

# 26th PRIORITY PROJECT LIST REPORT (APPENDICES)

**PREPARED BY:** 

LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION

TASK FORCE

September 2017

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Summary and Complete Text of the CWPPRA

# COASTAL WETLANDS PLANNING, PROTECTION & RESTORATION ACT

## Public Law 101-646, Title III

## SECTION 303. Priority Louisiana Coastal Wetlands Restoration Projects.

- <u>Section 303a.</u> 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.
- <u>Section 303b.</u> 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 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 26th 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

<u>Reptiles and Amphibians</u> bullfrog slider turtle American alligator <u>Birds</u> 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 <u>Mammals</u> mink muskrat swamp rabbit

<u>Freshwater Fish</u> channel catfish largemouth bass red ear sunfish bluegill

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

# SUITABILITY INDEX GRAPH DEVELOPMENT

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variables was partially derived, consultation with other professionals and researchers outside the EnvWG, published and unpublished data and studies, and personal knowledge of EnvWG members.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

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

<u>Variable  $V_1$  - Percent of wetland area covered by emergent vegetation</u>. 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 loss of habitat quality through time with the project. Those situations arose primarily when: existing (baseline) emergent vegetation cover exceeded the optimum (> 80 percent); the project was predicted to maintain baseline cover values; and without the project the marsh was predicted to degrade, with a concurrent decline in percent emergent vegetation into the optimal range (60-80 percent). The time factor aggravated the situation when the without-project degradation was not rapid enough to reduce marsh cover values significantly below the optimal range, or below the baseline SI, within the 20-year evaluation period. In those cases, the analysis would show net negative benefits for the project, and positive benefits for letting the marsh degrade rather than maintaining the existing marsh. Coupling that situation with the presumption that marsh conditions are not static, and that Louisiana will continue to lose coastal emergent marsh; and taking into account the purpose of the CWPPRA, the EnvWG decided that, all other factors being equal, the models should favor projects that maximize emergent marsh creation, maintenance, and protection. Therefore, the EnvWG agreed to deviate from a strictly biologically-based habitat suitability index graph for  $V_1$  and established optimal habitat conditions at 100 percent marsh cover.

Variable V<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 V<sub>3</sub> - 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 V<sub>4</sub> - Percent of open water area # 1.5 feet deep in relation to marsh</u> <u>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 V<sub>5</sub> - 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  $V_6$  is determined by calculating an "access value" based on the interaction between the percentage of the project area wetlands considered accessible by aquatic organisms during normal tidal fluctuations, and the type of man-made structures (if any) across identified points of ingress/egress (bayous, canals, etc.). Standardized procedures for calculating the Access Value have been established (Appendix B). It should be noted that access ratings for man-made structures were determined by consensus among EnvWG members and that scientific research has not been conducted to determine the actual access value for each of those structures. Optimal conditions are assumed to exist when all of the study area is accessible and the access points are entirely open and unobstructed.

A fresh marsh with no access is assigned an SI=0.3, reflecting the assumption that, while fresh marshes are important to some species of estuarine-dependent fishes and shellfish, such a marsh lacking access continues to provide benefits to a wide variety of other wildlife and fish species, and is not without habitat value. An intermediate marsh with no access is assigned an SI=0.2, reflecting that intermediate marshes are somewhat more important to estuarine-dependent organisms than fresh marshes. The general rationale and procedure behind the  $V_6$  Suitability Index graph for the brackish marsh model is identical to that established for the fresh/intermediate model. However, brackish marshes are assumed to be more important as habitat for estuarine-dependent fish and shellfish than fresh/intermediate marshes. Therefore, a brackish marsh providing no access is assigned an SI of 0.1. The Suitability Index graph for aquatic organism access in the saline marsh model is the same as that in the brackish marsh model.

#### HABITAT SUITABILITY INDEX FORMULAS

In developing the HSI formulas, the EnvWG recognized that the primary focus of the CWPPRA is on vegetated wetlands, and that some marsh protection strategies could have adverse impacts to aquatic organism access. Therefore, the EnvWG made an *a priori* decision to emphasize variables  $V_1$ ,  $V_2$ , and  $V_6$  by grouping them together, when possible, and weighting them greater than the remaining variables. Weighting was facilitated by treating the grouped variables as a geometric mean. Variables  $V_3$ ,  $V_4$ , and  $V_5$  were grouped to isolate their influence relative to  $V_1$ ,  $V_2$ , and  $V_6$ .

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

and  $V_6$  receives more weight in the saline HSI formula than in the fresh/intermediate formula. As with the Suitability Index graphs, the Habitat Suitability Index formulas were developed by consensus among the EnvWG members.

For several years, 1991 through 1996, the EnvWG utilized one HSI formula specific to each marsh type. However, it was noted that variables  $V_2$  and  $V_4$ , which characterize open water areas only, often resulted in an "artificially inflated" HSI when those variable values were optimal (i.e., SI = 1.0) and open water comprised a very small portion of the project area. For example, Project Area A contains 90 percent emergent marsh and 10 percent open water. Project Area B contains 10 percent emergent marsh and 90 percent open water. Assume the open water in each project area is completely covered by submerged aquatic vegetation and is entirely less than 1.5 feet in depth. Under those conditions, the Suitability Index values for  $V_2$  and  $V_4$  would equal 1.0 for both project areas even though open water only accounts for 10 percent of Project Area A. The EnvWG has commonly referred to this as a "scaling" problem; the Suitability Index values for  $V_2$  and  $V_4$  are not "scaled" in respect to the proportion of the project area they describe. This allows those variables to contribute disproportionately to the HSI in instances when open water constitutes a small portion of the project area.

The EnvWG acknowledged that the scaling problem presented a flaw in the WVA methodology resulting in unrealistic HSI values for certain project areas and eventually resulting in inflated wetland benefits for those projects. During 1996 and 1997, Dr. Gary Shaffer assisted the EnvWG in developing potential solutions to the scaling problem. After several unsuccessful attempts to develop a single HSI formula for each marsh type which scaled the Suitability Index values for V<sub>2</sub> and V<sub>4</sub> 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 marsh (i.e., V<sub>1</sub>, V<sub>3</sub>, V<sub>5</sub>, and V<sub>6</sub>). Likewise, the open water HSI formula contains only those variables important in characterizing the open water habitat (i.e., V<sub>2</sub>, V<sub>3</sub>, V<sub>4</sub>, V<sub>5</sub>, and V<sub>6</sub>). 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: <u>2.1(Emergent Marsh AAHUs) + Open Water AAHUs</u> 3.1

Brackish Marsh: <u>2.6(Emergent Marsh AAHUs) + Open Water AAHUs</u> 3.6

Saline Marsh: <u>3.5(Emergent Marsh AAHUs) + Open Water AAHUs</u> 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<sub>4</sub> Percent of open water area  $\boxed{k}$  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).

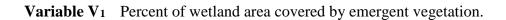
### **Aquatic Organism Access:**

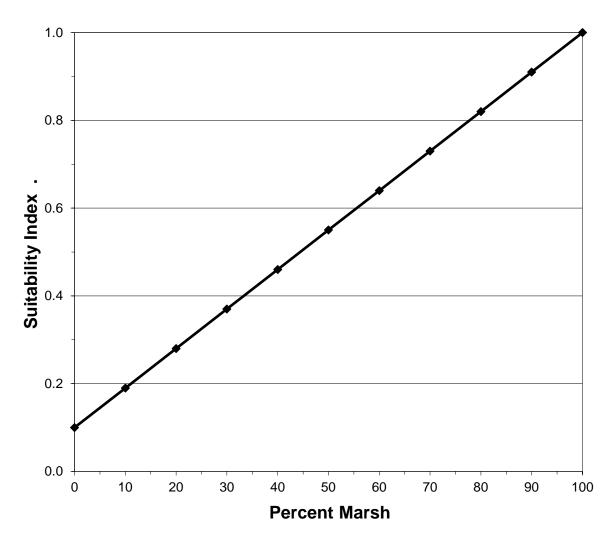
Variable V<sub>6</sub> Aquatic organism access.

#### **HSI Calculations:**

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

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

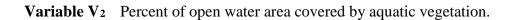


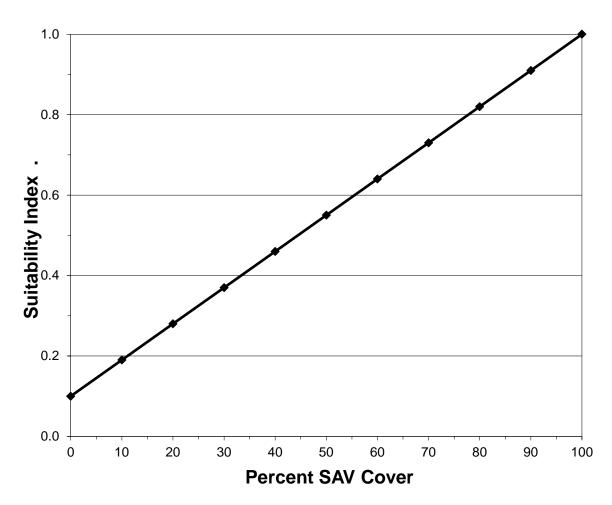


# Suitability Graph

Line Formula

SI = (0.009 \* %) + 0.1

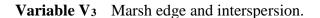


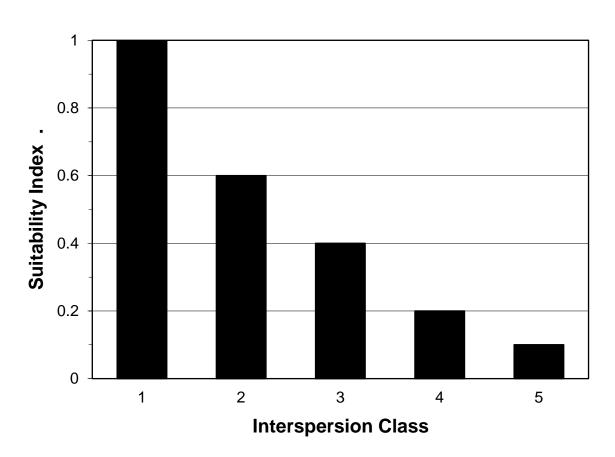


# **Suitability Graph**

Line Formula

SI = (0.009 \* %) + 0.1



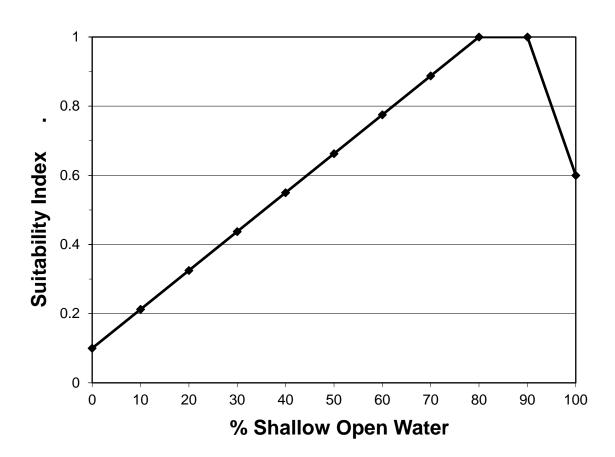


# **Suitability Graph**

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

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





# **Suitability Graph**

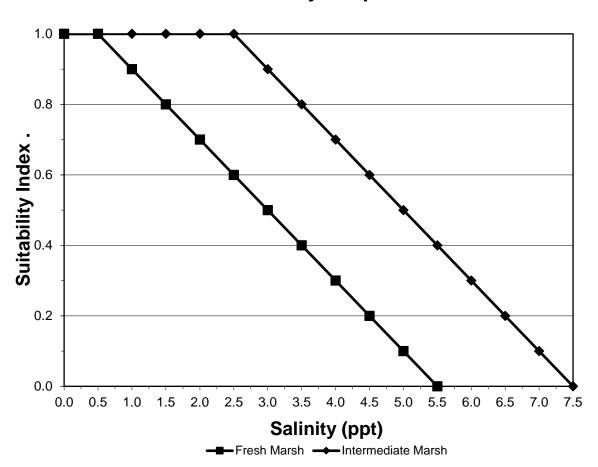
# **Line Formulas**

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**<sup>5</sup> Mean high salinity during the growing season (March through November).



**Suitability Graph** 

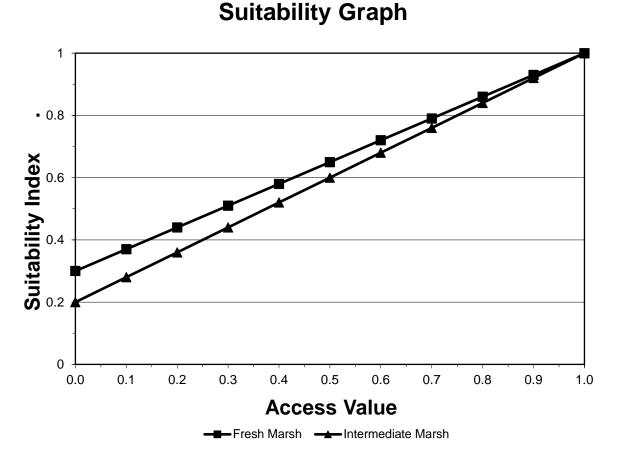
#### **Line Formulas**

#### Fresh Marsh:

If 0 < ppt <= 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 =  $(-0.20 * ppt) + 1.50$ 



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

#### **Line Formulas**

**Fresh Marsh:** 

SI = (0.7 \* Access Value) + 0.3

#### **Intermediate Marsh:**

SI = (0.8 \* Access Value) + 0.2

Access Value = P \* R, where "P" = percentage of wetland area considered NOTE: 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.

#### **BRACKISH MARSH**

# Vegetation:

- Variable  $V_1$  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<sub>4</sub> 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**

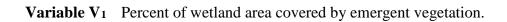
Variable V<sub>6</sub> Aquatic organism access.

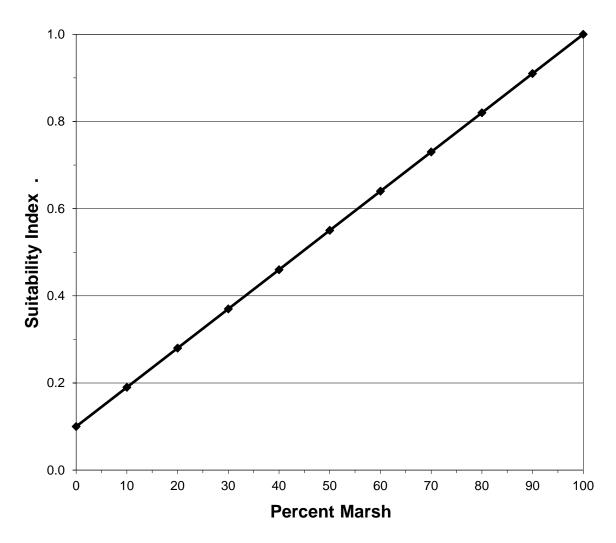
## **HSI Calculations:**

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

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

# **BRACKISH MARSH**





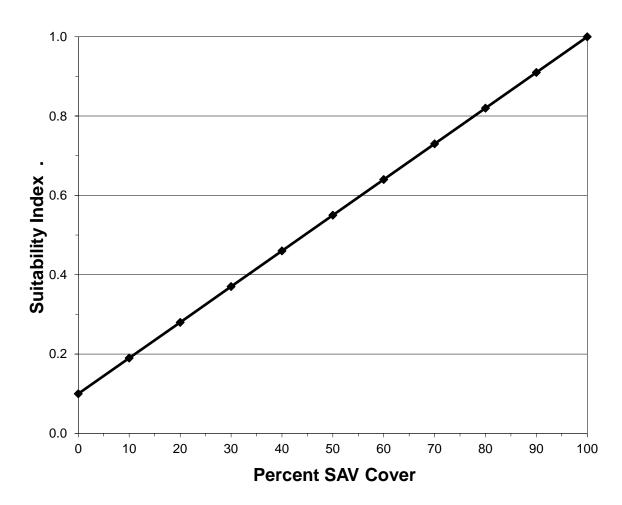
# **Suitability Graph**

# Line Formula

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

# **BRACKISH MARSH**

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

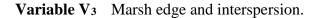


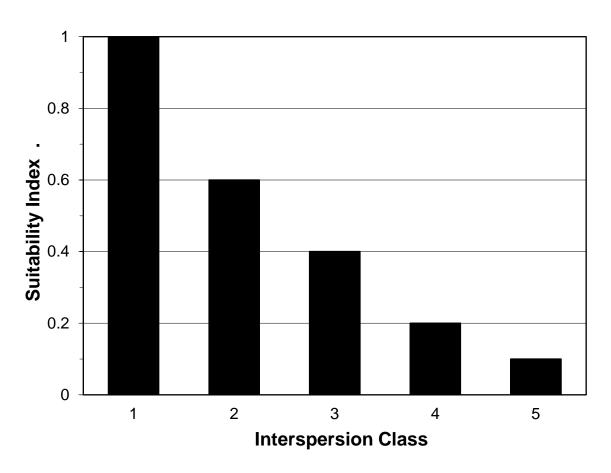
# **Suitability Graph**

Line Formula

SI = (0.009 \* %) + 0.1

#### **BRACKISH MARSH**





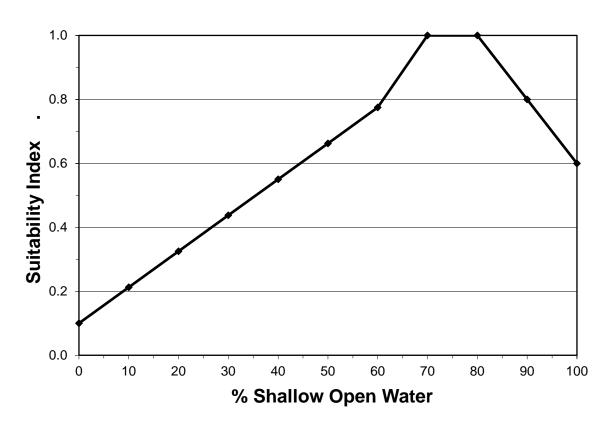
# **Suitability Graph**

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

- 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.

