

# 23rd PRIORITY PROJECT LIST REPORT (APPENDICES)

PREPARED BY:

LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION TASK FORCE

October 2014

# Coastal Wetlands Planning, Protection, and Restoration Act 23rd Priority Project List Report

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# Coastal Wetlands Planning, Protection, and Restoration Act 23rd 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.

- <u>Section 307a.</u> Secretary authorized to:
  - Carry out projects to protect, restore, and enhance wetlands and aquatic/coastal ecosystems.
- <u>Section 307b.</u> 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 23rd Priority Project List Report Appendix B

Wetland Value Assessment Methodology and Community Models

### Appendix B

### Wetland Value Assessment Methodology and Community Models

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#### WETLAND VALUE ASSESSMENT METHODOLOGY

#### **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 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

muskrat swamp rabbit Freshwater Fish channel catfish largemouth bass red ear sunfish

Mammals

mink

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<sub>1</sub> - 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., 20year project life), often reduced project benefits or generated a net <u>loss</u> 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<sub>1</sub> and established optimal habitat conditions at 100 percent marsh cover.

Variable V<sub>2</sub> - 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.

<u>Variable V3 - Marsh edge and interspersion.</u> 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.

<u>Variable V4 - Percent of open water area # 1.5 feet deep in relation to marsh surface.</u> 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.

<u>Variable V5 - Salinity.</u> 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<sub>6</sub> - 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<sub>6</sub> 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<sub>6</sub> 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: 2.1(Emergent Marsh AAHUs) + Open Water AAHUs
3.1

Brackish Marsh: 2.6(Emergent Marsh AAHUs) + Open Water AAHUs
3.6

Saline Marsh: 3.5(Emergent Marsh AAHUs) + Open Water AAHUs
4.5

#### **Vegetation:**

Variable V<sub>1</sub> Percent of wetland area covered by emergent vegetation.

Variable V<sub>2</sub> Percent of open water area covered by aquatic vegetation.

#### **Interspersion:**

Variable V<sub>3</sub> Marsh edge and interspersion.

#### Water Depth:

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

#### **Water Quality:**

Variable V<sub>5</sub> Mean high salinity during the growing season (March through November).

#### **Aquatic Organism Access:**

Variable V<sub>6</sub> Aquatic organism access.

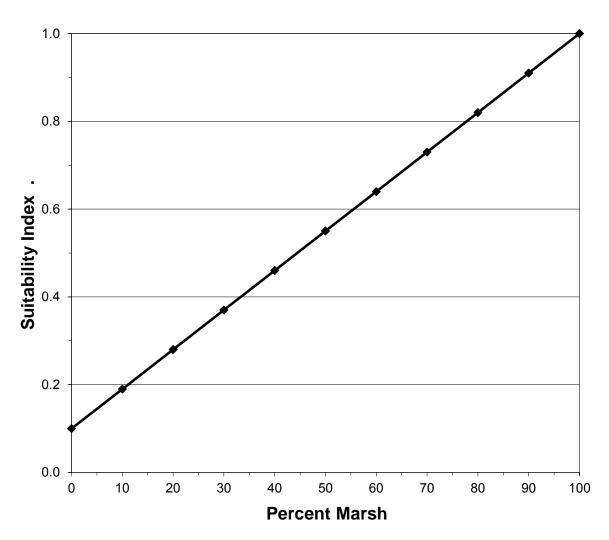
#### **HSI Calculations:**

Marsh 
$$HSI = [\{3.5 \ x \ (SIV_1^5 \ x \ SIV_6)^{(1/6)}\} + (SIV_3 + SIV_5)/2] / 4.5$$

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

 $Variable V_1$  Percent of wetland area covered by emergent vegetation.

# **Suitability Graph**

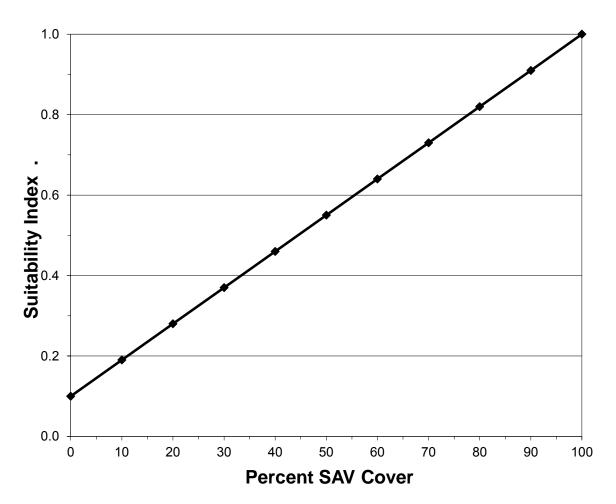


#### Line Formula

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

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

## **Suitability Graph**

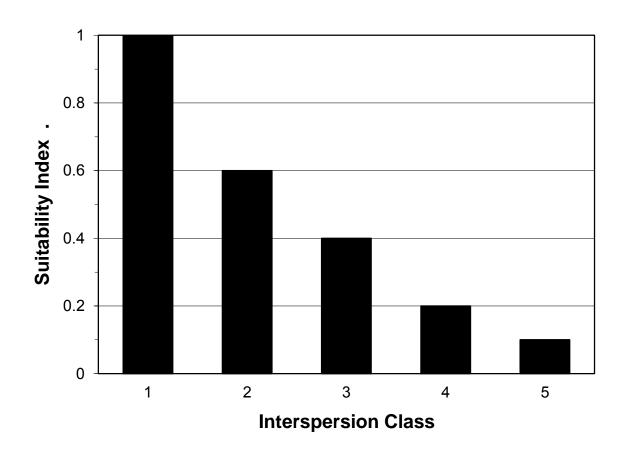


#### Line Formula

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

Variable V<sub>3</sub> Marsh edge and interspersion.

# **Suitability Graph**

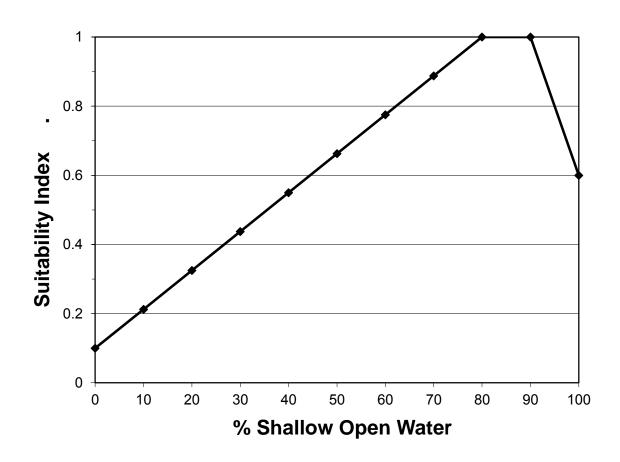


#### Instructions for Calculating the SI for Variable V<sub>3</sub>:

- 1. Refer to Appendix A for examples of the different interspersion classes.
- 2. Estimate percent of project area in each class.

**Variable V<sub>4</sub>** Percent of open water area  $\leq 1.5$  feet deep, in relation to marsh surface.

# **Suitability Graph**



#### **Line Formulas**

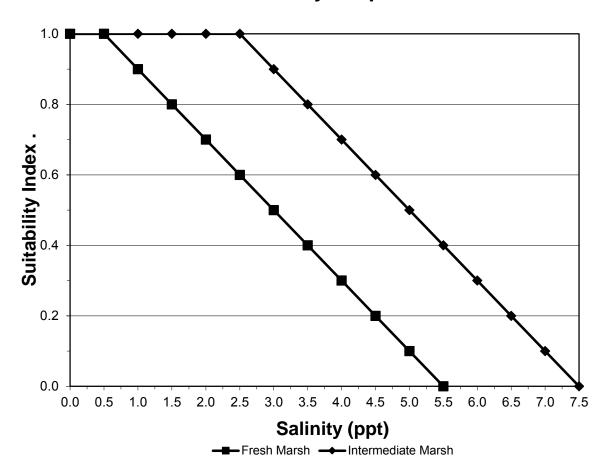
If 
$$0 \le \% < 80$$
, then  $SI = (0.01125 * \%) + 0.1$ 

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

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

Variable V<sub>5</sub> Mean high salinity during the growing season (March through November).

### **Suitability Graph**



#### **Line Formulas**

#### Fresh Marsh:

If 
$$0 < ppt \le 0.5$$
, then  $SI = 1.0$   
If  $ppt > 0.5$ , then  $SI = (-0.20 * ppt) + 1.10$ 

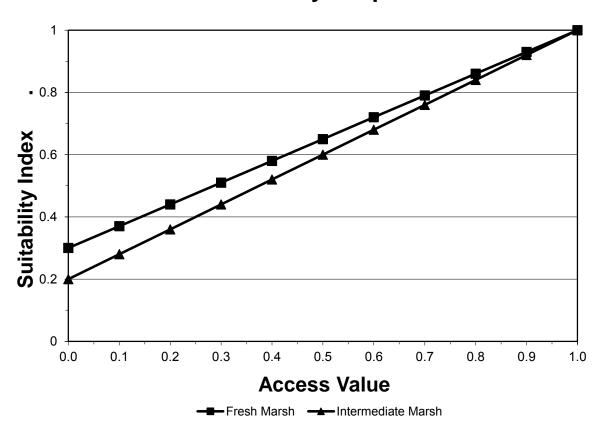
#### **Intermediate Marsh:**

If 
$$0 < ppt \le 2.5$$
, then  $SI = 1.0$   
If  $ppt > 2.5$ , then  $SI = (-0.20 * ppt) + 1.50$ 

#### FRESH/INTERMEDIATE MARSH

Variable V<sub>6</sub> Aquatic organism access.

## **Suitability Graph**



#### **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 the Access Value.

#### **Vegetation:**

Variable V<sub>1</sub> Percent of wetland area covered by emergent vegetation.

Variable V<sub>2</sub> Percent of open water area covered by aquatic vegetation.

#### **Interspersion:**

Variable V<sub>3</sub> Marsh edge and interspersion.

#### Water Depth:

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

#### Water Quality:

Variable V<sub>5</sub> Average annual salinity.

#### **Aquatic Organism Access**

Variable V<sub>6</sub> Aquatic organism access.

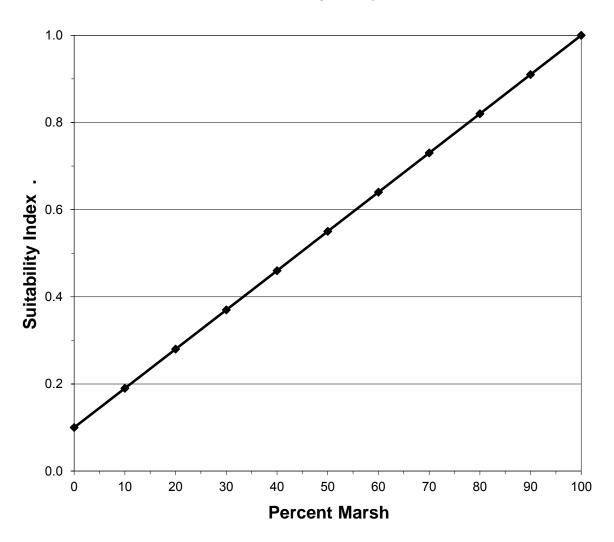
#### **HSI Calculations:**

Marsh 
$$HSI = [\{3.5 \text{ x } (SIV_1^5 \text{ x } SIV_6^{1.5})^{(1/6.5)}\} + (SIV_3 + SIV_5)/2] / 4.5$$

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

 $Variable V_1$  Percent of wetland area covered by emergent vegetation.

## **Suitability Graph**

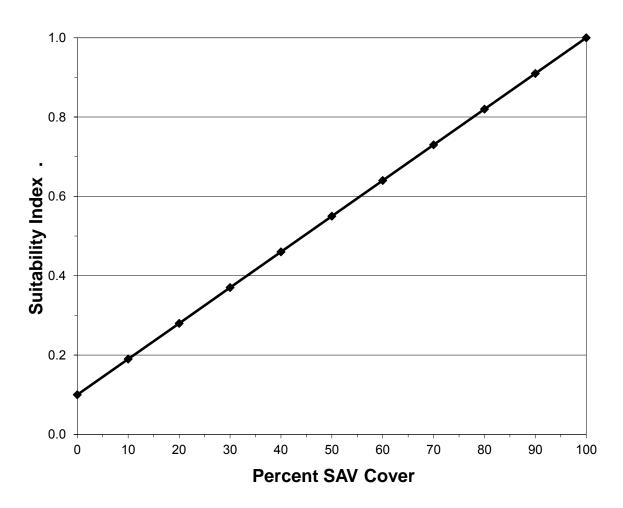


#### Line Formula

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

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

## **Suitability Graph**

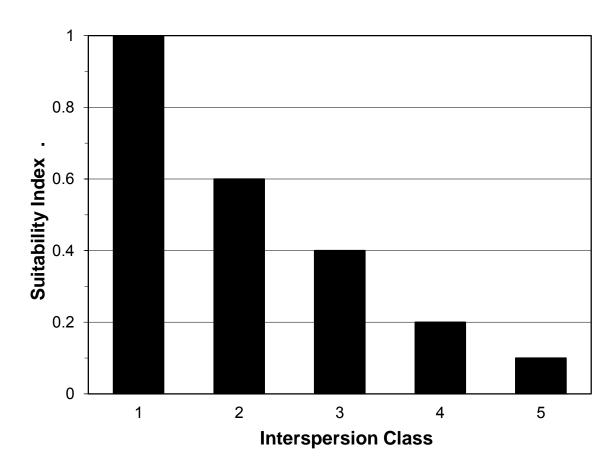


#### Line Formula

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

Variable V<sub>3</sub> Marsh edge and interspersion.

## **Suitability Graph**

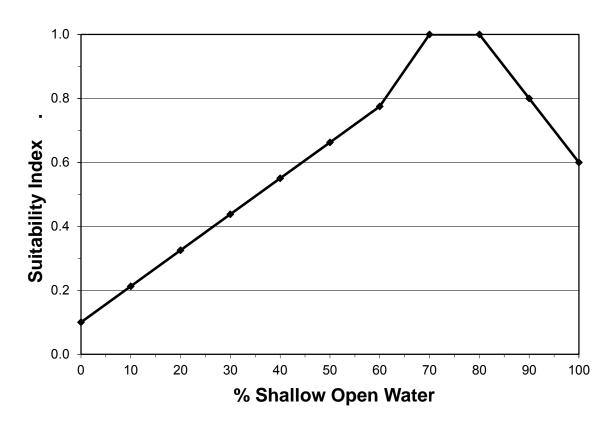


#### **Instructions for Calculating SI for Variable V3:**

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

**Variable V**<sub>4</sub> Percent of open water area  $\leq \square$  1.5 feet deep, in relation to marsh surface.

## **Suitability Graph**



#### **Line Formulas**

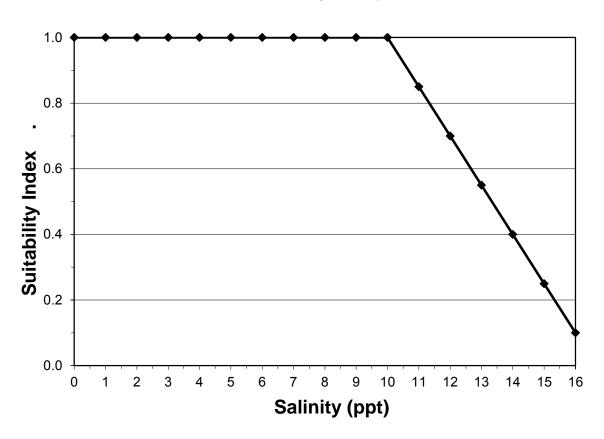
If 
$$0 \le \% < 70$$
, then  $SI = (0.01286 * \%) + 0.1$ 

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

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

Variable V<sub>5</sub> Average annual salinity.

## **Suitability Graph**



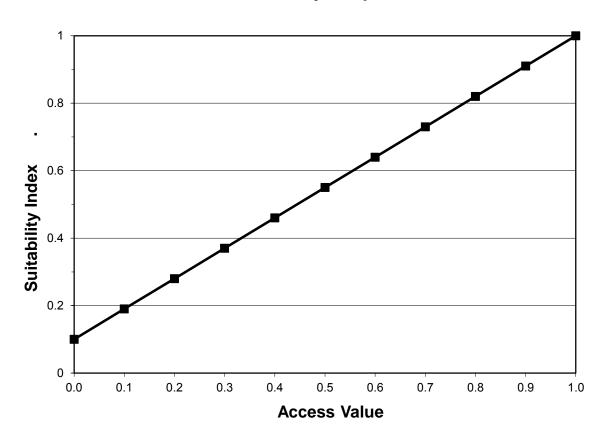
#### **Line Formulas**

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

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

Variable V<sub>6</sub> Aquatic organism access.

### **Suitability Graph**



#### **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.

#### **Vegetation:**

Variable V<sub>1</sub> Percent of wetland area covered by emergent vegetation.

Variable V<sub>2</sub> Percent of open water area covered by aquatic vegetation.

#### **Interspersion:**

Variable V<sub>3</sub> Marsh edge and interspersion.

#### Water Depth:

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

#### Water Quality:

Variable V<sub>5</sub> Average annual salinity.

#### **Aquatic Organism Access:**

Variable V<sub>6</sub> Aquatic organism access.

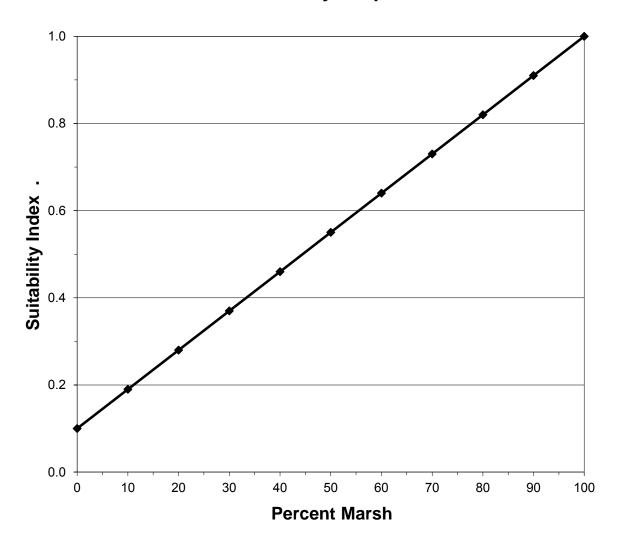
#### **HSI Calculation:**

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

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

 $Variable\ V_1$  Percent of wetland area covered by emergent vegetation.

## **Suitability Graph**

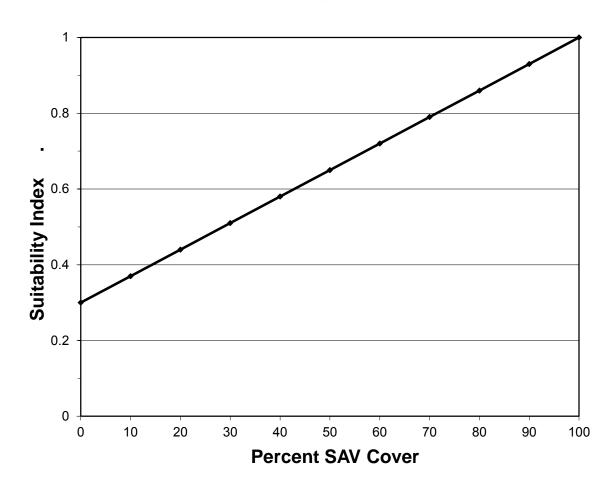


#### Line Formula

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

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

## **Suitability Graph**

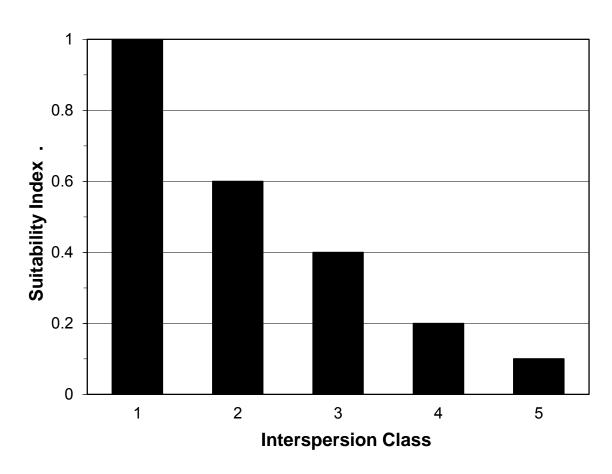


#### Line Formula

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

Variable V<sub>3</sub> Marsh edge and interspersion.

## **Suitability Graph**

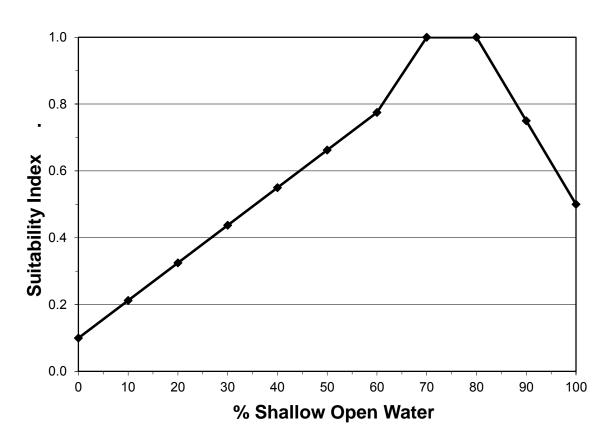


#### **Instructions for Calculating SI for Variable V3:**

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

**Variable V**<sub>4</sub> Percent of open water area  $\leq \square$  1.5 feet deep, in relation to marsh surface.

## **Suitability Graph**



#### **Line Formulas**

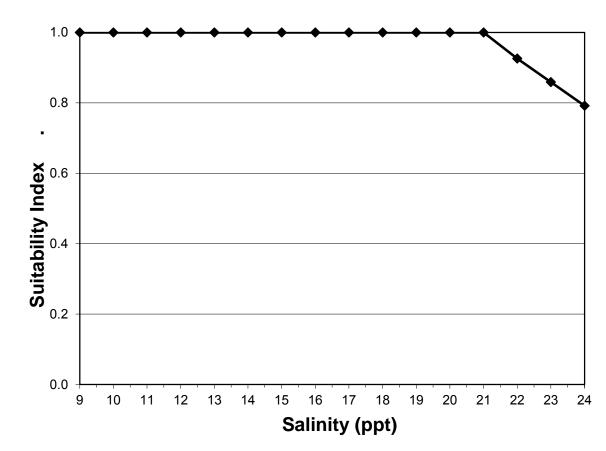
If 
$$0 \le \% < 70$$
, then  $SI = (0.01286 * \%) + 0.1$ 

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

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

Variable V<sub>5</sub> Average annual salinity.

## **Suitability Graph**



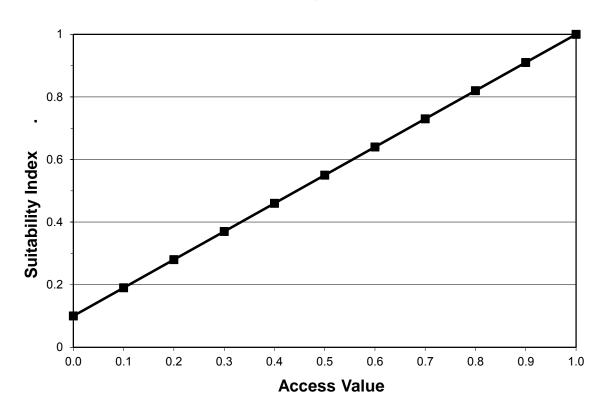
#### **Line Formulas**

If 
$$9 \le ppt \le 21$$
, then  $SI = 1.0$ 

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

Variable V<sub>6</sub> Aquatic organism access.

## **Suitability Graph**



#### 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 the Access Value.

## ATTACHMENT B – EXAMPLES OF MARSH EDGE AND INTERSPERSION CLASSES

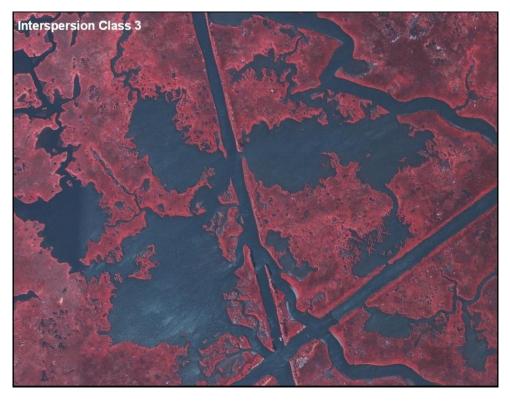


























#### ATTACHMENT C - PROCEDURE FOR CALCULATING ACCESS VALUE

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

Structure Type	Structure Rating
Open system	1.0
Rock weir set at 1ft below marsh level (BML), 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 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 <u>equally</u> 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 <u>total</u> 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 (<u>Note</u>: 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.

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.

c. Two openings into area, <u>each capable by itself</u> 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.

<u>Note</u>: 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
```

<u>Note</u>:  $P_1 + P_2 = .90$ , 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
```

