $90,022

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	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Lake Hermitage Marsh Creation	BARA	PLAQ	438	28-Mar-2006 A	01-May-2009	01-May-2010	$1,197,590	$1,197,590	100.0	$33,202 $13,162
	Status:	A 30% design review meeting is now scheduled for March 19, 2008.								
	Total Priority List	15	438				$1,197,590	$1,197,590	100.0	$33,202 $13,162

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 17

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Caernarvon Outfall Management/Lake Lery SR	BRET	MULTI	652				$2,665,993	$2,665,993	100.0	$0 $0
	Status:									

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	17	652				$2,665,993	$2,665,993	100.0	$0 $0

1 Project(s)
0 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Total	DEPT. OF THE INTERIOR, FISH & WILDLIFE SERVICE	15,692	$207,619,535	$170,679,731	82.2	**$60,215,421** $29,371,598

25 Project(s)
24 Cost Sharing Agreements Executed
18 Construction Started
12 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

Lead Agency: DEPT. OF COMMERCE, NATIONAL MARINE FISHERIES SERVICE

Priority List 1

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

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
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.

	Baseline	Current	%	Obligations/ Expenditures
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

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

				*********** SCHEDULES ***********			******** ESTIMATES ********			
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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.								
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 !	$7,043,049 $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 $2,678,521
	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	$12,641,102 $11,404,549

3 Project(s)
3 Cost Sharing Agreements Executed
3 Construction Started
3 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 COMMERCE (NMFS)

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
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.								
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	$3,720,721	181.8 !	$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	$5,605,856	135.1 !	$5,466,191 $5,115,282
	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	0	01-Mar-1995 A	02-Jul-1997 A	30-Jun-1998 A	$1,444,628	$2,801,782	193.9 !	$2,801,782 $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.								

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
	Total Priority List	3	2,422				$9,475,828	$12,149,322	128.2	$12,042,150 $11,612,158

4 Project(s)
4 Cost Sharing Agreements Executed
3 Construction Started
3 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 4

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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	$7,600,150	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.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	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.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	4	215				$10,771,372	$7,639,176	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

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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	$863,436 $683,929

Status: An O&M inspection trip was conducted March 2007. Terraces and vegetation appear to be in good condition. Emergent vegetation was noted to be colonizing in some locations between terraces. The Freshwater Bayou canal bank continues to erode and retreat along the northern edege of the project.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Myrtle Grove Siphon [DEAUTHORIZED]	BARA	PLAQ		20-Mar-1997 A			$15,525,950	$481,803	3.1	$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.

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List	5		441				$16,466,015	$1,367,833	8.3	$1,345,239 $1,165,732

2 Project(s)
2 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 6

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Black Bayou Hydrologic Restoration	CA/SB	CAMER	3,594	28-May-1998 A	01-Jul-2001 A	03-Nov-2003 A	$6,316,800	$6,000,720	95.0	$5,982,655 $4,791,617
	Status:	The LDNR is currently developing a work plan for minor maintenance noted during a November 2006 O&M inspection.								
Delta Wide Crevasses	DELTA	PLAQ	2,386	28-May-1998 A	21-Jun-1999 A	01-May-2005 A	$5,473,934	$4,728,319	86.4	$2,046,110 $1,851,471
	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	$1,662,709 $1,291,211
	Status:	An O&M inspection trip is scheduled for June 2007.								
Total Priority List	6		7,979				$14,958,134	$14,121,174	94.4	$9,691,474 $7,934,299

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

Priority List 7

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Grand Terre Vegetative Plantings	BARA	JEFF	127	23-Dec-1998 A	01-May-2001 A	01-Jul-2001 A	$928,895	$492,774	53.0	$501,364 $345,343

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.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
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	$2,394,418 $2,153,675

Status: An O&M inspection trip was conducted March 2007. The vegetation on the terraces experienced a die-back after Hurricane Rita. However, the vegetation appears to be re-establishing. The overall condition of the terraces is good. The earthen terraces with little-to-no vegetation are experiencing some toe scour.

Total Priority List	7	569	$3,114,795	$2,884,727	92.6	$2,895,783 $2,499,019

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

Priority List 8

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Bayou Bienvenue Pump Station Diversion and Terracing [DEAUTHORIZED]	PONT	STBER		01-Jun-2000 A			$3,295,574	$212,153	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.