## **BRACKISH MARSH**

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



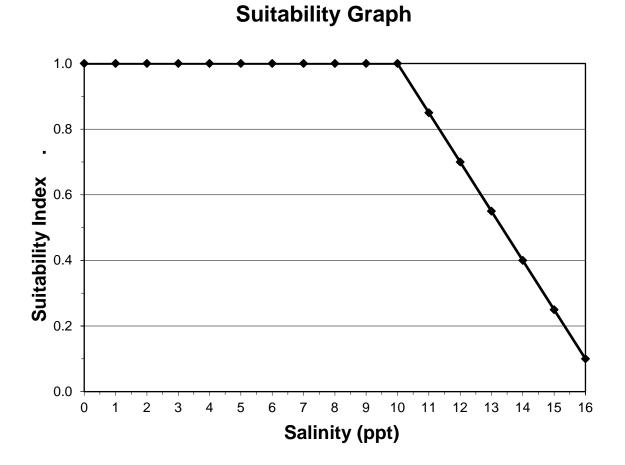
# **Suitability Graph**

#### **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



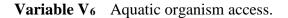
Variable V<sub>5</sub> Average annual salinity.

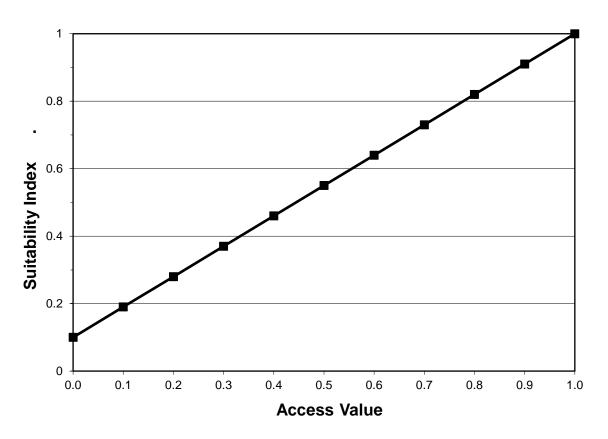
## **Line Formulas**

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

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

#### **BRACKISH MARSH**





## **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<sub>4</sub> Percent of open water area  $\boxed{1.5}$  feet deep, in relation to marsh surface.

#### Water Quality:

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

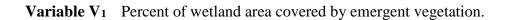
#### **Aquatic Organism Access:**

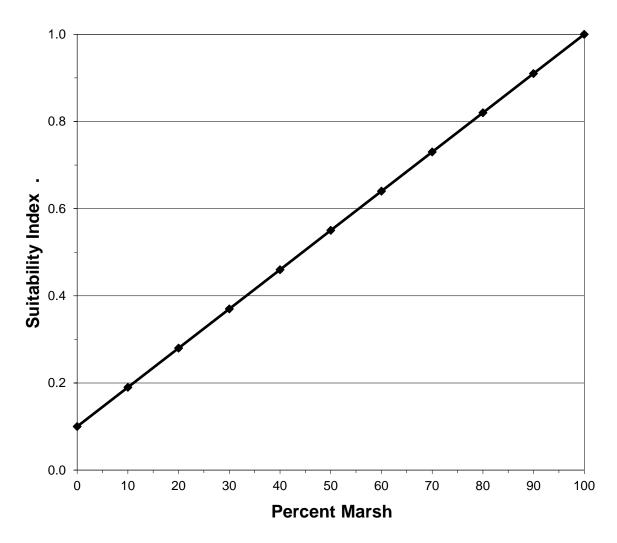
Variable V<sub>6</sub> Aquatic organism access.

#### **HSI Calculation:**

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

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

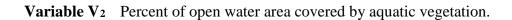


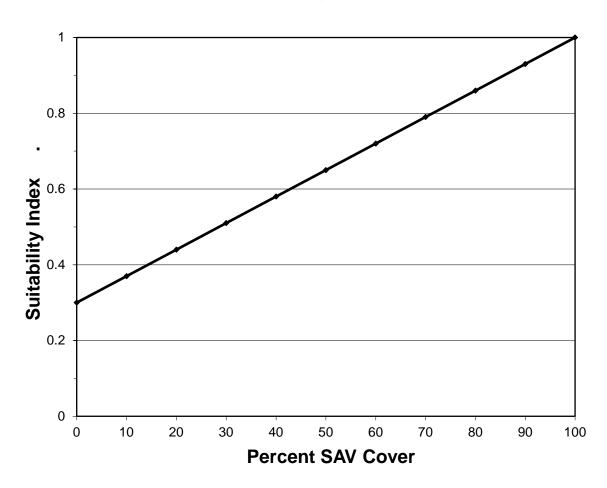


# **Suitability Graph**

#### Line Formula

SI = (0.009 \* %) + 0.1

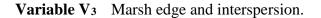


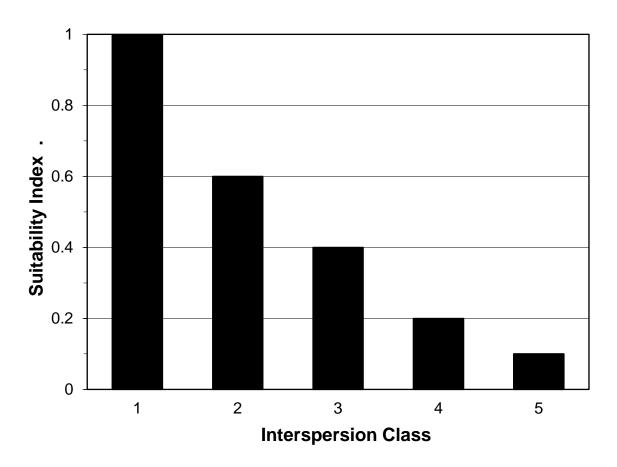


# **Suitability Graph**

## Line Formula

SI = (0.007 \* %) + 0.3



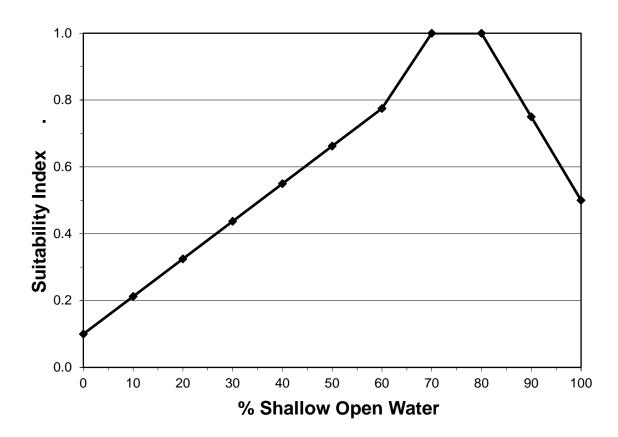


# **Suitability Graph**

## Instructions for Calculating 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. If the <u>entire</u> project area is solid assign an interspersion Class 1. Conversely, if the <u>entire</u> project area is assign an interspersion Class 5.

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



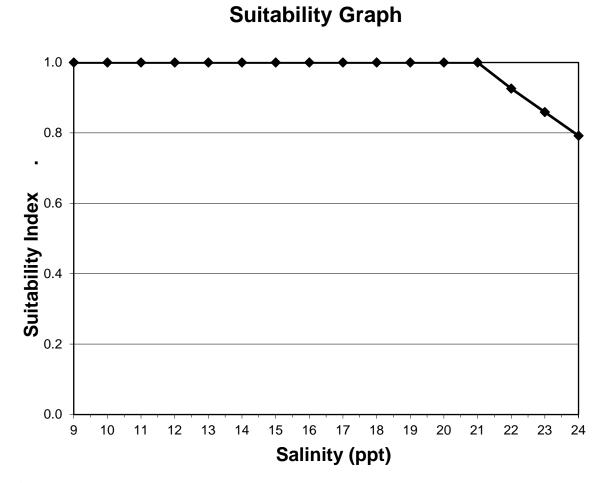
# **Suitability Graph**

## **Line Formulas**

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

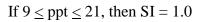
If  $70 \le \% \le 80$ , then SI = 1.0

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

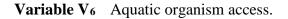


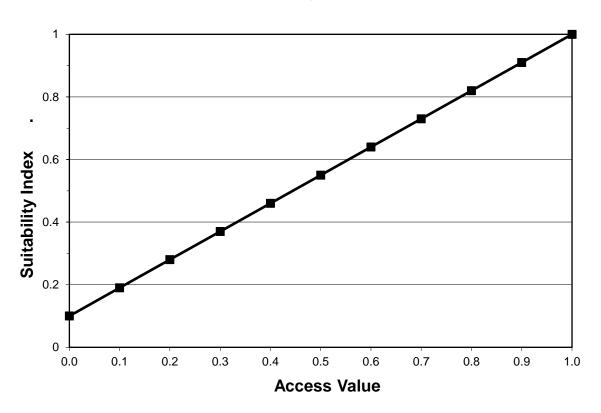
Variable V<sub>5</sub> Average annual salinity.





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





## **Suitability Graph**

#### Line Formula

SI = (0.9 \* Access Value) + 0.1

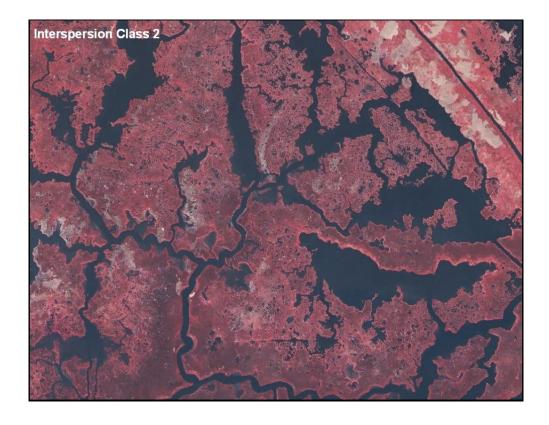
<u>Note</u>: Access Value = P \* R, where "P" = percentage of wetland area considered accessible by estuarine organisms during normal tidal fluctuations, and "R" = Structure Rating.

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



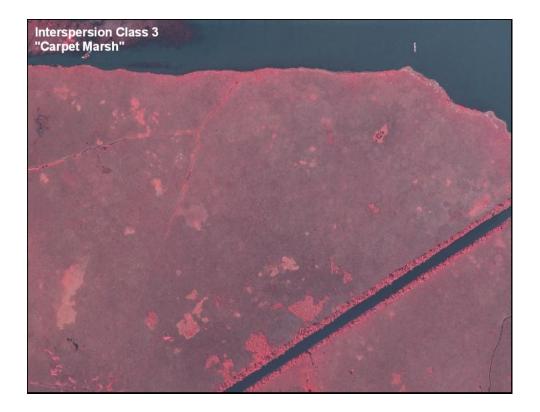
























#### ATTACHMENT C - PROCEDURE FOR CALCULATING ACCESS VALUE

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.

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		

2. Determine the Structure Rating (R) for each project structure as follows:

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.

Access Value = P= .90

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

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

c. Two openings into area, <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.

Access Value = P= .90

<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

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

$$= ([P_1*R_1]+[P_2*R_2]+[P_3*R_3])/(P_1+P_2+P_3)$$
  
= ([.20\*.5]+[.40\*.35]+[.30\*.1])/(.20+.40+.30)  
= (.10+.14+.03)/.90  
= .27/.90  
= .30

## Wetland Value Assessment Methodology Coastal Chenier/Ridge Community Model

## Introduction

The Wetland Value Assessment (WVA) methodology is a quantitative habitat-based assessment methodology developed for use in determining wetland benefits of project proposals submitted for funding under the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA). The WVA quantifies changes in fish and wildlife habitat quality and quantity that are expected to result from a proposed wetland restoration project. The WVA operates under the assumption that optimal conditions for fish and wildlife habitat within a given coastal wetland habitat type can be characterized, and that existing or predicted conditions can be compared to that optimum to provide an index of habitat quality. Habitat quality is estimated or expressed through the use of community models developed specifically for each habitat type. The results of the WVA, measured in Average Annual Habitat Units (AAHUs), can be combined with cost data to provide a measure of the effectiveness of a proposed project in terms of annualized cost per AAHU gained. In addition, the WVA methodology provides an estimate of the number of acres benefited or enhanced by the project and the net acres of habitat protected/restored.

The WVA was developed by the CWPPRA Environmental Work Group (EnvWG) after the passage of CWPPRA in 1990. The EnvWG includes members from each agency represented on the CWPPRA Task Force and members of the Academic Advisory Group (AAG). The WVA is a modification of the Habitat Evaluation Procedures (HEP) developed by the U.S. Fish and Wildlife Service (U.S. Fish and Wildlife Service 1980). HEP has been widely used by the Fish and Wildlife Service (FWS) and other Federal and State agencies in evaluating the impacts of development projects on fish and wildlife resources. A notable difference exists between the two methodologies, however, in that HEP generally uses a species-oriented approach, whereas the WVA utilizes a community approach.

The WVA has been developed for application to several habitat types along the Louisiana coast and community models have been developed for fresh marsh, intermediate marsh, brackish marsh, saline marsh, swamp, barrier islands, and barrier headlands. The coastal chenier/ridge community model, as well as a bottomland hardwoods model, were developed outside of CWPPRA but are utilized by the EnvWG. The WVA models have been developed for determining the suitability of Louisiana coastal wetlands in providing resting, foraging, breeding, and nursery habitat to a diverse assemblage of fish and wildlife species. The models have been designed to function at a community level and therefore attempt to define an optimum combination of habitat conditions for <u>all</u> fish and wildlife species utilizing a given habitat type. Each model consists of 1) a list of variables that are considered important in characterizing fish and wildlife habitat, 2) a Suitability Index (SI) graph for each variable, which defines the assumed relationship between habitat quality (Suitability Index) and different variable values, and 3) a mathematical formula that combines the Suitability Index for each variable into a single value for habitat quality; that single value is referred to as the Habitat Suitability Index, or HSI. The output of each model (the HSI) is assumed to have a linear relationship with the suitability of a coastal wetland system in providing fish and wildlife habitat.