<u>Note</u>: 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
```

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# Coastal Wetlands Planning, Protection, and Restoration Act 23rd Priority Project List Report

## Appendix C

Wetland Value Assessment for Candidate Projects

## Appendix C

## Wetland Value Assessment for Candidate Projects

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Grand Bayou Freshwater Enhancement	
Southwest Pass Shoreline Protection	
West Cove Marsh Creation and Nourishment	
Southeast Pecan Island Marsh Creation and Freshwater Enhancement	
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#### WETLAND VALUE ASSESSMENT

#### **Benefits Summary Sheet**

Project: New Orleans Landbridge Shoreline Stabilization & Marsh Creation

TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area AAHUs
Brackish Marsh 65.01

TOTAL BENEFITS = 65 AAHUS

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: New Orleans Landbridge Shoreline Stabilization & Marsh Creation Project Area: 192

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	45	0.51	45	0.51	42	0.48
V2	% Aquatic	50	0.55	50	0.55	50	0.55
V3	Interspersion	%		%		%	
	Class 1	0	0.31	0	0.31	0	0.31
	Class 2	0		0		0	
	Class 3	56		56		56	
	Class 4	44		44		44	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	72	1.00	72	1.00	61	0.88
V5	Salinity (ppt)	6	1.00	6	1.00	6	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.61	EM HSI =	0.61	EM HSI =	0.59
	Open Water HS	SI =	0.71	OW HSI =	0.71	OW HSI =	0.71

Project: New Orleans Landbridge Shoreline Stabilization & Marsh Creation Project Area: 192

FWOP	=						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project: New Orleans Landbridge Shoreline Stabilization & Marsh Creation Project Area: 192

FWOP	īl i	TV		TV		TV	
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	_
		OW HSI =	_	OW HSI =		OW HSI =	

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: New Orleans Landbridge Shoreline Stabilization & Marsh Creation Project Area: 192

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	45	0.51	32	0.39	99	0.99
V2	% Aquatic	50	0.55	0	0.10	25	0.33
V3	Interspersion	%		%		%	
	Class 1	0	0.31	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	56		0		100	
	Class 4	44		0		0	
	Class 5	0		100		0	
V4	%OW <= 1.5ft	72	1.00	100	0.60	100	0.60
V5	Salinity (ppt)	6	1.00	6	1.00	6	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Marsh HSI =		0.61	EM HSI =	0.34	EM HSI =	0.93
	Open Water HS	SI =	0.71	OW HSI =	0.20	OW HSI =	0.54

Project: New Orleans Landbridge Shoreline Stabilization & Marsh Creation Project Area: FWP

192

		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	99	0.99	97	0.97		
V2	% Aquatic	50	0.55	75	0.78		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	90	0.80		
V5	Salinity (ppt)	6	1.00	6	1.00		
V6	Access Value	1.0000	1.00	1.0000	1.00		
	<u>-</u>	EM HSI =	0.99	EM HSI =	0.98	EM HSI =	
		OW HSI =	0.74	OW HSI =	0.87	OW HSI =	

Project: New Orleans Landbridge Shoreline Stabilization & Marsh Creation Project Area: 192 FWP

		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

### **AAHU CALCULATION - EMERGENT MARSH**

**Project:** New Orleans Landbridge Shoreline Stabilization & Marsh Creation

Future With	out Project		Total	Cummulative
TY	TY Marsh Acres		HUs	HUs
0	87	0.61	52.69	
1	86	0.61	52.08	52.39
20	81	0.59	47.51	945.89
Max TY=	20		AAHUs =	49.91

Future With	Project		Total	Cummulative	
TY	TY Marsh Acres		HUs	HUs	
0	87	0.61	52.69		
1	62	0.34	21.26	35.88	
3	191	0.93	177.24	173.35	
5	190	0.99	188.98	366.24	
20	185	0.98	182.00	2782.20	
Max TY=	20		AAHUs	167.88	

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	167.88
B. Future Without Project Emergent Marsh AAHUs =	49.91
Net Change (FWP - FWOP) =	117.97

## **AAHU CALCULATION - OPEN WATER**

Project: New Orleans Landbridge Shoreline Stabilization & Marsh Creation

Future With	out Project		Total	Cummulative
TY	TY Water Acres		HUs	HUs
0	105	0.71	75.03	
1	106	0.71	75.75	75.39
20	111	0.71	78.37	1464.26
Max TY=	20		AAHUs =	76.98

Future With	h Project		Total	Cummulative	
TY	TY Water Acres		HUs	HUs	
0	105	0.71	75.03		
1	0	0.20	0.00	28.58	
3	1	0.54	0.54	0.43	
5	2	0.74	1.47	1.95	
20	7	0.87	6.12	55.23	
Max TY=	20		AAHUs	4.31	

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	4.31
B. Future Without Project Open Water AAHUs =	76.98
Net Change (FWP - FWOP) =	-72.67

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	117.97				
B. Open Water Habitat Net AAHUs =	-72.67				
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	65.01				

### WETLAND VALUE ASSESSMENT

### **Benefits Summary Sheet**

**Project: Caminada Headlands Back Barrier Marsh Restoration** 

TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area AAHUs
Saline Marsh 143.55

**TOTAL BENEFITS = 144 AAHUS** 

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Caminada Headlands Back Barrier Marsh Restoration Project Area: 430

Condition: Future Without Project

		TY	0	TY	1	TY	5
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	30	0.37	29	0.36	28	0.35
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	0	0.25	0	0.25	0	0.25
	Class 2	0		0		0	
	Class 3	27		27		25	
	Class 4	73		73		75	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	12	0.25	11	0.24	9	0.22
V5	Salinity (ppt)	22	0.93	22	0.93	22	0.93
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.50	EM HSI =	0.49	EM HSI =	0.49
	Open Water HS	=	0.66	OW HSI =	0.66	OW HSI =	0.65

Project: Caminada Headlands Back Barrier Marsh Restoration Project Area: 430

FWOP TY 10 TY 20 ΤY Variable Value SI Value SI Value SI V1 % Emergent 27 0.34 24 0.32 V2 % Aquatic 0 0.30 0 0.30 V3 Interspersion % % % Class 1 0 0.24 0 0.22 Class 2 0 0 Class 3 20 10 Class 4 90 80 Class 5 0 0 V4 %OW <= 1.5ft 5 0.16 2 0.13 V5 Salinity (ppt) 22 0.93 22 0.93 V6 Access Value 1.0000 1.00 1.0000 1.00 EM HSI = EM HSI = EM HSI = 0.46 0.48 OW HSI = OW HSI = 0.65 OW HSI = 0.65

Project: Caminada Headlands Back Barrier Marsh Restoration Project Area: 430

FWOP	1						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Caminada Headlands Back Barrier Marsh Restoration Project Area: 430

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	30	0.37	17	0.25	50	0.55
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	0	0.25	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	27		0		100	
	Class 4	73		0		0	
	Class 5	0		100		0	
V4	%OW <= 1.5ft	12	0.25	100	0.50	100	0.50
V5	Salinity (ppt)	22	0.93	22	0.93	22	0.93
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Marsh HSI =		0.50	EM HSI =	0.27	EM HSI =	0.64
	Open Water HSI	=	0.66	OW HSI =	0.22	OW HSI =	0.69

Project:	Caminada Headlands Back Barrier Marsh Restoration	Project Area:	430
FWP			

IVVE	,						
		TY	5	TY	10	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	99	0.99	97	0.97	94	0.95
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	100	0.50	90	0.75	90	0.75
V5	Salinity (ppt)	22	0.93	22	0.93	22	0.93
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
		EM HSI =	0.99	EM HSI =	0.98	EM HSI =	0.96
		OW HSI =	0.73	OW HSI =	0.75	OW HSI =	0.75

Project: Caminada Headlands Back Barrier Marsh Restoration Project Area: 430

-WP	ī i	T)/		T./		T./	
		TY		TY		TY	
Variable		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)						
V6	Access Value						
	-	EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	_

### **AAHU CALCULATION - EMERGENT MARSH**

**Project:** Caminada Headlands Back Barrier Marsh Restoration

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	127	0.50	63.51	
1	125	0.49	61.67	62.59
5	116	0.49	56.39	236.07
10	101	0.48	48.29	261.60
20	62	0.46	28.22	381.07
Max=	20		AAHUs =	47.07

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	127	0.50	63.51	
1	75	0.27	20.25	39.89
3	208	0.64	133.97	137.64
5	407	0.99	401.51	512.77
10	369	0.98	360.13	1903.79
20	243	0.96	233.29	2963.80
Max=	20		AAHUs	277.89

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	277.89
B. Future Without Project Emergent Marsh AAHUs =	47.07
Net Change (FWP - FWOP) =	230.83

### **AAHU CALCULATION - OPEN WATER**

**Project:** Caminada Headlands Back Barrier Marsh Restoration

Future With	out Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	303	0.66	199.26	
1	302	0.66	198.32	198.79
5	297	0.65	194.38	785.40
10	279	0.65	181.33	939.22
20	198	0.65	127.83	1545.21
Max=	20		AAHUs =	173.43

Future With	Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	303	0.66	199.26	
1	2	0.22	0.44	77.88
3	4	0.69	2.75	2.87
5	6	0.73	4.39	7.10
10	12	0.75	9.00	33.36
20	17	0.75	12.74	108.69
Max=	20		AAHUs	11.50

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	11.50
B. Future Without Project Open Water AAHUs =	173.43
Net Change (FWP - FWOP) =	-161.94

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	230.83				
B. Open Water Habitat Net AAHUs =	-161.94				
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	143.55				

### WETLAND VALUE ASSESSMENT

#### **Benefits Summary Sheet**

**Project: Wilkinson Canal Marsh Creation and Nourishment** 

TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area AAHUs
Brackish Marsh 222.65

TOTAL BENEFITS = 223 AAHUS

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Wilkinson Canal Marsh Creation and Nourishment Project Area: 484

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	10	0.19	10	0.19	8	0.17
V2	% Aquatic	2	0.12	2	0.12	2	0.12
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.10
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	100		100		100	
V4	%OW <= 1.5ft	10	0.23	10	0.23	10	0.23
V5	Salinity (ppt)	5.9	1.00	5.9	1.00	5.9	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.34	EM HSI =	0.34	EM HSI =	0.32
	Open Water HS	SI =	0.31	OW HSI =	0.31	OW HSI =	0.31

Project Area:

484

**Project: Wilkinson Canal Marsh Creation and Nourishment** 

FWOF

FWOP	_						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project: Wilkinson Canal Marsh Creation and Nourishment

FWOP

FWOP	a i						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
·		EM HSI =	-	EM HSI =		EM HSI =	
		OW HSI =	-	OW HSI =		OW HSI =	

Project Area:

484

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Wilkinson Canal Marsh Creation and Nourishment Project Area: 484

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	10	0.19	21	0.29	54	0.59
V2	% Aquatic	2	0.12	0	0.10	10	0.19
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	0		0		0	
	Class 5	100		100		0	
V4	%OW <= 1.5ft	10	0.23	100	0.60	100	0.60
V5	Salinity (ppt)	5.9	1.00	5.9	1.00	5.9	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Marsh HSI =		0.34	EM HSI =	0.30	EM HSI =	0.67
	Open Water HS	6l =	0.31	OW HSI =	0.20	OW HSI =	0.44

Project: Wilkinson Canal Marsh Creation and Nourishment

Project Area:

484

FWP

		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	97	0.97	90	0.91		
V2	% Aquatic	20	0.28	20	0.28		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	90	0.80		
V5	Salinity (ppt)	5.9	1.00	5.9	1.00		
V6	Access Value	1.0000	1.00	1.0000	1.00		
·		EM HSI =	0.98	EM HSI =	0.95	EM HSI =	
		OW HSI =	0.55	OW HSI =	0.57	OW HSI =	

**Project: Wilkinson Canal Marsh Creation and Nourishment** 

Project Area:

484

FWP

		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

### **AAHU CALCULATION - EMERGENT MARSH**

**Project:** Wilkinson Canal Marsh Creation and Nourishment

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	49	0.34	16.61	
1	49	0.34	16.61	16.61
20	41	0.32	13.24	283.23
Max TY=	20	-	AAHUs =	14.99

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	49	0.34	16.61	
1	100	0.30	29.82	23.56
3	263	0.67	176.51	186.07
5	472	0.98	464.35	619.09
20	436	0.95	412.27	6571.22
Max TY=	20		AAHUs	370.00

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	370.00
B. Future Without Project Emergent Marsh AAHUs =	14.99
Net Change (FWP - FWOP) =	355.00

## **AAHU CALCULATION - OPEN WATER**

**Project:** Wilkinson Canal Marsh Creation and Nourishment

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	435	0.31	136.67	
1	435	0.31	136.67	136.67
20	443	0.31	139.18	2620.59
Max TY=	20		AAHUs =	137.86

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	435	0.31	136.67	
1	3	0.20	0.61	60.69
3	8	0.44	3.48	3.71
5	12	0.55	6.66	9.98
20	48	0.57	27.35	253.73
Max TY=	20		AAHUs	16.41

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	16.41
B. Future Without Project Open Water AAHUs =	137.86
Net Change (FWP - FWOP) =	-121.46

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	355.00				
B. Open Water Habitat Net AAHUs =	-121.46				
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	222.65				

### WETLAND VALUE ASSESSMENT

#### **Benefits Summary Sheet**

**Project: Bayou Grande Cheniere Marsh and Ridge Restoration** 

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area AAHUs Brackish Marsh 138.38

Area AAHUs
Coastal Chenier/Ridge 8.06

**TOTAL BENEFITS = 146 AAHUS** 

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Bayou Grande Cheniere Marsh and Ridge Restoration Project Area: 354

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	18	0.26	18	0.26	15	0.24
V2	% Aquatic	11	0.20	11	0.20	11	0.20
V3	Interspersion	%		%		%	
	Class 1	0	0.20	0	0.20	0	0.20
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	100		100		100	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	9	0.22	9	0.22	5	0.16
V5	Salinity (ppt)	7.9	1.00	7.9	1.00	7.9	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.41	EM HSI =	0.41	EM HSI =	0.39
	Open Water HSI =		0.40	OW HSI =	0.40	OW HSI =	0.40

Project: Bayou Grande Cheniere Marsh and Ridge Restoration Project Area:

354

FWOP

FWOP		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project: Bayou Grande Cheniere Marsh and Ridge Restoration

Project Area:

354

**FWOP** 

		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Bayou Grande Cheniere Marsh and Ridge Restoration Project Area: 354

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	18	0.26	16	0.24	44	0.50
V2	% Aquatic	11	0.20	0	0.10	10	0.19
V3	Interspersion	%		%		%	
	Class 1	0	0.20	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	100		0		0	
	Class 5	0		100		0	
V4	%OW <= 1.5ft	9	0.22	100	0.60	100	0.60
V5	Salinity (ppt)	7.9	1.00	7.9	1.00	7.9	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Marsh HSI =		0.41	EM HSI =	0.28	EM HSI =	0.61
	Open Water HS	6l =	0.40	OW HSI =	0.20	OW HSI =	0.44

**Project: Bayou Grande Cheniere Marsh and Ridge Restoration** 

Project Area:

354

FWP

FVVP	ត					·	
		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	97	0.97	89	0.90		
V2	% Aquatic	20	0.28	20	0.28		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	90	0.80		
V5	Salinity (ppt)	7.9	1.00	7.9	1.00		
V6	Access Value	1.0000	1.00	1.0000	1.00		
		EM HSI =	0.98	EM HSI =	0.94	EM HSI =	
		OW HSI =	0.55	OW HSI =	0.57	OW HSI =	

**Project: Bayou Grande Cheniere Marsh and Ridge Restoration** 

Project Area:

354

FWP

FWP							
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =	-	OW HSI =		OW HSI =	

## **AAHU CALCULATION - EMERGENT MARSH**

**Project:** Bayou Grande Cheniere Marsh and Ridge Restoration

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	65	0.41	26.71	
1	64	0.41	26.30	26.50
20	52	0.39	20.21	440.98
Max TY=	20		AAHUs =	23.37

Future With	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	65	0.41	26.71	
1	55	0.28	15.22	20.74
3	152	0.61	92.58	97.06
5	332	0.98	326.62	396.72
20	304	0.94	285.78	4589.93
Max TY=	20		AAHUs	255.22

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	255.22
B. Future Without Project Emergent Marsh AAHUs =	23.37
Net Change (FWP - FWOP) =	231.85

## **AAHU CALCULATION - OPEN WATER**

**Project:** Bayou Grande Cheniere Marsh and Ridge Restoration

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	289	0.40	115.63	
1	290	0.40	116.03	115.83
20	302	0.40	119.68	2239.40
Max TY=	20		AAHUs =	117.76

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	289	0.40	115.63	
1	2	0.20	0.41	48.63
3	6	0.44	2.61	2.71
5	10	0.55	5.55	8.00
20	38	0.57	21.65	202.97
Max TY=	20		AAHUs	13.12

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	13.12
B. Future Without Project Open Water AAHUs =	117.76
Net Change (FWP - FWOP) =	-104.65

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	231.85					
B. Open Water Habitat Net AAHUs =	-104.65					
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	138.38					

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Coastal Chenier/Ridge

Project: Bayou Grande Cheniere Marsh and Ridge Restoration Project Area: 12

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Class/Value	SI	Class/Value	SI	Class/Value	SI
V1	Tree Canopy Cover (%)	0	0.10	0	0.10	0	0.10
V2	Shrub/Midstory Cover (%)	0	0.10	0	0.10	0	0.10
V3	Species Diversity	0	0.10	0	0.10	0	0.10
		HSI =	0.10	HSI =	0.10	HSI =	0.10

Project: Bayou Grande Cheniere Marsh and Ridge Restoration Project Area: 12

FWOP

		TY		TY		TY	
Variable		Class/Value	SI	Class/Value	SI	Class/Value	SI
V1	Tree Canopy Cover (%)						
V2	Shrub/Midstory Cover (%)						
V3	Species Diversity						
		HSI =		HSI =		HSI =	

Project: Bayou Grande Cheniere Marsh and Ridge Restoration Project Area: 12

FWOP

		TY		TY		TY	
Variable		Class/Value	SI	Class/Value	SI	Class/Value	SI
V1	Tree Canopy Cover (%)						
V2	Shrub/Midstory Cover (%)						
V3	Species Diversity						
		HSI =		HSI =		HSI =	

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Coastal Chenier/Ridge

Project: Bayou Grande Cheniere Marsh and Ridge Restoration Project Area: 12

Condition: Future With Project

		TY	0	TY	1	TY	2
Variable		Class/Value	SI	Class/Value	SI	Class/Value	SI
V1	Tree Canopy Cover (%)	0	0.10	0	0.10	0	0.10
V2	Shrub/Midstory Cover (%)	0	0.10	0	0.10	10	0.36
V3	Species Diversity	0	0.10	0	0.10	6	0.80
		HSI =	0.10	HSI =	0.10	HSI =	0.31

Project: Bayou Grande Cheniere Marsh and Ridge Restoration Project Area: 12

FWP

		TY	5	TY	10	TY	15
Variable		Class/Value	SI	Class/Value	SI	Class/Value	SI
V1	Tree Canopy Cover (%)	5	0.17	25	0.45	40	0.66
V2	Shrub/Midstory Cover (%)	35	1.00	50	1.00	50	1.00
V3	Species Diversity	10	1.00	10	1.00	10	1.00
		HSI =	0.55	HSI =	0.77	HSI =	0.87

Project: Bayou Grande Cheniere Marsh and Ridge Restoration Project Area: 12

WP

		TY	20	TY		TY	
Variable		Class/Value	SI	Class/Value	SI	Class/Value	SI
V1	Tree Canopy Cover (%)	50	0.80				
V2	Shrub/Midstory Cover (%)	50	1.00				
V3	Species Diversity	10	1.00				
		HSI =	0.93	HSI =	•	HSI =	

## **AAHU CALCULATION**

Project: Bayou Grande Cheniere Marsh and Ridge Restoration

Future Witho	out 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
Max TY =	20		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	12	0.10	1.20	0.60
2	12	0.31	3.68	2.44
5	12	0.55	6.65	15.49
10	12	0.77	9.20	39.61
15	12	0.87	10.45	49.11
20	12	0.93	11.14	53.97
Max TY =	20		Total	
			CHUs =	161.21
			AAHUs =	8.06

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project AAHUs =	8.06
B. Future Without Project AAHUs =	0.00
Net Change (FWP - FWOP) =	8.06

### WETLAND VALUE ASSESSMENT

### **Benefits Summary Sheet**

**Project: Island Road Marsh Creation and Nourishment** 

TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area AAHUs
Saline Marsh 166.36

**TOTAL BENEFITS = 166 AAHUS** 

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Island Road Marsh Creation and Nourishment Project Area: 383

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	5	0.15	5	0.15	4	0.14
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.10
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	100		100		100	
V4	%OW <= 1.5ft	1	0.11	1	0.11	1	0.11
V5	Salinity (ppt)	14	1.00	14	1.00	14	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.30	EM HSI =	0.30	EM HSI =	0.30
	Open Water HSI	=	0.64	OW HSI =	0.64	OW HSI =	0.64

Project: Island Road Marsh Creation and Nourishment Project Area: 383

FWOP

FWOP	•						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project: Island Road Marsh Creation and Nourishment Project Area: 383 FWOP

TY TY TY Variable 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)

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

EM HSI =

OW HSI =

EM HSI =

OW HSI =

Project: Island Road Marsh Creation and Nourishment Project Area: 383

Condition: Future With Project

Access Value

EM HSI =

OW HSI =

V6

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	5	0.15	19	0.27	51	0.56
V2	% Aquatic	0	0.30	0	0.30	5	0.34
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	0		0		0	
	Class 5	100		100		0	
V4	%OW <= 1.5ft	1	0.11	100	0.50	100	0.50
V5	Salinity (ppt)	14	1.00	14	1.00	14	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	<b>Emergent Marsl</b>	n HSI =	0.30	EM HSI =	0.29	EM HSI =	0.66
	Open Water HS	=	0.64	OW HSI =	0.23	OW HSI =	0.71

Project:	Island Road Marsh Creation and Nourishment	Project Area:	383
FWP			

IVVE	<b>-</b>						
		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	96	0.96	85	0.87		
V2	% Aquatic	10	0.37	10	0.37		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.50	80	1.00		
V5	Salinity (ppt)	14	1.00	14	1.00		
V6	Access Value	1.0000	1.00	1.0000	1.00		
		EM HSI =	0.98	EM HSI =	0.92	EM HSI =	
		OW HSI =	0.77	OW HSI =	0.81	OW HSI =	

Project: Island Road Marsh Creation and Nourishment Project Area: 383
FWP

		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	_
		OW HSI =	_	OW HSI =		OW HSI =	

## **AAHU CALCULATION - EMERGENT MARSH**

**Project:** Island Road Marsh Creation and Nourishment

Future With	out Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	19	0.30	5.79	
1	18	0.30	5.49	5.64
20	14	0.30	4.15	91.47
Max=	20		AAHUs =	4.86

Future With	Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	19	0.30	5.79	
1	73	0.29	20.92	13.52
3	196	0.66	129.04	134.71
5	368	0.98	360.24	470.90
20	326	0.92	299.87	4944.58
Max=	20		AAHUs	278.19

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	278.19
B. Future Without Project Emergent Marsh AAHUs =	4.86
Net Change (FWP - FWOP) =	273.33

## **AAHU CALCULATION - OPEN WATER**

**Project:** Island Road Marsh Creation and Nourishment

Future With	out Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	364	0.64	233.41	
1	365	0.64	234.05	233.73
20	369	0.64	236.62	4471.33
Max=	20		AAHUs =	235.25

Future With	Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	364	0.64	233.41	
1	3	0.23	0.68	92.00
3	9	0.71	6.39	6.09
5	15	0.77	11.56	17.83
20	57	0.81	46.04	428.08
Max=	20		AAHUs	27.20

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	27.20
B. Future Without Project Open Water AAHUs =	235.25
Net Change (FWP - FWOP) =	-208.05

TOTAL BENEFITS IN AAHUS DUE TO PROJECT				
A. Emergent Marsh Habitat Net AAHUs =	273.33			
B. Open Water Habitat Net AAHUs =	-208.05			
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	166.36			

### WETLAND VALUE ASSESSMENT

### **Benefits Summary Sheet**

**Project: Grand Bayou Freshwater Enhancement** 

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Area 1 West Brackish Marsh	87.97
Area	AAHUs
Area 1 West Fresh Marsh	9.83
Area	AAHUs
Area 1 West Intermediate Marsh	43.94
Area	AAHUs
Area 2 East Brackish Marsh	281.54
Area	AAHUs
Area 2 East Intermediate Marsh	128.35
Area	AAHUs
Marsh Creation Area	33.57

TOTAL BENEFITS = 585 AAHUS

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Grand Bayou Freshwater Enhancement Project Area: 5,163

Area 1 - West - Brackish
Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	35	0.42	35	0.42	32	0.39
V2	% Aquatic	35	0.42	35	0.42	35	0.42
V3	Interspersion	%		%		%	
	Class 1	0	0.30	0	0.30	0	0.30
	Class 2	0		0		0	
	Class 3	50		50		50	
	Class 4	50		50		50	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	10	0.23	10	0.23	5	0.16
V5	Salinity (ppt)	7	1.00	7	1.00	7	1.00
V6	Access Value	0.2700	0.34	0.2700	0.34	0.2700	0.34
	Emergent Marsh HSI =		0.45	EM HSI =	0.45	EM HSI =	0.44
	Open Water HS	SI =	0.41	OW HSI =	0.41	OW HSI =	0.41

Project Area:

5163

Project: Grand Bayou Freshwater Enhancement

FWOP

FWOP	_						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

**Project: Grand Bayou Freshwater Enhancement** 

FWOP

FWOP	ī						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
·	-	EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project Area:

Project Area:

5163

5163

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Grand Bayou Freshwater Enhancement

Area 1 - West - Brackish

Condition: Future With Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	35	0.42	35	0.42	34	0.41
V2	% Aquatic	35	0.42	50	0.55	50	0.55
V3	Interspersion	%		%		%	
	Class 1	0	0.30	0	0.30	0	0.30
	Class 2	0		0		0	
	Class 3	50		50		50	
	Class 4	50		50		50	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	10	0.23	10	0.23	6	0.18
V5	Salinity (ppt)	7	1.00	5.3	1.00	5.3	1.00
V6	Access Value	0.2700	0.34	0.3100	0.38	0.3100	0.38
	Emergent Marsh HSI =		0.45	EM HSI =	0.46	EM HSI =	0.46
	Open Water HS	SI =	0.41	OW HSI =	0.48	OW HSI =	0.48

Project: Grand Bayou Freshwater Enhancement

Project Area: 5163

FWP

FVVF	]	TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

**Project: Grand Bayou Freshwater Enhancement** 

Project Area: 5163

FWP

FWP	1	TV		TV		TV	
		TY		TY		TY	
Variable		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)						
V6	Access Value						
·		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

### **AAHU CALCULATION - EMERGENT MARSH**

Project: Grand Bayou Freshwater Enhancement

Area 1 - West - Brackish

Future With	out Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1824	0.45	826.89	
1	1816	0.45	823.26	825.07
20	1660	0.44	726.68	14716.71
Max TY=	20		AAHUs =	777.09

<b>Future With</b>	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1824	0.45	826.89	
1	1820	0.46	838.17	832.53
20	1744	0.46	793.95	15503.88
Max TY=	20		AAHUs	816.82

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	816.82
B. Future Without Project Emergent Marsh AAHUs =	777.09
Net Change (FWP - FWOP) =	39.73

### **AAHU CALCULATION - OPEN WATER**

**Project:** Grand Bayou Freshwater Enhancement

Area 1 - West - Brackish

Future Without	out Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	3339	0.41	1376.74	
1	3347	0.41	1380.03	1378.38
20	3503	0.41	1427.67	26675.55
Max TY=	20		AAHUs =	1402.70

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	3339	0.41	1376.74	
1	3343	0.48	1610.68	1493.66
20	3419	0.48	1634.27	30827.96
Max TY=	20		AAHUs	1616.08

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	1616.08
B. Future Without Project Open Water AAHUs =	1402.70
Net Change (FWP - FWOP) =	213.38

TOTAL BENEFITS IN AAHUS DUE TO PROJECT				
A. Emergent Marsh Habitat Net AAHUs =	39.73			
B. Open Water Habitat Net AAHUs =	213.38			
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	87.97			

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Grand Bayou Freshwater Enhancement

Area 1 - West - Fresh Condition: Future Without Project

Project Area:	631
% Fresh	100
% Intermediate	0

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	71	0.74	71	0.74	65	0.69
V2	% Aquatic	80	0.82	80	0.82	80	0.82
V3	Interspersion	%		%		%	
	Class 1	50	0.70	50	0.70	45	0.67
	Class 2	0		0		0	
	Class 3	50		50		55	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	98	0.68	98	0.68	98	0.68
V5	Salinity (ppt)						
	fresh	2	0.70	2	0.70	2	0.70
	intermediate						
V6	Access Value						
	fresh	0.6600	0.76	0.6600	0.76	0.6600	0.76
	intermediate						
	Emergent Mars	sh HSI =	0.73	EM HSI =	0.73	EM HSI =	0.69
	Open Water H	SI =	0.78	OW HSI =	0.78	OW HSI =	0.78

#### Project: Grand Bayou Freshwater Enhancement

**FWOP** 

FWOP	1	h					
		TY		TY		TY	
Variable		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						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project: Grand Bayou Freshwater Enhancement

FWOP

FWOP	]	TY		TY		TY	
Variable		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						
	_	EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Grand Bayou Freshwater Enhancement

Area 1 - West - Fresh Condition: Future With Project

Project Area:	631
% Fresh	100
% Intermediate	0

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	71	0.74	71	0.74	68	0.71
V2	% Aquatic	80	0.82	85	0.87	85	0.87
V3	Interspersion	%		%		%	
	Class 1	50	0.70	50	0.70	50	0.70
	Class 2	0		0		0	
	Class 3	50		50		50	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	98	0.68	98	0.68	98	0.68
V5	Salinity (ppt)						
	fresh	2	0.70	1.5	0.80	1.5	0.80
	intermediate						
V6	Access Value						
	fresh	0.6600	0.76	0.6400	0.75	0.6400	0.75
	intermediate						
	Emergent Mar	sh HSI =	0.73	EM HSI =	0.74	EM HSI =	0.73
	Open Water H	SI =	0.78	OW HSI =	0.81	OW HSI =	0.81

Project: Grand Bayou Freshwater Enhancement

FWP

	]	TY		TY		TY	
Variable		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						
	_	EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

#### Project: Grand Bayou Freshwater Enhancement

FWP

FWP	1	T)/		T)/		T)/	
		TY		TY		TY	