				*********** SCHEDULES ***********			******** ESTIMATES ********			
PROJECT	**BASIN**	**PARISH**	**ACRES**	**CSA**	**Const Start**	**Const End**	**Baseline**	**Current**	**%**	**Actual Obligations/ Expenditures**
Hopedale Hydrologic Restoration	PONT	STBER	134	11-Jan-2000 A	10-Jan-2004 A	15-Jan-2005 A	$2,179,491	$2,281,287	104.7	$2,198,170 $1,330,527
	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	$2,493,439	45.5	$2,410,323 $1,542,680

2 Project(s)
2 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 9

PROJECT	**BASIN**	**PARISH**	**ACRES**	**CSA**	**Const Start**	**Const End**	**Baseline**	**Current**	**%**	**Actual Obligations/ Expenditures**
Castille Pass Channel Sediment Delivery	ATCH	STMRY	577	29-Sep-2000 A	15-Jun-2008	01-Apr-2009	$1,484,633	$1,846,326	124.4	$1,815,854 $1,605,779
	Status:	Castille Pass was not recommended for Phase 2 funding by the Technical Committee at their December 6, 2006 meeting. The NMFS and DNR are continuing to coordinate with the COE on a permit issuance.								
Chandeleur Islands Marsh Restoration	PONT	STBER	220	10-Sep-2000 A	01-Jun-2001 A	31-Jul-2001 A	$1,435,066	$839,928	58.5	$839,253 $835,409
	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.								

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
East Grand Terre Island Restoration	BARA	JEFF	335	21-Sep-2000 A	01-May-2008	01-Dec-2008	$1,856,203	$2,312,023	124.6	$2,276,530 $2,158,839
	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	$2,059,136	40.5	$2,038,171 $1,998,139
	Status:	An O&M inspection field trip was conducted in March 2007. The project is showing some signs of erosion along the 4-Mile canal side on the ends of the terraces. However, at this time an O&M event does not appear to be warranted.								
LaBranche Wetlands Terracing, Planting, and Shoreline Protection [DEAUTHORIZED]	PONT	STCHA		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.								
Total Priority List		9	1,299				$10,684,165	$7,364,248	68.9	$7,276,643 $6,905,001

5 Project(s)
5 Cost Sharing Agreements Executed
2 Construction Started
2 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 10

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Rockefeller Refuge Gulf Shoreline Stabilization	MERM	CAMER	920	27-Sep-2001 A	15-Jul-2008	01-Feb-2009	$1,929,888	$2,408,478	124.8	$2,189,418 $1,286,451
	Status:	Rockefeller Refuge Test Sections were not recommended for Phase 2 funding by the Technical Committee at their December 6, 2006 meeting. However, this project was selected by the Coastal Impact Assistance Program (CIAP). As such, the coordination of handing over the project to CIAP for construction is underway.								
Total Priority List		10	920				$1,929,888	$2,408,478	124.8	$2,189,418 $1,286,451

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 11

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	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-Jun-2008	$61,995,587	$65,808,267	106.1	$59,608,615 $19,980,215
	Status:	Construction of Chaland Headland (CU 1) was completed in Decemeber 2006. Advertisement of a construction contract for Pelican Island (CU 2) is pending oyster acquisition. Project delays associated with oyster acquisition and project site changes will require a re-assessment of fill requirements and preparation of updated cost estimates.								
Little Lake Shoreline Protection/Dedicated Dredging near Round Lake	BARA	LAFOU	713	06-Aug-2002 A	04-Aug-2005 A	30-Mar-2007 A	$35,994,929	$33,993,846	94.4	$28,863,981 $17,472,765
	Status:	The dredging component is complete. The contractor is finishing dressing the rock which is expected to be completed early Spring 2007.								
Pass Chaland to Grand Bayou Pass Barrier Shoreline Restoration	BARA	PLAQ	263	06-Aug-2002 A	01-Feb-2008	01-Nov-2008	$29,753,880	$35,515,228	119.4	$28,180,001 $1,922,318
	Status:	Advertisement of a construction contract is pending clearance of oyster leases in the project area and assessment of post-storm project area conditions.								

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
	Total Priority List	11	1,510				$127,744,396	$135,317,341	105.9	$116,652,597 $39,375,298

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

Priority List 14

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Riverine Sand Mining/Scofield Island Restoration	BARA **Status:**	PLAQ	234	04-Oct-2005 A			$3,221,887	$3,221,887	100.0	$2,740,886 $233,211
	Total Priority List	14	234				$3,221,887	$3,221,887	100.0	$2,740,886 $233,211

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	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
South Pecan Island Freshwater Introduction	MERM	VERMI	98				$1,102,043	$1,102,043	100.0	$936,735 $68,230

Status: CH Fenstermaker and Associates has been selected to lead the design of this project. Project E&D kick-off is shceduled for July 2007.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	15	98				$1,102,043	$1,102,043	100.0	$936,735 $68,230

1 Project(s)
0 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 16

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Madison Bay Marsh Creation and Terracing	TECHE	TERRE	372	31-May-2007 A			$3,002,171	$3,002,171	100.0	$2,551,845 $62,169
	Status:	Phase 1 project design meetings have begun. Currently preliminary bathymetry and geotechnical borings are being planned.								
West Belle Pass Barrier Headland Restoration Project	TERRE	LAFOU	299	31-May-2007 A			$2,694,363	$2,694,363	100.0	$2,290,210 $8,012
	Status:	A scope of work is under development with the contractor.								
	Total Priority List	16	671				$5,696,534	$5,696,534	100.0	$4,842,055 $70,181