Note: This document has been primarily developed to guide the application of the coastal chenier/ridge community model for CWPPRA. However, the guidance it provides may be used by other restoration programs (e.g., Louisiana Coastal Area, U.S. Army Corps of Engineers Civil Works) recognizing the distinction between projects that result in net habitat gain (i.e., restoration), net loss (i.e., development), or no net loss (i.e., mitigation). Furthermore, for development and mitigation projects, it should be recognized that the role and jurisdiction of specific groups may vary from program to program. In addition, these models may be used to calculate the number of average annual habitat units lost to determine the potential impacts and adequately compensate (i.e., mitigation) for those impacts.

## **Geographic Scope**

The coastal chenier/ridge community model bases its habitat assessment scheme on variables that are quite broadly applicable to migrant habitats outside of Louisiana, especially in the eastern USA and southern Canada where the basic plant community is relatively homogeneous (deciduous forest). Habitat characteristics dealing with forest structure and floristic diversity are relevant defining features of stopover site quality throughout this region.

The scientific literature used to justify the model parameters and coefficients comes primarily from the eastern USA and extreme southeastern Canada (Great Lakes shoreline; Dunn 2001), supplemented by some studies from the western USA and two from outside North America (Europe and Israel; Chernetsov and Manukyan 2000, Sapir et al. 2004). The latter studies were included because they provided insights that appeared transferable given the similarities of the Neartic-Neotropical and Palearctic-Ethiopian migratory systems. Although the list of regular migrants might change by a few species if one moves from the Louisiana coast to South Dakota or New England, there are relatively few such examples. This is because almost all species that migrate from eastern North America pass through the western Gulf en route to the tropics- the few exceptions being songbirds that winter in the Caribbean or South America and pass east of the area. However, the inclusion of these species in some of the studies in other parts of the eastern USA is probably not problematic, as they show the same broad foraging and habitat use characteristics as the species that pass through Louisiana.

The coastal chenier/ridge community WVA model utilizes a set of variables considered important in determining the suitability of non-grazed barrier headland ridges, cheniers, and spoil areas in Louisiana that are, or are proposed to be, vegetated in primarily non-obligate wetland plant species, to provide the habitat necessary to support transient migratory landbirds in the spring and fall. The area of the state to which this model is applicable includes the portions of Cameron, Vermilion, Iberia, St. Mary, Terrebonne, Lafourche, Jefferson, Plaquemines and St. Bernard Parishes south of the Gulf Intracoastal Waterway. The model attempts to assess the suitability of habitat for providing foraging and resting requirements to a diverse assemblage of migratory landbirds. This model has not been validated with field data.

## **Minimum Area of Application**

Various authors have concluded that even very small patches of wooded habitat can be attractive to migrants. Migrants were found in greater densities in smaller wooded hammocks in coastal South Carolina in a sample that ranged down to 0.32 ha (Somershoe and Chandler 2004), and Skagen et al. (1998) concluded that riparian habitat patches were important to migrants in the southwestern USA no matter how small. Pachett and Dunning (2009) found that migrant densities actually increased as woodlot size decreased, in wooded fragments in an agricultural landscape in Indiana. All their woodlots were < 10 ha in size.

The value of tiny woodlots to migrant birds stems from the fact that migrants in an inhospitable landscape will gravitate to whatever forested habitat is available. It is quite possible that many of these small fragments are lower in quality than habitats in larger forested areas, but this is not a variable that can be reliably addressed by this model as data on food resources and predation threats are likely to be unavailable for most sites. Thus, this model can probably be profitably applied to even very small woodlot fragments less than 1 ha in size.

## **Evaluation of Nominated Projects**

Each year, projects are nominated at regional planning team meetings held at various locations along the coast. Each nominated project is assigned to one of the five Federal agencies which administer the CWPPRA program. Those agencies include the FWS, Environmental Protection Agency (EPA), National Marine Fisheries Service (NMFS), U.S. Army Corps of Engineers (USACE), and Natural Resources Conservation Service (NRCS). The sponsoring agency is responsible for preparation of fact sheets which include a project description, preliminary costs, and an estimate of project benefits. The features, estimated benefits, and estimated costs for all nominated projects are reviewed by the EnvWG and the Engineering Work Group (EngWG). The benefits and cost estimates, and other pertinent information are provided to the Planning and Evaluation Subcommittee which prepares a matrix containing all project information. The Technical Committee utilizes that information in selecting which projects to further evaluate as candidate Priority Project List (PPL) projects. Candidate projects remain assigned to one of the five Federal agencies. The Louisiana Office of Coastal Protection and Restoration (OCPR) usually serves in a supporting role to the Federal agencies although they may have the primary responsibility of preparing information for some candidate projects. The sponsoring agency serves as the point of contact for the project and is responsible for development of project features, preparation of cost estimates, and preparation of the draft WVA.

## **Field Investigation of Candidate Projects**

The first step in evaluating candidate projects is to conduct a field investigation of the project area. This field investigation has several purposes: 1) familiarize the EnvWG and EngWG with the project area, 2) visit the locations of project features, 3) discuss a benefited area for the upcoming project boundary meeting, 4) determine habitat conditions in the project area, 5) compile a list of vegetative species and discuss habitat classification, and 6) collect data for the WVA (e.g., cover of submerged aquatics, water depths, salinities, etc.).

The sponsoring agency is responsible for field trip logistics and coordinating with landowners, local government, all CWPPRA agencies, the AAG, and other field trip attendees. Field trip attendees typically consist of each agency's EnvWG and EngWG representatives. The sponsoring agency should be familiar with the project area so that field time is spent efficiently.

The primary purpose of the field investigation is to allow members of the EnvWG and EngWG to familiarize themselves with the project area and project features in order to make informed decisions in the evaluation of the WVA. The sponsoring agency should not treat the interagency field investigation as the only opportunity to conduct surveys or take measurements to develop designs and/or cost estimates for the project. The sponsoring agency should have obtained that information during previous field trips or should plan a follow-up field trip. In cases where the project area is very large, it may be necessary to divide the group into small work parties to collect WVA information across the project area or to allow some areas to be investigated by at least a subset of the entire group. However, an effort should be made to keep the group together to facilitate discussion about wetland conditions in the project area, the causes of habitat loss, the project features, and the effectiveness of the project features.

## **Project Boundary Determination**

The project boundary is the area where a measurable biological impact, in regard to the WVA variables, is expected to occur with project implementation. Project boundary meetings are usually scheduled after the completion of candidate project field trips. Boundary meetings are attended by the EnvWG, EngWG, and sometimes other agency representatives. The U.S. Geological Survey (USGS)-Baton Rouge Field Station provides GIS support. Proposed project boundaries (i.e., shape files) should be provided to USGS prior to the boundary meeting. At the boundary meeting, the project sponsor provides a map(s) indicating the project features and presents the rationale for the proposed boundary. The boundary is discussed by the entire group and revisions to the boundary are made by consensus or, if necessary, by vote.

Coastal chenier/ridge habitat includes forested barrier headland ridges, forested cheniers, and in some instances, forested spoil areas. Such areas are typically at an elevation capable of supporting trees and/or shrub/scrub vegetation and are not influenced by an average daily tide.

Note: Outside of the CWPPRA process (e.g., USACE civil works project evaluations), restoration boundaries are determined through the use of aerial/satellite photographs, LIDAR information, USGS habitat and quadrangle maps and site visits. The boundary and revisions to the boundary are made by interagency group consensus. For non-restoration projects, boundaries are usually provided by the construction agency as areas designated for construction or clearing (typically to provide temporary or permanent rights-of-way) or areas that will experience changes in hydrology.

## **Selection of Target Years**

All CWPPRA project WVAs are conducted for a period of 20 years which corresponds to the authorized project life of a CWPPRA project. (*Note: Other programs (e.g., LCA) may require a longer period of analysis (e.g., 50 years or more to include the date of impact, construction* 

*duration, or date of mitigation*)). Each project evaluation must include target years (TY) 0, 1, and 20. Target year 0 (TY0) represents baseline or exiting conditions in the project area and TY20 (or TY50 for LCA projects) represents the projected conditions at the end of the project life. A linear fit (over the project life) is used to make the projection unless there are expected changes that may occur in the intervening years. Examples of these changes include (but are not limited to):

- 1. Storm events: Storm frequencies for the Louisiana coast vary depending on the period of record analyzed but are generally 8 to 10 years. For sites located along the gulf shoreline, it may be necessary to select a target year which corresponds to a storm event which is likely to occur within the project life in order to capture the effects of the storm. A storm event could impact a coastal chenier/ridge by reducing vegetative cover if the chenier/ridge is overwashed. Selection of a storm impact target year should be based on the storm return frequency that would result in substantial impact (e.g., overtopping). Storm impact and return frequency (Stone et al. 1997), by barrier system, should be used as justification when selecting target years. If the FWOP loss rates are based on data which include the effects of storm events then care must be taken to ensure that effects of storm events are not double counted.
- 2. Changes in frequency and duration of flooding: As relative sea level (RSL) rise continues, flooding frequency and duration may increase which could result in habitat loss.
- 3. Salinity changes: Salinity may increase as a system continues to lose land or is impacted by a channel breach.
- 4. Project implementation: Additional CWPPRA (or non-CWPPRA) projects may be built which could influence the conditions in the current project area.
- 5. Maintenance events: These would include items such as phased planting, a second lift on rocks used for shoreline protection, additional pumping of material for beach nourishment, replacement of structures, etc.
- 6. Increase or decrease in vegetative cover: These could be associated with project features (initial or phased) or environmental changes (see numbers 1, 2, 3, and 5).

During the life span for which a project analysis is conducted, target years are selected which represent time intervals when changes are expected to occur. When habitat or environmental conditions change sufficient to result in a change to a variable's suitability index, additional target years may be added to the analysis. The new conditions are then projected forward to obtain the expected conditions until the next target year, or the end of the project life if there are no more intervening target years. In addition, target years should be selected for years in which any variable undergoes sufficient change to result in a large change in the overall HSI.

The EnvWG has adopted certain target year conventions for certain project types. Although these conventions are generally applied, exceptions are sometimes proposed and may be

accepted by the group. It should be noted that these conventions are based on assumptions developed by the group and have not been validated. It is the responsibility of the project sponsor to provide justification for deviating from these conventions and this should be recorded in the Project Information Sheet. These conventions are summarized in Table 1. Maintenance events shall be included as additional target years as needed; other target years may be added to include other expected events (breaches, vegetation or salinity shifts, or changes in RSL rise). The number of target years may be extended for programs which require consideration of a longer project life. Values for all variables must be determined for each target year selected. The variable values represent conditions at the end of the target year. For FWP, TY1 represents the conditions in the project area one year after project construction.

Table 1	Summary of Targ	et Years used for CWPPRA	coastal chenier/ridge projects.
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Project/Habitat	Target Year						
Туре	0	1	3	5	10	20	>20
Coastal Ridge/Chenier Restoration	Measured baseline				Storm Event (?)		Storm Event (?)

## Use of the Community Habitat Models

Each community model contains a set of variables which is important in characterizing the habitat quality of several coastal wetland habitat types relative to the fish and wildlife communities dependent on those environments. Baseline (TY0) values are determined for each of those variables to describe existing conditions in the project area. Future values for those variables are projected to describe conditions in the area without the project and with the project. Projecting future values is the most complicated, and sometimes controversial, part of this process. It requires project sponsors to substantiate their claims with monitoring data, research findings, scientific literature, or examples of project success in other areas. Not all future projections can be substantiated by the results of monitoring or research, and, as with all wetland assessment methodologies, some projections are based on best professional judgment and can be subjective. It should be noted that future projections are not the sole responsibility of the project planner. It is the responsibility of the evaluation team (i.e., agency representatives, academics, and others) to use the best information available in developing those projections. Many times, the collective knowledge of the evaluation team is the only tool available to predict project benefits. The various workgroups are comprised of many individuals with diverse backgrounds and all project scenarios are discussed by the group and a final outcome is usually reached by consensus. Key assumptions made during the evaluation process, e.g., regarding the effects of climate change or storms, should be recorded on the Project Information Sheet. There are occasionally off-site conditions and human disturbances adjacent to a project area. These have an effect on the animals in the project area, however these disturbances are considered to be the same under FWOP and FWP conditions.

An important point to consider when projecting benefits is the effect of other constructed or authorized projects on the project area. Benefits attributed to those projects should be taken into consideration when projecting benefits for any candidate project. That procedure prevents a candidate project from being credited with benefits previously attributed to another project (i.e., double-counting). CWPPRA projects are not taken into consideration unless authorized for construction. Project planners should also consider the benefits of non-CWPPRA projects funded by other authorities (e.g., WRDA, State-only projects, and landowner-funded projects). An important aspect of the WVA, as it is used in restoration planning, is the comparison of the FWOP to the FWP condition. If another project influences the project area of the evaluated project, the other project must be considered as baseline and put into both FWOP and FWP. For instance, if a project being evaluated is in the area of a river diversion, the effect of the diversion must be considered in both the FWOP and FWP conditions.

#### Model Application

The coastal chenier/ridge community model was developed to determine the suitability of coastal forested ridges in providing foraging and resting habitat for transient migratory landbirds. The model should be applied to forested habitats within the coastal zone consisting of non-grazed barrier headland ridges, cheniers, and in some cases, spoil areas. Those areas should be at an elevation capable of supporting woody vegetation such as trees and/or shrub/scrub habitat and are not influenced by the average daily tide. This model is not intended to be applied to other forested habitats such as bottomland hardwoods or swamp.

#### Baseline Habitat Classification and Land/Water Data

Baseline data can be obtained from the most recent habitat classification data provided by USGS (or other sources) which delineates forested areas. As with other project types, if the project area acreage is not current, the erosion rate should be applied to that acreage and adjusted to the current year. For coastal ridge habitats located along the gulf shoreline, erosion data could be obtained from the U.S. Geological Survey's Louisiana Barrier Island Erosion Study-Atlas of Shoreline Changes in Louisiana from 1853 to 1989 and the Atlas of Sea-Floor Changes from 1878 to 1989.

## **Variable Selection**

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

More than 80 species of neotropical migratory landbirds from at least eleven Families pass through Louisiana during the spring and fall (Sauer et al. 2000). At the peak of spring migration, it is estimated that as many as 50,000 birds per day per mile of coastline enter the state (Conner

and Day 1987). During favorable weather conditions, the majority of these birds will bypass small wooded areas embedded in coastal marsh and land in extensive forested areas north of the marshes, but during thunderstorms or other unfavorable conditions, a large percentage of these individuals may stop in these small coastal wood patches (Gauthreaux 1971). Identifying the optimal stopover habitat characteristics for such a varied group of birds is challenging. Martin (1980) stated that migrants often select habitats en route that superficially resemble their breeding habitat. Moore et al. (1995) concluded that spring migrants on the northern Gulf of Mexico coast preferentially select structurally diverse stopover sites, consisting of forested areas with mixed shrub layers, and that maintenance of plant species and structural diversity should be a goal at migratory landbird stopover sites. Similarly, Martin (1980) found that habitat structure in shelterbelt "island" habitat in the Great Plains influences migrant diversity and abundance. Robinson and Holmes (1984) determined that the diversity of bird species in terrestrial habitats is correlated with factors associated with vegetation structure or composition, including diversity of foliage height, and stated that, in general, the number of bird species increases with the addition of vertical vegetation layers. Based upon the findings above and upon prior field investigations, we proposed three habitat assessment variables: 1) percent tree canopy cover, 2) percent shrub/midstory canopy cover, and 3) the number of native woody species planted/present on the site. We also identified some tentative variables, including percent herbaceous ground cover, minimum patch size, average tree height, and proximity of the site to other forested patches.

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

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

stopover sites. The developers of this model assumed that percent canopy cover was a more pertinent variable to consider.