Variable		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						
	_	EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

### **AAHU CALCULATION - EMERGENT MARSH**

Project: Grand Bayou Freshwater Enhancement

Area 1 - West - Fresh

Future With	out Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	449	0.73	329.24	
1	447	0.73	327.77	328.51
20	409	0.69	284.07	5807.85
Max=	20		AAHUs =	306.82

Future With	Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	449	0.73	329.24	
1	448	0.74	332.69	330.97
20	429	0.73	311.03	6114.27
Max=	20		AAHUs	322.26

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	322.26
B. Future Without Project Emergent Marsh AAHUs =	306.82
Net Change (FWP - FWOP) =	15.44

### **AAHU CALCULATION - OPEN WATER**

**Project:** Grand Bayou Freshwater Enhancement

Area 1 - West - Fresh

Future With	out Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	182	0.78	142.01	
1	184	0.78	143.57	142.79
20	222	0.78	172.72	3005.05
Max=	20	_	AAHUs =	157.39

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	182	0.78	142.01	
1	183	0.81	148.28	145.14
20	202	0.81	163.67	2963.51
Max=	20		AAHUs	155.43

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	155.43
B. Future Without Project Open Water AAHUs =	157.39
Net Change (FWP - FWOP) =	-1.96

TOTAL BENEFITS IN AAHUS DUE TO PROJECT				
A. Emergent Marsh Habitat Net AAHUs =	15.44			
B. Open Water Habitat Net AAHUs =	-1.96			
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	9.83			

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Grand Bayou Freshwater Enhancement

Area 1 - West - Intermediate

Condition: Future Without Project

Project Area:	2,179
% Fresh	0
% Intermediate	100

T	1						
		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	65	0.69	65	0.69	59	0.63
V2	% Aquatic	80	0.82	80	0.82	80	0.82
V3	Interspersion	%		%		%	
	Class 1	50	0.70	50	0.70	45	0.67
	Class 2	0		0		0	
	Class 3	50		50		55	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	98	0.68	98	0.68	98	0.68
V5	Salinity (ppt)						
	fresh		0.70		0.70		0.70
	intermediate	4		4		4	
V6	Access Value						
	fresh		0.73		0.73		0.73
	intermediate	0.6600		0.6600		0.6600	
	Emergent Mar	sh HSI =	0.69	EM HSI =	0.69	EM HSI =	0.65
	Open Water H	ISI =	0.77	OW HSI =	0.77	OW HSI =	0.77

Project: Grand Bayou Freshwater Enhancement

**FWOP** 

FWOF	1	TY		TY		TY	
Variable		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						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project: Grand Bayou Freshwater Enhancement

FWOP

FWOP		TY		TY		TY	
Variable		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						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Grand Bayou Freshwater Enhancement

Area 1 - West - Intermediate

Condition: Future With Project

Project Area:	633
% Fresh	100
% Intermediate	0

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	65	0.69	65	0.69	62	0.66
V2	% Aquatic	80	0.82	85	0.87	85	0.87
V3	Interspersion	%		%		%	
	Class 1	50	0.70	50	0.70	50	0.70
	Class 2	0		0		0	
	Class 3	50		50		50	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	98	0.68	98	0.68	98	0.68
V5	Salinity (ppt)						
	fresh		0.70		0.90		0.90
	intermediate	4		3		3	
V6	Access Value						
	fresh		0.73		0.71		0.71
	intermediate	0.66		0.6400		0.6400	
_	Emergent Mar	sh HSI =	0.69	EM HSI =	0.71	EM HSI =	0.70
	Open Water H	SI =	0.77	OW HSI =	0.81	OW HSI =	0.81

Project: Grand Bayou Freshwater Enhancement

FWP

		TY		TY		TY	
Variable		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						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project: Grand Bayou Freshwater Enhancement

FWF

FWP	=						
		TY		TY		TY	
Variable		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						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

### **AAHU CALCULATION - EMERGENT MARSH**

Project: Grand Bayou Freshwater Enhancement

Area 1 - West - Intermediate

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1420	0.69	985.15	
1	1414	0.69	980.99	983.07
20	1293	0.65	846.70	17348.14
Max=	20		AAHUs =	916.56

Future With	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1420	0.69	985.15	
1	1417	0.71	1011.74	998.45
20	1358	0.70	945.61	18591.52
Max=	20	_	AAHUs	979.50

NET CHANGE IN AAHUS DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	979.50
B. Future Without Project Emergent Marsh AAHUs	=	916.56
Net Change (FWP - FWOP) =		62.94

### **AAHU CALCULATION - OPEN WATER**

**Project:** Grand Bayou Freshwater Enhancement

Area 1 - West - Intermediate

Future With	Future Without Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	759	0.77	586.83	
1	765	0.77	591.47	589.15
20	886	0.77	683.05	12108.73
Max=	20		AAHUs =	634.89

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	759	0.77	586.83	
1	762	0.81	617.00	601.89
20	821	0.81	664.77	12176.84
Max=	20	_	AAHUs	638.94

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	638.94
B. Future Without Project Open Water AAHUs =	634.89
Net Change (FWP - FWOP) =	4.04

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	62.94				
B. Open Water Habitat Net AAHUs =	4.04				
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	43.94				

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Grand Bayou Freshwater Enhancement Project Area: 15,478

Area 2 - East - Brackish
Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	31	0.38	30	0.37	26	0.33
V2	% Aquatic	5	0.15	5	0.15	3	0.13
V3	Interspersion	%		%		%	
	Class 1	5	0.26	5	0.26	0	0.24
	Class 2	5		5		10	
	Class 3	0		0		0	
	Class 4	90		90		90	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	5	0.16	5	0.16	4	0.15
V5	Salinity (ppt)	10	1.00	10	1.00	12	0.70
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.51	EM HSI =	0.50	EM HSI =	0.44
	Open Water HS	SI =	0.35	OW HSI =	0.35	OW HSI =	0.31

Project: Grand Bayou Freshwater Enhancement

FWOF

FWOP	ו ה						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project Area:

15478

**Project: Grand Bayou Freshwater Enhancement** 

FWOP

FWOP							
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project Area:

15478

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Grand Bayou Freshwater Enhancement Project Area: 15478

Area 2 - East - Brackish

Condition: Future With Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	31	0.38	30	0.37	27	0.34
V2	% Aquatic	5	0.15	10	0.19	10	0.19
V3	Interspersion	%		%		%	
	Class 1	5	0.26	5	0.26	0	0.24
	Class 2	5		5		10	
	Class 3	0		0		0	
	Class 4	90		90		90	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	5	0.16	5	0.16	4	0.15
V5	Salinity (ppt)	10	1.00	8	1.00	9.6	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.51	EM HSI =	0.50	EM HSI =	0.48
	Open Water HS	SI =	0.35	OW HSI =	0.39	OW HSI =	0.39

Project: Grand Bayou Freshwater Enhancement

FWP	<del>-</del>						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project Area: 15478

Project Area:

15478

#### Project: Grand Bayou Freshwater Enhancement

FWP

FWP	1	TV		TV		TV	
		TY		TY		TY	
Variable		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)						
V6	Access Value						
·		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

### **AAHU CALCULATION - EMERGENT MARSH**

Project: Grand Bayou Freshwater Enhancement

Area 2 - East - Brackish

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	4724	0.51	2403.33	
1	4683	0.50	2350.84	2377.04
20	3982	0.44	1748.22	38801.30
Max TY=	20		AAHUs =	2058.92

Future With	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	4724	0.51	2403.33	
1	4699	0.50	2358.88	2381.08
20	4250	0.48	2036.93	41727.82
Max TY=	20		AAHUs	2205.45

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	2205.45
B. Future Without Project Emergent Marsh AAHUs =	2058.92
Net Change (FWP - FWOP) =	146.53

### **AAHU CALCULATION - OPEN WATER**

Project: Grand Bayou Freshwater Enhancement

Area 2 - East - Brackish

Future With	out Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	10754	0.35	3760.29	
1	10795	0.35	3774.63	3767.46
20	11496	0.31	3521.72	69411.47
Max TY=	20		AAHUs =	3658.95

Future With	Project	]	Total	Cummulative	
i uture with	Froject	I Otal		Cullillulative	
TY	Water Acres	x HSI	HUs	HUs	
0	10754	0.35	3760.29		
1	10779	0.39	4232.41	3996.17	
20	11228	0.39	4381.38	81834.41	
Max TY=	20		AAHUs	4291.53	

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	4291.53
B. Future Without Project Open Water AAHUs =	3658.95
Net Change (FWP - FWOP) =	632.58

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	146.53					
B. Open Water Habitat Net AAHUs =	632.58					
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	281.54					

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Grand Bayou Freshwater Enhancement

Area 2 - East - Intermediate

Condition: Future Without Project

Project Area:	2,956
% Fresh	0
% Intermediate	100

	]	TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	72	0.75	72	0.75	61	0.65
V2	% Aquatic	40	0.46	40	0.46	35	0.42
V3	Interspersion	%		%		%	
	Class 1	70	0.85	70	0.85	68	0.84
	Class 2	15		15		15	
	Class 3	15		15		17	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	20	0.33	20	0.33	20	0.33
V5	Salinity (ppt)						
	fresh		0.30		0.30		0.10
	intermediate	6		6		7	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.0000		1.0000		1.0000	
	Emergent Mars	sh HSI =	0.74	EM HSI =	0.74	EM HSI =	0.65
	Open Water H	SI =	0.54	OW HSI =	0.54	OW HSI =	0.50

#### Project: Grand Bayou Freshwater Enhancement

FWOP

FWOP	_						
		TY		TY		TY	
Variable		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						
,		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

#### Project: Grand Bayou Freshwater Enhancement

FWOP

		TY		TY		TY	
Variable		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						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Grand Bayou Freshwater Enhancement

Area 2 - East - Intermediate

Condition: Future With Project

Project Area:	2,984
% Fresh	0
% Intermediate	100

	ī i	<b>T</b> )/		T)/		T)/	
		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	72	0.75	72	0.75	65	0.69
V2	% Aquatic	40	0.46	50	0.55	50	0.55
V3	Interspersion	%		%		%	
	Class 1	70	0.85	70	0.85	68	0.84
	Class 2	15		15		15	
	Class 3	15		15		17	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	20	0.33	20	0.33	20	0.33
V5	Salinity (ppt)						
	fresh		0.30		0.68		0.54
	intermediate	6		4.1		4.8	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1		1.0000		1.0000	
	Emergent Mars	sh HSI =	0.74	EM HSI =	0.78	EM HSI =	0.72
	Open Water H	SI =	0.54	OW HSI =	0.63	OW HSI =	0.62

Project: Grand Bayou Freshwater Enhancement

FWP

		TY		TY		TY	
Variable		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						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

#### Project: Grand Bayou Freshwater Enhancement

FWP

FWP	t	i <del></del>		ı			
		TY		TY		TY	
Variable		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						
		EM HSI =	·	EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

### **AAHU CALCULATION - EMERGENT MARSH**

Project: Grand Bayou Freshwater Enhancement

Area 2 - East - Intermediate

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	2140	0.74	1580.18	
1	2121	0.74	1566.15	1573.16
20	1804	0.65	1166.67	25869.75
Max=	20		AAHUs =	1372.15

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	2140	0.74	1580.18	
1	2129	0.78	1661.95	1621.14
20	1936	0.72	1395.01	29004.44
Max=	20		AAHUs	1531.28

NET CHANGE IN AAHUS DUE TO PROJECT	]
A. Future With Project Emergent Marsh AAHUs =	1531.28
B. Future Without Project Emergent Marsh AAHUs =	1372.15
Net Change (FWP - FWOP) =	159.13

### **AAHU CALCULATION - OPEN WATER**

Project: Grand Bayou Freshwater Enhancement

Area 2 - East - Intermediate

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	816	0.54	443.65	
1	835	0.54	453.98	448.82
20	1152	0.50	571.06	9786.05
Max=	20		AAHUs =	511.74

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	816	0.54	443.65	
1	827	0.63	524.44	483.88
20	1020	0.62	635.34	11024.81
Max=	20		AAHUs	575.43

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	575.43
B. Future Without Project Open Water AAHUs =	511.74
Net Change (FWP - FWOP) =	63.69

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	159.13				
B. Open Water Habitat Net AAHUs = 63.69					
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1 128.35					

### WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Grand Bayou Freshwater Enhancement

Marsh Creation Area

Condition: Future Without Project

Project Area:	126
% Fresh	0
% Intermediate	100

	ī i	TV	0	TV		TV	20
		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	11	0.20	11	0.20	10	0.19
V2	% Aquatic	80	0.82	80	0.82	80	0.82
V3	Interspersion	%		%		%	
	Class 1	0	0.20	0	0.20	0	0.20
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	100		100		100	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	100	0.60	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	2		2		2	
V6	Access Value						
	fresh		0.36		0.36		0.36
	intermediate	0.2000		0.2000		0.2000	
	Emergent Mars	sh HSI =	0.30	EM HSI =	0.30	EM HSI =	0.30
	Open Water H	SI =	0.65	OW HSI =	0.65	OW HSI =	0.65

#### Project: Grand Bayou Freshwater Enhancement

FWOP	1						
		TY		TY	·	TY	
Variable		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						
		EM HSI =	_	EM HSI =		EM HSI =	·
		OW HSI =		OW HSI =		OW HSI =	

Project: Grand Bayou Freshwater Enhancement

FWOP

		TY		TY		TY	
Variable		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						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project: Grand Bayou Freshwater Enhancement

Marsh Creation Area
Condition: Future With Project

Project Area:	176
% Fresh	0
% Intermediate	100

	]	TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	11	0.20	14	0.23	38	0.44
V2	% Aquatic	80	0.82	0	0.10	40	0.46
V3	Interspersion	%		%		%	
	Class 1	0	0.20	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	100		0		0	
	Class 5	0		100		0	
V4	%OW <= 1.5ft	100	0.60	0	0.10	100	0.60
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	2		2		2	
V6	Access Value						
	fresh		0.36		0.20		0.36
	intermediate	0.2		0.0001		0.2000	
	Emergent Mars	sh HSI =	0.30	EM HSI =	0.29	EM HSI =	0.49
	Open Water H	SI =	0.65	OW HSI =	0.18	OW HSI =	0.48

Project: Grand Bayou Freshwater Enhancement

FWP

		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	99	0.99	95	0.96		
V2	% Aquatic	80	0.82	80	0.82		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	100	0.60		
V5	Salinity (ppt)						
	fresh		1.00		1.00		
	intermediate	2		2			
V6	Access Value						
	fresh		0.36		0.36		
	intermediate	0.2000		0.2000			
		EM HSI =	0.87	EM HSI =	0.85	EM HSI =	
		OW HSI =	0.71	OW HSI =	0.71	OW HSI =	

#### Project: Grand Bayou Freshwater Enhancement

FW/P

FWP							
		TY		TY		TY	
Variable		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						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

### **AAHU CALCULATION - EMERGENT MARSH**

Project: Grand Bayou Freshwater Enhancement

Marsh Creation Area

Future Without	out Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	14	0.30	4.26	
1	14	0.30	4.26	4.26
20	13	0.30	3.87	77.20
Max=	20		AAHUs =	4.07

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	14	0.30	4.26	
1	18	0.29	5.30	4.79
3	47	0.49	22.93	26.36
5	125	0.87	109.16	122.06
20	120	0.85	102.42	1586.65
Max=	20		AAHUs	86.99

NET CHANGE IN AAHUS DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	86.99
B. Future Without Project Emergent Marsh AAHUs	=	4.07
Net Change (FWP - FWOP) =		82.92

### **AAHU CALCULATION - OPEN WATER**

**Project:** Grand Bayou Freshwater Enhancement

Marsh Creation Area

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	112	0.65	73.08	
1	112	0.65	73.08	73.08
20	113	0.65	73.73	1394.68
Max=	20		AAHUs =	73.39

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	112	0.65	73.08	
1	0	0.18	0.00	27.75
3	1	0.48	0.48	0.38
5	1	0.71	0.71	1.20
20	6	0.71	4.27	37.37
Max=	20		AAHUs	3.33

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	3.33
B. Future Without Project Open Water AAHUs =	73.39
Net Change (FWP - FWOP) =	-70.05

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	82.92					
B. Open Water Habitat Net AAHUs =	-70.05					
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	33.57					

#### WETLAND VALUE ASSESSMENT

#### **Benefits Summary Sheet**

**Project: Southwest Pass Shoreline Protection** 

TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area AAHUs
Brackish Marsh 34.79

TOTAL BENEFITS = 35 AAHUS

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Southwest Pass Shoreline Protection Project Area: 100

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	91	0.92	86	0.87	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00	0	0.10
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	0		0		100	
V4	%OW <= 1.5ft	100	0.60	100	0.60	12	0.25
V5	Salinity (ppt)	8.9	1.00	8.9	1.00	8.9	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.95	EM HSI =	0.92	EM HSI =	0.25
	Open Water HSI =		0.39	OW HSI =	0.39	OW HSI =	0.30

**Project: Southwest Pass Shoreline Protection** 

FWOP

FWOP	_						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project Area:

100

**Project: Southwest Pass Shoreline Protection** 

FWOP

FWOP	a .	i-				i-	
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project Area:

100

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Southwest Pass Shoreline Protection Project Area: 100

Condition: Future With Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	91	0.92	91	0.92	91	0.92
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	100	0.60	100	0.60	100	0.60
V5	Salinity (ppt)	8.9	1.00	8.9	1.00	8.9	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.95	EM HSI =	0.95	EM HSI =	0.95
	Open Water HS	SI =	0.39	OW HSI =	0.39	OW HSI =	0.39

**Project: Southwest Pass Shoreline Protection** 

Project Area:

FWP

FVVP	a i					i	
		TY		TY		TY	
Variable		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)						
V6	Access Value						
·		EM HSI =	·	EM HSI =		EM HSI =	
		OW HSI =	-	OW HSI =		OW HSI =	

**Project: Southwest Pass Shoreline Protection** 

1 Tojoot. Southwest 1 ass shoreline

Project Area:

100

100

FWP

		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

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### **AAHU CALCULATION - EMERGENT MARSH**

**Project:** Southwest Pass Shoreline Protection

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	91	0.95	86.55	
1	86	0.92	79.42	82.96
20	0	0.25	0.00	572.30
Max TY=	20		AAHUs =	32.76

Future With	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	91	0.95	86.55	
1	91	0.95	86.55	86.55
20	91	0.95	86.55	1644.40
Max TY=	20		AAHUs	86.55

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	86.55
B. Future Without Project Emergent Marsh AAHUs =	32.76
Net Change (FWP - FWOP) =	53.78

### **AAHU CALCULATION - OPEN WATER**

**Project:** Southwest Pass Shoreline Protection

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	9	0.39	3.49	
1	14	0.39	5.43	4.46
20	100	0.30	29.57	357.63
Max TY=	20		AAHUs =	18.10

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	9	0.39	3.49	
1	9	0.39	3.49	3.49
20	9	0.39	3.49	66.34
Max TY=	20		AAHUs	3.49

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	3.49
B. Future Without Project Open Water AAHUs =	18.10
Net Change (FWP - FWOP) =	-14.61

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	53.78				
B. Open Water Habitat Net AAHUs =	-14.61				
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	34.79				

#### WETLAND VALUE ASSESSMENT

#### **Benefits Summary Sheet**

**Project: West Cove Marsh Creation and Nourishment** 

TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area AAHUs
Brackish Marsh 177.55

**TOTAL BENEFITS = 178 AAHUS** 

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: West Cove Marsh Creation and Nourishment Project Area: 409

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	5	0.15	5	0.15	4	0.14
V2	% Aquatic	1	0.11	1	0.11	1	0.11
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.10
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	100		100		100	
V4	%OW <= 1.5ft	91	0.78	91	0.78	61	0.88
V5	Salinity (ppt)	12.7	0.60	12.7	0.60	12.7	0.60
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.25	EM HSI =	0.25	EM HSI =	0.24
	Open Water HSI =		0.31	OW HSI =	0.31	OW HSI =	0.32

Project Area:

409

**Project: West Cove Marsh Creation and Nourishment** 

FWOP

FWOP	_						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

**Project: West Cove Marsh Creation and Nourishment** 

FWOP

FWOP	a .	i-				i-	
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project Area:

409

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: West Cove Marsh Creation and Nourishment Project Area: 409

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	5	0.15	12	0.21	33	0.40
V2	% Aquatic	1	0.11	0	0.10	5	0.15
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	0		0		0	
	Class 5	100		100		0	
V4	%OW <= 1.5ft	91	0.78	100	0.60	100	0.60
V5	Salinity (ppt)	12.7	0.60	12.7	0.60	12.7	0.60
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Marsh HSI =		0.25	EM HSI =	0.21	EM HSI =	0.49
	Open Water HS	SI =	0.31	OW HSI =	0.17	OW HSI =	0.36

**Project: West Cove Marsh Creation and Nourishment** 

Project Area: 409

FWP

		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	98	0.98	92	0.93		
V2	% Aquatic	5	0.15	5	0.15		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	90	0.80		
V5	Salinity (ppt)	12.7	0.60	12.7	0.60		
V6	Access Value	1.0000	1.00	1.0000	1.00		
·		EM HSI =	0.94	EM HSI =	0.91	EM HSI =	
		OW HSI =	0.41	OW HSI =	0.42	OW HSI =	

**Project: West Cove Marsh Creation and Nourishment** 

Project Area: 409

FWP

FWP	1	TV		TV		TV	
		TY		TY		TY	
Variable		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)						
V6	Access Value						
·		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

### **AAHU CALCULATION - EMERGENT MARSH**

**Project:** West Cove Marsh Creation and Nourishment

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	21	0.25	5.32	
1	21	0.25	5.32	5.32
20	18	0.24	4.41	92.33
Max TY=	20		AAHUs =	4.88

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	21	0.25	5.32	
1	49	0.21	10.48	8.08
3	136	0.49	67.01	69.40
5	401	0.94	378.63	405.75
20	377	0.91	343.66	5415.17
Max TY=	20		AAHUs	294.92

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	294.92
B. Future Without Project Emergent Marsh AAHUs =	4.88
Net Change (FWP - FWOP) =	290.04

### **AAHU CALCULATION - OPEN WATER**

**Project:** West Cove Marsh Creation and Nourishment

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	388	0.31	122.22	
1	388	0.31	122.22	122.22
20	391	0.32	126.19	2359.79
Max TY=	20		AAHUs =	124.10

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	388	0.31	122.22	
1	2	0.17	0.35	52.19
3	5	0.36	1.81	1.97
5	8	0.41	3.25	5.02
20	32	0.42	13.49	124.69
Max TY=	20		AAHUs	9.19

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	9.19
B. Future Without Project Open Water AAHUs =	124.10
Net Change (FWP - FWOP) =	-114.91

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	290.04				
B. Open Water Habitat Net AAHUs =	-114.91				
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	177.55				

### WETLAND VALUE ASSESSMENT

### **Benefits Summary Sheet**

Project: Southeast Pecan Island Marsh Creation & Freshwater Enhancement

### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area AAHUs
Brackish Marsh 181.14

**TOTAL BENEFITS = 181 AAHUS** 

### WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Southeast Pecan Island Marsh Creation & Freshwater Enhancement Project Area: 3,281

Condition: Future Without Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	34	0.41	33	0.40	33	0.40
V2	% Aquatic	5	0.15	5	0.15	5	0.15
V3	Interspersion	%		%		%	
	Class 1	0	0.26	0	0.26	0	0.26
	Class 2	0		0		0	
	Class 3	30		30		30	
	Class 4	70		70		70	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	24	0.41	24	0.41	24	0.41
V5	Salinity (ppt)	5.4	1.00	5.4	1.00	5.4	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	<b>Emergent Mars</b>	sh HSI =	0.53	EM HSI =	0.52	EM HSI =	0.52
	Open Water HS	SI =	0.37	OW HSI =	0.37	OW HSI =	0.37

Project: **Southeast Pecan Island Marsh Creation & Freshwater Enhancement** Project Area: 3281 FWOP

		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	32	0.39	28	0.35		
V2	% Aquatic	5	0.15	5	0.15		
V3	Interspersion	%		%		%	
	Class 1	0	0.26	0	0.24		
	Class 2	0		0			
	Class 3	30		20			
	Class 4	70		80			
	Class 5	0		0			
V4	%OW <= 1.5ft	24	0.41	21	0.37		
V5	Salinity (ppt)	5.4	1.00	5.4	1.00		
V6	Access Value	1.0000	1.00	1.0000	1.00		
		EM HSI =	0.52	EM HSI =	0.49	EM HSI =	
		OW HSI =	0.37	OW HSI =	0.36	OW HSI =	

Project: **Southeast Pecan Island Marsh Creation & Freshwater Enhancement** Project Area: 3281

FWOP	ו ה						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =	_	OW HSI =		OW HSI =	

### WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Southeast Pecan Island Marsh Creation & Freshwater Enhancement Project Area: 3281

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	34	0.41	32	0.39	36	0.42
V2	% Aquatic	5	0.15	5	0.15	13	0.22
V3	Interspersion	%		%		%	
	Class 1	0	0.26	0	0.24	0	0.29
	Class 2	0		0		0	
	Class 3	30		30		46	
	Class 4	70		54		54	
	Class 5	0		16		0	
V4	%OW <= 1.5ft	24	0.41	24	0.41	24	0.41
V5	Salinity (ppt)	5.4	1.00	5	1.00	5	1.00
V6	Access Value	1.0000	1.00	0.8400	0.86	1.0000	1.00
	Emergent Mars	sh HSI =	0.53	EM HSI =	0.50	EM HSI =	0.55
	Open Water HS	6l =	0.37	OW HSI =	0.35	OW HSI =	0.44

Project: **Southeast Pecan Island Marsh Creation & Freshwater Enhancement** Project Area: 3281 FWP

		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	43	0.49	40	0.46		
V2	% Aquatic	13	0.22	13	0.22		
V3	Interspersion	%		%		%	
	Class 1	16	0.39	16	0.37		
	Class 2	0		0			
	Class 3	30		20			
	Class 4	54		64			
	Class 5	0		0			
V4	%OW <= 1.5ft	24	0.41	27	0.45		
V5	Salinity (ppt)	5	1.00	5	1.00		
V6	Access Value	1.0000	1.00	1.0000	1.00		
		EM HSI =	0.60	EM HSI =	0.58	EM HSI =	
		OW HSI =	0.44	OW HSI =	0.45	OW HSI =	

Project: **Southeast Pecan Island Marsh Creation & Freshwater Enhancement** Project Area: 3281

FWP	ត						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =	-	EM HSI =		EM HSI =	
		OW HSI =	-	OW HSI =		OW HSI =	

### **AAHU CALCULATION - EMERGENT MARSH**

**Project:** Southeast Pecan Island Marsh Creation & Freshwater Enhancement

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1108	0.53	585.91	
1	1098	0.52	573.32	579.60
3	1080	0.52	563.92	1137.24
5	1062	0.52	547.43	1111.31
20	935	0.49	454.55	7505.51
Max TY=	20		AAHUs =	516.68

Future With	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	1108	0.53	585.91	
1	1053	0.50	526.98	556.18
3	1193	0.55	650.83	1175.71
5	1426	0.60	857.62	1504.11
20	1307	0.58	758.05	12111.14
Max TY=	20		AAHUs	767.36

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	767.36
B. Future Without Project Emergent Marsh AAHUs =	516.68
Net Change (FWP - FWOP) =	250.67

### **AAHU CALCULATION - OPEN WATER**

**Project:** Southeast Pecan Island Marsh Creation & Freshwater Enhancement

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	2173	0.37	799.15	
1	2183	0.37	802.83	800.99
3	2201	0.37	809.45	1612.28
5	2219	0.37	816.07	1625.52
20	2346	0.36	852.59	12516.35
Max TY=	20		AAHUs =	827.76

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	2173	0.37	799.15	
1	1820	0.35	640.38	718.83
3	1839	0.44	803.56	1443.39
5	1855	0.44	823.74	1627.26
20	1974	0.45	879.30	12772.36
Max TY=	20		AAHUs	828.09

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	828.09
B. Future Without Project Open Water AAHUs =	827.76
Net Change (FWP - FWOP) =	0.34

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	250.67				
B. Open Water Habitat Net AAHUs =	0.34				
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	181.14				

### WETLAND VALUE ASSESSMENT

### **Benefits Summary Sheet**

**Project: South Grand Chenier Marsh Creation - Baker Tract** 

TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area AAHUs Brackish Marsh 195.96

**TOTAL BENEFITS = 196 AAHUS** 

### WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: South Grand Chenier Marsh Creation - Baker Tract Project Area: 420

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	3	0.13	3	0.13	2	0.12
V2	% Aquatic	2	0.12	2	0.12	2	0.12
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.10
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	0		0		0	
	Class 5	100		100		100	
V4	%OW <= 1.5ft	30	0.49	30	0.49	17	0.32
V5	Salinity (ppt)	12	0.70	12	0.70	12	0.70
V6	Access Value	0.8600	0.87	1.0000	1.00	1.0000	1.00
	Emergent Mars	sh HSI =	0.24	EM HSI =	0.25	EM HSI =	0.24
	Open Water HS	SI =	0.30	OW HSI =	0.31	OW HSI =	0.30

Project: South Grand Chenier Marsh Creation - Baker Tract

FWOF

FWOP	_						
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project Area:

420

Project: South Grand Chenier Marsh Creation - Baker Tract