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

Priority List 17

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
Bayou Dupont Ridge Creation and Marsh Restoration	BARA **Status:**	JEFF	187				$2,013,881	$2,013,881	100.0	$0 $0
Bio-Engineered Oyster Reef Demonstration (DEMO)	MERM **Status:**	MULTI	0				$1,981,822	$1,981,822	100.0	$0 $0
Total Priority List		17	187				$3,995,703	$3,995,703	100.0	$0 $0

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

Total	**DEPT. OF COMMERCE, NATIONAL MARINE FISHERIES SERVICE**	**20,846**		**$222,696,056**	**$212,713,992**	**95.5**	**$183,428,454 $91,769,035**

35 Project(s)
30 Cost Sharing Agreements Executed
18 Construction Started
17 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

Lead Agency: DEPT. OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE

Priority List 1

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
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	$8,666,324 $7,065,809
	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	0	17-Apr-1993 A	30-Aug-1996 A	30-Dec-1996 A	$144,561	$209,284	144.8 !	$230,407 $211,853
	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	0	17-Apr-1993 A	15-Mar-1995 A	30-Jul-1996 A	$372,589	$293,124	78.7	$324,377 $305,823
	Status:	Sub-project of the Vegetative Plantings project. Complete.								
Vegetative Plantings - West Hackberry Planting Demonstration (DEMO)	CA/SB	CAMER	0	17-Apr-1993 A	15-Apr-1993 A	30-Mar-1994 A	$213,947	$258,805	121.0	$279,561 $261,581
	Status:	Sub-project of the Vegetative Plantings project. Complete.								

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	1	175				$9,063,612	$9,769,356	107.8	$9,592,682 $7,937,077

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-Jun-2008	01-May-2009	$3,222,800	$4,002,363	124.2	$1,790,340 $878,245

Status: Design is scheduled to be completed in November 2007. The Technical Committee has requested a revised WVA Benefits analysis of the project, to be completed in September 2007. Construction is anticipated to begin in June 2008.

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 !	$4,238,356 $3,139,509

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	$4,736,767	163.1 !	$3,344,200 $2,831,451

Status: Bid opening was August 8, 1995 and contract awarded to Crain Bros. Construction started in early October 1995. Water control structures are installed and the vegetation installed in the summer of 1996.

Construction complete. O&M plan executed. Maintenance needs on a water control structure is being evaluated.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
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	$3,382,910 $2,675,914
	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.								
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	$2,131,695 $1,728,684
	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	$1,211,893	173.0 !	$1,090,234 $881,251
	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-Jan-2009	$3,398,867	$28,886,616	849.9 !	$27,782,038 $7,760,198
	Status:	Construction Unit#4 was revised due to hurricane related causes. Revised schedule is for construction to begin in August 2007 with a completion date anticipated for January 2009.								
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	$996,078 $856,258
	Status:	Complete.								

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List	2		6,275				$19,575,334	$50,043,266	255.6	$44,755,851 $20,751,512

8 Project(s)
8 Cost Sharing Agreements Executed
7 Construction Started
6 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 3

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	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	$5,169,617 $4,259,490
	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	30-Sep-1997 A	$3,719,926	$6,515,433	175.1 !	$4,116,127 $974,053
	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 !	$5,969,201 $5,520,601
	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.								

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
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 !	$568,920 $527,346
	Status:	Project team decision regarding proposed project features has been revised after an operation plan of siphon between Parish and State was completed. Project costs and benefits are being revised for submittal to the Technical Committee for approval by September 2007.								
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	$24,017,096	139.7	$16,089,418 $11,546,448

7	Project(s)
7	Cost Sharing Agreements Executed
4	Construction Started
4	Construction Completed
3	Project(s) Deferred/Deauthorized

Priority List 4

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	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 !	$2,957,864
	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.								$2,387,618
Bayou L'Ours Ridge Hydrologic Restoration [DEAUTHORIZED]	BARA	LAFOU		23-Jun-1997 A			$2,418,676	$371,232	15.3	$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.								$371,232
Flotant Marsh Fencing Demonstration (DEMO) [DEAUTHORIZED]	TERRE	TERRE		16-Jul-1999 A			$367,066	$106,960	29.1	$106,960
	Status:	Difficulty in locating an appropriate site for demonstration and difficulty in addressing engineering constraints. Project deauthorized, October 4, 2000.								$106,960
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	$2,222,971
	Status:	Project complete.								$1,823,941
Plowed Terraces Demonstration (DEMO)	CA/SB	CAMER	0	22-Oct-1998 A	30-Apr-1999 A	31-Aug-2000 A	$299,690	$325,641	108.7	$335,739
	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.								$326,591

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total Priority List	4		1,435				$7,501,368	$6,106,289	81.4	$5,994,767 $5,016,343

5 Project(s)
5 Cost Sharing Agreements Executed
3 Construction Started
3 Construction Completed
2 Project(s) Deferred/Deauthorized

Priority List 5

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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	$2,504,933 $2,020,366

Status: The local cost share is being paid by Acadian Gas Company.