## Suitability Index Graph Development

Each of the community models developed for CWPPRA includes SI graphs for each variable. Suitability Index graphs are unique to each variable and define the relationship between that variable and habitat quality. A variety of resources was utilized to construct each SI graph, including consultation with professionals and scientists with expertise in the study of migrant landbirds and their habitat requirements, published and unpublished data and studies, and personal knowledge of the model development team. A review of contemporary, peer-reviewed scientific literature was also conducted for each of the variables, providing ecological support for the form of the SI graph for each of the variables (Appendix A). The process of SI graph development is one of constant evolution, feedback, and refinement; the form of each SI graph was decided upon through consensus among the model development team.

All suitability graphs have a minimal SI of 0.1. This is because any area that falls into the cover type addressed by the WVA model provides some habitat value. For example, a coastal ridge with no shrub or midstory cover still has value to migrant landbirds.

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

### Variable 1 – Percent tree canopy cover

Neotropical migratory landbirds preferentially use stopover sites exhibiting high structural and floristic diversity (Moore et al.1995). To achieve the desired vertical plant diversity (i.e., a mix of trees, tree saplings, shrubs, vines, and herbaceous plants), a moderately closed tree canopy would be preferred to over a totally closed canopy (Hunter, pers. comm.; Barrow, pers. comm.; Woodrey, pers. comm.). Tree canopy coverage ranging from 65 - 85% is assumed to provide optimal conditions to allow for establishment of midstory trees, shrubs, vines, and herbaceous plants, provided that the site is not grazed. Tree species that may occur at coastal stopover sites include sugarberry (*Celtis laevigata*), toothache tree (*Zanthoxylum clava-herculis*), live oak (*Quercus virginiana*), water oak (*Q. nigra*), honey locust (*Gleditsia triacanthos*), red mulberry (*Morus rubra*), and green haw (*Crataegus viridis*) (Louisiana Natural Heritage Program 1988, Materne 2000, Gosselink et al. 1979, Thomas and Allen 1996, Thomas and Allen 1998).

#### Variable 2 – Percent shrub/midstory cover

Shrub-scrub habitats provide important foraging and resting areas for migrant landbirds (Moore et al. 1995). Shrub-scrub habitats are also presumed to be important to migratory passerine birds as refuges from raptor predators (Moore et al. 1990). For the purposes of this model, shrub/midstory means multi-stemmed shrubs, single-stemmed midstory trees, single-stemmed saplings of overstory tree species, and woody vines. Shrub/midstory canopy coverage ranging from 35 - 65% is assumed to represent optimal conditions at a forested site. Species of shrubs, small trees, and woody vines that may be found at stopover sites include Small's acacia (*Acacia minuta*), wax myrtle (*Morella cerifera*), dwarf palmetto (*Sabal minor*), yaupon holly (*Ilex*)

*vomitoria*), saltbush (*Baccharis halimifolia*), greenbriars (*Smilax spp.*), grapes (*Vitis spp.*), prickly pear cactus (*Opuntia spp.*), Virginia creeper (*Parthenocissus quinquefolia*), pepper vine (*Ampelopsis arborea*), blackberries (*Rubus spp.*), rattlebox (*Sesbania drummondii*), marshelder (*Iva frutescens*), poison ivy (*Toxicodendron radicans*), Carolina wolf-berry (*Lycium carolinianum*), marine vine (*Cissus incisa*), elderberry (*Sambucus canadensis*), and Chinese tallow (*Triadica sebifera*) (Louisiana Natural Heritage Program 1988, Materne 2000, Gosselink et al. 1979, Thomas and Allen 1996, Thomas and Allen 1998).

#### Variable 3 – Native woody species diversity

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

#### **Habitat Suitability Index Formula**

Within the HSI formula, any Suitability Index can be weighted by various means to increase the power or "importance" of that variable relative to the other variables in determining the HSI. For this model, it was assumed that the variables are of equal weight in determining the habitat quality of a coastal chenier/ridge. A geometric mean was chosen, as opposed to an arithmetic mean, to convey the weak compensatory relationship between the three variables. An arithmetic mean is often used when it is assumed that the model variables have a strong compensatory relationship (i.e., a high value for one variable can compensate for the low value of another variable). The geometric mean is used to discourage a variable with a marginal or low suitability from being offset by the high suitability of the other variables (U.S. Fish and Wildlife Service 1981). It was assumed that the three variables in this model do not have a strong compensatory relationship.

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

## Subsidence and Sea Level Rise

Subsidence and sea level rise (SLR) are assumed to affect FWOP and FWP scenarios. For most CWPPRA project evaluations (e.g., those within interior coastal areas), it is assumed that historical wetland loss rates calculated from a recent time period (e.g., 1985 to 2010) adequately capture the effects of subsidence and SLR for the relatively short analysis period of 20 years. However, for barrier island project evaluations, measures of subsidence and SLR are incorporated into many of the analytical modeling tools (e.g., SBEACH) used to determine project performance.

### **Model Revisions**

As our knowledge of coastal ecology and coastal restoration benefits improves, the need may arise for model revision. Model revisions are documented in Appendix B to allow tracking between versions. In addition, the "Revisions" tab of the Excel model spreadsheet should also reflect any revisions and the revision date.

## **Additional Notes**

All project WVAs should be prepared in the Project Information Sheet (PIS) format (Appendix C) which was adopted by the EnvWG. At a minimum, the PIS should provide; 1) baseline habitat analysis, 2) marsh/wetland loss analysis, 3) the calculations for each variable, 4) documentation of data sources and key assumptions and 5) a list of literature cited and/or reference material. Project evaluations are conducted much more efficiently when the project planner is well-prepared and all necessary information is presented in the PIS. The PIS should be revised after the WVA meeting to reflect all decisions made by the EnvWG. A copy of the final PIS should be provided to each member of the EnvWG.

The official calculation of project benefits is the responsibility of the EnvWG Chairman. However, project planners are encouraged to also calculate project benefits to serve as a check on the information provided to the CWPPRA Planning and Evaluation Subcommittee. Project benefits are calculated using Excel spreadsheets which have been developed specifically for each habitat model.

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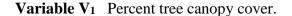
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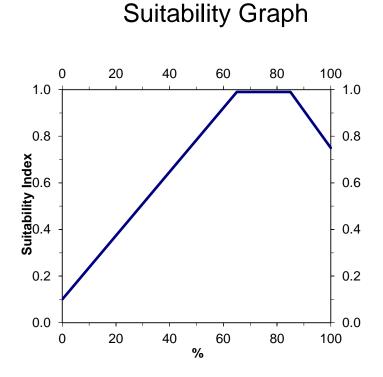
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#### **COASTAL CHENIER/RIDGE**





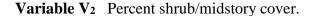
#### **Line Formulas**

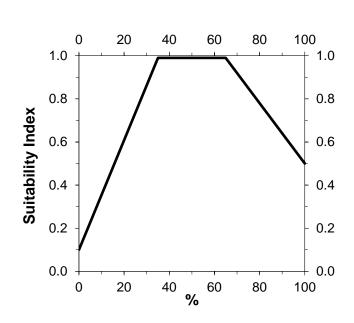
If % < 65, then SI = (0.014\*%) + 0.1If  $65 \le \% \le 85$ , then SI = 1.0 If % > 85, then SI = (-0.017\*%) + 2.445

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

#### **COASTAL CHENIER/RIDGE**

Suitability Graph





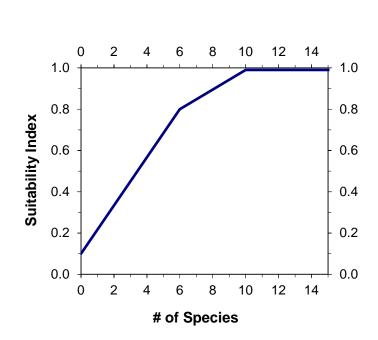
#### **Line Formulas**

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

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

#### **COASTAL CHENIER/RIDGE**

Variable V<sub>3</sub> Native woody species diversity (shrubs, midstory trees, woody vines and overstory trees).



# Suitability Graph

#### **Line Formulas**

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

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

# Appendix A

A description of the relative role of the model variables in providing habitat to the modeled community based on available, contemporary peer-reviewed scientific literature is provided below.

## Variable V1 – Percent tree canopy cover

The presence of both a substantial canopy and sufficient light penetration to allow dense understory and edge characteristics is important. Substantial canopy coverage is important because providing habitat for forest dwelling songbird migrants is the expressed goal of managing these habitats, and therefore significant canopy vegetation must be present to make forest species accept these habitats. The existence of sufficient canopy opening to allow light penetration to stimulate understory development is a recognition of the value of scrubby and edge habitats for migratory small land birds. The attractiveness of early successional, edge, or scrubby habitats to migrants has been reported numerous times in studies of migrant stopover habitat selection in North America (Kilgo et al. 1999; Latta and Brown 1999; MacKinnon and Aburto 2003; Martin and Karr 1986; Rodewald and Brittingham 2002, 2004, 2007; Smith and Hatch 2008; Suthers et al. 2000; Swanson et al. 2003; Willson et al. 1982). Others have specifically reported high use of habitat with low canopy cover (Blake and Hopper 1986) or successful refueling in such open canopy habitats (Bonter et al. 2007, who reported gains in mass of 9% per day in spring and fall).

## Variable V2 – Percent shrub/midstory cover

Various woodland migrants inhabit the lower strata of forests either in passage or on their winter or summer ranges, such as the Kentucky Warbler (*Oporornis formosus*) or Northern Waterthrush (*Seiurus noveboracensis*) (Lowery 1974, Rappole and Warner 1976). One study of passage migrants has found increased numbers associated with dense understory in Arizona (Hutto 1985), and another found shrub/sapling breeding species to show high use of areas with dense cover in the shrub layer in their Pennsylvania stopovers (Rodewald and Brittingham 2007). Migrants in South Dakota have shown high use of habitats dominated by ragweed understory (Swanson et al. 2003). Another reason for high emphasis on low strata is the frequent use of fruit by passage migrants (Parrish 1997, Smith et al. 2007, Suthers et al. 2000); other studies have shown their habitat choice to be correlated with availability of fruit in the eastern USA (Blake and Hopper 1986, Buler et al. 2007) or in Israel (Sapir et al. 2004). Fruits are often associated with scrubby, edge, or early successional habitats in these studies. The importance of having understory or midstory vegetation at stopover sites, whether because low strata are preferred by a species or because it utilizes fruit, are the reason for weighing understory coverage equally to canopy coverage.

#### Variable V3 – Native woody species diversity

Native woody species floristic diversity has also been connected to migrant habitat use during stopover. Passage migrants have shown greater use of sites with higher floristic diversity in New Mexico (Walker 2008) and South Dakota (Martin 1980). A study in Louisiana showed that

migrants use a diverse array of foods on cheniers that include arthropods, fruit, nectar, and seeds (Barrow et al. 2000); because these resources are often linked to individual plant species, floristic richness is important on cheniers. Floristic or habitat diversity is also important when suitable habitats or foods vary among migratory species, or change over time. For instance, a site in which a series of plant species flower at different times in the spring will have nectar resources available throughout the period. Some studies have shown that different plants or foods peak in their usefulness to migrants at different times of the season (Strode 2009, Suthers et al. 2000), or that favored habitats or resources change from spring to fall (Chernetsov and Manukyan 2000; Smith et al. 1998; Weisbrod et al. 1993; Winker et al. 1992; Hutto 1985; Balda et al. 1975; Austin 1970) or year to year (Smith et al. 1998). Studies have also shown that different species of migrants occur in peak numbers in different habitats (Dunn 2001, Hutto 1985, Moore and Simons 1990, Parnell 1969, Rodewald and Brittingham 2004, Smith and Hatch 2008) or in association with different plant species (Graber and Graber 1983, Smith et al. 1998, 2004) within the same geographical area. Different sex and age classes of some migrant species also show peak use of different habitats in the same area (Yong et al. 1998 NM). All these examples of diversity in habitat or resource use illustrate the value of floristic diversity, which increases the chances of meeting the preferences of a variety of species at the same site, or species that pass through at a variety of times. High floristic diversity presumably also makes in more likely that species with unusual or specialized habitat use patterns will be able to find suitable resources (e.g., Yellow Warbler Dendroica petechia Weisbrod et al. 1993).

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# Appendix **B**

# **Document Revisions**

Version 1.0 – March 2010 document developed via the Corps' WVA certification process

Version 1.1 – January 2012

1) Pertinent sections from Procedural Manual incorporated

# Appendix C

# **Project Information Sheet Format**

#### **Project Name:**

Sponsoring Agency: List Environmental and Engineering Work Group Contacts

**Project Location and Description:** Describe project location (Coast 2050 region, basin, parish, nearby cities, important bodies of water, total acres, wetland type, etc.). Include a project map.

**Problem:** Discuss the major causes (historical and current) of habitat loss/degradation in the project area.

**Objectives:** How will the project address the major causes of habitat loss/degradation in the project area? What are the specific objectives of the project?

**Project Features:** List all project features including their locations, dimensions, etc. The project map should include the locations of all project features.

Monitoring and Modeling Results for Similar Projects: Relevant monitoring reports and modeling studies should be discussed.

**Miscellaneous:** As necessary, discuss the following subjects as they relate to the project. Climate change Off site disturbances – these are generally the same FWOP and FWP. Any project risks or uncertainties

# V1 – Percent Tree Canopy Cover

- 1) Discuss the historical and current vegetative community and any trends noted for the area.
- 2) Discuss the methods used to determine the percentage of tree canopy cover.

TY 0 – Percent tree canopy cover.

FWOP – Provide percentages for tree canopy cover for each target year (TY) and include all assumptions. Use as many TYs as necessary and justify each.

TY 1 – TY X – TY Y –

TY 20 –

FWP – Provide percentages for tree canopy cover for each target year (TY) and include all assumptions. Use as many TYs as necessary and justify each. TY 1 –

TY X –

TY Y – TY 20 –

#### V2 – Percent Shrub/Midstory Cover

1) Discuss the methods used to determine the percentage of shrub/midstory cover.

TY 0 – Percent shrub/midstory cover.

FWOP – Provide percentages for shrub/midstory cover for each target year (TY) and include all assumptions. Use as many TYs as necessary and justify each.

TY 1 –

TY X -

TY Y -

TY 20 –

FWP – Provide percentages for shrub/midstory cover for each target year (TY) and include all assumptions. Use as many TYs as necessary and justify each.

TY 1 –

TY X -

TY Y -

TY 20 -

#### V3 – Native Woody Species Diversity

1) Discuss the methods used to determine the number of woody species in the project area for the baseline condition.

TY 0 – Number of woody species present in the project area.

FWOP – Provide the number of woody species for each target year (TY) and include all assumptions. Use as many TYs as necessary and justify each.

TY 1 – TY X – TY Y – TY 20 –

FWP – Provide the number of woody species for each target year (TY) and include all assumptions. Use as many TYs as necessary and justify each.