FWOP

FWOP							
		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project Area:

420

### WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: South Grand Chenier Marsh Creation - Baker Tract Project Area: 420

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	3	0.13	11	0.20	36	0.42
V2	% Aquatic	2	0.12	0	0.10	10	0.19
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	0		0		100	
	Class 4	0		0		0	
	Class 5	100		100		0	
V4	%OW <= 1.5ft	30	0.49	100	0.60	100	0.60
V5	Salinity (ppt)	12	0.70	12	0.70	12	0.70
V6	Access Value	0.8600	0.87	0.0001	0.10	1.0000	1.00
	Emergent Mars	sh HSI =	0.24	EM HSI =	0.22	EM HSI =	0.52
	Open Water HS	SI =	0.30	OW HSI =	0.18	OW HSI =	0.41

Project: South Grand Chenier Marsh Creation - Baker Tract

Project Area:

420

FWP

		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	99	0.99	96	0.96		
V2	% Aquatic	20	0.28	20	0.28		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	90	0.80		
V5	Salinity (ppt)	12	0.70	12	0.70		
V6	Access Value	1.0000	1.00	1.0000	1.00		
		EM HSI =	0.96	EM HSI =	0.95	EM HSI =	
		OW HSI =	0.53	OW HSI =	0.55	OW HSI =	

**Project: South Grand Chenier Marsh Creation - Baker Tract** 

Project Area:

420

FWP

		TY		TY		TY	
Variable		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)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

### **AAHU CALCULATION - EMERGENT MARSH**

**Project:** South Grand Chenier Marsh Creation - Baker Tract

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	11	0.24	2.67	
1	11	0.25	2.73	2.70
20	10	0.24	2.39	48.60
Max TY=	20		AAHUs =	2.57

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	11	0.24	2.67	
1	46	0.22	10.16	6.55
3	153	0.52	80.20	79.55
5	416	0.96	399.89	441.78
20	403	0.95	380.85	5855.03
Max TY=	20		AAHUs	319.15

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	319.15
B. Future Without Project Emergent Marsh AAHUs =	2.57
Net Change (FWP - FWOP) =	316.58

### **AAHU CALCULATION - OPEN WATER**

**Project:** South Grand Chenier Marsh Creation - Baker Tract

Future Without Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	409	0.30	122.58	
1	409	0.31	127.20	124.89
20	410	0.30	122.44	2371.63
Max TY=	20		AAHUs =	124.83

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	409	0.30	122.58	
1	1	0.18	0.18	53.34
3	3	0.41	1.24	1.27
5	4	0.53	2.13	3.33
20	17	0.55	9.31	85.31
Max TY=	20		AAHUs	7.16

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	7.16
B. Future Without Project Open Water AAHUs =	124.83
Net Change (FWP - FWOP) =	-117.66

TOTAL BENEFITS IN AAHUS DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	316.58
B. Open Water Habitat Net AAHUs =	-117.66
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	195.96

### Coastal Wetlands Planning, Protection, and Restoration Act 23rd Priority Project List Report

Appendix D

**Economic Analyses for Candidate Projects** 

### Appendix D

### **Economic Analyses for Candidate Projects**

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# Coastal Wetlands Conservation and Restoration Plan New Orleans Landbridge Shoreline Stabilization and MC Project Priority List 23 (ver.070313)

21	0.07036	\$12,499,983		Average Annual	\$811,538	\$20,982	\$6,468	\$844,380			
Total Project Years	Amortization Factor	Total Fully Funded Costs									
1	3.500%	\$11,726,696		Present Worth	\$11,533,910	\$298,198	\$91,933	\$844,380	65	\$12,988	104
Project Construction Years:	Interest Rate	Fully Funded First Costs		Total Charges	First Costs Monitoring	State O & M Costs	Other Federal Costs	Average Annual Cost	Average Annual Habitat Units	Cost Per Habitat Unit	Total Net Acres

# Coastal Wetlands Conservation and Restoration Plan Caminada Back Barrier Marsh Creation Project Priority List 23 (ver.070313)

Project Construction Years:	1	Total Project Years	21
Interest Rate	3.500%	Amortization Factor	0.07036
Fully Funded First Costs	\$28,441,134	Total Fully Funded Costs	\$31,034,094
Total Charges	Present Worth		Average Annual
First Costs	\$27,983,122		\$1,968,923
Monitoring State O & M Costs	\$196,902 \$1,714,238		\$13,854 \$120,616
Other Federal Costs	\$148,618		\$10,457
Average Annual Cost	\$2,113,849		\$2,113,849
Average Annual Habitat Units	144		
Cost Per Habitat Unit	\$14,726		
Total Net Acres	181		

# Coastal Wetlands Conservation and Restoration Plan Wilkinson Canal MC and Nourishment Project Project Priority List 23 (ver.070313)

Project Construction Years:		Total Project Years	21
Interest Rate	3.500%	Amortization Factor	0.07036
Fully Funded First Costs	\$35,226,651	Total Fully Funded Costs	\$36,292,706
Total Charges	Present Worth		Average Annual
First Costs	\$34,513,776		\$2,428,426
State O & M Costs	\$520,773 \$520,031		\$36,590
Other Federal Costs	\$97,010		\$6,826
Average Annual Cost	\$2,477,962		\$2,477,962
Average Annual Habitat Units	223		
Cost Per Habitat Unit	\$11,129		
Total Net Acres	395		

# Coastal Wetlands Conservation and Restoration Plan Bayou Grande Cheniere Marsh & Ridge Restoration Project Priority List 23 (ver.070313)

Project Construction Years:	1	Total Project Years	21
Interest Rate	3.500%	Amortization Factor	0.07036
Fully Funded First Costs	\$28,949,976	Total Fully Funded Costs	\$29,937,575
Total Charges	Present Worth		Average Annual
First Costs	\$28,466,831		\$2,002,957
Monitoring	\$82,442		\$5,801
State O & M Costs Other Federal Costs	\$456,101 \$99,571		\$32,092 \$7,006
Average Annual Cost	\$2,047,855		\$2,047,855
Average Annual Habitat Units	146		
Cost Per Habitat Unit	\$13,984		
Total Net Acres	264		

# Coastal Wetlands Conservation and Restoration Plan Island Road Marsh Creation and Nourishment Project Project Priority List 23 (ver.070313)

Project Construction Years:	1	Total Project Years	21
Interest Rate	3.500%	Amortization Factor	0.07036
Fully Funded First Costs	\$38,076,792	Total Fully Funded Costs	\$39,185,267
Total Charase	Present Worth		Average
Total Cital ges	W OLIH		Aminai
First Costs Monitoring	\$38,177,432 \$77.708		\$2,686,205
State O & M Costs	\$563,796		\$39,669
Other Federal Costs	\$100,379		\$7,063
Average Annual Cost	\$2,738,405		\$2,738,405
Average Annual Habitat Units	166		
Cost Per Habitat Unit	\$16,461		
Total Net Acres	312		

# Coastal Wetlands Conservation and Restoration Plan Grand Bayou Freshwater Enhancement Project Priority List 23 (ver.071012)

Project Construction Years:	1	Total Project Years	21
Interest Rate	3.500%	Amortization Factor	0.07036
Fully Funded First Costs	\$19,903,802	Total Fully Funded Costs	\$22,618,793
Total Charges	Present Worth		Average Annual
First Costs	\$19,596,362		\$1,378,821
Monitoring State O & M Costs	\$155,518 \$1,212,601		\$10,942 \$85,320
Other Federal Costs	\$126,779		\$8,920
Average Annual Cost	\$1,484,004		\$1,484,004
Average Annual Habitat Units	585		
Cost Per Habitat Unit	\$2,536		
Total Net Acres	676		

# Coastal Wetlands Conservation and Restoration Plan Southwest Pass Shoreline Protection Project Priority List 23 (ver.070313)

Project Construction Years:		Total Project Years	21
Interest Rate	3.500%	Amortization Factor	0.07036
Fully Funded First Costs	\$30,857,015	Total Fully Funded Costs	\$38,679,382
Total Charges	Present Worth		Average
First Costs	\$30,310,796		\$2,132,700
Monitoring State O & M Costs	\$6.001.00 \$6.001.00		\$0 \$422.237
Other Federal Costs	\$313,867		\$22,084
Average Annual Cost	\$2,577,022		\$2,577,022
Average Annual Habitat Units	35		
Cost Per Habitat Unit	\$74,074		
Total Net Acres	91		

# Coastal Wetlands Conservation and Restoration Plan West Cove Marsh Creation and Nourishment Project Priority List 23 (ver.070313)

Project Construction Years:	1	Total Project Years	21
Interest Rate	3.500%	Amortization Factor	0.07036
Fully Funded First Costs	\$19,150,068	Total Fully Funded Costs	\$20,034,472
Total Charoes	Present Worth		Average
	177.0.1		
First Costs Monitoring	\$18,929,550 \$76,632		\$1,331,904 \$5,392
State O & M Costs	\$383,645		\$26,994
Other Federal Costs	\$93,136		\$6,553
Average Annual Cost	\$1,370,842		\$1,370,842
Average Annual Habitat Units	178		
Cost Per Habitat Unit	\$7,721		
Total Net Acres	359		

# Coastal Wetlands Conservation and Restoration Plan Southeast Pecan Island MC and FWI Project Priority List 23 (ver.070313)

Project Construction Years:	_	Total Project Years	21
Interest Rate	3.500%	Amortization Factor	0.07036
Fully Funded First Costs	\$37,912,924	Total Fully Funded Costs	\$39,835,500
	Present		Average
Total Charges	Worth		Annual
First Costs	\$37,096,564		\$2,610,154
Monitoring State O & M Costs	\$74,389 \$991,719		\$5,234 \$69,778
Other Federal Costs	\$115,374		\$8,118
Average Annual Cost	\$2,693,285		\$2,693,285
Average Annual Habitat Units	181		
Cost Per Habitat Unit	\$14,869		
Total Net Acres	372		

# Coastal Wetlands Conservation and Restoration Plan South Grand Chenier - Baker MC Project Priority List 23 (ver.070313)

Project Construction Years:		Total Project Years	21
Interest Rate	3.500%	Amortization Factor	0.07036
Fully Funded First Costs	\$24,493,039	Total Fully Funded Costs	\$25,441,833
Total Charges	Present Worth		Average Annual
First Costs Monitoring	\$24,065,436		\$1,693,270
State O & M Costs	5/4,307 \$432,345		\$3,234
Other Federal Costs	\$94,911		\$6,678
Average Annual Cost	\$1,735,602		\$1,735,602
Average Annual Habitat Units	196		
Cost Per Habitat Unit	\$8,857		
Total Net Acres	393		

### Coastal Wetlands Planning, Protection, and Restoration Act 23rd Priority Project List Report

Appendix E

**Public Support for Candidate Projects** 

### 23rd Priority Project List

### Public Support for Candidate Projects

#### New Orleans Landbridge Shoreline Stabilization and Marsh Creation

• Charles E. Allen, III MSPH - Director, City of New Orleans

#### **Caminada Headlands Back Barrier Marsh Restoration**

No written comments submitted for this project

#### Wilkinson Canal Marsh Creation and Nourishment

No written comments submitted for this project

#### **Bayou Grande Cheniere Marsh and Ridge Restoration**

• P. J. Hahn - for Parish President Billy Nungesser, Plaquemines Parish Government

#### **Island Road Marsh Creation and Nourishment**

- Michel H. Claudet Parish President, Terrebonne Parish Consolidated Government
- Leslie R. Suazo Coastal Restoration Coordinator, Ducks Unlimited
- Phillip R. Precht Attorney-in-Fact, Louisiana Land and Exploration Company, LLC, ConocoPhillips, Landowners

#### **Grand Bayou Freshwater Enhancement**

- Leslie R. Suazo Coastal Restoration Coordinator, Ducks Unlimited
- Phillip R. Precht Attorney-in-Fact, Louisiana Land and Exploration Company, LLC, ConocoPhillips, Landowners

#### **Southwest Pass Shoreline Protection**

No written comments submitted for this project

#### **West Cove Marsh Creation and Nourishment**

No written comments submitted for this project

#### Southeast Pecan Island Marsh Creation and Freshwater Enhancement

No written comments submitted for this project

#### South Grand Chenier Marsh Creation - Baker Tract

No written comments submitted for this project

### Coastal Wetlands Planning, Protection, and Restoration Act 23rd Priority Project List Report

### Appendix F

Project Status Summary Report from 1st through 23rd Priority Project Lists by Lead Agency, Priority List, and Basin

### Appendix F

### Project Status Summary Report from 1st through 23rd Priority Project Lists by Lead Agency, Priority List, and Basin

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# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

#### PROJECT STATUS SUMMARY REPORT

24 September 2014

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:

Project Management Division Coastal Restoration Branch U.S. Army Corps of Engineers New Orleans District P.O. Box 60267 New Orleans, LA 70160-0267

















**PROJECT** 

## COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

**CSA** 

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

\*\*\*\*\*\*\* SCHEDULES \*\*\*\*\*\*\*

Const Start

\*\*\*\*\*\*\* ESTIMATES \*\*\*\*\*\*\* Obligations/
Baseline Current % Expenditures

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

PARISH

**BASIN** 

Priority List 1

Barataria Bay Waterway BARA JEFF 445 24-Apr-1995 A 22-Jul-1996 A 15-Oct-1996 A \$1,759,257 \$1,167,832 66.4 \$1,149,679 Wetland Creation \$1,158,382

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. There is no operations and maintenance plan for this project. The 20-year life for this CWPPRA

Const End

project expires on 15 Oct 2016.

ACRES

Bayou Labranche PONT STCHA 203 17-Apr-1993 A 06-Jan-1994 A 07-Apr-1994 A \$4,461,301 \$3,786,070 84.9 \$3,696,302 Wetland Creation

Status: Contract awarded to T. L. James Co. (Dredge "Tom James") for dredging approximately 2,500,000 cy of Lake Pontchartrain sediments

20 years. There is no O&M plan for this project; the project's 20 year life expires on 7 Apr 2014.

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; the majority of the monitoring has already been completed and is proceeding in accordance as originally planned for this project. The goal of creating a shallow water habitat conducive to the natural establishment of wetland vegetation seems to have been partially met. As sediment continues to consolidate and water is maintained in the area, upland vegetation is expected to be supplanted by more oblilgate wetland species. One project goal is to increase the marsh:open water ratio in the project area to a minimum of 70% emergent marsh to 30% open water after 5 years following project completion. As of 1997, the project area contained about 82% land and 18% water, which is higher than the minimum goal. The consolidation of dredged material over time has reached an elevation that appears to sustain the 70% (land and marsh) component of the project area. The soil properties and the vegetation community of the project have developed into characteristic wetland habitat for the region. The project will be monitored for

## COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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Actual

				******	******* SCHEDULES *******			****** ESTIMATES ******		
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Lake Salvador Shoreline Protection at Jean Lafitte	BARA	JEFF		29-Oct-1996 A	01-Jun-1995 A	21-Mar-1996 A	\$60,000	\$60,375	100.6	\$60,375 \$60,375
NHP&P	Status:			-		or the design of the pro-		e expenditure of u	p to	\$60,375
		the construct				in May 1996 to resolv 1996 for \$610,000 to E				
		Complete. T	his project wa	s design only.						
Vermilion River Cutoff Bank Protection	TECHE	VERMI	65	17-Apr-1993 A	10-Jan-1996 A	11-Feb-1996 A	\$1,526,000	\$2,047,479	134.2 !	\$2,007,627 \$2,007,627
Bank Hotection	Status:	sediment rete	ention fence or	the west bank is stil	l undetermined.	ast bank of the cutoff however, current estim	-	wetlands. The nee	ed for the	\$2,007,627
The Task Force approved a revised project estimate of \$2,500,000; however, current estimate is less.										
				e easements was requ s completed in Febru		lear ownership titles a	nd significantly leng	gthened the project	t	
		Complete.								

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

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Actual

				******	*** SCHEDULES	3 *****	******	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
West Bay Sediment Diversion	DELTA	PLAQ	9,831	29-Aug-2002 A	10-Sep-2003 A	28-Nov-2003 A	\$8,517,066	\$50,863,503	597.2 !	\$46,361,119
Diversion	Status: Flow measurements taken in May 2008 recorded a discharge of 51,270 cubic feet per second of Mississi project diversion channel. Since constructed in 2003 the diversion project discharge has averaged 19,188 project was designed to allow the discharge of 20,000 cfs at the 50% exceedence stage. Discharge meast monthly using an accoustic doppler profiler as part of project surveillance and performance monitoring. in the project area of marsh accretion from the deposition of diverted river sediment.  In 2006 the USACE performed maintenance dredging in the Pilottown Anchorage Area to remove induce with the project operations plan. Material from the dredging work was used beneficially for marsh creative event was performed using a hopper dredge linked to a pump out system - a first of its kind use of this terestoration. To date approximately 225 acres of marsh have been created through the beneficial use of disconstruction and maintaining the anchorage area.  Project construction began in September 2003 and construction was completed in November 2003. An athe project opened 08 July 2003 and bids were opened on 11 August 2003. Chevron-Texaco relocated a under a reimbursable construction agreement. A real estate plan for the project was completed in Octobe will be completed in July 2003. The project Cost Sharing Agreement was signed August 29, 2002. A 95-17, 2002. A Record of Decision finalizing the EIS was signed on March 18, 2002. The Task Force, by fa project description and reauthorized the project to comply with CWPPRA Section 3952 in April 2002. A Force meeting, approval was granted to proceed with the project at the current price of \$22 million due to maintaining the anchorage area. A VE study on the project was undertaken in August 2000.		veraged 19,188 cfs. ischarge measurement of the premove induced short marsh creation in duse of this technological use of dredge over 2003. An advert corelocated a major deted in October 2002, 2002. A 95% de sk Force, by fax von April 2002. At the 2 million due to the	Initial construction ents are taken rough is point there is no moal material in acc West Bay. The drest Bay. The drest Bay in Louisiana was demanded material from the materia	ordance ordanc	\$43,964,173				

\$16,323,624

\$57,925,258

354.9

\$53,275,101 \$50,865,366

- 5 Project(s)
- 5 Cost Sharing Agreements Executed

Total Priority List 1

10,544

- 5 Construction Started
- 5 Construction Completed
- 0 Project(s) Deferred/Deauthorized

Status:

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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Actual

Duningt Ctatura Crimoman	·· Damant I and Amana	y: DEPT. OF THE ARMY (COE)
Project Status Summary	v Kenori - Lead Agenc	V DEPT OF THE ARMY (COE)
110,000 Status Sainniai	, respons Boad rigone	j. DEI I. OI IIIE INGIII (COE)

				******	*** SCHEDULES	, ****	***** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Clear Marais Bank Protection	CA/SB	CALCA	1,067	29-Apr-1996 A	29-Aug-1996 A	03-Mar-1997 A	\$1,741,310	\$3,696,088	212.3 !	\$2,964,219 \$2,960,979
Protection	Status: The original construction estimate was low, based on the proposed plan in that the rock quantity estimate was less than half of the needed (based on the original design), and the estimate did not include a floatation channel needed for construction. This account most of the cost increase shown. The current estimate is based on the original rock dike design and costs about \$89/foot.									Ψ2,500,515
		Complete.								
West Belle Pass Headland Restoration	TERRE	LAFOU	474	27-Dec-1996 A	10-Feb-1998 A	15-Aug-1998 A	\$4,854,102	\$6,826,754	140.6!	\$6,642,429 \$6,642,429

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.

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

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Actual

				*****	*** SCHEDULES	****** ESTIMATES ******			Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
	Total Priority List	2	1,541				\$6,595,412	\$10,522,842	159.5	\$9,606,649 \$9,603,409
2 Co 2 Co 2 Co	oject(s) st Sharing Agreements I nstruction Started nstruction Completed oject(s) Deferred/Deauth									
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	\$824,465 \$824,465
Crevasse	Status:	Cost increase was due to additional project management costs, by both Federal and Local Sponsor.								
	the project. US Fis lower it at their own									
		Construction	complete.							
MRGO Disposal Area Marsh Protection	PONT	STBER	755	17-Jan-1997 A	25-Jan-1999 A	29-Jan-1999 A	\$512,198	\$318,445	62.2	\$318,445 \$318,445
	Status:	is under \$100	0,000. Bids rec		nan Government esti	ned via a simplified ac mate by 25%. Subsect 9 January 1999.				φ310,443
		the baseline e	estimate. Furtl		icates that private ov	conmental investigatio wnership titles are unc				

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

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Actual

				******	**** SCHEDULES	*****	****** E	STIMATES ***	****	Obligations/	
PROJECT	BASIN	BASIN	PARISH	PARISH ACRES CS	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Pass-a-Loutre Crevasse	DELTA	PLAQ					\$2,857,790	\$119,835	4.2	\$119,835	
DEAUTHORIZED	Status:	asked that the locations for the bottom w	e Corps investigathe cut. The Coidth of the crevatorandum dated I he project. COF	ate alternative loc rps has also revie asse from 430 feet December 5, 1997	area of the crevasse, i cations to avoid or min wed the design to dete t as originally propose was sent to the CWPI horization at the Janua	imize impacts to the permine whether relocated to 200 feet reduced PRA Technical Comm	pipelines, but there a tions cost-savings c the relocation cost on tittee Chairman requ	are no more suitable ould be achieved. It is only marginally.	e Reducing orce to	\$119,835	
	Total Priority List	3	1,691				\$4,178,385	\$1,327,265	31.8	\$1,262,745 \$1,262,745	

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

### Priority List 4

Beneficial Use of Hopper	DELTA	PLAQ	30-Jun-1997 A	\$300,000	\$58,310	19.4	\$58,310
Dredge Material Demo							\$58,310
DEAUTHORIZED	Status:	Current scheme	was found to be non-implementable due to inability of	the hopper dredge to get close enough to	the disposal are	a to spray	
		over the bank of	f the Mississippi River.				

Project deauthorized October 4, 2000.

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

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Actual

				*****	*** SCHEDULES	****	****** ES	TIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Grand Bay Crevasse	BRET	PLAQ					\$2,468,908	\$65,747	2.7	\$65,747 \$65,747
DEAUTHORIZED	Status:	impacting oil  A draft memory	and gas interest orandum dated I	ts within the depose	t of the project and has sition area. was sent to the CWPI orization at the Janua	PRA Technical Comn	nittee Chairman requ	esting the Task Fo	orce to	
	Total Priority List	4					\$2,768,908	\$124,057	4.5	\$124,057 \$124,057

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

### Priority List 5

Bayou Chevee Shoreline Protection	PONT Status:	ORL As of Oct 20	75 013, CPRA wa	01-Feb-2001 A s in the process of wo	25-Aug-2001 A orking up a cost estin	17-Dec-2001 A	\$2,555,029 ock lift for the Bayo	\$2,589,403 u Chevee project.	101.3	\$2,359,294 \$2,355,937
	Total Priority List	5	75				\$2,555,029	\$2,589,403	101.3	\$2,359,294 \$2,355,937

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

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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		Troject Bu	itus Dullilli	ary Report Dec	ad rigolicy. Di	11.01 11112711	duii (COL)			Actual					
					*** SCHEDULES			STIMATES ***		Obligations/					
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures					
Priority List 6															
Flexible Dustpan Demo at	DELTA	PLAQ	0	31-May-2002 A	03-Jun-2002 A	21-Jun-2002 A	\$1,600,000	\$1,909,020	119.3	\$1,902,570					
Head of Passes Demo	Status:	CSA execute	d May 31, 200	2. Construction com	npleted June 21, 200	2.				\$1,889,631					
		At the Octob demonstratio  The project v project identification	er 25, 2001 Ta n project and a was completed ified some mir	ask Force meeting, it approved changing the as an operations and nor areas of concern v	was approved the mane name of the project maintenance task of with regard to the dre	originally approved, notion to use the autho ct to "Flexible Dustpa rder through an ERDO edge plants effectiven . The final surveys ar	orized funds for a "fle in Demo at Head of I C research and devel ness as a maintenance	exible dustpan"  Passes".  copment IDC contracts  tool. The dredge	act. The						
Marsh Creation East of	TERRE	STMRY					\$6,438,400	\$66,869	9 1.0						
the Atchafalaya River- Avoca Island DEAUTHORIZED	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 deaut	horized July 2	3, 1998.											
Marsh Island Hydrologic Restoration	TECHE	IBERI	408	01-Feb-2001 A	25-Jul-2001 A	12-Dec-2001 A	\$4,094,900	\$5,143,323	125.6 !	\$4,463,197					
Restoration	Status:					ember 13, 2000. CSA ompleted December 2		ry 1, 2001. Advert	tised as	\$4,427,376					

Revised design of closures from earthen to rock because soil borings indicate highly organic material in borrow area.

Status:

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

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Actual

	BASIN	PARISH	ACRES	****** SCHEDULES ******			****** ESTIMATES ******			Obligations/
PROJECT				CSA	Const Start	Const End	Baseline	Current	%	Expenditures
	Total Priority List	6	408				\$12,133,300	\$7,119,212	58.7	\$6,432,635 \$6,383,875
2 Constru	(s) naring Agreements Ention Started action Completed	Executed								
	(s) Deferred/Deauth	orized								
Priority List 8										
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	\$3,422,433	21.8	\$3,430,704
Creation, Cycle 1	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.								\$3,422,433
Sabine Refuge Marsh Creation, Cycle 2	CA/SB	CAMER	261	17-Feb-2005 A	28-Apr-2009 A		\$9,266,842	\$11,031,151	119.0	\$11,096,734 \$11,091,917

Currently this project is complete but are waiting on the O&M Manual to be completed by the Corps before this pipeline can be used.

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

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			D. 1 D. 1977	D.A. D.I.G.I.I.		*****	** SCHEDULES	*****	****** E	STIMATES ***	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures		
Sabine Refuge Marsh Creation, Cycle 3	CA/SB	CAMER	187	28-Mar-2005 A	25-Oct-2006 A	30-Sep-2010 A	\$3,629,333	\$3,945,581	108.7	\$2,763,802 \$2,763,802		
· •	Charren	This music at	rios ammeriad l	bry the Teels Comes on	a mout of Duionity Du	signt List O. The music	at agraiges of agratu	natina 5 manuah ana	tion sites	. , ,		

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. Construction of Cycle 2 was completed in 2009. 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 was placed between elevations 2.03 NAVD 88 and 2.71 NAVD 88. Construction of low level weirs along north and west boundary of Cycle 3 allowed 10 to 20 percent of the dredged material to splay into the surrounding area. Containment along the South and East border was breached in Fall of 2010 to complete all construction items.

Total Priority List 8

662

\$28,621,140

\$18,399,165

64.3 \$17,291,240

\$17,278,152

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

### Priority List 9

Freshwater Bayou Bank Stabilization - Belle Isle Canal to Lock INACTIVE TECHE VERMI

Status:

\$1,498,967

\$1,101,738

73.5

\$1,101,738 \$1,101,738

A site visit was held in January 2001 with the Local Sponsor and landowner. Right of entry for surveys and borings was obtained March 14, 2001, and data collection followed. The USACE team met with LDNR staff after survey data was processed and obtained consensus on cross-sections and depth contours. A 30% design review was held in June 2002. The project was revised to include Area A - shoreline protection work only dropping a hydrologic restoration feature. A 95% design review was completed in January 2004. Phase II authorization will be sought again in January 2007.

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

27-Aug-2014 Page 11

				*****	**** SCHEDULES	* SCHEDULES *********		****** ESTIMATES ****		Obligations/				
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures				
Opportunistic Use of the Bonnet Carre Spillway	PONT	STCHA					\$150,706	\$83,932	55.7	\$83,932 \$83,932				
DEAUTHORIZED	Status:	accordance w requesting the	vith the CWPPR are ir comments an	A Project Standar	eting, the Task Force d Operating Procedur hat, at the next CWPF e.	es Manual, notices we	ere sent out in July 2	007 to all intereste	ed parties	φ03,732				
Periodic Intro of Sediment and Nutrients at	COAST	VARY					\$1,502,817	\$83,556	5.6	\$83,556 \$83,556				
Selected Diversion Sites Demo DEAUTHORIZED	Status:	Modification working on u												
Weeks Bay MC & SP	TECHE	IBERI					\$1,229,337	\$534,057	43.4	\$534,057				
TRANSFER	Status:				A Program per Task ler their 3 Jun 2013 req		un 2013. It was trans	ferred to the Iberia	a Parish	\$534,057				