Contract was awarded January 14, 1998. Construction is complete.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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 !	$2,171,488 $1,387,062

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.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Raccoon Island Breakwaters Demonstration (DEMO)	TERRE	TERRE	0	03-Sep-1996 A	21-Apr-1997 A	31-Jul-1997 A	$1,497,538	$1,795,388	119.9	$1,794,473 $1,749,237

Status: Complete.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual Obligations/ Expenditures
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	
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	$4,130,956 $3,342,180
	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	$10,601,850 $8,498,845

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	$5,116,591 $4,043,496
	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	0	20-Jul-1999 A	01-Sep-2001 A	02-Nov-2001 A	$500,000	$624,999	125.0	$626,133 $594,859
	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)

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	**BASIN**	**PARISH**	**ACRES**	**CSA**	**Const Start**	**Const End**	**Baseline**	**Current**	**%**	**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	$2,860,560 $2,152,228
	Status:	O&M Plan in draft.								
Penchant Basin Natural Resources Plan, Increment 1	TERRE	TERRE	675	23-Apr-2002 A	01-Jun-2008	01-May-2009	$14,103,051	$14,455,551	102.5	$2,785,362 $1,758,498
	Status:	Design on preferred project alternative is ongoing. A revised WVA Benefits analysis is scheduled to be completed in July 2007. Project is scheduled to request construction approval in December 2007, with an anticipated construction start date of June 2008. Construction completion date is scheduled for May 2009.								
	Total Priority List	6	1,052				$21,990,651	$23,230,243	105.6	$11,388,646 $8,549,081

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-Apr-2008	$17,515,029	$31,288,623	178.6 !	$30,868,938 $13,403,011
	Status:	Construction Unit #4 began construction on May 26, 2005. Construction was halted due to hurricane related causes, and resumed on July 24, 2006. Revised anticipated completion date is October 2007. Construction Unit #5 has been revised for construction to begin in January 2007, with an anticipated completion date of April 2008.								
Thin Mat Floating Marsh Enhancement Demonstration (DEMO)	TERRE	TERRE	0	16-Oct-1998 A	15-Jun-1999 A	10-May-2000 A	$460,222	$538,101	116.9	$554,196 $552,937
	Status:	Construction complete. Monitoring ongoing.								

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Total Priority List	7		1,304				$17,975,251	$31,826,724	177.1	$31,423,134 $13,955,947

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

Priority List 8

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
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	$1,587,589 $891,254
	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	$1,181,129	116.5	$1,160,535 $1,015,452
	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.								

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	8	402				$5,040,195	$2,768,417	54.9	$2,804,600 $1,963,182

3 Project(s)
2 Cost Sharing Agreements Executed
2 Construction Started
2 Construction Completed
1 Project(s) Deferred/Deauthorized

Priority List 9

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

				*********** SCHEDULES ***********			******** ESTIMATES ********			
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Barataria Basin Landbridge Shoreline Protection, Phase 3	BARA	JEFF	264	25-Jul-2000 A	20-Oct-2003 A	01-Jul-2009	$15,204,620	$12,844,639	84.5	$10,118,768 $6,363,960
	Status:	Construction Unit #7 was not selected for funding in 2007, and is scheduled to request funding at February 2008 Task Force Meeting. If approved, revised plan for construction is from August 2008 to July 2009. 10/12/2006 Construction Unit #7 was not selected for funding in 2006, and is scheduled to request funding at January 2007 Task Force Meeting. If approved, revised plan for construction is from August 2007 to July 2008. 1/19/2005 Construction Unit #7 is planned for construction from August 2006 to July 2007; subject to funding approval at January 2006 Task Force Meeting. 6/9/2004 Construction Unit #3 was completed on May 27, 2004. 3/16/2004 Construction Unit #3 is under construction and scheduled to be completed in April 2004. Construction Unit #4 is in design phase until June 2004. 3/12/2003 Landrights issues have caused a delay in advertising contract. Issues are near resolution. Advertisment scheduled for May 2003. 12/11/2001 The project will be divided into 3 construction units. Construction unit 1 received Phase 2 funding in January 2002.								
Black Bayou Culverts Hydrologic Restoration	CA/SB	CAMER	540	25-Jul-2000 A	25-May-2005 A	01-Jul-2007 *	$5,900,387	$5,389,358	91.3	$4,922,070 $4,439,819
	Status:	Construction is currently scheduled to be completed in July 2007.								

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Little Pecan Bayou Hydrologic Restoration	MERM	CAMER	144	25-Jul-2000 A	01-Aug-2009	01-Jul-2010	$1,245,278	$1,556,598	125.0 !	$1,328,897 $605,998
	Status:	Landrights issues have caused design revisions to current features. Schedule has been updated for a 30% review meeting in June 2008, with anticipated construction beginning in August 2009 and ending in March 2010, pending funding approval. Scheduled to request Construction Approval at the February 2009 Task Force meeting.								
Perry Ridge West Bank Stabilization	CA/SB	CAMER	83	25-Jul-2000 A	01-Nov-2001 A	31-Jul-2002 A	$3,742,451	$1,774,074	47.4	$1,709,388 $1,626,975
	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)

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
South Lake Decade Freshwater Introduction	TERRE	TERRE	201	25-Jul-2000 A	01-Aug-2008	01-Jan-2009	$396,489	$670,611	169.1 !	$584,024 $504,134

Status: Construction Unit #1 of this project did not get selected for Phase 2 funding at the January 2007 Task Force meeting. CU#1 will be presented for proposed construction funding at the February 2008 Task Force meeting. If funded, construction is planned for August 2008 to January 2009.