TY 1 – TY X –

TY Y –

TY 20 –

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# Coastal Wetlands Planning, Protection, and Restoration Act 26th Priority Project List Report Appendix C Wetland Value Assessment for Candidate Projects

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#### WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

#### Brackish Marsh and Coastal Chenier/Ridge Project: Bayou La Loutre Ridge Restoration and Marsh Creation

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Brackish Marsh - Marsh Creation	91.63
Area	AAHUs
Coastal Chenier/Ridge - No ridge habitat FWOP	12.24

TOTAL BENEFITS = 103.87 AAHUS

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Bayou La Loutre Ridge Restoration and Marsh Creation

```
Project Area: 433
```

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	60	0.64	60	0.64	55	0.60
V2	% Aquatic	56	0.60	56	0.60	56	0.60
V3	Interspersion	%		%		%	
	Class 1	0	0.50	0	0.50	0	0.48
	Class 2	48		48		40	
	Class 3	52		52		60	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	2	0.13	2	0.13	2	0.13
V5	Salinity (ppt)	6.6	1.00	6.6	1.00	6.6	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Mars	sh HSI =	0.72	EM HSI =	0.72	EM HSI =	0.69
	Open Water HS	6l =	0.69	OW HSI =	0.69	OW HSI =	0.69

Project: Bayou La Loutre Ridge Restoration and Marsh Creation

Project Area: 433

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 La Loutre Ridge Restoration and Marsh Creation Project Area: 433

FWOP	a	1		in		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 Brackish Marsh

Project: Bayou La Loutre Ridge Restoration and Marsh Creation

Condition: Future With Project

		TY	0	TY	1	ΤY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	60	0.64	34	0.41	73	0.76
V2	% Aquatic	56	0.60	0	0.10	28	0.35
V3	Interspersion	%		%		%	
	Class 1	0	0.50	0	0.10	0	0.40
	Class 2	48		0		0	
	Class 3	52		0		100	
	Class 4	0		0		0	
	Class 5	0		100		0	
V4	%OW <= 1.5ft	2	0.13	100	0.60	100	0.60
V5	Salinity (ppt)	6.6	1.00	6.6	1.00	6.6	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
٣	Emergent Mars	sh HSI =	0.72	EM HSI =	0.35	EM HSI =	0.78
	Open Water HS	6l =	0.69	OW HSI =	0.20	OW HSI =	0.56

Project: Bayou La Loutre Ridge Restoration and Marsh Creation

Project Area: 433

FWP							
		TY	5	TY	12	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	99	0.99	97	0.97	95	0.96
V2	% Aquatic	56	0.60	56	0.60	56	0.60
V3	Interspersion	%		%		%	
	Class 1	0	0.40	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	100		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	100	0.60	95	0.70	90	0.80
V5	Salinity (ppt)	6.6	1.00	6.6	1.00	6.6	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
		EM HSI =	0.93	EM HSI =	0.98	EM HSI =	0.97
		OW HSI =	0.72	OW HSI =	0.77	OW HSI =	0.78

Project: Bayou La Loutre Ridge Restoration and Marsh Creation

Project Area: 433

FWP		1		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 =	

# AAHU CALCULATION - EMERGENT MARSH

Project: Bayou La Loutre Ridge Restoration and Marsh Creation

Future With	Future Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	271	0.72	194.58	
1	270	0.72	193.86	194.22
20	247	0.69	169.47	3449.34
Max TY=	20		AAHUs =	182.18

Future With	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	271	0.72	194.58	
1	148	0.35	51.92	115.72
3	317	0.78	248.34	275.89
5	428	0.93	397.16	640.15
12	421	0.98	414.18	2840.14
20	414	0.97	402.79	3267.79
Max TY=	20		AAHUs	356.98

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	356.98
B. Future Without Project Emergent Marsh AAHUs =	182.18
Net Change (FWP - FWOP) =	174.81

### AAHU CALCULATION - OPEN WATER

Project: Bayou La Loutre Ridge Restoration and Marsh Creation

Future With	Future Without Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	182	0.69	126.47	
1	183	0.69	127.16	126.81
20	206	0.69	142.90	2565.68
Max TY=	20		AAHUs =	134.62

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	182	0.69	126.47	
1	1	0.20	0.20	48.52
3	3	0.56	1.69	1.66
5	5	0.72	3.61	5.20
12	12	0.77	9.30	44.77
20	20	0.78	15.64	99.68
Max TY=	20		AAHUs	9.99

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	9.99
B. Future Without Project Open Water AAHUs =	134.62
Net Change (FWP - FWOP) =	-124.63

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	174.81					
B. Open Water Habitat Net AAHUs =	-124.63					
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	91.63					

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Coastal Chenier/Ridge

Project: Bayou La Loutre Ridge Restoration and Marsh Creation

Project Area: 20

No ridge habitat FWOP

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 La Loutre Ridge Restoration and Marsh Creation Project Area: 20 FWOP

		Т	Y	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 La Loutre Ridge Restoration and Marsh Creation Project Area: 20 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 La Loutre Ridge Restoration and Marsh Creation Project Area: 20

Condition: Future With Project

		TY	0	TY	1	TY	3
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 La Loutre Ridge Restoration and Marsh Creation Project Area: 20 FWP

		TY	7	TY	12	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	8	0.90	8	0.90	10	1.00
		HSI =	0.53	HSI =	0.74	HSI =	0.87

Project: Bayou La Loutre Ridge Restoration and Marsh Creation Project Area:

FWP	_						
		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 =	

20

# AAHU CALCULATION

Project: Bayou La Loutre Ridge Restoration and Marsh Creation No ridge habitat FWOP

Future Witho	Future Without Project		То	tal	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		То	tal	
			СН	ls =	0.00
			AAH	Us =	0.00

Future With	Project		То	tal	Cummulative		
ΤY	Acres	x HSI	HUs		HUs HUs		HUs
0	0	0.10		0.00			
1	20	0.10		2.00	1.00		
3	20	0.31		6.13	8.13		
7	20	0.53		10.70	33.65		
12	20	0.74		14.80	63.74		
15	20	0.87		17.41	48.32		
20	20	0.93		18.57	89.95		
Max TY =	20		То	tal			
			СН	Us =	244.79		
			AAH	IUs =	12.24		

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project AAHUs =	12.24
B. Future Without Project AAHUs =	0.00
Net Change (FWP - FWOP) =	12.24

### WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

#### Brackish Marsh Project: St. Catherine Island Marsh Creation and Shoreline Protection

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Marsh Creation benefit area	69.84
Area	AAHUs
Shoreline protection benefit area	21.55

TOTAL BENEFITS = 91.39 AAHUS

### WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: St. Catherine Island Marsh Creation and Shoreline Protection

Project Area: 219

Marsh creation benefit area Condition: Future Without Project

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		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	66	0.69	66	0.69	63	0.67
V2	% Aquatic	70	0.73	70	0.73	30	0.37
V3	Interspersion	%		%		%	
	Class 1	0	0.40	0	0.40	0	0.40
	Class 2	0		0		0	
	Class 3	100		100		100	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	40	0.61	40	0.61	35	0.55
V5	Salinity (ppt)	5.3	1.00	5.3	1.00	5.3	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.74	EM HSI =	0.74	EM HSI =	0.73
	Open Water HS	SI =	0.79	OW HSI =	0.79	OW HSI =	0.57

Project: St. Catherine Island Marsh Creation and Shoreline Protection Project Area: 219

FWOP	4						
		ΤY		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: St. Catherine Island Marsh Creation and Shoreline Protection	Project Area:	219
FWOP		

FWOP	]	TY		TY		TY	
							1
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: St. Catherine Island Marsh Creation and Shoreline Protection

Project Area: 219

Marsh creation benefit area Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	66	0.69	33	0.40	70	0.73
V2	% Aquatic	70	0.73	0	0.10	40	0.46
V3	Interspersion	%		%		%	
	Class 1	0	0.40	0	0.10	0	0.40
	Class 2	0		0		0	
	Class 3	100		0		100	
	Class 4	0		0		0	
	Class 5	0		100		0	
V4	%OW <= 1.5ft	40	0.61	100	0.60	100	0.60
V5	Salinity (ppt)	5.3	1.00	5.3	1.00	5.3	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Mars	sh HSI 🛛 =	0.74	EM HSI =	0.35	EM HSI =	0.77
	Open Water HS	SI =	0.79	OW HSI =	0.20	OW HSI =	0.64

Project: St. Catherine Island Marsh Creation and Shoreline Protection Project Area: 219

FWP							
		TY	5	ΤY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	99	0.99	97	0.97		
V2	% Aquatic	80	0.82	80	0.82		
V3	Interspersion	%		%		%	
	Class 1	0	0.40	100	1.00		
	Class 2	0		0			
	Class 3	100		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	90	0.80		
V5	Salinity (ppt)	5.3	1.00	5.3	1.00		
V6	Access Value	1.0000	1.00	1.0000	1.00		
		EM HSI =	0.93	EM HSI =	0.98	EM HSI =	
		OW HSI =	0.84	OW HSI =	0.90	OW HSI =	

Project: St. Catherine Island Marsh Creation and Shoreline Protection	Project Area:	219
FWP		

FWP	, r					( <u> </u>	
		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: St. Catherine Island Marsh Creation and Shoreline Protection Marsh creation benefit area

Future With	Future Without Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	98	0.74	72.80	
1	97	0.74	72.05	72.42
20	93	0.73	67.44	1324.95
Max TY=	20		AAHUs =	69.87

Future With	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	98	0.74	72.80	
1	72	0.35	24.98	47.17
3	153	0.77	117.21	130.87
5	217	0.93	201.36	315.12
20	213	0.98	209.55	3082.40
Max TY=	20		AAHUs	178.78

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	178.78
B. Future Without Project Emergent Marsh AAHUs =	69.87
Net Change (FWP - FWOP) =	108.91

# AAHU CALCULATION - OPEN WATER

Project: St. Catherine Island Marsh Creation and Shoreline Protection Marsh creation benefit area

Future With	Future Without Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	49	0.79	38.86	
1	49	0.79	38.86	38.86
20	54	0.57	30.93	666.54
Max TY=	20		AAHUs =	35.27

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	49	0.79	38.86	
1	1	0.20	0.20	14.82
3	1	0.64	0.64	0.84
5	2	0.84	1.68	2.25
20	6	0.90	5.39	52.39
Max TY=	20		AAHUs	3.51

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	3.51
B. Future Without Project Open Water AAHUs =	35.27
Net Change (FWP - FWOP) =	-31.76

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	108.91					
B. Open Water Habitat Net AAHUs =	-31.76					
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	69.84					

### WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: St. Catherine Island Marsh Creation and Shoreline Protection

Project Area: 120

Shoreline protection benefit area

Condition: Future Without Project

		ΤY	0	ΤY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	66	0.69	63	0.67	0	0.10
V2	% Aquatic	60	0.64	60	0.64	10	0.19
V3	Interspersion	%		%		%	
	Class 1	40	0.52	40	0.52	0	0.10
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	60		60		0	
	Class 5	0		0		100	
V4	%OW <= 1.5ft	25	0.42	25	0.42	0	0.10
V5	Salinity (ppt)	5.3	1.00	5.3	1.00	5.3	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Mars	sh HSI 🛛 =	0.76	EM HSI =	0.74	EM HSI =	0.25
	Open Water HS	SI =	0.74	OW HSI =	0.74	OW HSI =	0.38

Project: St. Catherine Island Marsh Creation and Shoreline Protection Project Area: 120

FWOP	_						
		ΤY		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: St. Catherine Island Marsh Creation and Shoreline Protection	Project Area:	120
FWOP		

		ΤY		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: St. Catherine Island Marsh Creation and Shoreline Protection

Project Area: 120

Shoreline protection benefit area Condition: Future With Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	66	0.69	82	0.84	78	0.80
V2	% Aquatic	60	0.64	60	0.64	80	0.82
V3	Interspersion	%		%		%	
	Class 1	40	0.52	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	60		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	25	0.42	40	0.61	35	0.55
V5	Salinity (ppt)	5.3	1.00	5.3	1.00	5.3	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Mars	sh HSI 🛛 =	0.76	EM HSI =	0.90	EM HSI =	0.88
	Open Water HS	SI =	0.74	OW HSI =	0.79	OW HSI =	0.88

Project: St. Catherine Island Marsh Creation and Shoreline Protection Project Area: 120

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 =	

Project: St. Catherine Island Marsh Creation and Shoreline Protection Project Area: 120 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: St. Catherine Island Marsh Creation and Shoreline Protection Shoreline protection benefit area

Future With	Future Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	127	0.76	96.03	
1	121	0.74	89.36	92.68
20	0	0.25	0.00	663.46
Max TY=	20		AAHUs =	37.81

Future With	Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	127	0.76	96.03	
1	99	0.90	89.21	93.30
20	94	0.88	82.59	1631.73
Max TY=	20		AAHUs	86.25

#### NET CHANGE IN AAHUS DUE TO PROJECT

A. Future With Project Emergent Marsh AAHUs =	86.25
B. Future Without Project Emergent Marsh AAHUs =	37.81
Net Change (FWP - FWOP) =	48.44

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# AAHU CALCULATION - OPEN WATER

Project: St. Catherine Island Marsh Creation and Shoreline Protection Shoreline protection benefit area

Future With	out Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	65	0.74	48.03	
1	71	0.74	52.46	50.24
20	192	0.38	72.20	1323.30
Max TY=	20		AAHUs =	68.68

Future With	Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	65	0.74	48.03	
1	21	0.79	16.56	32.66
20	26	0.88	22.86	373.12
Max TY=	20		AAHUs	20.29

#### NET CHANGE IN AAHUS DUE TO PROJECT

A. Future With Project Open Water AAHUs =	20.29
B. Future Without Project Open Water AAHUs =	68.68
Net Change (FWP - FWOP) =	-48.39

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	48.44				
B. Open Water Habitat Net AAHUs =	-48.39				
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	21.55				

## WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

Saline Marsh Project: Elmer's Island Marsh Creation and Restoration

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area Marsh Creation and Restoration AAHUs 120.93

TOTAL BENEFITS = 120.93 AAHUS

### WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Elmer's Island Marsh Creation and Restoration

Project Area: 265

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	14	0.23	14	0.23	12	0.21
V2	% Aquatic	0	0.30	0	0.30	0	0.30
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	19	0.34	19	0.34	14	0.28
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsl	hHSI =	0.39	EM HSI =	0.39	EM HSI =	0.37
	Open Water HSI =		0.67	OW HSI =	0.67	OW HSI =	0.66

Project:	Elmer's Island Marsh Creation and Restoration	Project Area:	265
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FWOP						í	
		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:Elmer's Island Marsh Creation and RestorationProject Area:265

FWOP							
		ΤY		ΤY		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: Elmer's Island Marsh Creation and Restoration

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	14	0.23	22	0.30	57	0.61
V2	% Aquatic	0	0.30	0	0.30	0	0.30
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	19	0.34	100	0.50	100	0.50
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Marsh	hHSI =	0.39	EM HSI =	0.30	EM HSI =	0.69
	Open Water HSI =		0.67	OW HSI =	0.23	OW HSI =	0.69

Project:	Elmer's Island Marsh Creation and Restoration	
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Project Area: 265

FWP							
		TY	5	TY	13	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	99	0.99	97	0.97	96	0.96
V2	% Aquatic	0	0.30	0	0.30	0	0.30
V3	Interspersion	%		%		%	
	Class 1	0	0.40	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	100		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	100	0.50	95	0.63	90	0.75
V5	Salinity (ppt)	20	1.00	20	1.00	20	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
		EM HSI =	0.93	EM HSI =	0.98	EM HSI =	0.98
		OW HSI =	0.69	OW HSI =	0.75	OW HSI =	0.76

Project:	Elmer's Island Marsh Creation and Restoration

Project Area: 265

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 =	

Project Area: 265

#### AAHU CALCULATION - EMERGENT MARSH

Project: Elmer's Island Marsh Creation and Restoration

Future With	Future Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	37	0.39	14.37	
1	37	0.39	14.37	14.37
20	33	0.37	12.31	253.18
Max=	20		AAHUs =	13.38

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	37	0.39	14.37	
1	58	0.30	17.32	16.16
3	150	0.69	104.16	109.35
5	262	0.93	243.16	338.59
13	258	0.98	253.92	1988.61
20	255	0.98	249.62	1762.38
Max=	20		AAHUs	210.75

#### NET CHANGE IN AAHUS DUE TO PROJECT

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	210.75
B. Future Without Project Emergent Marsh AAHUs =	13.38
Net Change (FWP - FWOP) =	197.38

### AAHU CALCULATION - OPEN WATER

Project: Elmer's Island Marsh Creation and Restoration

Future With	Future Without Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	228	0.67	151.80	
1	229	0.67	152.47	152.13
20	234	0.66	154.68	2917.96
Max=	20		AAHUs =	153.50

Future With	Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	228	0.67	151.80	
1	1	0.23	0.23	59.34
3	2	0.69	1.38	1.45
5	3	0.69	2.08	3.46
13	7	0.75	5.22	28.90
20	10	0.76	7.55	44.67
Max=	20		AAHUs	6.89

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	6.89
B. Future Without Project Open Water AAHUs =	153.50
Net Change (FWP - FWOP) =	-146.61