Tot	al Priority List	9					\$4,381,827	\$1,803,283	41.2	\$1,803,283 \$1,803,283				

<sup>4</sup> Project(s)

<sup>0</sup> Cost Sharing Agreements Executed

<sup>0</sup> Construction Started

<sup>0</sup> Construction Completed

<sup>4</sup> Project(s) Deferred/Deauthorized

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

27-Aug-2014 Page 12

				******* SCHEDULES *******		****** ESTIMATES ******			Obligations/			
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures		
Benneys Bay Diversion DEAUTHORIZED	DELTA	PLAQ					\$1,076,328	\$976,581	90.7	\$976,581 \$976,581		
DELTO THORIZED	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	BARA	JEFF					\$3,002,114	\$2,543,325	84.7	\$2,543,325		
at Myrtle Grove DEAUTHORIZED									d analysis IS team have been	\$2,543,325		
Delta Building Diversion	BRET	PLAQ					\$1,155,200	\$1,178,640	102.0	\$1,178,640		
North of Fort St. Philip DEAUTHORIZED	Status:	95% desgin r	eview anticipate	ed July 25, 2007.						\$1,178,640		
	Total Priority List	10					\$5,233,642	\$4,698,546	89.8	\$4,698,546 \$4,698,546		

<sup>3</sup> Project(s)

<sup>0</sup> Cost Sharing Agreements Executed

<sup>0</sup> Construction Started

<sup>0</sup> Construction Completed

<sup>3</sup> Project(s) Deferred/Deauthorized

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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				*****	*** SCHEDULES	*****	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Priority List 12										
Avoca Island Diversion DEAUTHORIZED	TERRE	STMRY					\$2,229,876	\$1,716,949	77.0	\$1,716,949
DEAUTHORIZED	Status:	The TE-49 A	voca Diversion	and Land Building	Project was deautho	orized per CWPPRA T	Task Force decision	on 4 June 2013.		\$1,716,949
Lake Borgne and MRGO	PONT	STBER					\$1,348,345	\$1,089,193	80.8	\$1,089,193 \$1,089,193
Shoreline Protection DEAUTHORIZED  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.										\$1,007,173
Mississippi River	DELTA	PLAQ					\$1,880,376	\$354,791	18.9	\$354,791
Sediment Trap DEAUTHORIZED	Status:		plan is under de			august 2002. A kickofn meeting with the LA				\$354,791
South White Lake	MERM	VERMI	844	24-Mar-2005 A	01-Nov-2005 A	29-Aug-2006 A	\$19,673,929	\$10,535,962	53.6	\$10,503,429
Shoreline Protection	Status:		_	ss of setting up the 2 timeframe with repo	_	ection trip for the ME	E-22 project; it is ten	tatively set to occur	in the	\$10,462,852

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

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\$1,017,991

DD OIF OT	DACIN	·		******** SCHEDULES ********  CSA Const Start Const End			****** ESTIMATES ******  Baseline Current %			Actual Obligations/ Expenditures	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Basenne	Current	%	Expenditures	
	Total Priority List	12	844				\$25,132,526	\$13,696,893	54.5	\$13,664,361 \$13,623,783	
4 Project	(s)										
	naring Agreements I	Executed									
	iction Started										
	ction Completed (s) Deferred/Deauth	orizad									
3 Floject	(s) Deferred/Deautif	orized									
Priority List 13											
Shoreline Protection	COAST	COAST	0	24-Mar-2005 A	01-Nov-2005 A	29-Aug-2006 A	\$1,000,000	\$707,839	70.8	\$707,839	
Foundation Improvements Demo	Status:	DEMO Final on 16 Jan 20		ompleted and present	ation on project & c	opies of report were p	rovided at the CWP	PRA Task Force M	leeting	\$707,839	
Spanish Pass Diversion	DELTA	PLAQ					\$1,137,344	\$310,152	27.3	\$310,152	
DEAUTHORIZED	Status:	The MR-14	Spanish Pass D	viversion project was	deauthorized per C	WPPRA Task Force d	ecision on 4 June 20	13.		\$310,152	
	Total Priority List	13	0				\$2,137,344	\$1,017,991	47.6	\$1,017,991	

<sup>2</sup> Project(s)

<sup>1</sup> Cost Sharing Agreements Executed

<sup>1</sup> Construction Started

<sup>1</sup> Construction Completed

<sup>1</sup> Project(s) Deferred/Deauthorized

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

		Troject Bu	******* SCHEDULES ******* ****** ESTIMATES ******						****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Southwest LA Gulf	MERM	CAMER	888		30-Jun-2017	10-Jul-2018	\$1,266,842	\$1,266,842	100.0	\$11,594 \$11,594
Shoreline Nourishment &Protection	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 CPRA, a Phase 1 work plan will be developed and a kickoff meeting/site visit scheduled. In Mar 2009, a project Fact Sheet and map was approved by the New Orleans District for placement on the LaCoast website. At this time, the project is unable to be further developed by the COE and the CPRA until a Cost Share Agreement is signed.								
Т	otal Priority List	16	888				\$1,266,842	\$1,266,842	100.0	\$11,594 \$11,594
1 Project(s)										
	ring Agreements E	Executed								
0 Construc	tion Started tion Completed									
	) Deferred/Deauth	orized								
Total DEPT. OF THE A ENGINEERS	RMY, CORPS (	OF	16,653				\$111,327,979	\$120,490,758	108.2	\$111,547,496 \$109,028,737
33 Project(	s)									

#### Notes:

- 1. Expenditures based on Corps of Engineers financial data.
- 2. Date codes: A = Actual date \* = Behind schedule

18 Cost Sharing Agreements Executed

15 Project(s) Deferred/Deauthorized

17 Construction Started16 Construction Completed

3. Percent codes: ! = 125% of baseline estimate exceeded

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### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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Actual

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

### Lead Agency: ENVIRONMENTAL PROTECTION AGENCY, REGION 6

### Priority List Conservation Plan

State of Louisiana Wetlands Conservation

Plan

COAST
Status:

COAST

13-Jun-1995 A

03-Jul-1995 A

21-Nov-1997 A

\$238,871

\$143,855

60.2

60.2

\$143,855 \$143,855

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

\$143,855

\$143,855

\$143,855

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

### Priority List 1

Isles Dernieres TERRE TERRE 9 17-Apr-1993 A 16-Jan-1998 A 15-Jun-1999 A \$6,345,468 \$8,682,295 136.8 ! \$8,537,070 Restoration East Island \$8,583,826

Status:

This phase of the Isles Dernieres restoration project was combined with Isles Dernieres, Phase I (Trinity Island), a priority list 2 project. Additional funds to cover the increased construction cost on lowest bid received were approved at the January 16, 1998 Task Force meeting.

Construction start was January 16, 1998. Hydraulic dredging was completed September 1998. Vegetation planting was completed June 1999.

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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	110,000 2000		,	******* SCHEDULES ******			******	k***	Actual Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	STIMATES **** Current	%	Expenditures
	Total Priority List	1	9				\$6,345,468	\$8,682,295	136.8	\$8,537,070 \$8,583,826
1 Proje	ect(s)									
	t Sharing Agreements E	Executed								
1 Cons	struction Started									
1 Cons	struction Completed									
0 Proje	ect(s) Deferred/Deauth	orized								
Priority List	TERRE	TERRE	109	17-Apr-1993 A	27-Jan-1998 A	15-Jun-1999 A	\$6,907,897	\$10,774,974	156.0 !	\$10,328,040
Restoration Trinity Islan	Status:					ojected in plans and s nuary 16, 1998 Task		itional funds to cov	er the	\$10,329,072
				e Tom James, mobil was completed June		n about January 27, 1	998. Dredging wa	s completed in Sept	tember	
	Total Priority List	2	109				\$6,907,897	\$10,774,974	156.0	\$10,328,040 \$10,329,072

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

# Priority List 3

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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Actual

	****** SCHEDULES ********				*****	****** E	Obligations/			
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Red Mud Demo DEAUTHORIZED	PONT	STJON		03-Nov-1994 A			\$350,000	\$520,129	148.6!	\$520,129 \$520,129
DELTO THORIEDS	Status:	-			-	l pending resolution of ells completed; no veg		by saltwater befor	e planting	\$320,127
		The Task For and Chemica		ne deauthorization of	the project on Augu	ast 7, 2001. Escrowed	l funds will be retur	ned to Kaiser Alun	ninum	
Whiskey Island Restoration	TERRE	TERRE	1,239	06-Apr-1995 A	13-Feb-1998 A	15-Jun-2000 A	\$4,844,274	\$7,043,188	145.4 !	\$7,043,188
Restoration	Status:	At the Janua received.	ry 16, 1998 me	eeting, the Task Force	e approved addition	al funds to cover the in	ncreased construction	on cost on lowest b	id	\$7,043,188
				uary 13, 1998. Dredging/planting was carr	, ,	1998. Initial vegetat 00.	ion with spartina on	bay shore, July 19	998.	
	Total Priority List	3	1,239				\$5,194,274	\$7,563,317	145.6	\$7,563,317 \$7,563,317

<sup>2</sup> Project(s)

Priority List 4

<sup>2</sup> Cost Sharing Agreements Executed

<sup>1</sup> Construction Started

<sup>1</sup> Construction Completed

<sup>1</sup> Project(s) Deferred/Deauthorized

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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\$1,500,000

\$1,500,000

6.1

\$24,487,337

\$1,500,000

Troject Status Summary Report - Lead Agency. ENVINONMENTAL I ROTECTION AGENCT (ELA)											
PROJECT	BASIN	PARISH	ACRES	**************************************	** SCHEDULES Const Start	********** Const End	****** Es Baseline	STIMATES **** Current	**** %	Obligations/ Expenditures	
Compost Demo DEAUTHORIZED	CA/SB	CAMER		22-Jul-1996 A			\$370,594	\$255,391	68.9	\$255,391 \$255,391	
DEAUTHORIZED	Status:	Plans and spe	Plans and specifications have been finalized. All permits and construction approvals have been obtained.								
			of compost vege ion bids has bee		t yet been supplied.	A smaller sized den	nonstration has been	designed. Advert	isement		
		The Task For	rce approved de	authorization on Janu	nary 16, 2002.						
	Γotal Priority List	4					\$370,594	\$255,391	68.9	\$255,391 \$255,391	
1 Project(s	3)										
1 Cost Sha	ring Agreements I	Executed									
0 Construc											
	ction Completed										
1 Project(s	) Deferred/Deauth	orizea									
Priority List 5											
Bayou Lafourche Siphon	TERRE	IBERV		19-Feb-1997 A			\$24,487,337	\$1,500,000	6.1	\$1,500,000	
DEAUTHORIZED	Status:	Project was d	leauthorized by	the Task Force on O	ctober 25, 2007.					\$1,500,000	

Total Priority List 5

<sup>1</sup> Project(s)

<sup>1</sup> Cost Sharing Agreements Executed

<sup>0</sup> Construction Started

<sup>0</sup> Construction Completed

<sup>1</sup> Project(s) Deferred/Deauthorized

## COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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Actual

					******	** SCHEDULES	*****	****** ESTIMATES ******			Obligations/				
PROJECT		BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures				
Priority List	5.1														
Mississippi River Reintroduction into		TERRE	IBERV		23-Jul-2003 A			\$9,700,000	\$7,452,191	76.8	\$7,452,191 \$7,452,101				
Bayou Lafourche DEAUTHORIZED		Status:	program. Ho Resources, ha	(ississippi River Reintroduction into Bayou Lafourche Project (BA-25b) has been proposed for de-authorization from the CWPPRA m. However, recognizing the importance of this project, the State of Louisiana, through the Louisiana Department of Natural rees, has committed to developing this project and is continuing final design efforts toward completion beyond its authorization the CWPPRA program.											
	Total F	riority List	5.1					\$9,700,000	\$7,452,191	76.8	\$7,452,191 \$7,452,191				

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

### Priority List 6

Bayou Boeuf Pump TERRE STMAR \$150,000 \$3,452 2.3 \$3,452 Station DEAUTHORIZED \$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.

Status:

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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	<b>,</b>	•	,	*****	** SCHEDULES	****	******	STIMATES ***	<b>***</b> *	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Tot	tal Priority List	6					\$150,000	\$3,452	2.3	\$3,452 \$3,452
<ul><li>0 Construction</li><li>0 Construction</li></ul>	ng Agreements I on Started on Completed Deferred/Deauth									
LA Highway 1 Marsh	BARA	LAFOU		05-Oct-2000 A			\$1,151,484	\$250,257	21.7	\$250,257
Creation							\$1,131,464	\$230,237	21.7	\$250,257
DEAUTHORIZED	Status:	The project w	as deauthorize	d at the February 17,	2005 Task Force m	neeting.				
New Cut Dune and Marsh	TERRE	TERRE	102	01-Sep-2000 A	01-Oct-2006 A	30-Sep-2008 A	\$7,393,626	\$11,842,197	160.2 !	\$10,213,368
Restoration	Status:		_	ras held on April 23, 2 ncrement activities in	•	for Phase II construct nual inspections.	tion activities was cl	osed-out on Septer	mber 30,	\$10,192,472
Timbalier Island Dune & Marsh Restoration	TERRE	TERRE	273	05-Oct-2000 A	01-Jun-2004 A	19-Mar-2009 A	\$16,234,679	\$16,675,496	102.7	\$15,152,860 \$15,149,562
THE STATE OF THE S	Ctatura	I assemed lear	mad maatina r	oo hald on Amril 22	2000 I DND amont	for Dhasa II construct	tion activities was a	acad out on Manah	. 10	\$13,149,302

2009. Remaining Phase II increment activities included on-going annual inspections.

Lessoned learned meeting was held on April 23, 2008. LDNR grant for Phase II construction activities was closed-out on March 19,

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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	110,000 2000		y map and							Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	S ********** Const End	****** E Baseline	STIMATES *** Current	*****	Obligations/ Expenditures
7	Гotal Priority List	9	375				\$24,779,789	\$28,767,951	116.1	\$25,616,486 \$25,592,291
3 Project(s	s)									
3 Cost Sha	aring Agreements E	Executed								
	ction Started									
	ction Completed									
1 Project(s	s) Deferred/Deautho	orized								
Priority List 10										
Hydrologic Restoration & Vegetative Planting in the	BARA	STJAM	941	08-Oct-2001 A	01-Aug-2015	01-Feb-2016	\$1,899,834	\$2,362,687	124.4	\$2,031,257 \$796,324
Lac des Allemands Swamp	Status:		h modeling co			as early as December deling will last approx				Ψ170,32 <del>4</del>
Lake Borgne Shoreline	PONT	STBER	165	02-Oct-2001 A	01-Aug-2007 A	12-Apr-2010 A	\$18,378,900	\$28,646,027	155.9 !	\$18,252,090
Protection	Status:	Construction	grant has exp	ired and final Phase 1	activities in the pro	ocess of being closed-o	out.			\$18,249,538
	Γotal Priority List	10	1,106				\$20,278,734	\$31,008,714	152.9	\$20,283,347 \$19,045,862

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

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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Actual

				******	*** SCHEDULES	*****	****** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
River Reintroduction into Maurepas Swamp	PONT	STJON		04-Apr-2002 A	01-Feb-2015	01-Feb-2018	\$5,434,288	\$6,780,307	124.8	\$6,655,948
TRANSFER	Status:	the project fro funds cease a	om CWPPRA, s soon as the r	to CPRA in the near equest is made, and I	future. However, CEPA and CPRA still	expected to be met be CWPPRA SOP required have some necessary object transfer at this time	res that all project expenditures that w	penditures of CWP	PRA	\$5,991,279
Ship Shoal: Whiskey	TERRE	TERRE		17-Mar-2003 A	15-Jan-2014 *	01-Oct-2014	\$2,998,960	\$3,717,855	124.0	\$2,008,205
West Flank Restoration INACTIVE	Status:		•	ted, but not recommended will be made.	ended, at the Decem	aber 2012 Technical C	Committee Meeting.	Sponsors will dete	rmine	\$2,008,205
	Total Priority List	11					\$8,433,248	\$10,498,162	124.5	\$8,664,153 \$7,999,485

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

## Priority List 12

Bayou Dupont Sediment	BARA	PLAQ	326	21-Mar-2004 A	04-Feb-2009 A	30-Jun-2013 *	\$28,342,879	\$27,162,306	95.8	\$25,068,130
Delivery System										\$21,801,949
	Status:	Additional po	st-primary c	onstruction activities v	vill not be pursued.	Sponsors will be pro	ceeding with constru	ction grant close-ou	t	. , ,

Additional post-primary construction activities will not be pursued. Sponsors will be proceeding with construction grant close-out

activities.

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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			) Tiopoli							Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	Const End	****** E Baseline	STIMATES **** Current	***** %	Obligations/ Expenditures
Total I	Priority List	12	326				\$28,342,879	\$27,162,306	95.8	\$25,068,130 \$21,801,949
<ol> <li>Project(s)</li> <li>Cost Sharing A</li> <li>Construction S</li> <li>Construction C</li> <li>Project(s) Defendance</li> </ol>	Started Completed									
Priority List 13										
Whiskey Island Back Barrier Marsh Creation	TERRE Status:	TERRE After further	272 assessment of	29-Sep-2004 A project vegetation, sp	11-Feb-2009 A ponsors intend to pu	30-Nov-2013 *  rsue an additional veg	\$27,453,090 getation planting eve	\$30,163,401 ent.	109.9	\$32,257,364 \$29,321,349
Total I	Priority List	13	272				\$27,453,090	\$30,163,401	109.9	\$32,257,364 \$29,321,349
<ol> <li>Project(s)</li> <li>Cost Sharing A</li> <li>Construction S</li> <li>Construction C</li> <li>Project(s) Defo</li> </ol>	Started Completed									
Priority List 15										
Bayou Lamoque Freshwater Diversion	BRET	PLAQ	620				\$1,205,354	\$9,510	0.8	\$9,510 \$9,510
TRANSFER	Status:	Project was d	eauthorized b	y the Task Force on C	October 25, 2007.					42,510

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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\$1,054,959

\$1,054,959

\$736,686

\$736,686

	·		-	*****	*** SCHEDULES	¦ *****	****** E	STIMATES ***	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Venice Ponds Marsh	DELTA	PLAQ		19-Jun-2009 A	01-Sep-2013 *	01-Sep-2014	\$1,074,522	\$1,074,522	100.0	\$922,576
Creation and Crevasses INACTIVE	Status:			ted, but not recommended will be made.	ended, at the Decem	iber 2012 Technical C	Committee Meeting.	Sponsors will dete	ermine	\$490,532
	Total Priority List	15	620				\$2,279,876	\$1,084,032	47.5	\$932,086 \$500,042
2 Projec	t(s)									
1 Cost S	Sharing Agreements E	Executed								
0 Constr	ruction Started									
0 Constr	ruction Completed									
4 5 1	t(s) Deferred/Deauth	orized								

14-Jun-2010 A

A draft final report was received and reviewed, with minimal comments. Subsequently, a final report was completed.

31-Dec-2010 A

\$919,599

\$919,599

\$919,599

\$919,599

100.0

100.0

27-Jul-2007 A

COAST

Status:

Total Priority List 16

**COAST** 

0

Enhancement of Barrier

Island Vegetation Demo

<sup>1</sup> Project(s)

<sup>1</sup> Cost Sharing Agreements Executed

<sup>1</sup> Construction Started

<sup>1</sup> Construction Completed

<sup>0</sup> Project(s) Deferred/Deauthorized

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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	3		, 1	******	* SCHEDULES	*****	****** F	STIMATES ***	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Bohemia Mississippi	BRET	PLAQ		16-Jul-2008 A			\$1,359,699	\$414,418	30.5	\$414,418
River Reintroduction DEAUTHORIZED	Status:	Project delay of Task Force		derations of State Ma	ster Plan consisten	cy. Project deauthori	zation process to be	initiated pending of	lirection	\$414,418
Т	Cotal Priority List	17					\$1,359,699	\$414,418	30.5	\$414,418 \$414,418
1 Project(s	)									
	ring Agreements I	Executed								
0 Construc										
	tion Completed									
	) Deferred/Deauth	orized								

Bertrandville Siphon DEAUTHORIZED	BRET Status:	PLAQ Project delays due to conside	15-Jun-2011 A crations of State Mas	01-Jun-2015 ster Plan consistency	01-Jun-2017 y and pursuit of lando	\$2,129,816 wner support.	\$2,129,816	100.0	\$1,819,047 \$477,683
	Total Priority List	18				\$2,129,816	\$2,129,816	100.0	\$1,819,047 \$477,683

<sup>1</sup> Project(s)

<sup>1</sup> Cost Sharing Agreements Executed

<sup>0</sup> Construction Started

<sup>0</sup> Construction Completed

<sup>1</sup> Project(s) Deferred/Deauthorized

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)

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	Troject Stat	us Sullillai	y Report -	Lead Agency. I				, ,		Actual
PROJECT	BASIN	PARISH	ACRES	CSA	** SCHEDULES Const Start	Const End	****** E Baseline	STIMATES **** Current	%	Obligations/ Expenditures
Bayou Dupont Sediment Delivery-Marsh Creation 3	BARA	PLAQ	383	23-Aug-2013 A			\$38,279,163	\$3,415,930	8.9	\$0
Denvery-maisir Cleanon 3	Status:	notice to prod	ceed has been	nt was effective on 8/2 issued but is currently enly estimating a July	on hold pending a	permit from USACE	. Moffit and Nichol			\$0
To	otal Priority List	22	383				\$38,279,163	\$3,415,930	8.9	\$0 \$0
1 Project(s)										
<ul><li>1 Cost Shari</li><li>0 Constructi</li></ul>	ng Agreements F on Started	Executed								
0 Constructi 0 Project(s)	on Completed Deferred/Deauth	orized								
Priority List 23										
Caminada Headlands Back Barrier Marsh	BARA		181				\$31,034,094	\$3,354,935	10.8	\$2,961,723 \$0
Creation	Status:									ΨΟ
To	otal Priority List	23	181				\$31,034,094	\$3,354,935	10.8	\$2,961,723 \$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)

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				*****	**** SCHEDULES	*****	****** E	STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Total ENVIRONM AGENCY, I	MENTAL PROTECTION REGION 6	N	4,620				\$238,684,428	\$175,294,738	73.4	\$154,855,028 \$141,720,868
21 C	roject(s) ost Sharing Agreements onstruction Started	Executed								
	onstruction Completed roject(s) Deferred/Deaut	horized								

#### Notes:

- 1. Expenditures based on Corps of Engineers financial data.
- 2. Date codes: A = Actual date \* = Behind schedule
- 3. Percent codes: ! = 125% of baseline estimate exceeded

## COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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	•	loject Statu	5 Dullillar	y Report - Lead	Agency. Der	I. OF THE INTE	MOR (I Wb)			Actual
				*****	** SCHEDULES	******	****** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Lead Agency: DEPT. O	F THE IN	NTERIOR, I	FISH & W	TLDLIFE SERV	/ICE					
Priority List 1										
Bayou Sauvage National	PONT	ORL	1,550	17-Apr-1993 A	01-Jun-1995 A	30-May-1996 A	\$1,657,708	\$1,680,193	101.4	\$1,633,234
Wildlife Refuge Hydrologic Restoration, Phase 1	Status:					ntenance Plan was appr Protection and Restora			e lead	\$1,400,943
						A-constructed pumpin to accommodate the la				
Cameron Creole Plugs	CA/SB	CAMER	865	17-Apr-1993 A	01-Oct-1996 A	28-Jan-1997 A	\$660,460	\$1,146,585	173.6 !	\$1,093,774
	Status:					1997. The Fish and W tenance Plan in 2002.				\$1,079,096
Cameron Prairie National	MERM	CAMER	247	17-Apr-1993 A	19-May-1994 A	09-Aug-1994 A	\$1,177,668	\$1,227,123	104.2	\$1,064,845
Wildlife Refuge Shoreline Protection	Status:	maintenance l	has been need e rock was ob	led and \$39,963 expensions	nded on O&M inspection. The rock dike is no	made in the near future ections. The Corps ins of within the GIWW na e rock dike is in good	talled warning signs avigation channel. T	s in 2001 due to na	vigation	\$1,054,719
				er rock allowing water Those low areas were		ted during the March 2 nspections.	2012 O&M inspection	on, but there was no	o need of	
Sabine National Wildlife Refuge Erosion Protection	CA/SB Status:	CAMER	5,542	17-Apr-1993 A	24-Oct-1994 A	01-Mar-1995 A	\$4,895,780	\$1,602,656	32.7	\$1,324,713 \$1,309,987

The Fish and Wildlife Service and the LA Dept.of Natural Resources are finalizing a draft Operation and Maintenance Plan. The LDNR will be responsible for project maintenance

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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			*****	*** SCHEDULES	******	****** E	STIMATES ***	****	Obligations/
BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Total Priority List	1	8,204				\$8,391,616	\$5,656,557	67.4	\$5,116,566 \$4,844,745
t(s)									
	Executed								
-									
t(s) Deferred/Deauth	orized								
PONT	ORL	1,280	30-Jun-1994 A	15-Apr-1996 A	28-May-1997 A	\$1,452,035	\$1,692,552	116.6	\$1,549,440 \$1,442,643
Status:	Construction	was complete	d on March 18, 1997	and accepted at a fi	inal inspection on May	28, 1997. The Ope	eration and Mainter	nance	\$1,442,043
	_	-				-	-		
		III. This was	done because larger j	pumps were needed	to accommodate the I	arger hurricane prot	ection levees modi	fied in	
	2011.								
Total Priority List	2	1,280				\$1,452,035	\$1,692,552	116.6	\$1,549,440
1	Total Priority List  ct(s)  Sharing Agreements Fruction Started ruction Completed ct(s) Deferred/Deauth	Total Priority List 1  et(s) Sharing Agreements Executed ruction Started ruction Completed et(s) Deferred/Deauthorized  PONT ORL  Status: Construction Plan was approved The Corps of	Total Priority List 1 8,204  et(s) Sharing Agreements Executed ruction Started ruction Completed et(s) Deferred/Deauthorized  PONT ORL 1,280  Status: Construction was completed Plan was approved in Octol The Corps of Engineers ren December 2011. This was	BASIN PARISH ACRES CSA  Total Priority List 1 8,204  Status: Construction was completed on March 18, 1997 Plan was approved in October 2004. The FWS i The Corps of Engineers removed the two 33-inc December 2011. This was done because larger	Total Priority List 1 8,204  Status: Construction was completed on March 18, 1997 and accepted at a fire Plan was approved in October 2004. The FWS is the lead O&M age The Corps of Engineers removed the two 33-inch diameter CWPPR December 2011. This was done because larger pumps were needed	BASIN PARISH ACRES CSA Const Start Const End  Total Priority List 1 8,204  Sharing Agreements Executed ruction Started ruction Completed et(s) Deferred/Deauthorized  PONT ORL 1,280 30-Jun-1994 A 15-Apr-1996 A 28-May-1997 A  Status: Construction was completed on March 18, 1997 and accepted at a final inspection on May Plan was approved in October 2004. The FWS is the lead O&M agency for this project. The Corps of Engineers removed the two 33-inch diameter CWPPRA-constructed pumpin December 2011. This was done because larger pumps were needed to accommodate the 1	Total Priority List 1 8,204 \$8,391,616  Status: Construction was completed on March 18, 1997 and accepted at a final inspection on May 28, 1997. The Open Plan was approved in October 2004. The FWS is the lead O&M agency for this project. The Corps of Engineers removed the two 33-inch diameter CWPRA-constructed pumping stations in 2010 a December 2011. This was done because larger pumps were needed to accommodate the larger hurricane protection.	Total Priority List 1 8,204 \$8,391,616 \$5,656,557  Status: Construction was completed on March 18, 1997 and accepted at a final inspection on May 28, 1997. The Operation and Mainter Plan was approved in October 2004. The FWS is the lead O&M agency for this project.  The Corps of Engineers removed the two 33-inch diameter CWPPRA-constructed pumping stations in 2010 and replaced them in December 2011. This was done because larger pumps were needed to accommodate the larger hurricane protection levees modi	Total Priority List 1 8,204 \$8,391,616 \$5,656,557 67.4  Status: Construction was completed on March 18, 1997 and accepted at a final inspection on May 28, 1997. The Operation and Maintenance Plan was approved in October 2004. The FWS is the lead O&M agency for this project.  The Corps of Engineers removed the two 33-inch diameter CWPPRA-constructed purpling stations in 2010 and replaced them in December 2011. This was done because larger pumps were needed to accommodate the larger hurricane protection levees modified in

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

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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Actual

				******	*** SCHEDULES	******	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	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	\$5,709,299	124.6	\$5,724,454
Replacement (Hog Island)	Status:	Sabine Refug	ge Structure Re	placement Project						\$5,443,741

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.

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

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Actual

					Obligations/					
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
	Total Priority List	3	953				\$4,581,454	\$5,709,299	124.6	\$5,724,454 \$5,443,741
1 Pr	roject(s)									
1 Co	ost Sharing Agreements E	Executed								
1 Co	onstruction Started									
1 Co	onstruction Completed									
0 Pr	oject(s) Deferred/Deauth	orized								
Priority List	5									
Grand Bayou Hydrolo	ogic TERRE	LAFOU	28	8-May-2004 A			\$5,135,468	\$1,452,357	28.3	\$1,452,357