10/12/2006

Construction Unit #1 of this project did not get selected for Phase 2 funding at the January 2006 Task Force meeting. CU#1 will be presented for proposed construction funding at the January 2007 Task Force meeting. If funded, construction is planned for August 2007 to January 2008.

Construction Unit #2 is currently in design phase. A 30% Project Review meeting is projected for June 2007. CU#2 is scheduled to request Phase 2 funding at the January 2008 Task Force meeting. If funded, construction is planned for August 2008 to July 2009.

11/4/2005

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.

1/19/2005

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 January 2007.

3/12/2003

A proposal to construct the shoreline protection component of the project as a stand alone feature will be presented to the Task Force in the near future. Further investigation of the freshwater introduction component is ongoing.

3/22/2002

Phase 1 activities on-going.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	9	1,232				$26,489,225	$22,235,280	83.9	$18,663,147 $13,540,885

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

Priority List 10

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
GIWW Bank Restoration of Critical Areas in Terrebonne	TERRE	TERRE	366	16-May-2001 A	01-Aug-2008	01-Jul-2009	$1,735,983	$1,735,983	100.0	$1,148,266 $1,012,215

Status: This project did not get selected for Phase 2 funding at the January 2007 Task Force meeting. Project will be presented for proposed construction funding at the January 2008 Task Force meeting.

10/12/2006

This project did not get selected for Phase 2 funding at the January 2006 Task Force meeting. Project will be presented for proposed construction funding at the January 2007 Task Force meeting.

1/19/2005

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.

3/12/2003

30% Design review scheduled for May 2003.

3/22/2002

Phase 1 activities on-going.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
	Total Priority List	10	366				$1,735,983	$1,735,983	100.0	$1,148,266 $1,012,215

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 11

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Barataria Basin Landbridge Shoreline Protection, Phase 4	BARA	JEFF	256	09-May-2002 A	27-Apr-2005 A	26-Apr-2006 A	$22,787,951	$16,923,374	74.3	$15,198,764 $6,519,228

Status: Construction Unit #6 was completed on April 26, 2006.

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Coastwide Nutria Control Program	COAST	COAST	14,963	26-Feb-2002 A	20-Nov-2002 A		$68,864,870	$22,072,193	32.1	$16,770,633 $7,317,302

Status:

In Year 4 (2005-06) Trapping Season, 168,843 nutria tails were collected.

The decrease from last year's total can primarily be traced to lack of hunter participation due to hurricanes Rita and Katrina.

11/4/2005

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.

1/20/2005

In Year 1 (2002-03 Trapping Season), 308,160 nutria tails were collected. Nutria herbivory surveys in summer 2003, yielded a coastwide estimate of 82,080 acres of marsh impacted by nutria feeding activity.

In Year 2 (2003-04 Trapping Season), 332,596 nutria tails were collected. Nutria herbivory surveys in spring 2004, yielded a coastwide estimate of 63,397 acres of marsh impacted by nutria feeding activity.

3/12/2003

Implementation began with the 2002-2003 trapping season. A report on the first years accomplishments will be given at the August Task Force meeting.

7/3/2002

Request for Phase 2 funding was approved at the April 16, 2002 Task Force meeting.

A revised baseline estimate for Phase 2 was approved at the March 6, 2002 Tech Committee meeting.

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual Obligations/
PROJECT	**BASIN**	**PARISH**	**ACRES**	**CSA**	**Const Start**	**Const End**	**Baseline**	**Current**	**%**	**Expenditures**
Raccoon Island Shoreline Protection/Marsh Creation, Ph 2	TERRE	TERRE	167	23-Apr-2002 A	13-Dec-2005 A	01-Feb-2009	$7,797,791	$7,868,646	100.9	$7,234,774 $4,501,514

Status: Construction is behind schedule for Unit #1, and is currently scheduled for completion in July 2007.

Construction Unit #2 is currently in design and scheduled for a 30% review in September 2007 and a 95% review in November 2007. Funding request for Phase 2 approval is scheduled for January 2008 Task Force meeting. Anticipated date for construction to begin is August 2008, with a completion date of February 2009.

Total Priority List		11	15,386				$99,450,612	$46,864,213	47.1	$39,204,170 $18,338,044

3 Project(s)
3 Cost Sharing Agreements Executed
3 Construction Started
1 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	$13,915,320 $13,758,508

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.