TOTAL BENEFITS IN AAHUS DUE TO PROJECT				
A. Emergent Marsh Habitat Net AAHUs =	197.38			
B. Open Water Habitat Net AAHUs =	-146.61			
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	120.93			

# WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

Saline Marsh Project: East Bayou Lafourche Marsh Creation

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area Marsh Creation AAHUs 174.82

TOTAL BENEFITS = 174.82 AAHUS

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: East Bayou Lafourche Marsh Creation

Project Area: 417

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	12	0.21	12	0.21	9	0.18
V2	% Aquatic	0	0.30	0	0.30	0	0.30
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	7	0.19	7	0.19	1	0.11
V5	Salinity (ppt)	15.3	1.00	15.3	1.00	15.3	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	<b>Emergent Marsl</b>	hHSI =	0.37	EM HSI =	0.37	EM HSI =	0.35
	Open Water HS	=	0.65	OW HSI =	0.65	OW HSI =	0.65

Project: East Bayou Lafourche Marsh Creation

Project Area: 417

		TY		TY		ΤY	
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:	East Bayou Lafourche Marsh Creation

Project Area: 417

		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: East Bayou Lafourche Marsh Creation

Project Area: 417

Condition: Future With Project

		TY	0	ΤY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	12	0.21	15	0.24	37	0.43
V2	% Aquatic	0	0.30	0	0.30	0	0.30
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	7	0.19	100	0.50	100	0.50
V5	Salinity (ppt)	15.3	1.00	15.3	1.00	15.3	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Mars	hHSI =	0.37	EM HSI =	0.27	EM HSI =	0.57
	Open Water HS	=	0.65	OW HSI =	0.23	OW HSI =	0.69

Project: East Bayou Lafourche Marsh Creation

Project Area: 417

FWP						Ú.	
		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	97	0.97	87	0.88		
V2	% Aquatic	0	0.30	0	0.30		
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)	15.3	1.00	15.3	1.00		
V6	Access Value	1.0000	1.00	1.0000	1.00		
		EM HSI =	0.98	EM HSI =	0.93	EM HSI =	
		OW HSI =	0.74	OW HSI =	0.77	OW HSI =	

Project: East Bayou Lafourche Marsh Creation

Project Area: 417

						,	
FWP	-						
		TY		ΤY		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: East Bayou Lafourche Marsh Creation

Future With	Future Without Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	49	0.37	18.27	
1	49	0.37	18.27	18.27
20	37	0.35	12.92	295.41
Max=	20		AAHUs =	15.68

Future With	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	49	0.37	18.27	
1	61	0.27	16.46	17.57
3	156	0.57	89.03	95.97
5	402	0.98	395.65	450.77
20	362	0.93	336.91	5488.85
Max=	20		AAHUs	302.66

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	302.66
B. Future Without Project Emergent Marsh AAHUs =	15.68
Net Change (FWP - FWOP) =	286.97

# AAHU CALCULATION - OPEN WATER

Project: East Bayou Lafourche Marsh Creation

Future With	Future Without Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	368	0.65	240.80	
1	368	0.65	240.80	240.80
20	380	0.65	246.48	4629.45
Max=	20		AAHUs =	243.51

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	368	0.65	240.80	
1	3	0.23	0.68	94.62
3	9	0.69	6.23	5.97
5	15	0.74	11.05	17.19
20	55	0.77	42.55	398.28
Max=	20		AAHUs	25.80

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	25.80
B. Future Without Project Open Water AAHUs =	243.51
Net Change (FWP - FWOP) =	-217.71

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	286.97				
B. Open Water Habitat Net AAHUs =	-217.71				
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	174.82				

# WETLAND VALUE ASSESSMENT

## **Benefits Summary Sheet**

## Brackish Marsh Project: Bayou Terrebonne Freshwater Diversion

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area Freshwater Diversion Benefit Area	AAHUs
Freshwater Diversion Benefit Area	46.92
Area	AAHUs
Terrace Benefit Area	7.88

TOTAL BENEFITS = 54.80 AAHUS

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Bayou Terrebonne Freshwater Diversion

Project Area: 5,979

Freshwater diversion benefit area

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	40	0.46	40	0.46	34	0.41
V2	% Aquatic	2	0.12	2	0.12	2	0.12
V3	Interspersion	%		%		%	
	Class 1	0	0.28	0	0.28	0	0.28
	Class 2	0		0		0	
	Class 3	40		40		40	
	Class 4	60		60		60	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	56	0.82	55	0.81	33	0.52
V5	Salinity (ppt)	5.6	1.00	5.6	1.00	5.6	1.00
V6	Access Value	0.2300	0.31	0.2300	0.31	0.2300	0.31
	Emergent Mars	sh HSI 🛛 =	0.47	EM HSI =	0.47	EM HSI =	0.44
	Open Water HS	SI =	0.29	OW HSI =	0.29	OW HSI =	0.27

Project: Bayou Terrebonne Freshwater Diversion

Project Area: 5979

FWOP	a .						
		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 Terrebonne Freshwater Diversion

Project Area: 5979

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 Terrebonne Freshwater Diversion

Project Area: 5979

Freshwater diversion benefit area

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	40	0.46	40	0.46	39	0.45
V2	% Aquatic	2	0.12	5	0.15	5	0.15
V3	Interspersion	%		%		%	
	Class 1	0	0.28	0	0.28	0	0.28
	Class 2	0		0		0	
	Class 3	40		40		40	
	Class 4	60		60		60	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	56	0.82	56	0.82	55	0.81
V5	Salinity (ppt)	5.6	1.00	5.1	1.00	5.1	1.00
V6	Access Value	0.2300	0.31	0.2300	0.31	0.2300	0.31
	Emergent Mars	sh HSI 🛛 =	0.47	EM HSI =	0.47	EM HSI =	0.46
	Open Water HS	SI =	0.29	OW HSI =	0.31	OW HSI =	0.31

Project: Bayou Terrebonne Freshwater Diversion

Project Area: 5979

FWP							
		ΤY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	39	0.45	37	0.43		
V2	% Aquatic	5	0.15	5	0.15		
V3	Interspersion	%		%		%	
	Class 1	0	0.28	0	0.28		
	Class 2	0		0			
	Class 3	40		40			
	Class 4	60		60			
	Class 5	0		0			
V4	%OW <= 1.5ft	50	0.74	33	0.52		
V5	Salinity (ppt)	5.1	1.00	5.1	1.00		
V6	Access Value	0.2300	0.31	0.2300	0.31		
		EM HSI =	0.46	EM HSI =	0.45	EM HSI =	
		OW HSI =	0.30	OW HSI =	0.29	OW HSI =	

Project: Bayou Terrebonne Freshwater Diversion

Project Area: 5979

FWP	a 1			0			
		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 Terrebonne Freshwater Diversion					
	Freshwater div	version benefit	t area			
		-				
Future Wit	hout Project		Total	Cummulative		
TY	Marsh Acres	x HSI	HUs	HUs		
0	2380	0.47	1114.13			
1	2363	0.47	1106.18	1110.15		
20	2052	0.44	899.34	19023.00		
Max TY=	20		AAHUs =	1006.66		

Future With	Project	1	Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	2380	0.47	1114.13	
1	2371	0.47	1109.92	1112.03
3	2354	0.46	1090.39	2200.28
5	2336	0.46	1082.05	2172.44
20	2208	0.45	1000.90	15618.98
Max TY=	20		AAHUs	1055.19

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	1055.19
B. Future Without Project Emergent Marsh AAHUs =	1006.66
Net Change (FWP - FWOP) =	48.53

# AAHU CALCULATION - OPEN WATER

Project:	Bayou Terrebonne Freshwater Diversion					
	Freshwater diversion benefit area					

Future With	Future Without Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	3599	0.29	1044.08	
1	3616	0.29	1045.57	1044.83
20	3927	0.27	1053.20	19958.95
Max TY=	20		AAHUs =	1050.19

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	3599	0.29	1044.08	
1	3608	0.31	1110.57	1077.30
3	3625	0.31	1112.35	2222.93
5	3643	0.30	1100.52	2212.91
20	3771	0.29	1078.12	16345.05
Max TY=	20		AAHUs	1092.91

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	1092.91
B. Future Without Project Open Water AAHUs =	1050.19
Net Change (FWP - FWOP) =	42.72

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs	=	48.53			
B. Open Water Habitat Net AAHUs	=	42.72			
Net Benefits= (2.6xEMAAHUs+OWAAHUs	)/3.6	46.92			

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL

#### **Brackish Marsh**

Project: Bayou Terrebonne Freshwater Diversion

Project Area: 330

Terrace benefit area

Condition: Future Without Project

		TY	0	TY	1	ΤY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	0	0.10	0	0.10
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	56	0.82	55	0.81	33	0.52
V5	Salinity (ppt)	5.6	1.00	5.6	1.00	5.6	1.00
V6	Access Value	0.2500	0.33	0.2500	0.33	0.2500	0.33
	Emergent Marsh HSI =		0.22	EM HSI =	0.22	EM HSI =	0.22
	Open Water HS	SI =	0.28	OW HSI =	0.28	OW HSI =	0.26

Project: Bayou Terrebonne Freshwater Diversion

Project Area: 330

	Í Í	TY		TY		TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						Ι
	Class 4						
	Class 5						Ī
V4	%OW <= 1.5ft						
V5	Salinity (ppt)						
V6	Access Value						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

# Project: Bayou Terrebonne Freshwater Diversion

#### Project Area: 330

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 Terrebonne Freshwater Diversion

Project Area: 330

Terrace benefit area Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	1	0.11	6	0.15
V2	% Aquatic	2	0.12	0	0.10	5	0.15
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.40	0	0.40
	Class 2	0		0		0	
	Class 3	0		100		100	
	Class 4	0		0		0	
	Class 5	100		0		0	
V4	%OW <= 1.5ft	56	0.82	53	0.78	53	0.78
V5	Salinity (ppt)	5.6	1.00	5.1	1.00	5.1	1.00
V6	Access Value	0.2500	0.33	0.2500	0.33	0.2500	0.33
	Emergent Marsh HSI =		0.22	EM HSI =	0.26	EM HSI =	0.30
	Open Water HS	SI =	0.28	OW HSI =	0.29	OW HSI =	0.32

Project: Bayou Terrebonne Freshwater Diversion

Project Area: 330

FWP						,	
		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	6	0.15	5	0.15		
V2	% Aquatic	10	0.19	10	0.19		
V3	Interspersion	%		%		%	
	Class 1	0	0.40	0	0.40		
	Class 2	0		0			
	Class 3	100		100			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	53	0.78	50	0.74		
V5	Salinity (ppt)	5.1	1.00	5.1	1.00		
V6	Access Value	0.2500	0.33	0.2500	0.33		
		EM HSI =	0.30	EM HSI =	0.29	EM HSI =	
		OW HSI =	0.34	OW HSI =	0.34	OW HSI =	

#### Project: Bayou Terrebonne Freshwater Diversion

#### Project Area: 330

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 Terrebonne Freshwater Diversion Terrace benefit area

Future Wit	Future Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.22	0.00	
1	0	0.22	0.00	0.00
20	0	0.22	0.00	0.00
Max TY=	20		AAHUs =	0.00

Future With	Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.22	0.00	
1	5	0.26	1.32	0.63
3	18	0.30	5.36	6.54
5	18	0.30	5.36	10.72
20	17	0.29	4.95	77.35
Max TY=	20		AAHUs	4.76

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	4.76
B. Future Without Project Emergent Marsh AAHUs =	0.00
Net Change (FWP - FWOP) =	4.76

# AAHU CALCULATION - OPEN WATER

Project: Bayou Terrebonne Freshwater Diversion

Terrace benefit area

Future With	uture Without Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	330	0.28	92.36	
1	330	0.28	92.04	92.20
20	330	0.26	85.13	1683.12
Max TY=	20		AAHUs =	88.77

Future With	Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	330	0.28	92.36	
1	311	0.29	89.02	90.71
3	312	0.32	99.01	188.02
5	312	0.34	107.57	206.58
20	313	0.34	107.02	1609.41
Max TY=	20		AAHUs	104.74

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	104.74
B. Future Without Project Open Water AAHUs =	88.77
Net Change (FWP - FWOP) =	15.97

TOTAL BENEFITS IN AAHUS DUE TO PROJECT				
A. Emergent Marsh Habitat Net AAHUs =	4.76			
B. Open Water Habitat Net AAHUs =	15.97			
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	7.88			

# WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

Saline Marsh Project: West Louisiana Highway 1 Marsh Creation

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area Marsh Creation AAHUs 147.65

TOTAL BENEFITS = 147.65 AAHUS

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: West Louisiana Highway 1 Marsh Creation

Project Area: 346

346

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	16	0.24	16	0.24	13	0.22
V2	% Aquatic	1	0.31	1	0.31	1	0.31
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	0	0.10	0	0.10	0	0.10
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 Marsl	nHSI =	0.40	EM HSI =	0.40	EM HSI =	0.38
	Open Water HS	=	0.65	OW HSI =	0.65	OW HSI =	0.65

Project:	West Louisiana Highway 1 Marsh Creation	Project Area:
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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 Louisiana Highway 1 Marsh Creation Project Area: 346

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: West Louisiana Highway 1 Marsh Creation

Project Area: 346

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	16	0.24	16	0.24	40	0.46
V2	% Aquatic	1	0.31	0	0.30	1	0.31
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	0	0.10	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>	hHSI =	0.40	EM HSI =	0.27	EM HSI =	0.59
	Open Water HS	=	0.65	OW HSI =	0.23	OW HSI =	0.70

Project:	West Louisiana Highway 1 Marsh Creation	
Project:	West Louisiana Highway 1 Marsh Creation	

Project Area: 346

FWP							
		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	97	0.97	90	0.91		
V2	% Aquatic	5	0.34	5	0.34		
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 =	0.95	EM HSI =	
		OW HSI =	0.75	OW HSI =	0.79	OW HSI =	

Project:	West Louisiana Highway 1 Marsh Creation
----------	---

Project Area: 346

FWP							
		TY		TY		ΤY	
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 Louisiana Highway 1 Marsh Creation

Future Without Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	54	0.40	21.78	
1	54	0.40	21.78	21.78
20	44	0.38	16.75	365.30
Max=	20		AAHUs =	19.35

Future With Project			Total	Cummulative
TY Marsh Acres		x HSI	HUs	HUs
0	54	0.40	21.78	
1	56	0.27	15.35	18.61
3	140	0.59	82.60	89.10
5	337	0.98	331.67	388.39
20	311	0.95	294.48	4693.74
Max=	20		AAHUs	259.49

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	259.49
B. Future Without Project Emergent Marsh AAHUs =	19.35
Net Change (FWP - FWOP) =	240.14

## AAHU CALCULATION - OPEN WATER

Project: West Louisiana Highway 1 Marsh Creation

Future Without Project			Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	292	0.65	190.19	
1	292	0.65	190.19	190.19
20	302	0.65	196.70	3675.49
Max=	20		AAHUs =	193.28

Future With Project			Total	Cummulative
TY Water Acres		x HSI	HUs	HUs
0	292	0.65	190.19	
1	2	0.23	0.45	74.72
3	5	0.70	3.48	3.46
5	9	0.75	6.79	10.19
20	35	0.79	27.69	256.21
Max=	20		AAHUs	17.23

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	17.23
B. Future Without Project Open Water AAHUs =	193.28
Net Change (FWP - FWOP) =	-176.05

TOTAL BENEFITS IN AAHUS DUE TO PROJECT				
A. Emergent Marsh Habitat Net AAHUs =	240.14			
B. Open Water Habitat Net AAHUs =	-176.05			
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	147.65			

# WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

Fresh/Intermediate Marsh Project: Bayou Decade Ridge Restoration and Marsh Creation

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Marsh Creation	126.03
Area	AAHUs
Coastal Chenier/Ridge - No ridge habitat FWOP	7 34
Coustar Chemer/Rage 110 hage habitat 1 (101	7.54