Restoration DEAUTHORIZED	Status:				ect would result in net have agreed to begin			Staff of the Pointe	au Chene	\$1,452,357
	Total Priority List	5					\$5,135,468	\$1,452,357	28.3	\$1,452,357 \$1,452,357

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

Priority List 6

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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				******	*** SCHEDULES	*****	****** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Lake Boudreaux Freshwater Introduction	TERRE	TERRE	266	22-Oct-1998 A	01-Jun-2013 *	01-Oct-2014	\$9,831,306	\$20,048,152	203.9 !	\$3,237,396 \$3,107,784
riesiwaci masadeasi	Status:	final landrigh	nts documents e permitting ag	which are being subr	nitted to property ov to address the conc	rights work. The upda wners for execution. F urrent Parish proposal	Review of the permi	t application has be	en put on	φ3,107,70 <del>4</del>
Nutria Harvest for Wetland Restoration	COAST	COAST	0	27-Oct-1998 A	20-Sep-1998 A	30-Oct-2003 A	\$2,140,000	\$806,220	37.7	\$806,220 \$806,220
Demo	Status:	Nutria Harve	st Demonstrat	ion Project						, , , , ,
		Status July 2	005							
		preparation a assisted Chef Opelousas Cl	and organized j Kevin Diez b hamber of Cor	udging for the U.S. y providing nutria mannerce for a national	Army Corps of Engineat for the Baton Roll cycling event.	ted: Promotional Even ineers annual "Earth I uge Family Fun Fair,	Day Celebration" in and 3) LDWF provi	New Orleans, 2) Ll ided nutria sausage	OWF to the	
						e "www.nutria.com" to apid user information.	•	September 2003. Th	e upgrade	
		This project	was completed	l in October 2003. Th	ne project sponsors h	nave completed projec	t close-out activities	5.		
	Total Priority List	6	266				\$11,971,306	\$20,854,372	174.2	\$4,043,616 \$3,914,004

<sup>2</sup> Project(s)

<sup>2</sup> Cost Sharing Agreements Executed

<sup>1</sup> Construction Started

<sup>1</sup> Construction Completed

<sup>0</sup> Project(s) Deferred/Deauthorized

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

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Actual

				*****	*** SCHEDULES	*****	***** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Sabine Refuge Marsh Creation, Cycles 4 & 5	CA/SB	CAMER	331	06-May-2014 A	01-Aug-2014 *		\$10,328,064	\$10,169,154	98.5	\$4,362,793 \$0
Croudon, Cycles 1 & 3	Status:	This project 1 2014.	has completed	l all steps to be advert	ised for construction.	. The Corps has sch	eduled this project to	be advertised in ea	rly May	φU
	Total Priority List	8	331				\$10,328,064	\$10,169,154	98.5	\$4,362,793 \$0

1 Project(s)

1 Cost Sharing Agreements Executed

0 Construction Started

0 Construction Completed

0 Project(s) Deferred/Deauthorized

Priority List 9

#### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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Actual

				******	** SCHEDULES	*****	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	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	\$5,159,594	85.3	\$5,052,490 \$5,052,455
South of Highway 02	Status:									φυ,0υ2,4υυ

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

## COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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Actual

				******	** SCHEDULES	*****	****** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
		modified Con applications w of no objectio on March 10 a	sistency Deter- were submitted on were receive and March 18,	minations were rece May 27, 2004. The do on October 2, 200 2005. The draft En	ived on March 11, 2 Corps public notice 3, February 2, 2004, vironmental Assessn	y applications were su 004, and June 3, 2004 is were issued on June and April 19, 2004. ment was submitted fo act was distributed on	respectively. The 1 18, 2004. LA Dep The Corps Section 4 r agency review on	modified Corps per t. of Transportation 404 permits were re	mit letters eceived	
		Phase II Cons	truction Items							
		1, 2003. The		303(e) Determination		2004. The NRCS Ove Corps on May 6, 200				
		Phase II const	truction fundin	g approval was rece	ved at the October 2	2004 Task Force meet	ing.			
		Construction	bids were rece	ived by June 21, 200	5. Construction is ε	anticipated to begin by	July 15, 2005.			
Mandalay Bank Protection Demo	TERRE	TERRE	0	06-Dec-2000 A	25-Apr-2003 A	01-Sep-2003 A	\$1,194,495	\$1,732,498	145.0 !	\$1,732,498
Trocction Demo	Status:	Construction	was completed	19/1/2003.						\$1,732,498
	Total Priority List	9	296				\$7,245,820	\$6,892,092	95.1	\$6,784,988 \$6,784,953
2 Coi 2 Coi	oject(s) st Sharing Agreements Enstruction Started instruction Completed object(s) Deferred/Deauthor									
Priority List	10									
Delta Management at F St. Philip	Fort BRET	PLAQ	267	16-May-2001 A	19-Jun-2006 A	14-Dec-2006 A	\$3,183,940	\$2,219,860	69.7	\$1,679,376 \$1,670,543

A crevasse maintenance event is currently in design and scheduled for 2015.

Status:

#### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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Actual

				******	** SCHEDULES	*****	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
East Sabine Lake Hydrologic Restoration	CA/SB	CAMER	225	17-Jul-2001 A	01-Dec-2004 A	11-Aug-2009 A	\$6,490,751	\$4,944,870	76.2	\$4,681,663 \$4,650,982
,	Status:									ψ1,030,702

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.

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				*****	*** SCHEDULES	*****	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
		Current Cons	struction							
		installed in A	august 2007, in	the 3,000 foot-long	rock breakwater nea	y damage caused by H ir Willow Bayou. A co ied in January 2008. (	ontract for 50,000 lin	near feet of addition	nal	
Grand-White Lake Landbridge Restoration	MERM	CAMER	213	24-Jul-2001 A	10-Jul-2003 A	01-Oct-2004 A	\$9,635,224	\$4,929,522	51.2	\$3,742,674 \$3,700,645

Grand-White Lakes Land Bridge Restoration

Status July 2005

Status:

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.

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				******	*** SCHEDULES	*****	***** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
North Lake Mechant	TERRE	TERRE	604	16-May-2001 A	01-Apr-2003 A	16-Dec-2009 A	\$31,727,917	\$34,708,825	109.4	\$34,242,248
Landbridge Restoration	Status:	Construction	of this project	has been completed	. This project is now	w in the Operation and	Maintenance Phase	s.		\$34,235,204
Terrebonne Bay Shore	COAST	TERRE	0	24-Jul-2001 A	25-Aug-2007 A	19-Dec-2007 A	\$2,006,424	\$2,747,094	136.9 !	\$2,465,239
Protection Demo	Status:	•			•	December 19, 2007 a the form of PVC pipe		• • •		\$2,459,632
		right after the	e hurricanes).	DNR/Thibobaux Fie	ld Office was up for	t problems in getting a the job I would like to on the project and for	o say that they work	ed quickly on all a	spects of	
		THANK YO	U for a great jo	ob.						
	Total Priority List	10	1,309				\$53,044,256	\$49,550,171	93.4	\$46,811,202 \$46,717,007

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

# Priority List 11

Dedicated Dredging on	BARA	JEFF	242	03-Apr-2002 A	11-Sep-2008 A	15-Apr-2010 A	\$17,672,811	\$15,884,605	89.9	\$15,681,387
the Barataria Basin										\$15,669,407
Landbridge	Status:	The project w	as complete	d in 2010. A survey of	the marsh platform	was completed in 20	14.			

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								Obligations/		
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
South Grand Chenier Hydrologic Restoration	MERM	CAMER	414	03-Apr-2002 A	01-Jun-2015	01-Mar-2016	\$22,623,346	\$22,282,940	98.5	\$1,770,769
Trydrologic Restoration	Status:	The project v	was approved	for construction on Ja	nuary 20, 2014, by	the CWPPRA Task F	orce.			\$1,745,781
		September 20 completed in Preliminary of construction of the seven meeting. Lan	004. Design so 2008. Landri design (30%) approval was major landow drights were	g and field trip was he arveying was complet ghts meetings were he and 95% Design Revi approved by the Task ners, project construct finalized in 2012 and o oduction feature was a	ed September 2007 eld between project ew meetings were last Force on January 2 tion funds were retuction approved	. A wave analysis mosponsors and the majoreld on August 6, 200 20, 2010. Due to the intended to the CWPPRA and was again received	del and geotechnical or landowners in 2009, and November 3, nability to receive land Program at the Janu	investigations were 22, 2003, and 2006. 2009, respectively. Indrights approvals farry 19, 2012, Task	Phase II From two Force	
West Lake Boudreaux	TERRE	TERRE	277	03-Apr-2002 A	24-Jul-2007 A	04-Apr-2011 A	\$17,519,731	\$17,618,073	100.6	\$15,902,994
Shoreline Protection& Marsh Creation	Status:	Construction	of this projec	t is complete. TE-46	is now in the Opera	ation and Maintenance	e phase.			\$15,896,804
	Total Priority List	11	933				\$57,815,888	\$55,785,618	96.5	\$33,355,150 \$33,311,992

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

### Priority List 13

Goose Point/Point Platte	PONT	STTAM	436	14-May-2004 A	02-Apr-2008 A	12-Feb-2009 A	\$21,067,777	\$14,558,123	69.1	\$13,725,923
Marsh Creation										\$13,716,120

**Status:** The project was completed in 2009. Surveys of the marsh platform are being conducted in 2014 along with vegetative plantings.

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Project Status Sumr	nary Report - Lea	d Agency: DEPT.	OF THE INTERIOR (FWS)
<i>J</i>	<i>J</i> 1	0 1	

				******* SCHEDULES *******			****** ESTIMATES ******			Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
,	Total Priority List	13	436				\$21,067,777	\$14,558,123	69.1	\$13,725,923 \$13,716,120
1 Construct 1 Construct	s)  aring Agreements Ection Started  ction Completed  s) Deferred/Deauth									
Priority List 15										
Creation	BARA	PLAQ	447	28-Mar-2006 A	24-Feb-2012 A	01-Sep-2014	\$38,040,158	\$37,968,898	99.8	\$9,940,796
	Status:	The project h	nas been expar	nded by 246 acres. The	ne expected complete	tion date is September	r 2014.			\$9,901,331
	Total Priority List	15	447				\$38,040,158	\$37,968,898	99.8	\$9,940,796 \$9,901,331
1 Construc 0 Construc	s) aring Agreements E ction Started ction Completed s) Deferred/Deauth									
Priority List 17										
South Lake Lery Shoreline and Marsh	BRET	MULTI	409	19-Feb-2008 A	01-Apr-2014 *	01-Apr-2014 *	\$32,466,987	\$32,238,260	99.3	\$30,699,883
Restoration	Status:			project, but was rescortake place June 1, 20						\$1,958,787

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				******	******* SCHEDULES *******			****** ESTIMATES ******				
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures		
Т	Total Priority List	17	409				\$32,466,987	\$32,238,260	99.3	\$30,699,883 \$1,958,787		
1 Project(s	)											
1 Cost Sha	ring Agreements E	Executed										
0 Construc												
0 Construc	tion Completed											
	) Deferred/Deauth	orized										
Priority List 19												
Lost Lake Marsh Creation	TERRE	TERRE	452	22-Apr-2010 A	01-Jan-2015	01-Jan-2016	\$34,626,728	\$34,626,728	100.0	\$803,921 \$765,116		
and Hydrologic Restoration	Status:				proval in January 2013. Landrights agreements have not been signed between the State and the ions continue and will hopefully be resolved in 2014.							
Т	Total Priority List	19	452				\$34,626,728	\$34,626,728	100.0	\$803,921 \$765,116		

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

Priority List 20

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				******	****** SCHEDULES *******			****** ESTIMATES ******			
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures	
Bayou Bonfouca Marsh Creation	PONT	STTAM	478	14-Mar-2011 A			\$23,875,866	\$23,553,196	98.6	\$531,533 \$521,876	
	Status:	A cultural resource field survey in currently underway for this project. We are also consulting with the Louisiana Wildlife and Fisheries on a Scenic River permit. We have submitted to the Corps a 404 application but are currently involved in Section 7 consultation with NOAA Fisheries and Fish and Wildlife Service concerning the Gulf sturgeon. At this time we are conducting a bottom grab sample survey in the proposed borrow area located in Lake Pontchartrain, and dissolved oxygen monitoring in the Point Platt borrow area also located in Lake Pontchartrain. We are also using computer modeling to calculate if there would be any effects of differing sides-slopes, dredging depths, and borrow site orientations concerning the dissolved oxygen levels within our proposed Lake Pontchartrain borrow site.									
Cameron-Creole Watershed Grand Bayou	CA/SB	CAMER	476	24-Oct-2011 A			\$23,405,612	\$2,376,789	10.2	\$507,137 \$454,702	
Marsh Creation	Status:	95% Design Review completed in October 2013. Phase II construction funds will be requested in December 2014.									
Terrebonne Bay Marsh Creation-Nourishment	TERRE	TERRE	353				\$27,414,402	\$2,901,750	10.6	\$628,728	
	Status:	Currently the of certain pro		is collecting geotech a	and survey data that	will help engineers d	lesign the project an	d further clarify the	location	\$536,321	
	Total Priority List	20	1,307				\$74,695,880	\$28,831,735	38.6	\$1,667,398 \$1,512,899	

<sup>3</sup> Project(s)

<sup>2</sup> Cost Sharing Agreements Executed

<sup>0</sup> Construction Started

<sup>0</sup> Construction Completed

<sup>0</sup> Project(s) Deferred/Deauthorized

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				******* SCHEDULES *******			****** ESTIMATES ******			Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Northwest Turtle Bay Marsh Creation	BARA	JEFF	407	10-May-2012 A	01-Jan-2015		\$23,198,757	\$2,354,788	10.2	\$1,328,031 \$681,019
Maisi Cicaton	Status:	A 30% desig December 20	_	s held on March 27, 20	014. A 95% meetin	ng is scheduled for Oc	ctober 2014. Phase 2	request is planned	for	φ081,019
	Total Priority List	21	407				\$23,198,757	\$2,354,788	10.2	\$1,328,031 \$681,019
1 Projec		7 1								
	Sharing Agreements I ruction Started	Executed								
	ruction Completed									
	et(s) Deferred/Deauth	orized								
Priority List 22	2									
Terracing & Marsh Creation South of Big Ma	BARA	PLAQ	303	31-Oct-2013 A			\$23,692,705	\$2,308,599	9.7	\$1,359,094 \$30,713
Creation South of Dig Ma.	Status:									\$30,713
	Total Priority List	22	303				\$23,692,705	\$2,308,599	9.7	\$1,359,094 \$30,713

<sup>1</sup> Project(s)

<sup>1</sup> Cost Sharing Agreements Executed

<sup>0</sup> Construction Started

<sup>0</sup> Construction Completed

<sup>0</sup> Project(s) Deferred/Deauthorized

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				******* SCHEDULES *******			****** E	Obligations/		
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Bayou Grande Cheniere Marsh & Ridge Restoration	BARA Status:		264				\$29,104,945	\$3,038,141	10.4	\$0 \$0
Kestoration	Total Priority List	23	264				\$29,104,945	\$3,038,141	10.4	\$0
0 Cons 0 Cons	ect(s) Sharing Agreements Estruction Started struction Completed ect(s) Deferred/Deauthor									\$0
Total DEPT. OF TH WILDLIFE SE	E INTERIOR, FISH ERVICE	&	17,597				\$436,859,844	\$313,687,445	71.8	\$168,725,612 \$132,477,426
18 Con 17 Con	ect(s) t Sharing Agreement struction Started struction Completed ect(s) Deferred/Dear									

#### 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

CEN	MΛ	NI	DN.	1 T	XΖ
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\$107,328

		****** SCHEDULES ******* ****** ESTIMATES *******							
PROJECT	BASIN	PARISH AC	RES CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Lead Agency: DEPT	C. OF COMM	IERCE, NATIO	NAL MARINE FIS	HERIES SERVI	CE				
Priority List 1									
Fourchon Hydrologic Restoration	TERRE	LAFOU				\$252,036	\$7,703	3.1	\$7,703 \$7,703
DEAUTHORIZED	Status:	conducted by the P	tober 7, 1993, Port Fourcho ort and they did not wish to ral public involvement wou	see the project pursu	ed because they questi				\$1,703
Lower Bayou LaCache	TERRE	TERRE	17-Apr-1993 A			\$1,694,739	\$99,625	5.9	\$99,625
Hydrologic Restoration DEAUTHORIZED	Status:	two east-west conn	on September 22, 1993, wi ections between Bayou Pet ding deauthorization of the	it Caillou and Bayou 7	Terrebonne. NMFS	received a letter from	n LA DNR, dated		\$99,625
		Deauthorized.							
To	otal Priority List	1				\$1,946,775	\$107,328	5.5	\$107,328

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

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				*****	****** SCHEDULES *******			****** ESTIMATES ******					
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures			
Atchafalaya Sediment Delivery	ATCH	STMRY	2,232	01-Aug-1994 A	25-Jan-1998 A	21-Mar-1998 A	\$907,810	\$2,455,669	270.5 !	\$2,046,734 \$2,046,734			
Delivery	Status:	has partially bathymetric s dredge mater	all O&M inspections are conducted on the Project. Project goals to increase the distributary potential of Natal Pass and Castille Pass artially been met. Limited bathymetric data is suggesting partial shoaling at the head of Natal Pass and Castille Pass. More extensive remetric survey is currently being discussed for both AT-02 and AT-03. The creation of delta lobe islands with beneficially using ge material channel excavation has also been met. The creation and enlargement of the delta lobes at these locations indicates that the is growing within the project boundaries.										
Big Island Mining	ATCH	STMRY	1,560	01-Aug-1994 A	25-Jan-1998 A	08-Oct-1998 A	\$7,550,903	\$7,003,102	92.7	\$6,638,690			
	Status:	Project cost i	ncrease was a	pproved by the Task l	Force at the January	7 16, 1998 meeting.				\$6,638,690			
		Construction	project compl	lete. First costs accou	unting underway.								
Point Au Fer Canal Plugs	TERRE	TERRE	375	01-Jan-1994 A	01-Oct-1995 A	08-May-1997 A	\$1,069,589	\$5,501,932	514.4 !	\$3,371,556			
	Status:		2 & 3 and the 1	•	•	ith maintenance recome the shoreline. This cons			~	\$3,360,463			
7	Total Priority List	2	4,167				\$9,528,302	\$14,960,703	157.0	\$12,056,981 \$12,045,887			

<sup>3</sup> Project(s)

<sup>3</sup> Cost Sharing Agreements Executed

<sup>3</sup> Construction Started

<sup>3</sup> Construction Completed

<sup>0</sup> Project(s) Deferred/Deauthorized

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				****** SCHEDULES *******			****** ESTIMATES ******			Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures	
Bayou Perot/Bayou Rigolettes Marsh	BARA	JEFF		03-Mar-1995 A			\$1,835,047	\$20,963	1.1	\$20,963 \$20,963	
Restoration DEAUTHORIZED	Status:	DNR has ind	icated a willin	igness to deauthorize	the project. In Apr	etlands benefits from il 1996, LA DNR had authorized at January	asked to reconsider	the project with po		Ψ20,703	
		Deauthorized	l <b>.</b>								
East Timbalier Island Sediment Restoration,	TERRE	LAFOU	1,913	01-Feb-1995 A	01-May-1999 A	01-May-2001 A	\$2,046,971	\$3,621,544	176.9 !	\$3,589,350	
Phase 1	Status:					une platform was achi ings were completed M		and the installatio	n of sand	\$3,589,350	
Lake Chapeau Sediment	TERRE	TERRE	509	01-Mar-1995 A	14-Sep-1998 A	18-May-1999 A	\$4,149,182	\$6,810,133	164.1 !	\$5,653,040	
Input and Hydrologic Restoration	Status:	Maintenance	event to degra	ade the project feature	e identified as Weir	3 began on 4/27/2011	, and the work was a	accepted on 6/24/20	)11.	\$5,605,597	
Lake Salvador Shore	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	
Protection Demo	Status:				•	ction between Bayou of al first costs have been		Lake Salvador.		\$2,801,782	

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.

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				*****	*** SCHEDULES	*****	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
	Total Priority List	3	2,422				\$9,475,828	\$13,254,422	139.9	\$12,065,136 \$12,017,693
4 Proje	ect(s)									
	Sharing Agreements I	Executed								
3 Cons	struction Started									
3 Cons	struction Completed									
1 Proje	ect(s) Deferred/Deauth	orized								
Priority List 4	4									
East Timbalier Island	TERRE	LAFOU	215	08-Jun-1995 A	01-May-1999 A	15-Jan-2000 A	\$5,752,404	\$7,600,150	132.1 !	\$7,543,460
Sediment Restoration, Phase 2	Status:	invoked on th	DAA and DNR is currently closing out the cooperative agreements for East Tinbalier Island Phase 1 and 2. Considering the dama oked on the island as a result of Hurricane Lily and Tropical Storm Isadore, future construction will be reassessed pursuant to gineering feasibility and the Phase 2 prioritization process.							\$7,543,460
Eden Isles East Marsh Restoration	PONT	STTAM					\$5,018,968	\$39,025	0.8	\$41,972 \$39,025
DEAUTHORIZED	Status:		•	•		rce to move forward v to higher bids by priva				φ39,023

16, 1998 Task Force meeting.

Deauthorized.

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			****** SCHEDULES *******				****** E	Obligations/		
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
	Total Priority List	4	215				\$10,771,372	\$7,639,176	70.9	\$7,585,432 \$7,582,485
2 Proj	ect(s)									
1 Cos	t Sharing Agreements E	Executed								
1 Con	struction Started									
	struction Completed									
1 Proj	ect(s) Deferred/Deauth	orized								
<b>Priority List</b>	5									
Little Vermilion Bay	TECHE	VERMI	441	22-May-1997 A	10-May-1999 A	20-Aug-1999 A	\$940,065	\$886,030	94.3	\$739,126
Sediment Trapping	Status:	Emergent veg and retreat al	getation was nong the northe	oted to be colonizing	g in some locations bet resulting in some of	eported that the terraces between terraces. The largest on the ends of ed.	Freshwater Bayou ca	anal bank continues	s to erode	\$739,126
Myrtle Grove Siphon DEAUTHORIZED	BARA	PLAQ		20-Mar-1997 A			\$15,525,950	\$481,803	3.1	\$481,803 \$481,803
DEAUTHORIZED	Status:	funding in the	•	6,000,000 for FY 97.		0 for the FY 96 Phase uthorized to fund the		•		\$401,0U3

will remain active as authorized.

NOAA and LADNR are closing out the cooperative agreement and returning remaining project funds to the CWPPRA program. Project

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				******	** SCHEDULES	*****	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Tota	al Priority List	5	441				\$16,466,015	\$1,367,833	8.3	\$1,220,929 \$1,220,929
2 Project(s)										
2 Cost Sharin	g Agreements I	Executed								
1 Constructio	n Started									
1 Constructio	n Completed									
1 Project(s) D	Deferred/Deauth	orized								
Priority List 6										
Black Bayou Hydrologic Restoration	CA/SB	CAMER	3,594	28-May-1998 A	01-Jul-2001 A	03-Nov-2003 A	\$6,316,806	\$6,170,284	97.7	\$5,968,682 \$5,958,902
Restoration	Status:	An O&M ins	pection is sch	eduled for 5-04-11.						\$3,938,902
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	\$4,620,922
	Status:	discussions v	ith both USF	Project O&M annual WS and LDWF to ide ould be underway by	entify the new, and f					\$2,344,315
Sediment Trapping at The	TECHE	STMAR	1,999	28-May-1998 A	14-Jul-2004 A	19-May-2005 A	\$3,167,400	\$1,653,792	52.2	\$1,373,447
Jaws	Status:			conducted on 4-05-11. of mud flats between			ood. Evidence of rea	covery from herbiv	ory was	\$1,373,447

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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				****** SCHEDULES ********			****** ESTIMATES ******			Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures	
	Total Priority List	6	7,979				\$14,958,140	\$12,552,395	83.9	\$11,963,051 \$9,676,663	
3 Con 3 Con 0 Proj	t Sharing Agreements E struction Started struction Completed ect(s) Deferred/Deauth										
Priority List											
Grand Terre Vegetative Plantings	BARA	JEFF	127	23-Dec-1998 A	01-May-2001 A	01-Jul-2001 A	\$928,895	\$346,246	37.3	\$346,246 \$346,246	
Transings	Status:	of approxima	tely 35,000 sr		800 black mangrove	arshhay cordgrass on was completed in Jur				\$340,240	
Pecan Island Terracing	MERM	VERMI	442	01-Apr-1999 A	15-Dec-2002 A	10-Sep-2003 A	\$2,185,900	\$2,390,984	109.4	\$2,323,315	
	Status:	An O&M ins	pection is plan	nned for May 2011.						\$2,323,315	
	Total Priority List	7	569				\$3,114,795	\$2,737,230	87.9	\$2,669,561 \$2,669,561	

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

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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				******	***** SCHEDULES ********		****** ESTIMATES ******			Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures	
Bayou Bienvenue Pump Station Diversion	PONT	STBER		01-Jun-2000 A			\$3,295,574	\$212,153	6.4	\$212,858 \$212,858	
DEAUTHORIZED	Status:		C	,	,	gn analyses indicate the project is estimated to			•	\$212,030	
			-	sk Force meeting, DN red by the Task Force		FS requested initiation 02 meeting.	of the deauthorizat	ion procedure.			
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	\$1,920,267 \$1,910,292	
Restoration	Status:	investigation requirements COnstruction	s and hydrolog are complete. I was complete	ic modeling complete A construction contra	. Landrights for the ct was awarded in d the project is curred.	g and design is comple e major project feature November 2003, and rently being operated	e are complete. NEP construction was ini	A compliance and tiated in March 200	04.	\$1,710,272	
	Total Priority List	8	134				\$5,475,065	\$2,493,439	45.5	\$2,133,125 \$2,123,150	

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

### Priority List 9

Castille Pass Channel Sediment Delivery	ATCH	STMRY	29-Sep-2000 A	\$1,484,633	\$1,717,883	115.7	\$1,717,883 \$1,717,883
DEAUTHORIZED	Status:	issuance. These spe	ved induced shoaling by the proposed construction was conditions (maintenance dredging ved to de-authorize the project.				\$1,717,863

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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				******	******* SCHEDULES *******			****** ESTIMATES ******			
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures	
Chandeleur Islands Marsh	PONT	STBER	220	10-Sep-2000 A	01-Jun-2001 A	31-Jul-2001 A	\$1,435,066	\$839,927	58.5	\$839,927	
Restoration	Status:	Cooperative years.	Agreement was	s awarded Septembe	r 10, 2000. Vegetati	ve planting is schedul	led for spring, 2001,	and are phased ov	er two	\$839,927	
						ntive plantings comple imeters. Project area					
East Grand Terre Island	BARA	JEFF		21-Sep-2000 A			\$1,856,203	\$2,211,739	119.2	\$2,211,739	
Restoration TRANSFER	Status:	The project i	s anticipated to	be transfered to the	CIAP program for c	onstruction.				\$2,211,739	
Four Mile Canal Terracing and Sediment	TECHE	VERMI	167	25-Sep-2000 A	10-Jun-2003 A	23-May-2004 A	\$5,086,511	\$2,144,037	42.2	\$2,106,787	
Trapping	Status:		•	•	· ·	ported the project is sont this time an O&M of	~ ~		ng the 4-	\$2,079,285	
LaBranche Wetlands Terracing, Planting &	PONT	STCHA		21-Sep-2000 A			\$821,752	\$306,836	37.3	\$306,836	
Shoreline Protection	Status:	Cooperative	Agreement was	s awarded Septembe	r 21, 2000. Enginee	ering and design comp	olete. Construction i	s scheduled for 20	02.	\$306,836	
DEAUTHORIZED				2 funding at January er support. Deautho		In a letter dated Septe sted at this time.	ember 7, 2001, NMF	S returned Phase 2	2 funding		
	Total Priority List	9	387				\$10,684,165	\$7,220,422	67.6	\$7,183,172 \$7,155,670	

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

#### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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				*****	*** SCHEDULES	<b>5</b> *********	****** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Priority List 10										
Rockefeller Refuge Gulf Shoreline Stabilization	MERM	CAMER	920	27-Sep-2001 A			\$1,929,888	\$2,408,478	124.8	\$1,760,283 \$1,336,223
Shoreline statistication	Status:	_		eting will occur on M thorization in Decemb		e 95% Design Meetin	g scheduled for Sept	ember 30, 2014. N	IMFS	\$1,330,223
To	otal Priority List	10	920				\$1,929,888	\$2,408,478	124.8	\$1,760,283 \$1,336,223
<ul><li>0 Constructi</li><li>0 Constructi</li></ul>	ing Agreements I									
Priority List 11										
Little Lake Shoreline Protection/Dedicated	BARA	LAFOU	713	06-Aug-2002 A	04-Aug-2005 A	30-Mar-2007 A	\$35,994,894	\$21,996,296	61.1	\$21,951,414 \$21,843,837
Dredging near Round Lake	Status:	hd settled. A	survey will b		ber 7 to help determ	g the northern section nine the extent of settl				Ψ21,043,037
Pass Chaland to Grand	BARA	PLAQ	263	06-Aug-2002 A	06-Jun-2008 A	25-Aug-2009 A	\$29,753,880	\$40,105,164	134.8 !	\$39,212,887
Bayou Pass Barrier Shoreline Restoration	Status:					ears largely intact and				\$37,501,831

determined that dike gapping/degradation is not required.