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
	Total Priority List	11.1	330				$19,252,500	$14,130,233	73.4	$13,915,320 $13,758,508

1 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
1 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 12

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Freshwater Floating Marsh Creation Demonstration (DEMO)	COAST	COAST	0	12-Jun-2003 A	01-Jul-2004 A	01-Jan-2009	$1,080,891	$1,080,891	100.0	$931,499 $54,987

Status: The structures - artificial floating systems (afs) - were all deployed at Mandalay by June 1, 2006. Details of the field monitoring of their condition and performance will be included in the monitoring report that will be submitted to DNR in Dec 06. Some portion of the greenhouse/lab work being done by UNO was restarted over because it was destroyed by Katrina. As those results start coming out, they will be in future interim monitoring reports.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
	Total Priority List	12	0				$1,080,891	$1,080,891	100.0	$931,499 $54,987

1 Project(s)
1 Cost Sharing Agreements Executed
1 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 13

				*********** SCHEDULES ***********			******** ESTIMATES ********			Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Bayou Sale Shoreline Protection	TECHE	STMRY	329	16-Jun-2004 A	01-Aug-2009	01-Jul-2010	$2,254,912	$2,254,912	100.0	$1,731,429 $352,768

Status: Planning and Design is being revised due to the results of a magnetometer survey of the area. Project schedule has been revised for a projected 30% review in June 2008, 95% review in October 2008, and request for Construction approval at the the February 2009 Task Force meeting.

Total Priority List 13	329	$2,254,912	$2,254,912	100.0	$1,731,429 $352,768

1 Project(s)
1 Cost Sharing Agreements Executed
0 Construction Started
0 Construction Completed
0 Project(s) Deferred/Deauthorized

Priority List 14

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
South Shore of the Pen Shoreline Protection and Marsh Creation	BARA	JEFF	211	07-Dec-2005 A	01-Aug-2008	01-Jul-2009	$1,311,146	$1,311,146	100.0	$1,100,617 $513,300

Status: Project is scheduled for a 30% review in September 2007 and a 95% review in November 2007. Funding request for Phase 2 approval is scheduled for January 2008 Task Force meeting. Anticipated date for construction to begin is August 2008, with a completion date of February 2009.

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
White Ditch Resurrection	BRET	PLAQ	189	11-Aug-2005 A	01-Aug-2009	01-Jul-2010	$1,595,677	$1,595,677	100.0	$1,345,860 $420,492

Status: Project is being modeled to determine effects of siphon operation on proposed project features. Planning phase is projected to be completed in December 2007, when Design of proposed features will begin. A project 30% review meeting is projected for June 2008. Project is scheduled to request Phase 2 approval at the February 2009 Task Force meeting. If approved, construction will begin in August 2009 with an anticipated completion date of July 2010.

PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
	Total Priority List	14	400				$2,906,823	$2,906,823	100.0	$2,446,477 $933,792

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

Priority List 17

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Actual Obligations/ Expenditures
Sediment Containment System for Marsh Creation Demonstration (DEMO)	COAST **Status:**	COAST	0				$1,163,343	$1,163,343	100.0	$0 $0
West Pointe a la Hache Marsh Creation	BARA **Status:**	PLAQ	203				$1,620,740	$1,620,740	100.0	$0 $0
	Total Priority List	17	203				$2,784,083	$2,784,083	100.0	$0 $0

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

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

	PROJECT	BASIN	PARISH	ACRES	*********** SCHEDULES *********** CSA	Const Start	Const End	******** ESTIMATES ******** Baseline	Current	%	Actual Obligations/ Expenditures
Total	DEPT. OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE			36,489				$266,280,460	$252,516,932	94.8	**$210,691,255** $126,209,635

54	Project(s)
51	Cost Sharing Agreements Executed
38	Construction Started
31	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

CELMN-PM-OR

27-Jan-2008

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	118,926	$946,904,168	$871,179,538	92.0	$630,435,460 $381,259,369

175	Project(s)
141	Cost Sharing Agreements Executed
97	Construction Started
78	Construction Completed
26	Project(s) Deferred/Deauthorized

Total Available Funds

Federal Funds	$790,735,832
Non/Federal Funds	$138,146,564
Total Funds	$928,882,396

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

Basin: Atchafalaya

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
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	$1,605,779
Basin Total		3	4,369	3	2	2	0	$6,528,500	$11,455,877	$10,331,807