TOTAL BENEFITS = 133.37 AAHUS

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

Project.	Bayou Decade Ri	dge Restoration	and Mars	n Creation	1	Project Area:	517
	24/04 2 00440 1					% Fresh	0
Condition:	Future Without P	roject				% Intermediate	100
	_						
		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	23	0.31	23	0.31	19	0.27
V2	% Aquatic	90	0.91	90	0.91	90	0.91
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	7	0.18	7	0.18	2	0.12
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1.6		1.6		1.6	
V6	Access Value						
	fresh		0.60		0.60		0.60
	intermediate	0.5000		0.5000		0.5000	
	Emergent Mars	hHSI =	0.40	EM HSI =	0.40	EM HSI =	0.37
	Open Water H	SI =	0.74	OW HSI =	0.74	OW HSI =	0.74

Project: Bayou Decade Ridge Restoration and Marsh Creation

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 =	

		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: Bayou Decade Ridge Restoration and Marsh Creation

Project Area:	505
% Fresh	0
% Intermediate	100

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	23	0.31	18	0.26	44	0.50
V2	% Aquatic	90	0.91	0	0.10	45	0.51
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	7	0.18	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1.6		1.6		1.6	
V6	Access Value						
	fresh		0.60		0.20		0.60
	intermediate	0.5		0.0001		0.5000	
	Emergent Mars	hHSI =	0.40	EM HSI =	0.32	EM HSI =	0.55
	Open Water HS	SI =	0.74	OW HSI =	0.22	OW HSI =	0.56

Project: Bayou Decade Ridge Restoration and Marsh Creation

FWP	า	<b>T</b> Y		<b>T</b> 1/	_	<b>T</b> )(	
		TY	5	TY	7	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	98	0.98	97	0.97	92	0.93
V2	% Aquatic	90	0.91	90	0.91	90	0.91
V3	Interspersion	%		%		%	
	Class 1	0	0.40	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	100		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	100	0.60	100	0.60	80	1.00
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1.6		1.6		1.6	
V6	Access Value						
	fresh		0.60		0.60		0.60
	intermediate	0.5000		0.5000		0.5000	
		EM HSI =	0.86	EM HSI =	0.92	EM HSI =	0.89
		OW HSI =	0.79	OW HSI =	0.83	OW HSI =	0.86

FWP	7	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

Future With	Future Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	118	0.40	47.24	
1	117	0.40	46.84	47.04
20	101	0.37	37.77	802.45
Max=	20		AAHUs =	42.47

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	118	0.40	47.24	
1	93	0.32	29.49	38.01
3	224	0.55	124.04	143.19
5	495	0.86	425.27	521.73
7	491	0.92	451.92	877.27
20	467	0.89	417.22	5648.01
Max=	20		AAHUs	361.41

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	361.41
B. Future Without Project Emergent Marsh AAHUs =	42.47
Net Change (FWP - FWOP) =	318.94

### AAHU CALCULATION - OPEN WATER

Future With	Future Without Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	399	0.74	295.23	
1	400	0.74	295.97	295.60
20	416	0.74	306.07	5719.56
Max=	20		AAHUs =	300.76

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	399	0.74	295.23	
1	2	0.22	0.44	113.33
3	6	0.56	3.35	3.33
5	10	0.79	7.86	10.91
7	14	0.83	11.63	19.43
20	38	0.86	32.68	286.45
Max=	20		AAHUs	21.67

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	21.67
B. Future Without Project Open Water AAHUs =	300.76
Net Change (FWP - FWOP) =	-279.09

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	318.94					
B. Open Water Habitat Net AAHUs =	-279.09					
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	126.03					

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Coastal Chenier/Ridge

Project: Bayou Decade Ridge Restoration and Marsh Creation

Project Area: 12

12

No ridge habitat FWOP

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
<u> </u>	•	HSI =	0.10	HSI =	0.10	HSI =	0.10

Project: Bayou Decade Ridge Restoration and Marsh Creation Project Area: 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 Decade Ridge Restoration and Marsh Creation 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						
L	·	HSI =		HSI =		HSI =	

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Coastal Chenier/Ridge

Project: Bayou Decade Ridge Restoration and Marsh Creation Project Area: 12

Condition: Future With Project

		TY	0	TY	1	TY	3
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

12

12

Project: Bayou Decade Ridge Restoration and Marsh Creation Project Area:

FWP

		TY	7	TY	12	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	8	0.90	8	0.90	10	1.00
		HSI =	0.53	HSI =	0.74	HSI =	0.87

Project: Bayou Decade Ridge Restoration and Marsh Creation Project Area:

FWP				-			
		TY	<b>TY</b> 20		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 Decade Ridge Restoration and Marsh Creation No ridge habitat FWOP

Future Witho	out Project		Т	otal	Cummulative
ΤY	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		Т	otal	
			СН	Us =	0.00
			AAH	IUs =	0.00

Future With	Project		Т	otal	Cummulative
TY	Acres	x HSI	HUs		HUs
0	0	0.10		0.00	
1	12	0.10		1.20	0.60
3	12	0.31		3.68	4.88
7	12	0.53		6.42	20.19
12	12	0.74		8.88	38.24
15	12	0.87		10.45	28.99
20	12	0.93		11.14	53.97
Max TY =	20		Т	otal	
			Cł	HUs =	146.87
			AA	HUs =	7.34

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project AAHUs =	7.34
B. Future Without Project AAHUs =	0.00
Net Change (FWP - FWOP) =	7.34

# WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

Fresh/Intermediate Marsh Project: East Pecan Island Marsh Creation

## TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area Marsh Creation AAHUs 176.94

TOTAL BENEFITS = 176.94 AAHUS

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Fresh/Intermediate Marsh

<b>.</b>					1				
Project:	East Pecan Island	Marsh Creation				Project Area:	521		
						% Fresh	0		
Condition: I	Future Without Pr	oject				% Intermediate	100		
		TY	1	TY	20				
Variable		Value	SI	Value	SI	Value	SI		
V1	% Emergent	4	0.14	4	0.14	4	0.14		
V2	% Aquatic	30	0.37	30	0.37	30	0.37		
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	4	0.15	4	0.15	1	0.11		
V5	Salinity (ppt)								
	fresh		0.74		0.74		0.74		
	intermediate	3.8		3.8		3.8			
V6	Access Value								
	fresh		0.44		0.44		0.44		
	intermediate	0.3000		0.3000		0.3000			
	Emergent Marsl	hHSI =	0.22	EM HSI =	0.22	EM HSI =	0.22		
	Open Water HS	il =	0.37	OW HSI =	0.37	OW HSI =	0.37		

Project: East Pecan Island Marsh Creation 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: East Pecan Island Marsh Creation

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	%		%		%	
V4	Class 5 %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:	East Pecan Island N	Aarsh Creation				Project Area:	521
						% Fresh	0
ondition: I	Future With Project	ct				% Intermediate	100
	1 1	TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	4	0.14	19	0.27	52	0.57
V2	% Aquatic	30	0.37	0	0.10	15	0.24
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	4	0.15	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh		0.74		0.74		0.74
	intermediate	3.8		3.8		3.8	
V6	Access Value						
	fresh		0.44		0.20		0.44
	intermediate	0.3		0.0001		0.3000	
	Emergent Marsh	HSI =	0.22	EM HSI =	0.29	EM HSI =	0.55
	Open Water HS	=	0.37	OW HSI =	0.20	OW HSI =	0.34

Project: East Pecan Island Marsh Creation FWP

		TY	5	TY	6	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	98	0.98	97	0.97	92	0.93
V2	% Aquatic	30	0.37	30	0.37	30	0.37
V3	Interspersion	%		%		%	
	Class 1	0	0.40	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	100		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	100	0.60	100	0.60	80	1.00
V5	Salinity (ppt)						
	fresh		0.74		0.74		0.74
	intermediate	3.8		3.8		3.8	
V6	Access Value						
	fresh		0.44		0.44		0.44
	intermediate	0.3000		0.3000		0.3000	
		EM HSI =	0.79	EM HSI =	0.86	EM HSI =	0.83
		OW HSI =	0.43	OW HSI =	0.47	OW HSI =	0.50

Project: East Pecan Island Marsh Creation 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: East Pecan Island Marsh Creation

Future With	Future Without Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	23	0.22	5.11	
1	23	0.22	5.11	5.11
20	19	0.22	4.22	88.57
Max=	20		AAHUs =	4.68

Future With Project			Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	23	0.22	5.11	
1	98	0.29	28.78	16.05
3	268	0.55	147.41	161.67
5	510	0.79	405.34	533.01
6	508	0.86	435.03	420.21
20	478	0.83	397.07	5822.90
Max=	20		AAHUs	347.69

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	347.69
B. Future Without Project Emergent Marsh AAHUs =	4.68
Net Change (FWP - FWOP) =	343.01

#### AAHU CALCULATION - OPEN WATER

Project: East Pecan Island Marsh Creation

Future Witho	Future Without Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	498	0.37	185.99	
1	498	0.37	185.99	185.99
20	502	0.37	186.23	3536.18
Max=	20		AAHUs =	186.11

Future With P	roject		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	498	0.37	185.99	
1	2	0.20	0.40	78.79
3	7	0.34	2.40	2.56
5	11	0.43	4.72	7.01
6	13	0.47	6.16	5.43
20	43	0.50	21.65	192.59
Max=	20		AAHUs	14.32

NE	т СН/	ANGE I	N AAI	HUs I	DUE TO	PROJECT	

A. Future With Project Open Water AAHUs =	14.32
B. Future Without Project Open Water AAHUs =	186.11
Net Change (FWP - FWOP) =	-171.79

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	343.01					
B. Open Water Habitat Net AAHUs =	-171.79					
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	176.94					

# WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

Brackish Marsh and Saline Marsh Project: North Mud Lake Marsh Creation and Nourishment

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Marsh Creation Area	208.7
Area	AAHUs
Upland Disposal Area Marsh Creation	89.68

TOTAL BENEFITS = 298.38 AAHUS

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: North Mud Lake Marsh Creation and Nourishment

Project Area: 497

Marsh Creation Area Condition: Future Without Project

	1						
		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	10	0.23	10	0.23	6	0.18
V5	Salinity (ppt)	16	0.10	16	0.10	16	0.10
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Mars	sh HSI 🛛 =	0.20	EM HSI =	0.20	EM HSI =	0.19
	Open Water HS	SI =	0.24	OW HSI =	0.24	OW HSI =	0.23

Project: North Mud Lake Marsh Creation and Nourishment Project Area: 497

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: North Mud Lake Marsh Creation and Nourishment Project Area: 497

		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: North Mud Lake Marsh Creation and Nourishment

Project Area: 497

Marsh Creation Area 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	1	0.11
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	99	0.62	99	0.62
V5	Salinity (ppt)	16	0.10	16	0.10	16	0.10
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Mars	sh HSI 🛛 =	0.20	EM HSI =	0.16	EM HSI =	0.44
	Open Water HS	SI =	0.24	OW HSI =	0.14	OW HSI =	0.29

Project: North Mud Lake Marsh Creation and Nourishment

Project Area: 497

FWP							
		TY	5	ΤY	20	ΤY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	97	0.97	92	0.93		
V2	% Aquatic	1	0.11	1	0.11		
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	99	0.62	90	0.80		
V5	Salinity (ppt)	16	0.10	16	0.10		
V6	Access Value	1.0000	1.00	1.0000	1.00		
		EM HSI =	0.88	EM HSI =	0.86	EM HSI =	
		OW HSI =	0.33	OW HSI =	0.35	OW HSI =	

Project: North Mud Lake Marsh Creation and Nourishment Project Area:

t Area: 497

FVVP	1 7			(r		0-	
		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: North Mud Lake Marsh Creation and Nourishment Marsh Creation Area

Future With	Future Without Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	26	0.20	5.16	
1	26	0.20	5.16	5.16
20	22	0.19	4.18	88.56
Max TY=	20		AAHUs =	4.69

Future With	Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	26	0.20	5.16	
1	59	0.16	9.37	7.48
3	164	0.44	71.78	71.40
5	482	0.88	425.99	450.49
20	456	0.86	390.59	6122.56
Max TY=	20		AAHUs	332.60

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	332.60
B. Future Without Project Emergent Marsh AAHUs =	4.69
Net Change (FWP - FWOP) =	327.91

## **AAHU CALCULATION - OPEN WATER**

Project: North Mud Lake Marsh Creation and Nourishment Marsh Creation Area

Future With	Future Without Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	471	0.24	111.86	
1	471	0.24	111.86	111.86
20	475	0.23	111.00	2117.13
Max TY=	20		AAHUs =	111.45

Future With Project			Total	Cummulative	
TY	Water Acres	x HSI	HUs	HUs	
0	471	0.24	111.86		
1	7	0.14	0.97	48.76	
3	11	0.29	3.18	3.95	
5	15	0.33	5.00	8.11	
20	41	0.35	14.21	143.15	
Max TY=	20		AAHUs	10.20	

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	10.20
B. Future Without Project Open Water AAHUs =	111.45
Net Change (FWP - FWOP) =	-101.25

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	327.91					
B. Open Water Habitat Net AAHUs =	-101.25					
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	208.70					

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: North Mud Lake Marsh Creation and Nourishment

Project Area: 168

168

Upland Disposal Area Marsh Creation

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	0	0.10	0	0.10
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	0	0.10	0	0.10	0	0.10
V5	Salinity (ppt)	16	1.00	16	1.00	16	1.00
V6	Access Value	0.0001	0.10	0.0001	0.10	0.0001	0.10
	Emergent Marsh HSI =		0.20	EM HSI =	0.20	EM HSI =	0.20
	Open Water HS	=	0.20	OW HSI =	0.20	OW HSI =	0.20

Project:	North Mud Lake Marsh Creation and Nourishment	Project Area:	168

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: North Mud Lake Marsh Creation and Nourishment Project Area:

FWOP	1	TY		TY		TY	
Variable			01		01		01
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: North Mud Lake Marsh Creation and Nourishment

Project Area: 168

Upland Disposal Area Marsh Creation

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	14	0.23	40	0.46
V2	% Aquatic	0	0.30	0	0.30	1	0.31
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	0	0.10	100	0.50	100	0.50
V5	Salinity (ppt)	16	1.00	16	1.00	16	1.00
V6	Access Value	0.0001	0.10	0.0001	0.10	0.5000	0.55
	Emergent Marsh HSI =		0.20	EM HSI =	0.27	EM HSI =	0.53
	Open Water HS	=	0.20	OW HSI =	0.23	OW HSI =	0.50

Project:	North Mud Lake Marsh Creation and Nourishment	Project Area:
FWP		

FWP							
		TY	5	TY	7	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	98	0.98	97	0.97	93	0.94
V2	% Aquatic	1	0.31	1	0.31	1	0.31
V3	Interspersion	%		%		%	
	Class 1	0	0.40	100	1.00	100	1.00
	Class 2	0		0		0	
	Class 3	100		0		0	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	100	0.50	100	0.50	90	0.75
V5	Salinity (ppt)	16	1.00	16	1.00	16	1.00
V6	Access Value	0.5000	0.55	0.5000	0.55	0.5000	0.55
		EM HSI =	0.82	EM HSI =	0.88	EM HSI =	0.86
		OW HSI =	0.50	OW HSI =	0.55	OW HSI =	0.57

Project: North Mud Lake Marsh Creation and Nourishment

Project Area: 168

168

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:	North Mud Lake Marsh Creation and Nourishment
	Upland Disposal Area Marsh Creation

Future With	Future Without Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	0	0.20	0.00	
1	0	0.20	0.00	0.00
20	0	0.20	0.00	0.00
Max=	20		AAHUs =	0.00

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0	0.20	0.00	
1	23	0.27	6.11	2.80
3	66	0.53	34.96	37.28
5	165	0.82	134.69	160.19
7	164	0.88	144.06	278.77
20	156	0.86	134.18	1808.23
Max=	20		AAHUs	114.36

#### NET CHANGE IN AAHUS DUE TO PROJECT

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	114.36
B. Future Without Project Emergent Marsh AAHUs =	0.00
Net Change (FWP - FWOP) =	114.36