platform appear to be regularly flooded by tides and has about 50% to 60% vegetative cover. Marsh fill containment dikes were inspected to determine need for mechanical gapping to provide tidal exchange. Based on observed settlement and formation of natural gaps, it was

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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PROJECT	BASIN	PARISH	ACRES	********* CSA	*** SCHEDULES Const Start	S ************  Const End	****** E Baseline	STIMATES **** Current	**** %	Actual Obligations/ Expenditures
Pelican Island and Pass	BARA	PLAQ	334	06-Aug-2002 A	25-Mar-2006 A	28-Nov-2012 A	\$61,995,587	\$76,229,790	123.0	\$69,523,774
La Mer to Chaland Pass BBI	Status:			struction Start - 15 N etion - 14 Dec 2012(		ings - Fall 2012/Sprin	g 2013(S)			\$69,074,768
	Total Priority List	11	1,310				\$127,744,361	\$138,331,250	108.3	\$130,688,075 \$128,420,436
3 Project	` '									
	naring Agreements E action Started	Executed								
	iction Started iction Completed									
	(s) Deferred/Deauth	orized								
Priority List 14										
Riverine Sand Mining/Scofield Island	BARA	PLAQ		04-Oct-2005 A			\$3,221,887	\$2,935,025	91.1	\$2,935,025 \$2,035,025
Restoration DEAUTHORIZED	Status:		siana planning 9 January 2012		ect using state-only	funds. Final CWPPR	A deauthorization w	as approved by the	Task	\$2,935,025

\$3,221,887

\$2,935,025

91.1

\$2,935,025 \$2,935,025

- 1 Project(s)
- 1 Cost Sharing Agreements Executed

Total Priority List 14

- 0 Construction Started
- 0 Construction Completed
- 1 Project(s) Deferred/Deauthorized

Project

Status:

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Actual

				******	** SCHEDULES	*****	****** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
South Pecan Island Freshwater Introduction	MERM	VERMI		21-Sep-2006 A			\$1,102,043	\$779,422	70.7	\$779,422
DEAUTHORIZED	Status:	•	_	hts has been unsucces inical Committee that		•	herefore, the NMFS	and OCPR will be		\$779,422
	Total Priority List	15					\$1,102,043	\$779,422	70.7	\$779,422 \$779,422
0 Constru 0 Constru	naring Agreements I action Started action Completed (s) Deferred/Deauth									
Priority List 16	j									
Madison Bay Marsh	TERRE	TERRE	334	31-May-2007 A			\$3,002,171	\$3,002,171	100.0	\$2,678,773
Creation and Terracing	Status:	NMFS intend	ds to seek Pha	se 2 authorization in I	December 2014.					\$1,424,431
West Belle Pass Barrier Headland Restoration	TERRE	LAFOU	305	31-May-2007 A	09-Sep-2011 A	04-Jun-2013 A	\$42,250,417	\$41,569,090	98.4	\$37,088,325 \$24,062,561
Ticadiana Restoration	<b>G</b>	D 11 . 1.1		1 1 1	1 1 . 1	1 1 1				\$24,962,561

Readjusted description and changed construction completion date based on plantings date to fit with O&M plan.

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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PROJECT	BASIN						STIMATES **** Current	Actual Obligations/ Expenditures		
	Total Priority List	16	639				\$45,252,588	\$44,571,261	98.5	\$39,767,097 \$26,386,992
2 C 1 C 1 C	Project(s) Cost Sharing Agreements E Construction Started Construction Completed Project(s) Deferred/Deauth									
Bayou Dupont Ridge Creation & Marsh Restoration						03-Jun-2014 * d between CPRA and nalized for advertisem		\$37,984,593 OTD, and NOAA h	98.6 ave	\$32,181,804 \$1,567,929
Bio-Engineered Oys Reef DEMO	ter MERM Status:	MULTI Project const	0 ruction was con	npleted in early Feb.	02-Aug-2011 A ruary 2012. Biologi	17-Feb-2014 A cal and structural mor	\$1,981,822	\$2,316,692 ny.	116.9	\$1,987,295 \$1,970,928
	Total Priority List	17	186				\$40,521,437	\$40,301,285	99.5	\$34,169,099 \$3,538,857

<sup>2</sup> Project(s)

<sup>1</sup> Cost Sharing Agreements Executed

<sup>1</sup> Construction Started

<sup>1</sup> Construction Completed

<sup>0</sup> Project(s) Deferred/Deauthorized

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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Actual

PROJECT				******	*** SCHEDULES	` ********	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Grand Liard Marsh and	BARA	PLAQ	370		01-Jun-2013 *	16-Jun-2016	\$42,579,616	\$42,095,162	98.9	\$35,642,328
Ridge Restoration	Status:									\$2,455,194
	Γotal Priority List	18	370				\$42,579,616	\$42,095,162	98.9	\$35,642,328 \$2,455,194
1 Project(s	3)									
•	ring Agreements E	Executed								
0 Construc	ction Started									
	ction Completed									
0 Project(s	s) Deferred/Deauth	orized								
Priority List 19										
Chenier Ronquille Barrier	BARA	PLAQ	308	18-Aug-2010 A	01-Mar-2016	01-Jan-2017	\$3,419,263	\$3,419,263	100.0	\$3,055,123
Island Restoration	Status:	project and a		answer from the Tru		and federal sponsors Deepwater Horizon (				\$1,109,616
	Γotal Priority List	19	308				\$3,419,263	\$3,419,263	100.0	\$3,055,123 \$1,109,616

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

## COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)

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\$5,278

	•			Actual						
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Obligations/ Expenditures
Coles Bayou Marsh	TECHE	VERMI	398				\$26,631,223	\$3,136,805	11.8	\$2,694,568
Restoration	Status:									\$339,969
Oyster Bayou Marsh	CA/SB	CAMER	489				\$29,781,354	\$3,165,322	10.6	\$2,772,652
Restoration	Status:	NMFS intend	ls to seek Phase	2 authorization in	December 2014.					\$598,884
	Total Priority List	21	887				\$56,412,577	\$6,302,127	11.2	\$5,467,220 \$938,853
2 Projecti										
	naring Agreements E action Started	Executed								
	action Completed									
0 Project	(s) Deferred/Deauth	orized								
Priority List 22										
Cameron Meadows Marsh Creation	CA/SB	CAMER	264				\$27,685,820	\$3,108,025	11.2	\$2,428,908
Marsh Cication	Status:									\$5,278
	Total Priority List	22	264				\$27,685,820	\$3,108,025	11.2	\$2,428,908

<sup>1</sup> Project(s)

<sup>0</sup> Cost Sharing Agreements Executed

<sup>0</sup> Construction Started

<sup>0</sup> Construction Completed

<sup>0</sup> Project(s) Deferred/Deauthorized

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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Actual

PROJECT				******	** SCHEDULES	*****	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Priority List 23	3									
Island Road Marsh	TERRE		312	01-Jul-2014 *			\$39,185,267	\$3,721,447	9.5	\$0
Creation & Nourishment	Status:									\$0
	Total Priority List	23	312				\$39,185,267	\$3,721,447	9.5	\$0 \$0
1 Projec	t(s) haring Agreements E	vecuted								
	uction Started	Accured								
0 Constr	ruction Completed									
0 Projec	t(s) Deferred/Deautho	orized								
Total DEPT. OF COM MARINE FISHI	IMERCE, NATIOI ERIES SERVICE	NAL	21,510				\$471,475,204	\$350,305,694	74.3	\$313,677,296 \$222,505,262
41 Project		a Evenueta d								
	Sharing Agreement ruction Started	s executed								
21 Const	ruction Completed									
11 Projec	ct(s) Deferred/Deau	ıthorized								

#### 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

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PROJECT	BASIN	PARISH	ACRES	********* CSA	*** SCHEDULES Const Start	**************************************	****** E Baseline	STIMATES **** Current	**** %	Obligations/ Expenditures
						TION SERVICE		Curon	, v	<u> </u>
Priority List 1		,								
GIWW to Clovelly	BARA	LAFOU	175	17-Apr-1993 A	21-Apr-1997 A	31-Oct-2000 A	\$8,141,512	\$12,725,280	156.3 !	\$10,416,805
Hydrologic Restoration	Status:	began May 1 and one plug	, 1997 and cor	mpleted November 30 y 1, 2000 and comple	0, 1997, at a cost of	ementation. The first of \$646,691. The second 00, at a cost of \$3,400,	contract to install b	ank protection, one	e weir	\$10,377,827
Vegetative Plantings -	MERM	VERMI		17-Apr-1993 A	11-Jul-1994 A		\$191,003	\$92,147	48.2	\$92,147
Dewitt-Rollover Planting Demo DEAUTHORIZED	Status:	Sub-project of	of the Vegetati	ve Plantings project.						\$92,147
		Complete and	d deauthorized	l.						
Vegetative Plantings -	TERRE	TERRE	0	17-Apr-1993 A	30-Aug-1996 A	30-Dec-1996 A	\$144,561	\$206,523	142.9 !	\$206,523
Falgout Canal Planting Demo	Status:	Sub-project of	of the Vegetati	ve Plantings project.	Wave-stilling devi	ces are in place. Vege	etative plantings are	in place.		\$206,523
		Complete.								
Vegetative Plantings -	TERRE	TERRE	0	17-Apr-1993 A	15-Mar-1995 A	30-Jul-1996 A	\$372,589	\$300,492	80.6	\$300,492
Timbalier Island Planting Demo	Status:	Sub-project of	of the Vegetati	ve Plantings project.						\$300,492
		Complete.								
Vegetative Plantings -	CA/SB	CAMER	0	17-Apr-1993 A	15-Apr-1993 A	30-Mar-1994 A	\$213,947	\$256,251	119.8	\$256,251
West Hackberry Planting Demo	Status:	Sub-project of	of the Vegetati	ve Plantings project.						\$256,251

Complete.

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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				******	** SCHEDULES	*****	***** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
	Total Priority List	1	175				\$9,063,612	\$13,580,693	149.8	\$11,272,218 \$11,233,240
5 F	Project(s)									
5 (	Cost Sharing Agreements I	Executed								
5 (	Construction Started									
4 (	Construction Completed									
1 F	Project(s) Deferred/Deauth	orized								
Priority List	2									
Thomas 2180	-									
Brown Lake Hydrolo	ogic CA/SB	CAMER		28-Mar-1994 A			\$3,222,800	\$1,097,828	34.1	\$1,097,828
Restoration DEAUTHORIZED	Status:		• •	project has been with o approve deathoriza	•	es in project features t	therefore project tea	m moved to deauth	orize	\$1,097,828
Caernarvon Diversio		PLAQ	802	13-Oct-1994 A	01-Jun-2001 A	19-Jun-2002 A	\$2,522,199	\$4,536,000	179.8 !	\$3,916,030
Outfall Management	Status:	DNR. The p	oroject was mo	dified. The final plan	n/EA has been prepa	ut was referred for rev ured. Bids were open ction complete June 1	ed 23 February 200			\$3,916,030
East Mud Lake Mars	ch CA/SB	CAMER	1,520	24-Mar-1994 A	01-Oct-1995 A	15-Jun-1996 A	\$2,903,635	\$5,387,967	185.6 !	\$4,947,583
Management	Status:		•	1995 and contract as the vegetation install		s. Construction starte 1996.	ed in early October 1	995. Water contro	ol	\$4,924,598

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

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\*\*\*\*\* ESTIMATES \*\*\*\*\*\* \*\*\*\*\*\*\* SCHEDULES \*\*\*\*\*\*\* Obligations/ **PROJECT BASIN** PARISH ACRES **CSA** Const Start Const End **Baseline** Current % Expenditures Freshwater Bayou **MERM VERMI** 1,593 17-Aug-1994 A 29-Aug-1994 A \$2,770,093 \$6,059,652 218.8! \$3,454,867 15-Aug-1998 A Wetland Protection \$3,396,087 The project was expedited in order to allow the use of stone removed from the Wax Lake Outlet Weir at a substantial cost savings. Status: 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 \$1,862,128 \$1,843,027 Status: O&M plan executed January 29, 2003. Highway 384 Hydrologic CA/SB **CAMER** 150 13-Oct-1994 A 01-Oct-1999 A 07-Jan-2000 A \$700,717 \$1,479,587 211.2! \$1,315,096 Restoration \$1,295,583 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 **BARA JEFF** 510 05-Jan-1995 A 22-Jun-1998 A 12-Jan-2012 A \$3,398,867 \$28,873,513 849.5! \$22,827,287 Restoration \$22,711,406 Construction has begun to repair vandalism to the concrete walls. Work is anticipated to be completed by October 2012. Status: **TECHE VERMI** Vermilion Bay/Boston 378 24-Mar-1994 A 13-Sep-1994 A 30-Nov-1995 A \$1,008,634 \$1,043,748 103.5 \$887,581 Canal Shore Protection \$887,425 Complete. Status:

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\*\*\*\*\*\* SCHEDULES \*\*\*\*\*\*\*

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Actual

Obligations/

\*\*\*\*\*\* ESTIMATES \*\*\*\*\*\*

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
To	otal Priority List	2	5,993				\$19,575,334	\$50,679,970	258.9	\$40,308,400 \$40,071,985
<ul><li>7 Constructi</li><li>7 Constructi</li></ul>	ing Agreements E									
Priority List 3										
Brady Canal Hydrologic Restoration	TERRE	TERRE	297	15-May-1998 A	01-May-1999 A	22-May-2000 A	\$4,717,928	\$7,593,752	161.0 !	\$6,620,081
Restoration	Status:	the area. In ac	ldition, CSA re	evisions were needed resulted in the CSA	d to accommodate th	ons regarding moniton ne landowner's interest so include Fina Oil Co	in providing non-Fe	ederal funding. Per	mitting	\$6,544,752
		Construction	project is com	plete. O&M plan sig	ned 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	\$4,644,371	124.9	\$2,396,466
Mamtenance	Status:	The first three	e contracts for	maintenance work a	re complete. The pr	roject provides for mai	intenance on an as-n	eeded basis.		\$2,288,783
Cote Blanche Hydrologic	TECHE	STMRY	2,223	01-Jul-1996 A	25-Mar-1998 A	15-Dec-1998 A	\$5,173,062	\$10,036,640	194.0 !	\$8,271,879
Restoration	Status:	project. Site	inspection for	bidder was held Jan	uary 12, 1998. Con-	because of concern at cern for a source of sh on was completed Dec	ell may require bud			\$8,268,266

O&M plan executed. Maintenance contract complete.

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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Actual \*\*\*\*\*\* SCHEDULES \*\*\*\*\*\*\* \*\*\*\*\* ESTIMATES \*\*\*\*\*\* Obligations/ **PROJECT BASIN** PARISH ACRES **CSA** Const Start Const End **Baseline** Current % **Expenditures** Southwest Shore White **MERM VERMI** 11-Jan-1995 A 30-Apr-1996 A \$126,062 \$103,468 82.1 \$103,468 Lake Demo \$103,468 Complete. Project deauthorized. DEAUTHORIZED Status: Violet Freshwater **PONT STBER** 13-Oct-1994 A \$1,821,438 \$128,627 7.1 \$128,627 Distribution \$128,627 Rights-of-way to gain access to the site was a problem due to multiple landowner coordination, and additional questions have arisen about DEAUTHORIZED Status: rights to operate existing siphon. Project deauthorized, October 4, 2000. West Pointe a la Hache **BARA PLAQ** 05-Jan-1995 A 02-Jan-2014 \* \$1,192,308 646 01-Aug-2014 \* \$881,148 \$4,269,295 484.5! Outfall Management \$1,165,643 A 30% review meeting was held on October 3, 2012. Project Team is currently resolving concerns rasied during the meeting regarding Status: ownership and operation of the siphon. A 95% review meeting is anticipated for September 2013. White's Ditch Outfall **BRET** PLAQ 13-Oct-1994 A \$756,134 \$32,862 4.3 \$32,862 Management \$32.862 **DEAUTHORIZED** Status: LA DNR concurred with NRCS to deauthorize the project. Project deauthorized at the January 16, 1998 Task Force meeting. Deauthorized.

\$17,195,698

\$26,809,015

155.9

\$18,745,690 \$18,532,400

Total Priority List 3

5.768

<sup>7</sup> Project(s)

<sup>7</sup> Cost Sharing Agreements Executed

<sup>4</sup> Construction Started

<sup>3</sup> Construction Completed

<sup>3</sup> Project(s) Deferred/Deauthorized

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				*****	*** SCHEDULES	*****	****** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Barataria Bay Waterway West Side Shoreline	BARA	JEFF	232	23-Jun-1997 A	01-Jun-2000 A	01-Nov-2000 A	\$2,192,418	\$3,013,365	137.4 !	\$2,806,009 \$2,795,563
Protection	Status:	The project is	s being coording	nated with the COE of	lredging program. C	Contract advertised De	cember 1999.			φ2,773,303
		Construction	complete. Dec	lication ceremony he	ld October 20, 2000	). O&M plan signed Ju	uly 15, 2002.			
Bayou L'Ours Ridge	BARA	LAFOU		23-Jun-1997 A			\$2,418,676	\$371,232	15.3	\$371,232
Hydrologic Restoration DEAUTHORIZED	Status:	The initial stomeeting.	ep of deauthori	zation was taken at t	he January Task Fo	rce meeting. The proc	ess will be finalized	at the April Task I	Force	\$371,232
Flotant Marsh Fencing	TERRE	TERRE		16-Jul-1999 A			\$367,066	\$115,775	31.5	\$115,775
Demo DEAUTHORIZED	Status:	Difficulty in	locating an app	propriate site for dem	nonstration and diffi	culty in addressing en	gineering constraint	s.		\$115,775
		Project deaut	horized, Octob	per 4, 2000.						
Perry Ridge Shore	CA/SB	CALCA	1,203	23-Jun-1997 A	15-Dec-1998 A	15-Feb-1999 A	\$2,223,518	\$2,289,090	102.9	\$1,899,196
Protection	Status:	Project comp	elete.							\$1,878,987
Plowed Terraces Demo	CA/SB	CAMER	0	22-Oct-1998 A	30-Apr-1999 A	31-Aug-2000 A	\$299,690	\$325,641	108.7	\$324,970
	Status:	The first atte		e terraces in the sum		monstration project be t successful. A second				\$324,970

Raccoon Island

Breakwaters Demo

**TERRE** 

Status:

**TERRE** 

Complete.

0

03-Sep-1996 A

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

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\$1,751,046

\$1,751,046

				*****	** SCHEDULES	*****	****** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
	Total Priority List	4	1,435				\$7,501,368	\$6,115,103	81.5	\$5,517,183 \$5,486,528
5	Project(s)									
5	Cost Sharing Agreements I	Executed								
3	Construction Started									
	Construction Completed									
2	Project(s) Deferred/Deauth	orized								
Priority Lis	st 5									
Freshwater Bayou	Bank MERM	VERMI	511	01-Jul-1997 A	15-Feb-1998 A	15-Jun-1998 A	\$3,998,919	\$5,609,593	140.3 !	\$2,599,491
Stabilization	Status:	The local cos	st share is bein	ng paid by Acadian Ga	as Company.					\$2,579,831
		Contract was	awarded Janu	nary 14, 1998. Const	ruction is complete.					
Naomi Outfall	BARA	JEFF	633	12-May-1999 A	01-Jun-2002 A	15-Jul-2002 A	\$1,743,805	\$2,227,027	127.7 !	\$1,982,456
Management	Status:	This project	was combined	with the BBWW "Du	ipre Cut" East proje	ct for planning and de	esign; construction v	vill be separate.		\$1,955,121
				n is being reviewed by rtised in March 2002.				by both agencies.		
		O&M plan in	n draft.							

21-Apr-1997 A

31-Jul-1997 A

\$1,497,538

\$1,751,046

116.9

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				******	*** SCHEDULES	*****	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Sweet Lake/Willow Lake Hydrologic Restoration	CA/SB Status:	CAMER The rock ban	247 k protection fe	23-Jun-1997 A eature of the project i	01-Nov-1999 A is complete.	02-Oct-2002 A	\$4,800,000	\$3,929,152	81.9	\$3,447,744 \$3,422,804
		unable to cor		struction. Contract te	U	etative planting will b work was advertised	•			
Tot	tal Priority List	5	1,391				\$12,040,262	\$13,516,818	112.3	\$9,780,737 \$9,708,803

- 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 Status:	JEFF This project w	217	12-May-1999 A	01-Dec-2000 A	31-May-2001 A	\$5,019,900	\$5,224,477	104.1	\$4,836,928 \$4,774,706
Totection	Duitus.	rins project w	as comonica v	with the Naoini Outi	an Management pro	jeet for planning and c	lesign, construction	was separate.		
		Project constru	action complet	te.						
		O&M plan sig	ned October 2	2, 2002.						
Cheniere au Tigre Sediment Trapping	TECHE	VERMI	0	20-Jul-1999 A	01-Sep-2001 A	02-Nov-2001 A	\$500,000	\$624,999	125.0	\$599,472 \$596,781
DEMO	Status:	advertised for	bid. Bid came	e in over estimate. L	DNR and NRCS sh	sals received. Proceed ifted funds from monived July 13, 2001. Co	toring to construction	n. Delay in gettin	-	ψ370,701

## COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

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PROJECT		******* SCHEDULES ******* ****** ESTIMATES				STIMATES ***	****	Obligations/		
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Oaks/Avery Canal	TECHE	VERMI	160	22-Oct-1998 A	15-Apr-1999 A	11-Oct-2002 A	\$2,367,700	\$2,925,216	123.5	\$2,534,362
Hydrologic Restoration	Status:	O&M plan w	as finalized or	n 2/11/04.						\$2,534,362
Penchant Basin Natural	TERRE	TERRE	675	23-Apr-2002 A	25-May-2010 A	24-Aug-2011 A	\$14,103,051	\$14,746,461	104.6	\$13,627,130
Resources Plan, Increment 1	Status:	Project const	ruction was co	ompleted on August 2	24, 2011.					\$12,645,206
То	tal Priority List	6	1,052				\$21,990,651	\$23,521,153	107.0	\$21,597,892 \$20,551,055
4 Construction 4 Construction										
Priority List 7										
Barataria Basin Landbridge Shoreline	BARA	JEFF	1,304	16-Jul-1999 A	01-Dec-2000 A	05-Mar-2009 A	\$17,515,029	\$27,852,111	159.0 !	\$26,533,911
Protection, Ph 1 & 2	Status:	Construction	Unit #4 was c	completed on May 4tl	h, 2009.					\$26,423,702
		Construction	Unit #5 was c	completed on March :	5th, 2009.					
Thin Mat Floating Marsh	TERRE	TERRE	0	16-Oct-1998 A	15-Jun-1999 A	10-May-2000 A	\$460,222	\$538,101	116.9	\$538,101
Enhancement Demo	Status:			onitoring ongoing.		<b>y1</b>	+ ,	++++,-+ <u>+</u>		\$538,101
	~	2011011 4011011	- Jp. 1010. 171							

## COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

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				******	******* SCHEDULES *******			****** ESTIMATES ******			
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures	
Tota	Priority List	7	1,304				\$17,975,251	\$28,390,212	157.9	\$27,072,012 \$26,961,802	
<ul> <li>2 Project(s)</li> <li>2 Cost Sharing</li> <li>2 Construction</li> <li>2 Construction</li> <li>0 Project(s) Dec</li> </ul>	Started Completed										
Priority List 8											
Humble Canal Hydrologic	MERM	CAMER	378	21-Mar-2000 A	01-Jul-2002 A	01-Mar-2003 A	\$1,526,136	\$1,574,926	103.2	\$1,161,954	
Restoration	Status:	Construction	complete Mai	rch 2003.						\$1,150,570	
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	\$1,110,746	
	Status:	Project const	ruction was co	ompleted on May 15,	2004. Monitoring P	lan was finalized on J	uly 19, 2004			\$1,108,593	
Upper Oak River Freshwater Siphon	BRET	PLAQ					\$2,500,239	\$56,476	2.3	\$56,476	
DEAUTHORIZED	Status:					2,500,000 for completion engineering and de		nd design and cons	truction	\$56,476	
		-		aluated. DNR has so shed if project is deer		nte from one of their e	ngineering firms to	perform a feasibilit	y study.		
		Deauthorizat	ion procedures	s initiated.							

Little Pecan Bayou

DEAUTHORIZED

Hydrologic Restoration

**MERM** 

Status:

**CAMER** 

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\$1,303,713

\$1,303,713

		ojeet Biatas	Builling	roport zeus	igonoy. Dir i	of Mondeon				Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********* Const End	****** E Baseline	STIMATES **** Current	**** %	Obligations/ Expenditures
	Total Priority List	8	402				\$5,040,195	\$2,812,531	55.8	\$2,329,176 \$2,315,640
3 Pro	oject(s)									
	ost Sharing Agreements I	Executed								
2 Co	onstruction Started									
2 Cc	onstruction Completed									
1 Pro	oject(s) Deferred/Deauth	orized								
Priority List	9									
Barataria Basin Landbridge Shoreline	BARA	JEFF	264	25-Jul-2000 A	20-Oct-2003 A	30-Apr-2014 *	\$46,542,450	\$37,220,939	80.0	\$34,917,990
Protection, Ph 3	Status:	Pipeline remo	oval in project	area is nearing comp	oletion. Construction	n on Units#7 & #8 is	anticipated to begin	in August 2013.		\$9,900,819
Dlask Davou Culvente	CA/CD	CAMED	540	25 Iul 2000 A	25 May 2005 A	26 Ion 2010 A	¢5 000 297	\$15.224.000	250.7.1	¢14 221 605
Black Bayou Culverts Hydrologic Restoratio		CAMER	540	25-Jul-2000 A	25-May-2005 A	26-Jan-2010 A	\$5,900,387	\$15,324,990	259.7!	\$14,321,695 \$6,737,798
Tij drotogie Teostorano	Status:	•		-		actures to assess exter or repairs at the Winte	-		tive	ψ0,737,776

\$1,245,278

\$1,303,713

104.7

Project was deauthorized at Spring 2012 Task Force meeting for the following reasons:

25-Jul-2000 A

<sup>•</sup>The current ME-17 project features do not yield sufficient wetland benefits to warrant a Phase II request for construction and twenty years of maintenance.

<sup>•</sup>Within the current project scope, the CPRA has concerns over public vandalism.

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							****** E	STIMATES ****	****	Obligations/		
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures		
Perry Ridge West Bank Stabilization	CA/SB	CAMER	83	25-Jul-2000 A	01-Nov-2001 A	31-Jul-2002 A	\$3,742,451	\$2,140,816	57.2	\$1,732,956 \$1,710,733		
Stabilization	Status:	The Perry Ric	dge project app	proved on Priority Li	ist 4 was the first pha	se of this project. This	s is the second and	final phase of the pr	roject.	\$1,719,733		
			pproved Phase on has been cor		ing January 10, 2001	. The rock bank prote	ction is installed. Th	ne contract for the to	erraces			
South Lake Decade	TERRE	TERRE	202	25-Jul-2000 A	24-Jan-2011 A	12-Jul-2011 A	\$4,949,684	\$3,711,462	75.0	\$3,500,606		
Freshwater Introduction	Status:		\$3,314,4 Construction Unit #1 was completed on July 12, 2011. CPRA did not agree to proceed with 2nd construction unit, therefore project was considered completed and closed out.									
	Total Priority List	9	1,089				\$62,380,250	\$59,701,920	95.7	\$55,776,960 \$22,976,521		

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

### Priority List 10

GIWW Bank Restoration of Critical Areas in	TERRE	TERRE	65	16-May-2001 A	02-May-2013 *	01-Feb-2014 *	\$13,022,246	\$11,258,135	86.5	\$9,462,788 \$8,264,859
Terrebonne	Status:	U	$\mathcal{C}$	s to NRCS in April 20	012. Project re-surve	eyed to verify design	was still current. Pro	oject is scheduled for	r	\$6,204,639
		construction in	1 December	2012.						

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					****** E	STIMATES ****	****	Obligations/		
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Tot	al Priority List	10	65				\$13,022,246	\$11,258,135	86.5	\$9,462,788 \$8,264,859
1 Project(s) 1 Cost Sharin 0 Constructio 0 Constructio 0 Project(s) E	n Completed									
Priority List 11										
Barataria Basin	BARA	JEFF	256	09-May-2002 A	27-Apr-2005 A	26-Apr-2006 A	\$22,787,951	\$13,179,556	57.8	\$7,034,708
Landbridge Shoreline Protection, Ph 4	Status:	Construction	Unit #6 was c	completed on April 20	6, 2006.					\$6,574,634
Coastwide Nutria Control Program	COAST	COAST	14,963	26-Feb-2002 A	20-Nov-2002 A	15-Jul-2003 A	\$68,864,870	\$32,235,247	46.8	\$22,580,670
Trogram	Status:	In Year 9 (20	)10-11) Trappi	ing Season, 338,512 i	nutria tails were coll	ected.				\$22,469,370
Grand Lake Shoreline Protection	MERM	CAMER	45	20-Sep-2011 A	01-May-2013 *	30-Aug-2013 *	\$12,792,013	\$10,055,616	78.6	\$952,514 \$915,677
Totalion	Status:					ast 2012. Surveying ar ber 2013 Techncial Co		estigation has begur	1.	\$713,0//
Raccoon Island Shoreline Protection/Marsh Creation	TERRE	TERRE	71	23-Apr-2002 A	13-Dec-2005 A	01-Mar-2013 *	\$17,167,810	\$19,608,966	114.2	\$18,306,258 \$17,411,365
	Ctatura	Motion to Dea	and for const	mustion of Dhasa D v	vas airvan an Cantam	han 27 2012				φ17,111,505

Notice to Proceed for construction of Phase B was given on September 27,2012.

Status:

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\*\*\*\*\*\* SCHEDULES \*\*\*\*\*\*\*

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Obligations/

\*\*\*\*\*\* ESTIMATES \*\*\*\*\*\*

PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
	Total Priority List	11	15,335				\$121,612,644	\$75,079,385	61.7	\$48,874,149 \$47,371,046
4	Project(s)									
4	Cost Sharing Agreements E	Executed								
3	Construction Started									
2	Construction Completed									
0	Project(s) Deferred/Deauth	orized								
Priority Li	st 11.1									
Holly Beach Sand	CA/SB	CALCA	330	09-May-2002 A	01-Aug-2002 A	31-Mar-2003 A	\$19,252,500	\$14,130,233	73.4	\$13,989,141
Management	Status:	_			_	on Saturday, March 1, apleted beach work,er	-	_	-	\$13,989,141
	Total Priority List	11.1	330				\$19,252,500	\$14,130,233	73.4	\$13,989,141 \$13,989,141

# Priority List 12

1 Project(s)

Construction Started
 Construction Completed

1 Cost Sharing Agreements Executed

0 Project(s) Deferred/Deauthorized

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				******** SCHEDULES *********				STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Freshwater Floating Marsh Creation Demo	COAST	COAST	0	12-Jun-2003 A	01-Jul-2004 A	01-Jun-2006 A	\$1,080,891	\$1,068,602	98.9	\$1,068,602
Maish Cleanon Demo	Status:	the end of 20 structures and increasingly of Some of the ostorms well v structures per	008 (the third gd are beginning extensive network deployed struction than 5	growing season in the g to interweave with p ork of the fibrous roo tures at Mandalay we % of the structures d nely well in the areas	field), vegetation in plants from adjacent ots and rhizomes necessare damaged, but over amaged or lost. In the	the floating structures, and the becessary to establish the erall the project structions project, the P. hen becesses in water salinit	s has spread signific lowground plant ma e foundation of a sus- ures and associated nitomon plants estab	cantly from their months atterned was generated the stainable organic metallic weather the stain was a stain	othering an arsh mat.	\$1,068,602
	Total Priority List	12	0				\$1,080,891	\$1,068,602	98.9	\$1,068,602 \$1,068,602

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

### Priority List 13

Bayou Sale Shoreline	TECHE	STMRY	16-Jun-2004 A	01-Sep-2014	30-Aug-2015	\$2,254,912	\$2,254,912	100.0	\$1,864,438