Basin: Barataria

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Priority List:	1	3	620	3	3	3	0	$9,960,769	$10,147,780	$8,297,458
Priority List:	2	1	510	1	1	0	0	$3,398,867	$28,886,616	$7,760,198
Priority List:	3	3	1,087	3	1	1	1	$4,160,823	$6,890,790	$3,350,091
Priority List:	4	2	232	2	1	1	1	$4,611,094	$3,384,598	$2,758,850
Priority List:	5	2	633	2	1	1	1	$17,212,815	$2,663,230	$1,868,865
Priority List:	6	1	217	1	1	1	0	$5,019,900	$5,224,477	$4,043,496
Priority List:	7	2	1,431	2	2	1	0	$18,443,924	$31,781,397	$13,748,354
Priority List:	9	3	599	3	1	0	1	$18,212,307	$15,500,213	$8,765,938
Priority List:	10	2	9,832	1	0	0	0	$4,901,948	$5,364,801	$2,658,490
Priority List:	11	5	2,371	5	3	2	0	$152,826,757	$167,935,799	$46,281,986
Priority List:	12	1	326	1	0	0	0	$2,192,735	$2,731,221	$577,311
Priority List:	14	2	445	2	0	0	0	$4,533,033	$4,533,033	$746,511
Priority List:	15	1	438	1	0	0	0	$1,197,590	$1,197,590	$13,162
Priority List:	17	2	390	0	0	0	0	$3,634,621	$3,634,621	$0
Basin Total		30	19,131	27	14	10	4	$250,307,183	$289,876,166	$100,870,710

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

Basin: Breton Sound

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Priority List:	2	1	802	1	1	1	0	$2,522,199	$4,536,000	$3,139,509
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	1	1	0	$4,339,140	$3,524,118	$1,500,382
Priority List:	14	1	189	1	0	0	0	$1,595,677	$1,595,677	$420,492
Priority List:	15	1		0	0	0	1	$1,205,354	$1,205,291	$9,304
Priority List:	17	2	1,289	0	0	0	0	$4,025,692	$4,025,692	$0
Basin Total		10	3,048	4	2	2	4	$19,413,343	$15,041,863	$5,224,773

Basin: Calcasieu/Sabine

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Priority List:	1	3	6,407	3	3	3	0	$5,770,187	$2,900,652	$2,347,171
Priority List:	2	4	3,019	4	3	3	0	$8,568,462	$13,647,112	$7,495,136
Priority List:	3	2	3,555	2	2	2	0	$8,301,380	$11,043,851	$4,421,873
Priority List:	4	3	1,203	3	2	2	1	$2,893,802	$2,828,376	$2,364,177
Priority List:	5	1	247	1	1	1	0	$4,800,000	$4,242,995	$3,342,180
Priority List:	6	1	3,594	1	1	1	0	$6,316,800	$6,000,720	$4,791,617
Priority List:	8	5	993	3	2	1	0	$28,621,140	$19,541,890	$7,333,522
Priority List:	9	2	623	2	2	1	0	$9,642,838	$7,163,432	$6,066,794
Priority List:	10	1	225	1	1	0	0	$6,490,751	$5,498,431	$3,913,126
Priority List:	11.1	1	330	1	1	1	0	$19,252,500	$14,130,233	$13,758,508
Basin Total		23	20,196	21	18	15	1	$100,657,860	$86,997,691	$55,834,104

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

Basin: Coastal Basins

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Priority List: 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	$18,189,968	$1,787,383
Priority List: 0.2	1		1	1	0	0	$1,500,000	$1,500,000	$79,387
Priority List: 0.3	1		1	1	1	0	$303,359	$303,359	$0
Priority List: 6	1	0	1	1	1	0	$2,140,000	$804,683	$806,220
Priority List: 9	1	0	0	0	0	0	$1,502,817	$1,502,817	$31,726
Priority List: 10	1		1	1	0	0	$2,006,424	$2,718,767	$435,174
Priority List: 11	1	14,963	1	1	0	0	$68,864,870	$22,072,193	$7,317,302
Priority List: 12	1	0	1	1	0	0	$1,080,891	$1,080,891	$54,987
Priority List: 13	1	0	1	1	1	0	$1,000,000	$1,055,000	$585,316
Priority List: 17	1	0	0	0	0	0	$1,163,343	$1,163,343	$0
Basin Total	11	14,963	9	9	4	0	$146,690,875	$50,582,829	$11,289,302

Basin: Miss. River Delta

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Priority List: 1	1	9,831	1	1	1	0	$8,517,066	$22,312,761	$14,901,980
Priority List: 3	2	936	1	1	1	1	$3,666,187	$1,008,820	$807,514
Priority List: 4	1		1	0	0	1	$300,000	$58,310	$58,310
Priority List: 6	2	2,386	2	2	2	0	$7,073,934	$6,637,339	$3,717,398
Priority List: 10	1	5,706	0	0	0	0	$1,076,328	$1,076,328	$904,744
Priority List: 12	1	1,190	0	0	0	0	$1,880,376	$1,880,376	$309,673
Priority List: 13	1	433	0	0	0	0	$1,137,344	$1,421,680	$269,186
Priority List: 15	1	511	0	0	0	0	$1,074,522	$1,074,522	$25,492
Basin Total	10	20,993	5	4	4	2	$24,725,757	$35,470,136	$20,994,297

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

Basin: Mermentau

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Priority List: 1	2	247	2	2	2	1	$1,368,671	$1,319,135	$1,125,994
Priority List: 2	1	1,593	1	1	1	0	$2,770,093	$3,455,303	$2,675,914
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	$2,020,366
Priority List: 7	1	442	1	1	1	0	$2,185,900	$2,391,953	$2,153,675
Priority List: 8	1	378	1	1	1	0	$1,526,136	$1,530,812	$891,254
Priority List: 9	2	440	2	1	1	0	$7,296,603	$6,641,689	$2,066,665
Priority List: 10	2	1,133	2	1	1	0	$11,565,112	$7,170,385	$4,895,652
Priority List: 11	3	970	1	0	0	0	$22,551,953	$12,407,450	$1,165,044
Priority List: 12	1	844	1	1	1	0	$19,673,929	$15,714,410	$10,424,954
Priority List: 15	1	98	0	0	0	0	$1,102,043	$1,102,043	$68,230
Priority List: 16	1	888	0	0	0	0	$1,266,842	$1,266,842	$7,325
Priority List: 17	1	0	0	0	0	0	$1,981,822	$1,981,822	$0
Basin Total	18	7,544	13	10	10	2	$77,414,085	$57,628,626	$27,598,541

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

Basin: Pontchartrain

	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Priority List: 1	2	1,753	2	2	2	0	$6,119,009	$5,448,122	$5,015,635
Priority List: 2	2	2,320	2	2	2	0	$4,500,424	$3,844,225	$2,994,463
Priority List: 3	3	755	3	1	1	2	$2,683,636	$912,272	$961,901
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	$2,273,584
Priority List: 8	2	134	2	1	1	1	$5,475,065	$2,493,439	$1,542,680
Priority List: 9	3	220	2	1	1	2	$2,407,524	$1,335,147	$1,224,493
Priority List: 10	1	165	1	1	0	0	$18,378,900	$25,212,993	$1,124,520
Priority List: 11	1	5,438	1	0	0	0	$5,434,288	$6,780,307	$2,338,230
Priority List: 12	1	266	0	0	0	0	$1,348,345	$1,348,345	$1,067,733
Priority List: 13	1	436	1	0	0	0	$21,067,777	$20,720,519	$90,022
Priority List: 16	1	330	0	0	0	0	$1,660,985	$1,660,985	$8,830
Basin Total	19	11,892	15	9	8	6	$76,649,950	$72,384,783	$18,681,116

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report by Basin

Basin: Teche / Vermilion

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Priority List:	1	1	65	1	1	1	0	$1,526,000	$2,022,987	$1,852,057
Priority List:	2	1	378	1	1	1	0	$1,008,634	$1,012,649	$856,258
Priority List:	3	1	2,223	1	1	1	0	$5,173,062	$7,889,103	$5,520,601
Priority List:	5	1	441	1	1	1	0	$940,065	$886,030	$683,929
Priority List:	6	4	2,567	4	4	4	0	$10,130,000	$12,085,674	$8,099,067
Priority List:	8	1	24	1	1	1	0	$1,013,820	$1,181,129	$1,015,452
Priority List:	9	3	686	1	1	1	0	$7,814,815	$4,787,440	$3,613,586
Priority List:	13	1	329	1	0	0	0	$2,254,912	$2,254,912	$352,768
Priority List:	14	1	189	0	0	0	0	$1,193,606	$1,193,606	$61,724
Priority List:	16	1	372	1	0	0	0	$3,002,171	$3,002,171	$62,169
Basin Total		15	7,274	12	10	10	0	$34,057,085	$36,315,700	$22,117,611

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	$9,237,080
Priority List:	2	3	958	3	3	2	0	$12,831,588	$20,761,623	$19,728,728
Priority List:	3	4	3,958	4	4	4	0	$15,758,355	$21,712,720	$20,086,463
Priority List:	4	2	215	2	1	1	1	$6,119,470	$7,707,111	$7,632,833
Priority List:	5	3	199	3	1	1	1	$31,120,343	$11,505,110	$4,619,267
Priority List:	5.1	1		1	0	0	1	$9,700,000	$9,700,000	$6,893,521
Priority List:	6	4	1,278	2	0	0	2	$30,522,757	$25,045,255	$2,946,221
Priority List:	7	1	0	1	1	1	0	$460,222	$538,101	$552,937
Priority List:	9	4	576	4	3	1	0	$25,219,289	$32,205,039	$23,806,038
Priority List:	10	2	970	2	1	0	0	$33,463,900	$38,773,829	$1,831,640
Priority List:	11	3	639	3	2	0	0	$28,316,482	$29,506,201	$8,441,289
Priority List:	12	1	143	0	0	0	0	$2,229,876	$2,229,876	$1,519,815
Priority List:	13	1	272	1	0	0	0	$2,293,893	$2,754,889	$1,011,661
Priority List:	16	1	299	1	0	0	0	$2,694,363	$2,694,363	$8,012
Basin Total		35	9,516	31	19	13	7	$209,539,931	$214,506,270	$108,315,506
Basin: Various Basins										
Priority List:	16	1	0	1	0	0	0	$919,599	$919,599	$1,601
Basin Total		1	0	1	0	0	0	$919,599	$919,599	$1,601
Total All Basins		175	118,926	141	97	78	26	$946,904,168	$871,179,538	$381,259,369