Protection									\$1,851,658
DEAUTHORIZED	Status:	Project scope char	nge did not get approved by Te	chnical Committee	<ul> <li>e. Project team review</li> </ul>	ewing option suggested	by Parish to allow	a test	. , ,

section of an alternative shoreline protection product, funded by Parish. Project Team currently assessing viability.

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\$31,491,840

						****** E	STIMATES ****	****	Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
	Total Priority List	13					\$2,254,912	\$2,254,912	100.0	\$1,864,438 \$1,851,658
1 Cost 0 Con 0 Con	ect(s) t Sharing Agreements Estruction Started struction Completed ect(s) Deferred/Deauthor									
Priority List	14									
East Marsh Island Marsh	n TECHE	IBERI	169	04-Oct-2006 A	15-Feb-2010 A	22-Jul-2011 A	\$23,025,451	\$22,613,085	98.2	\$15,861,442
Creation	Status:	Construction	of marsh creat	ion has been complet	ted. Vegetative Plar	ntings began March 2	011, expected to be	completed by July 2	2011.	\$15,295,069
South Shore of the Pen	BARA	JEFF	106	07-Dec-2005 A	17-Jun-2010 A	06-Jun-2012 A	\$21,639,574	\$19,851,404	91.7	\$16,963,081
Shoreline Protection & Marsh Creation	Status:	Project was c	ompleted on Ju	ine 6, 2012.						\$15,176,352
White Ditch Resurrection		PLAQ		11-Aug-2005 A			\$1,595,677	\$1,020,420	63.9	\$1,020,420
and Outfall Managemen DEAUTHORIZED	t Status:	Project team	has agreed to r	nove to deauthorizati	ion due to issues reg	arding location & ope	eration of siphon.			\$1,020,420
	Total Priority List	14	275				\$46,260,702	\$43,484,909	94.0	\$33,844,942

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

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PROJECT	BASIN	PARISH	ACRES	**************************************	** SCHEDULES  Const Start	*********** Const End	****** ES Baseline	TIMATES **** Current	**** %	Obligations/ Expenditures
Priority List 10										
Alligator bend Marsh Restoration & Shoreline Protection	PONT Status:		•	11-Jun-2008 A ted in November 2011 at the January 2013 mo		30-Aug-2014 not approve funding f	\$1,660,985 or construction at Jan	\$1,660,985 uary 2012 meeting	100.0 . Project	\$1,374,073 \$1,364,230
	Total Priority List	16	181				\$1,660,985	\$1,660,985	100.0	\$1,374,073 \$1,364,230

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

### Priority List 17

Sediment Containment System for Marsh	COAST	COAST	0	28-Jan-2008 A	08-Jan-2013 A	11-Sep-2013 A	\$1,163,343	\$1,163,343	100.0	\$980,892 \$600,361		
Creation Demo	<b>Status:</b> LA-9 Demo Project was included with the PO-75 Pilot Study. Project was awarded on January 7, 2013.											
West Pointe a la Hache Marsh Creation	BARA	PLAQ	203	24-Jan-2008 A	01-Sep-2014	30-Aug-2015	\$1,620,740	\$1,620,740	100.0	\$1,361,685 \$610,007		
	Status:	Status: Project Team is waiting on results from BA-42 project regarding borrow site. Geotechnical Investigation and Surveying of fill placement area has begun. A 30% review meeting is anticipated for May 2013.										

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Actual

				*****	** SCHEDULES	****** ESTIMATES ******			Obligations/				
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures			
	Total Priority List	17	203				\$2,784,083	\$2,784,083	100.0	\$2,342,577 \$1,210,368			
2 Pr	roject(s)												
2 C	ost Sharing Agreements E	Executed											
1 C	onstruction Started												
1 C	onstruction Completed												
0 Pr	roject(s) Deferred/Deauth	orized											
Priority List	18												
Cameron-Creole	CA/SB	CAMER	473	04-May-2009 A	04-Apr-2012 A	01-Jul-2016	\$2,696,928	\$2,540,030	94.2	\$1,911,339			
Freshwater Introduction	on Status:	Design on pro	oject has been	halted pending result	es from Southwest St	udy model. Project	Feam will review sta	tus in January 2013	3.	\$1,522,791			
Central Terrebonne Freshwater Enhancem	TERRE	TERRE	456	04-May-2009 A	01-Sep-2014	01-Jul-2016	\$2,326,289	\$2,326,289	100.0	\$1,858,769 \$1,158,831			
	Status:			ccessful change in saling effort. A 30% re			are analyzing impact	s on velocity. Des	ign is	\$1,138,631			

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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		******* SCHEDULES *******					****** E	Actual Obligations/							
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditure					
Non-Rock Alternatives to Shoreline Protection Demo	COAST	COAST	0	04-May-2009 A	27-May-2013 *	24-Apr-2017	\$12,767,672	\$1,906,237	14.9	\$5,970,972					
	Status:	Projected Tir	nelines							\$3,934,367					
		Project was advertised on Nov. 15, 2011													
		Site VisitsNov. 16 & 17, 2011													
		Proposals Du	Proposals Due on RFPMar. 15, 2012)												
		< Phase I > Review of Pr	< Phase I > Review of ProposalsMay 14, 2012)												
		Interview ProcessJune 28, 2012)													
		< Phase 2 > Notice of Selection (for Phase 2 design) (July 13, 2012)													
		Draft Design Schedule from NRCS(Aug. 3, 2012)													
		Phase 2 Contract Award (Aug. 13, 2012)													
		Final Design Schedule from NRCS(Aug. 17, 2012)													
		Begin Surveys and Prepare P&S for advertisement (Sep. 19, 2012)													
		Final Product Selection and Develop Phase III Budget(Nov. 26, 2012)													
		Submit Budget Increase Request to Technical Committee (TC)(Nov. 27, 2012)													
		Request Task Force Approval and BudgetJanuary 17, 2013													
		< Phase 3 > Notice of Selection (for Phase III)(Jan. 25, 2013)													
		Advertise NRCS Dredging Contract(Mar. 18, 2013)													
		Finalize NRCS Plans & Specifications(May 25, 2013)													
		Phase 3 Cont	ract Award (N	May 27, 2013)											

LaBranche East Marsh

Creation

**PONT** 

Status:

**STCHA** 

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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Actual

				******	******* SCHEDULES *******			****** ESTIMATES ******			
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures	
		NTP on NRC	CS Dredging Co	ontract(May 31, 2013	)						
		Construction	of Shoreline P	rotection Systems(Ja	n. 22, 2014)						
		Construction	Report(Feb. 2	1, 2014)							
		Monitoring I	Period(Jan. 23,	2017)							
		Completion 1	Report and Pro	ject Closeout(Apr. 24	, 2017)						
Total	Priority List	18	929				\$17,790,889	\$6,772,556	38.1	\$9,741,080 \$6,615,989	
3 Project(s)											
3 Cost Sharing A	-	Executed									
1 Construction S											
0 Construction 0 Project(s) Def	-	orized									
Priority List 19											
shwater Bayou Marsh	MERM	VERMI	279	01-Apr-2010 A	01-Jul-2015	01-Aug-2016	\$2,425,997	\$2,425,997	100.0	\$2,229,392 \$1,033,882	
auon	Status:	Project design has been halted due to landowner requirements for extensive borrow site testing. Project Team is currently evaluating									

01-Sep-2015

30-Aug-2016

\$2,571,273

\$2,571,273

100.0

\$2,258,281

\$2,114,324

options. A 30% review is anticipated for June 2014.

01-Apr-2010 A

715

Pilot study was awarded on January 7, 2013.

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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				******	** SCHEDULES	*****	****** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
	Total Priority List	19	994				\$4,997,270	\$4,997,270	100.0	\$4,487,673 \$3,148,206
2	Project(s)									
	Cost Sharing Agreements	Executed								
	Construction Started									
0	Construction Completed									
0	Project(s) Deferred/Deaut	horized								
Priority List Coastwide Vegetat Planting		In Year 1 the 1) South Lak 2)Marsh Isla	nd is scheduled	20-Sep-2011 A  ed three locations for been advertised and i d to be advertised in Suled to be advertised in Suled to be advertised	s scheduled to be av September 2012 and	will be planted in Sp	oring 2013.	\$5,850,509	46.1	\$4,350,405 \$1,098,800
Kelso Bayou Marsi Creation		CAMER	274	20-Sep-2011 A	01-Sep-2014	30-Aug-2015	\$2,360,609	\$2,360,609	100.0	\$2,208,146 \$904,552
	Status:	_	s currently und	oing. Surveying of fi ler review.	m pracement area is	completed. Location	i and subsequent inv	esugation of propo	seu	

#### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

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				******	*** SCHEDULES	S *****	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
То	tal Priority List	20	1,053				\$15,050,334	\$8,211,118	54.6	\$6,558,550 \$2,003,352
1 Construction Construction										
Priority List 21										
LaBranche Central Marsh Creation	PONT	STCHA	731	01-Jun-2012 A	01-Sep-2015	01-Aug-2016	\$42,159,208	\$3,885,298	9.2	\$3,612,186 \$1,138,125
	Status:	Project is cui	rrently in the p	lanning and design p	hase. A 30% revie	w meeting is anticipat	ted for May 2014.			
То	tal Priority List	21	731				\$42,159,208	\$3,885,298	9.2	\$3,612,186 \$1,138,125
<ul><li>1 Project(s)</li><li>1 Cost Sharin</li><li>0 Construction</li></ul>	ng Agreements E	Executed								
0 Construction		orized								
Priority List 22										
North Catfish Lake Marsh Creation	TERRE	LAFOU	401				\$30,385,887	\$3,216,194	10.6	\$2,562,529 \$63,582
	Status:									ψ05,562

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)

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				*****	**** SCHEDULES	*****	****** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
То	tal Priority List	22	401				\$30,385,887	\$3,216,194	10.6	\$2,562,529 \$63,582
0 Construction 0 Construction										
Priority List 23										
South Grand Chenier	MERM		393				\$25,441,833	\$2,653,242	10.4	\$1,768,800
Marsh Creation – Baker Tract	Status:									\$0
То	tal Priority List	23	393				\$25,441,833	\$2,653,242	10.4	\$1,768,800 \$0

<sup>1</sup> Project(s)

<sup>0</sup> Cost Sharing Agreements Executed

<sup>0</sup> Construction Started

<sup>0</sup> Construction Completed

<sup>0</sup> Project(s) Deferred/Deauthorized

#### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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		J	,	******* SCHEDULES ******* ****** ESTIMATES *******						
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
RESOUR	F AGRICULTURE, NAT CES CONSERVATION ( Project(s)	SERVICE	39,499				\$516,517,005	\$406,584,336	78.7	\$333,951,798 \$277,418,974
	Cost Sharing Agreement	s Executed								
	Construction Started									
	Construction Completed									
11	Project(s) Deferred/Deau	ıthorized								

#### 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

**PROJECT** 

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\*\*\*\*\*\*\*\* SCHEDULES \*\*\*\*\*\*\* \*\*\* ESTIMATES \*\*\*\*\*\* Obligations/
CSA Const Start Const End Baseline Current % Expenditures

Lead Agency: DEPT. OF THE INTERIOR, U.S. Geological Survey

PARISH

Priority List 0.1

Coastwide Reference Monitoring System -Wetlands

Status:

**BASIN** 

COAST COAST 13-Feb-20

ACRES

13-Feb-2013 A 14-Aug-2003 A

\$114,607,082

\$75,844,538

66.2 \$62,377,652

\$55,956,103

The status of the CRMS network and data collection is as follows: all sites (391) have approved landrights and are fully constructed. Data collection is occurring at all sites. All data are posted within the DNR SONRIS database. Available data includes hydrologic, vegetation, elevation/accretion, and soil properties and coastwide aerial photography and satellite imagery. Ten CRMS sites were equipped with real time continuous hydrologic gages in September 2010. A CRMS website has been established as an offshoot of LaCoast.gov (http://www.lacoast.gov/crms2/Home.aspx). The CRMS website provides graphing, visualizations, and data download functionality. The website is designed to facilitate easy access to data and products.

CRMS analytical teams, including agency and academic personnel, were established for landscape, hydrology, vegetation, soils, and data delivery. The teams have developed ecological indices in consultation with the CWPPRA Monitoring Work Group. The ecological indices are incorporated in the CRMS report card which was released in 2011 and is accessed through the CRMS website. The website continues to evolve to support the data and tools that are developed through the CRMS program.

CRMS data are being used in the Operations, Maintenance, and Monitoring Reports for CWPPRA projects and will be incorporated into the 2012 CWPPRA Report to U.S. Congress to evaluate project effectiveness. Several articles have been submitted for publication and are in peer review, but the following documents have been published:

Coastwide Reference Monitoring System (CRMS): U.S. Geological Survey Fact Sheet 2010-3018, 2 p. http://pubs.usgs.gov/fs/2010/3018/.

Cretini, K.F., and Steyer, G.D. 2011, Floristic Quality Index -- An assessment tool for restoration projects and monitoring sites in coastal Louisiana: U.S. Geological Survey Fact Sheet 2011-3044, 4 p. http://pubs.usgs.gov/fs/2011/3044/.

Cretini, K.F, Visser, J.M., Krauss, K.W., and Steyer, G.D. 2012. Development and use of a floristic quality index for coastal Louisiana marshes. Environmental Monitoring and Assessment. 184(4):2389-2403.

#### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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				******	*** SCHEDULES	*****	****** E	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
То	tal Priority List	0.1					\$114,607,082	\$75,844,538	66.2	\$62,377,652 \$55,956,103
1 Project(s)										
1 Cost Sharin	ng Agreements I	Executed								
1 Construction	on Started									
0 Construction	on Completed									
0 Project(s) l	Deferred/Deauth	orized								
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	\$869,356
ruiu	Status:	multiple proje		plementation plan a			ency fund requests th .53 and a resurveying			\$666,704
							with Hurricanes Gus d retrofit of sondes (		v land	
То	tal Priority List	0.2					\$1,500,000	\$1,500,000	100.0	\$869,356 \$666,704

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

#### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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				*****	*** SCHEDULES	*****	****** ES	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Storm Recovery Assessment Fund	COAST	COAST		21-Aug-2007 A	18-Oct-2006 A		\$569,586	\$569,586	100.0	\$426,056 \$426,056
Assessment I und	Status:	Gustav and I	ke. Amendme		ooperative agreemer	onal \$266,227.00 to c nt was submitted by U				\$420,030
	Total Priority List	0.3					\$569,586	\$569,586	100.0	\$426,056 \$426,056
1 Cor 0 Cor	oject(s) st Sharing Agreements E nstruction Started nstruction Completed oject(s) Deferred/Deauth									
Priority List	0.4									
Construction Program Technical Support Services Fund	COAST Status:	COAST	0	19-Oct-2011 A			\$372,036	\$558,054	150.0 !	\$496,941 \$81,122
	Total Priority List	0.4	0				\$372,036	\$558,054	150.0	\$496,941 \$81,122

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

#### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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Actual

				******	**** SCHEDULES	*****	****** E	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Baseline	Current	%	Expenditures
Total DEPT. OF THE I	•		0				\$117,048,704	\$78,472,178	67.0	\$64,170,005 \$57,129,985
3 Constru 0 Constru	(s) naring Agreement action Started action Completed (s) Deferred/Deau									

#### 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

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Atchafala	aya									
Priority List:	2	2	3,792	2	2	2	0	\$8,458,713	\$9,458,771	\$8,685,424
Priority List:	9	1		1	0	0	1	\$1,484,633	\$1,717,883	\$1,717,883
Basin To	otal	3	3,792	3	2	2	1	\$9,943,346	\$11,176,653	\$10,403,307
Basin: Barataria	Ļ									
Priority List:	1	3	620	3	3	3	0	\$9,960,769	\$13,953,487	\$11,596,584
Priority List:	2	1	510	1	1	1	0	\$3,398,867	\$28,873,513	\$22,711,406
Priority List:	3	3	646	3	1	1	1	\$4,160,823	\$7,092,040	\$3,988,388
Priority List:	4	2	232	2	1	1	1	\$4,611,094	\$3,384,598	\$3,166,796
Priority List:	5	2	633	2	1	1	1	\$17,269,755	\$2,708,830	\$2,436,924
Priority List:	6	1	217	1	1	1	0	\$5,019,900	\$5,224,477	\$4,774,706
Priority List:	7	2	1,431	2	2	2	0	\$18,443,924	\$28,198,357	\$26,769,948
Priority List:	9	3	264	3	1	0	2	\$49,550,137	\$39,682,936	\$12,362,816
Priority List:	10	2	941	1	0	0	1	\$4,901,948	\$4,906,012	\$3,339,649
Priority List:	11	5	1,808	5	5	5	0	\$168,205,123	\$167,395,411	\$150,664,478
Priority List:	12	1	326	1	1	0	0	\$28,342,879	\$27,162,306	\$21,801,949
Priority List:	14	2	106	2	1	1	1	\$24,861,461	\$22,786,429	\$18,111,377
Priority List:	15	1	447	1	1	0	0	\$38,040,158	\$37,968,898	\$9,901,331
Priority List:	17	2	389	2	0	0	0	\$40,160,355	\$39,605,333	\$2,177,936
Priority List:	18	1	370	0	0	0	0	\$42,579,616	\$42,095,162	\$2,455,194
Priority List:	19	1	308	1	0	0	0	\$3,419,263	\$3,419,263	\$1,109,616
Priority List:	21	1	407	1	0	0	0	\$23,198,757	\$2,354,788	\$681,019
Priority List:	22	2	686	2	0	0	0	\$61,971,868	\$5,724,529	\$30,713
Priority List:	23	2	445	0	0	0	0	\$60,139,039	\$6,393,076	\$0
Basin To	otal	37	10,786	33	19	16	7	\$608,235,736	\$488,929,443	\$298,080,828

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report by Basin

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Breton So	ound									
Priority List:	2	1	802	1	1	1	0	\$2,522,199	\$4,536,000	\$3,916,030
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	267	1	1	1	1	\$4,339,140	\$3,398,501	\$2,850,003
Priority List:	14	1		1	0	0	1	\$1,595,677	\$1,020,420	\$1,020,420
Priority List:	15	1	620	0	0	0	0	\$1,205,354	\$9,510	\$9,510
Priority List:	17	2	409	2	0	0	1	\$33,826,686	\$32,652,678	\$2,373,205
Priority List:	18	1		1	0	0	1	\$2,129,816	\$2,129,816	\$477,683
Basin To	otal	11	2,098	7	2	2	7	\$51,344,153	\$43,902,010	\$10,801,935

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
asin: Calcasie	u/Sabir	ne								
Priority List:	1	3	6,407	3	3	3	0	\$5,770,187	\$3,005,492	\$2,645,334
Priority List:	2	4	2,737	4	3	3	1	\$8,568,462	\$11,661,471	\$10,278,989
Priority List:	3	2	3,555	2	2	2	0	\$8,301,380	\$10,353,670	\$7,732,524
Priority List:	4	3	1,203	3	2	2	1	\$2,893,802	\$2,870,122	\$2,459,348
Priority List:	5	1	247	1	1	1	0	\$4,800,000	\$3,929,152	\$3,422,804
Priority List:	6	1	3,594	1	1	1	0	\$6,316,806	\$6,170,284	\$5,958,902
Priority List:	8	4	993	4	3	2	0	\$38,949,204	\$28,568,319	\$17,278,152
Priority List:	9	2	623	2	2	2	0	\$9,642,838	\$17,465,805	\$8,457,531
Priority List:	10	1	225	1	1	1	0	\$6,490,751	\$4,944,870	\$4,650,982
Priority List:	11.1	1	330	1	1	1	0	\$19,252,500	\$14,130,233	\$13,989,141
Priority List:	18	1	473	1	1	0	0	\$2,696,928	\$2,540,030	\$1,522,791
Priority List:	20	2	750	2	0	0	0	\$25,766,221	\$4,737,398	\$1,359,254
Priority List:	21	1	489	0	0	0	0	\$29,781,354	\$3,165,322	\$598,884
Priority List:	22	1	264	0	0	0	0	\$27,685,820	\$3,108,025	\$5,278
Basin To	otal	27	21,890	25	20	18	2	\$196,916,253	\$116,650,191	\$80,359,914

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Coastal	Basins									
Priority List:	Cons Plan	1		1	1	1	0	\$238,871	\$143,855	\$143,855
Priority List:	0.1	1		1	1	0	0	\$114,607,082	\$75,844,538	\$56,947,002
Priority List:	0.2	1		1	1	0	0	\$1,500,000	\$1,500,000	\$666,704
Priority List:	0.3	1		1	1	0	0	\$569,586	\$569,586	\$426,056
Priority List:	0.4	1	0	1	0	0	0	\$372,036	\$558,054	\$81,122
Priority List:	6	1	0	1	1	1	0	\$2,140,000	\$806,220	\$806,220
Priority List:	9	1		0	0	0	1	\$1,502,817	\$83,556	\$83,556
Priority List:	10	1	0	1	1	1	0	\$2,006,424	\$2,747,094	\$2,459,632
Priority List:	11	1	14,963	1	1	1	0	\$68,864,870	\$32,235,247	\$22,469,370
Priority List:	12	1	0	1	1	1	0	\$1,080,891	\$1,068,602	\$1,068,602
Priority List:	13	1	0	1	1	1	0	\$1,000,000	\$707,839	\$707,839
Priority List:	16	1	0	1	1	1	0	\$919,599	\$919,599	\$736,686
Priority List:	17	1	0	1	1	1	0	\$1,163,343	\$1,163,343	\$600,361
Priority List:	18	1	0	1	0	0	0	\$12,767,672	\$1,906,237	\$3,934,367
Priority List:	20	1	779	1	1	0	0	\$12,689,725	\$5,850,509	\$1,098,800
Basin '	Total	15	15,742	14	12	8	1	\$221,422,916	\$126,104,279	\$92,230,173

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report by Basin

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Miss. Riv	ver Del	ta								
Priority List:	1	1	9,831	1	1	1	0	\$8,517,066	\$50,863,503	\$43,964,173
Priority List:	3	2	936	1	1	1	1	\$3,666,187	\$1,008,820	\$944,300
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	\$4,233,945
Priority List:	10	1		0	0	0	1	\$1,076,328	\$976,581	\$976,581
Priority List:	12	1		0	0	0	1	\$1,880,376	\$354,791	\$354,791
Priority List:	13	1		0	0	0	1	\$1,137,344	\$310,152	\$310,152
Priority List:	15	1		1	0	0	1	\$1,074,522	\$1,074,522	\$490,532
Basin To	otal	10	13,153	6	4	4	6	\$24,725,757	\$61,284,017	\$51,332,784

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Merment	au									
Priority List:	1	2	247	2	2	1	1	\$1,368,671	\$1,319,270	\$1,146,866
Priority List:	2	1	1,593	1	1	1	0	\$2,770,093	\$6,059,652	\$3,396,087
Priority List:	3	1		1	1	0	1	\$126,062	\$103,468	\$103,468
Priority List:	5	1	511	1	1	1	0	\$3,998,919	\$5,609,593	\$2,579,831
Priority List:	7	1	442	1	1	1	0	\$2,185,900	\$2,390,984	\$2,323,315
Priority List:	8	1	378	1	1	1	0	\$1,526,136	\$1,574,926	\$1,150,570
Priority List:	9	2	296	2	1	1	1	\$7,296,603	\$6,463,307	\$6,356,169
Priority List:	10	2	1,133	2	1	1	0	\$11,565,112	\$7,338,000	\$5,036,868
Priority List:	11	2	459	2	0	0	0	\$35,415,359	\$32,338,556	\$2,661,458
Priority List:	12	1	844	1	1	1	0	\$19,673,929	\$10,535,962	\$10,462,852
Priority List:	15	1		1	0	0	1	\$1,102,043	\$779,422	\$779,422
Priority List:	16	1	888	0	0	0	0	\$1,266,842	\$1,266,842	\$11,594
Priority List:	17	1	0	0	1	1	0	\$1,981,822	\$2,316,692	\$1,970,928
Priority List:	19	1	279	1	0	0	0	\$2,425,997	\$2,425,997	\$1,033,882
Priority List:	23	1	393	0	0	0	0	\$25,441,833	\$2,653,242	\$0
Basin To	otal	19	7,463	16	11	9	4	\$118,145,321	\$83,175,915	\$39,013,310

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Pontchar	train									
Priority List:	1	2	1,753	2	2	2	0	\$6,119,009	\$5,466,263	\$5,075,752
Priority List:	2	2	2,320	2	2	2	0	\$4,500,424	\$3,894,225	\$3,285,670
Priority List:	3	3	755	3	1	1	2	\$2,683,636	\$967,201	\$967,201
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	\$2,355,937
Priority List:	8	2	134	2	1	1	1	\$5,475,065	\$2,493,439	\$2,123,150
Priority List:	9	3	220	2	1	1	2	\$2,407,524	\$1,230,695	\$1,230,695
Priority List:	10	1	165	1	1	1	0	\$18,378,900	\$28,646,027	\$18,249,538
Priority List:	11	1		1	0	0	1	\$5,434,288	\$6,780,307	\$5,991,279
Priority List:	12	1		0	0	0	1	\$1,348,345	\$1,089,193	\$1,089,193
Priority List:	13	1	436	1	1	1	0	\$21,067,777	\$14,558,123	\$13,716,120
Priority List:	16	1	181	1	0	0	0	\$1,660,985	\$1,660,985	\$1,364,230
Priority List:	19	1	715	1	0	0	0	\$2,571,273	\$2,571,273	\$2,114,324
Priority List:	20	1	478	1	0	0	0	\$23,875,866	\$23,553,196	\$521,876
Priority List:	21	1	731	1	0	0	0	\$42,159,208	\$3,885,298	\$1,138,125
Basin To	Basin Total		7,963	19	10	10	8	\$145,256,297	\$99,424,654	\$59,262,116

# 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: Teche / V	/ermili	ion								
Priority List:	1	1	65	1	1	1	0	\$1,526,000	\$2,047,479	\$2,007,627
Priority List:	2	1	378	1	1	1	0	\$1,008,634	\$1,043,748	\$887,425
Priority List:	3	1	2,223	1	1	1	0	\$5,173,062	\$10,036,640	\$8,268,266
Priority List:	5	1	441	1	1	1	0	\$940,065	\$886,030	\$739,126
Priority List:	6	4	2,567	4	4	4	0	\$10,130,000	\$10,347,331	\$8,931,966
Priority List:	8	1	24	1	1	1	0	\$1,013,820	\$1,181,129	\$1,108,593
Priority List:	9	3	167	1	1	1	2	\$7,814,815	\$3,779,832	\$3,715,080
Priority List:	13	1		1	0	0	1	\$2,254,912	\$2,254,912	\$1,851,658
Priority List:	14	1	169	1	1	1	0	\$23,025,451	\$22,613,085	\$15,461,261
Priority List:	21	1	398	0	0	0	0	\$26,631,223	\$3,136,805	\$339,969
Basin To	otal	15	6,432	12	11	11	3	\$79,517,982	\$57,326,991	\$43,310,971

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Terrebon	ne									
Priority List:	1	5	9	4	3	3	2	\$8,809,393	\$9,296,639	\$9,198,169
Priority List:	2	3	958	3	3	3	0	\$12,831,588	\$23,103,661	\$20,331,964
Priority List:	3	4	3,958	4	4	4	0	\$15,758,355	\$25,068,616	\$22,782,888
Priority List:	4	2	215	2	1	1	1	\$6,119,470	\$7,715,925	\$7,659,234
Priority List:	5	3	0	3	1	1	2	\$31,120,343	\$4,703,403	\$4,703,403
Priority List:	5.1	1		1	0	0	1	\$9,700,000	\$7,452,191	\$7,452,191
Priority List:	6	4	941	2	1	1	2	\$30,522,757	\$34,864,934	\$15,823,310
Priority List:	7	1	0	1	1	1	0	\$460,222	\$538,101	\$538,101
Priority List:	9	4	577	4	4	4	0	\$29,772,484	\$33,961,653	\$30,388,989
Priority List:	10	2	669	2	1	1	0	\$44,750,163	\$45,966,960	\$42,500,063
Priority List:	11	3	348	3	2	1	1	\$37,686,501	\$40,944,894	\$35,316,374
Priority List:	12	1		0	0	0	1	\$2,229,876	\$1,716,949	\$1,716,949
Priority List:	13	1	272	1	1	0	0	\$27,453,090	\$30,163,401	\$29,321,349
Priority List:	16	2	639	2	1	1	0	\$45,252,588	\$44,571,261	\$26,386,992
Priority List:	18	1	456	1	0	0	0	\$2,326,289	\$2,326,289	\$1,158,831
Priority List:	19	1	452	1	0	0	0	\$34,626,728	\$34,626,728	\$765,116
Priority List:	20	1	353	0	0	0	0	\$27,414,402	\$2,901,750	\$536,321
Priority List:	22	1	401	0	0	0	0	\$30,385,887	\$3,216,194	\$63,582
Priority List:	23	1	312	0	0	0	0	\$39,185,267	\$3,721,447	\$0
Basin To	otal	41	10,560	34	23	21	10	\$436,405,403	\$356,860,995	\$256,643,825
otal All Basins		200	99,879	169	114	1E +0	49	\$1,891,913,164	\$1,444,835,148	\$941,439,163

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Summary Report by Priority List

P/L	No. of Projects	Acres	CSA Executed	Under Const.	Const.	Federal Const. Funds Available	Non/Fed Const. Funds Matching Share	Baseline Estimate	Current Estimate	Obligations To Date	Expenditures To Date
1	14	18,932	14	0	14	\$28,084,900	\$11,341,314	\$39,933,317	\$85,752,657	\$78,108,808	\$75,435,030
2	14	13,090	14	0	14	\$28,173,110	\$14,081,363	\$40,836,180	\$87,533,213	\$72,751,682	\$72,395,167
3	11	12,073	11	0	10	\$29,939,100	\$8,256,219	\$32,879,168	\$53,737,434	\$44,435,458	\$43,894,012
4	4	1,650	4	0	4	\$29,957,533	\$2,155,295	\$10,468,030	\$13,228,247	\$12,573,635	\$12,542,981
5	6	1,907	6	0	6	\$33,371,625	\$1,743,667	\$15,535,356	\$16,992,250	\$12,879,158	\$12,803,865
6	11	9,705	11	0	10	\$39,134,000	\$6,692,951	\$54,614,997	\$63,980,264	\$43,970,326	\$40,458,728
7	4	1,873	4	0	4	\$42,540,715	\$5,120,539	\$21,090,046	\$31,127,442	\$29,741,573	\$29,631,363
8	7	1,529	7	1	5	\$41,864,079	\$5,663,481	\$43,668,651	\$33,605,661	\$25,846,999	\$21,447,607
9	10	2,147	10	1	9	\$47,907,300	\$14,674,717	\$98,530,674	\$96,791,956	\$89,571,177	\$56,719,007
10	9	3,400	9	0	6	\$47,659,220	\$15,286,662	\$88,275,124	\$94,225,498	\$78,317,620	\$75,364,769
11	10	17,578	10	1	7	\$57,332,369	\$38,796,229	\$307,172,893	\$269,196,253	\$212,917,375	\$209,103,474
11.1	1	330	1	0	1	\$0	\$7,065,116	\$19,252,500	\$14,130,233	\$13,989,141	\$13,989,141
12	3	1,170	3	1	2	\$51,938,097	\$6,349,999	\$49,097,699	\$38,766,869	\$36,640,162	\$33,333,403
13	3	708	3	1	2	\$54,023,130	\$7,593,392	\$49,520,867	\$45,429,363	\$46,691,126	\$43,745,308
14	2	275	2	0	2	\$53,054,804	\$7,052,065	\$44,665,025	\$42,464,489	\$32,604,576	\$30,637,613
15	2	1,067	1	1	0	\$58,059,645	\$5,970,199	\$39,245,512	\$37,978,408	\$9,950,306	\$9,910,841
16	5	1,708	4	0	2	\$71,402,872	\$7,262,803	\$49,100,014	\$48,418,687	\$42,207,724	\$28,499,502
17	5	798	4	0	2	\$83,286,685	\$11,503,826	\$75,772,507	\$75,323,628	\$67,211,559	\$6,708,012
18	4	1,299	3	1	0	\$84,916,489	\$7,649,630	\$60,370,505	\$48,867,718	\$45,383,408	\$9,071,183
19	4	1,754	4	0	0	\$79,566,889	\$1,610,512	\$43,043,261	\$43,043,261	\$8,346,717	\$5,022,938
20	5	2,360	4	1	0	\$77,389,442	\$2,219,558	\$89,746,214	\$37,042,853	\$8,225,948	\$3,516,251
21	4	2,025	2	0	0	\$74,239,647	\$1,881,332	\$121,770,542	\$12,542,213	\$10,407,437	\$2,757,998
22	4	1,351	2	0	0	\$75,310,243	\$1,807,312	\$120,043,575	\$12,048,748	\$6,350,531	\$99,572
23	4	1,150	0	0	0	\$64,666,970	\$1,915,165	\$124,766,139	\$12,767,765	\$4,730,523	\$0
Active Projects	146	99,879	133	8	100	\$1,253,818,864	\$198,599,152	\$1,639,398,796	\$1,314,995,110	\$1,033,852,968	\$837,087,767
Deauthorized	50	620	31	2	0			\$136,432,147	\$51,233,514	\$48,549,969	\$46,096,167
Total Projects	195	99,879	164	10	100	\$1,253,818,864	\$198,599,152	\$1,774,625,589	\$1,366,219,115	\$1,082,393,427	\$883,174,424

Cons Plan	1		1	0	1	\$0	\$41,091	\$238,871	\$143,855	\$143,855	\$143,855
CPSSF	1	0	1	0	0	\$0	\$55,805	\$372,036	\$558,054	\$496,941	\$81,122
CRMS	1		1	1	0	\$0	\$9,956,326	\$114,607,082	\$75,844,538	\$62,377,652	\$56,947,002
MCF	1		1	1	0	\$0	\$225,000	\$1,500,000	\$1,500,000	\$666,704	\$666,704
SRAF	1		1	1	0	\$0	\$85,438	\$569,586	\$569,586	\$426,056	\$426,056
Total Construction Program	200	99,879	169	13	101	\$1,253,818,864 \$1,462.	\$208,907,008 725,871	\$1,891,913,164	\$1,444,835,148	\$1,146,504,635	\$941,439,163