## AAHU CALCULATION - OPEN WATER Project: North Mud Lake M

Project:	North Mud Lake Marsh Creation and Nourishment
	Upland Disposal Area Marsh Creation

Future With	Future Without Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	0	0.20	0.00	
1	0	0.20	0.00	0.00
20	0	0.20	0.00	0.00
Max=	20		AAHUs =	0.00

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	0	0.20	0.00	
1	1	0.23	0.23	0.11
3	2	0.50	1.01	1.14
5	3	0.50	1.51	2.51
7	4	0.55	2.19	3.68
20	12	0.57	6.79	58.04
Max=	20		AAHUs	3.27

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	3.27
B. Future Without Project Open Water AAHUs =	0.00
Net Change (FWP - FWOP) =	3.27

TOTAL BENEFITS IN AAHUS DUE TO PROJECT				
A. Emergent Marsh Habitat Net AAHUs =	114.36			
B. Open Water Habitat Net AAHUs =	3.27			
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	89.68			

## WETLAND VALUE ASSESSMENT

## **Benefits Summary Sheet**

## Fresh/Intermediate Marsh and Brackish Marsh Project: Salvinia Weevil Propagation Facility

### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Brackish Marsh	44.06
Area	AAHUs
Fresh Marsh	239.18
Area	AAHUs
Intermediate Marsh	314.25

TOTAL BENEFITS = 597.49 AAHUS

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Salvinia Weevil Propagation Facility

Project Area: 8,234

Condition: Future Without Project

		TY	0	TY	1	TY	10
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0.03	0.10	0.02	0.10	0.01	0.10
V2	% Aquatic	5	0.15	5	0.15	3	0.13
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)	3	1.00	3	1.00	3	1.00
V6	Access Value	0.5355	0.58	0.5355	0.58	0.5355	0.58
	Emergent Marsh HSI =		0.24	EM HSI =	0.24	EM HSI =	0.24
	Open Water HS	SI =	0.30	OW HSI =	0.30	OW HSI =	0.28

#### Project: Salvinia Weevil Propagation Facility

Project Area: 8234

,		1.0.	•			,	
FWOP	_						
		TY	12	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0.01	0.10	0	0.10		
V2	% Aquatic	5	0.15	4	0.14		
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	100		100			
V4	%OW <= 1.5ft	10	0.23	10	0.23		
V5	Salinity (ppt)	3	1.00	3	1.00		
V6	Access Value	0.5355	0.58	0.5355	0.58		
		EM HSI =	0.24	EM HSI =	0.24	EM HSI =	
		OW HSI =	0.30	OW HSI =	0.29	OW HSI =	

#### Project: Salvinia Weevil Propagation Facility

Project Area: 8234

FWOP	_						
		TY		ΤY		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: Salvinia Weevil Propagation Facility

Project Area: 8234

Condition: Future With Project

		TY	0	TY	1	TY	10
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0.03	0.10	0.03	0.10	0.03	0.10
V2	% Aquatic	5	0.15	6	0.15	7	0.16
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)	3	1.00	3	1.00	3	1.00
V6	Access Value	0.5355	0.58	0.5355	0.58	0.5355	0.58
	Emergent Mars	sh HSI =	0.24	EM HSI =	0.24	EM HSI =	0.24
	Open Water HS	SI =	0.30	OW HSI =	0.30	OW HSI =	0.31

#### Project: Salvinia Weevil Propagation Facility

Project Area: 8234

,							
FWP	_						
		TY	12	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0.03	0.10	0.03	0.10		
V2	% Aquatic	7	0.16	8	0.17		
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	100		100			
V4	%OW <= 1.5ft	10	0.23	10	0.23		
V5	Salinity (ppt)	3	1.00	3	1.00		
V6	Access Value	0.5355	0.58	0.5355	0.58		
		EM HSI =	0.24	EM HSI =	0.24	EM HSI =	
		OW HSI =	0.31	OW HSI =	0.32	OW HSI =	

#### Project: Salvinia Weevil Propagation Facility

Project Area: 8234

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

Future With	Future Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	4.93	0.24	1.18	
1	4.66	0.24	1.11	1.15
10	2.19	0.24	0.52	7.37
12	2.19	0.24	0.52	1.05
20	0	0.24	0.00	2.09
Max TY=	20		AAHUs =	0.58

Future With	Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	4.93	0.24	1.18	
1	4.93	0.24	1.18	1.18
10	4.93	0.24	1.18	10.62
12	4.93	0.24	1.18	2.36
20	4.93	0.24	1.18	9.44
Max TY=	20		AAHUs	1.18

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	1.18
B. Future Without Project Emergent Marsh AAHUs =	0.58
Net Change (FWP - FWOP) =	0.60

## AAHU CALCULATION - OPEN WATER

Future With	Future Without Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	8229.07	0.30	2427.86	
1	8229.34	0.30	2427.94	2427.90
10	8231.81	0.28	2304.94	21298.02
12	8231.81	0.30	2428.67	4733.61
20	8234	0.29	2368.25	19187.72
Max TY=	20		AAHUs =	2382.36

Future With	Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	8229.07	0.30	2427.86	
1	8229.07	0.30	2487.39	2457.63
10	8229.07	0.31	2545.55	22648.22
12	8229.07	0.31	2545.55	5091.09
20	8229.07	0.32	2602.43	20591.89
Max TY=	20		AAHUs	2539.44

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	2539.44
B. Future Without Project Open Water AAHUs =	2382.36
Net Change (FWP - FWOP) =	157.08

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	0.60				
B. Open Water Habitat Net AAHUs =	157.08				
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	44.06				

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

Project:	Salvinia Weevil P	ropagation Facili	ty		]	Project Area:	8,495
					-	% Fresh	100
Condition: I	Future Without Pre	oject				% Intermediate	0
	<b>a</b>						
		TY	0	TY	1	TY	10
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0.01	0.10	0.01	0.10	0	0.10
V2	% Aquatic	25	0.33	24	0.32	16	0.24
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	0.44	30	0.44	30	0.44
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	0.8027	0.86	0.8027	0.86	0.8027	0.86
	intermediate						
	Emergent Marsl	nHSI =	0.23	EM HSI =	0.23	EM HSI =	0.23
	Open Water HS	=	0.44	OW HSI =	0.43	OW HSI =	0.37

Project: Salvinia Weevil Propagation Facility

		TY	12	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0	0.10	0	0.10		
V2	% Aquatic	25	0.33	17	0.25		
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	100		100			
V4	%OW <= 1.5ft	30	0.44	30	0.44		
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00		
	intermediate						
V6	Access Value						
	fresh	0.8027	0.86	0.8027	0.86		
	intermediate						
		EM HSI =	0.23	EM HSI =	0.23	EM HSI =	
		OW HSI =	0.44	OW HSI =	0.38	OW HSI =	

		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:	Salvinia Weevil Pro	Project Area:	8,495				
		% Fresh	100				
Condition:	Future With Project	% Intermediate	0				
						ТҮ	10
Variable		TY Value	0 SI	TY Value	1 SI	Value	10 SI
			-		-		
V1	% Emergent	0.01	0.10	0.01	0.10	0.01	0.10
V2	% Aquatic	25	0.33	26	0.33	35	0.42
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	0.44	30	0.44	30	0.44
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00	0.5	1.00
	intermediate						
V6	Access Value						
	fresh	0.8027	0.86	0.8027	0.86	0.8027	0.86
	intermediate						
	Emergent Marsh	nHSI =	0.23	EM HSI =	0.23	EM HSI =	0.23
	Open Water HS	I =	0.44	OW HSI =	0.44	OW HSI =	0.50

Project: Salvinia Weevil Propagation Facility FWP

	]	TY	12	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0.01	0.10	0.01	0.10		
V2	% Aquatic	35	0.42	42	0.48		
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	100		100			
V4	%OW <= 1.5ft	30	0.44	30	0.44		
V5	Salinity (ppt)						
	fresh	0.5	1.00	0.5	1.00		
	intermediate						
V6	Access Value						
	fresh	0.8027	0.86	0.8027	0.86		
	intermediate						
		EM HSI =	0.23	EM HSI =	0.23	EM HSI =	
		OW HSI =	0.50	OW HSI =	0.54	OW HSI =	

	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 =	

# AAHU CALCULATION - EMERGENT MARSH Project: Salvinia Weevil Propagation Facility

Future With	Future Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0.7	0.23	0.16	
1	0.67	0.23	0.16	0.16
10	0.31	0.23	0.07	1.03
12	0.31	0.23	0.07	0.14
20	0	0.23	0.00	0.29
Max=	20		AAHUs =	0.08

Future With Project			Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	0.7	0.23	0.16	
1	0.7	0.23	0.16	0.16
10	0.7	0.23	0.16	1.47
12	0.7	0.23	0.16	0.33
20	0.7	0.23	0.16	1.31
Max=	20		AAHUs	0.16

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	0.16
B. Future Without Project Emergent Marsh AAHUs =	0.08
Net Change (FWP - FWOP) =	0.08

## AAHU CALCULATION - OPEN WATER

Future With	Future Without Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	8494.3	0.44	3707.45	
1	8494.33	0.43	3650.36	3678.90
10	8494.69	0.37	3177.53	30725.51
12	8494.69	0.44	3707.62	6885.15
20	8495	0.38	3238.51	27784.54
Max=	20		AAHUs =	3453.71

Future With	Future With Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	8494.3	0.44	3707.45	
1	8494.3	0.44	3764.17	3735.81
10	8494.3	0.50	4258.81	36103.39
12	8494.3	0.50	4258.81	8517.62
20	8494.3	0.54	4626.86	35542.68
Max=	20		AAHUs	4194.98

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	4194.98
B. Future Without Project Open Water AAHUs =	3453.71
Net Change (FWP - FWOP) =	741.27

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	0.08					
B. Open Water Habitat Net AAHUs =	741.27					
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	239.18					

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

Project: Salvinia Weevil Propagation Facility						Project Area:	16,533
		_	% Fresh	0			
Condition: F	uture Without Pro		% Intermediate	100			
	-	F		r		1	
		TY	0	TY	1	TY	10
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0.11	0.10	0.1	0.10	0.05	0.10
V2	% Aquatic	15	0.24	14	0.23	8	0.17
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	20	0.33	20	0.33	20	0.33
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1		1		1	
V6	Access Value						
	fresh		0.56		0.56		0.56
	intermediate	0.4488		0.4488		0.4488	
	Emergent Marsh	HSI =	0.23	EM HSI =	0.23	EM HSI =	0.23
	Open Water HSI	=	0.33	OW HSI =	0.33	OW HSI =	0.29

Project: Salvinia Weevil Propagation Facility FWOP

	1	TY	12	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0.05	0.10	0	0.10		
V2	% Aquatic	15	0.24	9	0.18		
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	100		100			
V4	%OW <= 1.5ft	20	0.33	20	0.33		
V5	Salinity (ppt)						
	fresh		1.00		1.00		
	intermediate	1		1			
V6	Access Value						
	fresh		0.56		0.56		
	intermediate	0.4488		0.4488			
		EM HSI =	0.23	EM HSI =	0.23	EM HSI =	
		OW HSI =	0.33	OW HSI =	0.29	OW HSI =	

	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 =	

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

Project: :	Project Area:	16,533					
	% Fresh	0					
Condition: I	Future With Project	:				% Intermediate	100
	٦	TY	0	TY	1	TY	10
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0.11	0.10	0.11	0.10	0.11	0.10
V2	% Aquatic	15	0.24	16	0.24	22	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	20	0.33	20	0.33	20	0.33
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1		1		1	
V6	Access Value						
	fresh		0.56		0.56		0.56
	intermediate	0.44882		0.4488		0.4488	
	Emergent Marsh	HSI =	0.23	EM HSI =	0.23	EM HSI =	0.23
	Open Water HSI	=	0.33	OW HSI =	0.34	OW HSI =	0.38

Project: Salvinia Weevil Propagation Facility FWP

		TY	12	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	0.11	0.10	0.11	0.10		
V2	% Aquatic	22	0.30	24	0.32		
V3	Interspersion	%		%		%	
	Class 1	0	0.10	0	0.10		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	100		100			
V4	%OW <= 1.5ft	20	0.33	20	0.33		
V5	Salinity (ppt)						
	fresh		1.00		1.00		
	intermediate	1		1			
V6	Access Value						
	fresh		0.56		0.56		
	intermediate	0.4488		0.4488			
		EM HSI =	0.23	EM HSI =	0.23	EM HSI =	
		OW HSI =	0.38	OW HSI =	0.39	OW HSI =	

	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 =	

## AAHU CALCULATION - EMERGENT MARSH

Future With	Future Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	20.84	0.23	4.72	
1	19.68	0.23	4.46	4.59
10	9.26	0.23	2.09	29.49
12	9.26	0.23	2.09	4.19
20	0	0.23	0.00	8.37
Max=	20		AAHUs =	2.33

Future With	Future With Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	20.84	0.23	4.72	
1	20.84	0.23	4.72	4.72
10	20.84	0.23	4.72	42.52
12	20.84	0.23	4.72	9.45
20	20.84	0.23	4.72	37.79
Max=	20		AAHUs	4.72

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	4.72
B. Future Without Project Emergent Marsh AAHUs =	2.33
Net Change (FWP - FWOP) =	2.39

#### AAHU CALCULATION - OPEN WATER

Future Witl	Future Without Project		Total	Cummulative
ТΥ	Water Acres	x HSI	HUs	HUs
0	16512.16	0.33	5491.16	
1	16513.32	0.33	5383.36	5437.26
10	16523.74	0.29	4712.24	45430.82
12	16523.74	0.33	5495.01	10207.26
20	16533	0.29	4830.68	41303.28
Max=	20		AAHUs =	5118.93

Future With	Future With Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	16512.16	0.33	5491.16	
1	16512.16	0.34	5598.32	5544.74
10	16512.16	0.38	6222.00	53191.40
12	16512.16	0.38	6222.00	12443.99
20	16512.16	0.39	6423.41	50581.62
Max=	20		AAHUs	6088.09

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	6088.09
B. Future Without Project Open Water AAHUs =	5118.93
Net Change (FWP - FWOP) =	969.16

TOTAL BENEFITS IN AAHUS DUE TO PROJEC	Т
A. Emergent Marsh Habitat Net AAHUs =	2.39
B. Open Water Habitat Net AAHUs =	969.16
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	314.25

## Coastal Wetlands Planning, Protection, and Restoration Act 26th Priority Project List Report Appendix D Economic Analyses for Candidate Projects

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#### Coastal Wetlands Planning, Protection and Restoration Act Bayou La Loutre Marsh Creation and Ridge Restoration Project Priority List 26 (ver.062416)

Project Construction Years:	1	Total Project Years20
Interest Rate	2.875%	Amortization Factor 0.06644
Fully Funded First Costs	\$27,738,669	Total Fully Funded Costs \$29,762,138

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$27,017,621 \$596,083 \$596,763 \$128,905	\$1,795,086 \$39,605 \$39,650 \$8,565
Average Annual Cost	\$1,882,905	\$1,882,905
Average Annual Habitat Units	103.87	
Cost Per Habitat Unit	\$18,128	
Total Net Acres	167	

#### Coastal Wetlands Planning, Protection and Restoration Act St. Catherine Shoreline Protection and Marsh Creation Project Priority List 26 (ver.062416)

Project Construction Years:	1	Total Project Years	20
Interest Rate	2.875%	Amortization Factor	0.06644
Fully Funded First Costs	\$24,074,715	Total Fully Funded Costs \$3	5,996,522

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$23,448,195 \$623,345 \$5,347,717 \$304,718	\$1,557,929 \$41,416 \$355,309 <u>\$20,246</u>
Average Annual Cost	\$1,974,900	\$1,974,900
Average Annual Habitat Units	91.39	
Cost Per Habitat Unit	\$21,610	
Total Net Acres	214	

#### Coastal Wetlands Planning, Protection and Restoration Act Elmer's Back Barrier Marsh Creation Project Priority List 26 (ver.062416)

Project Construction Years:	1	Total Project Years	20
Interest Rate	2.875%	Amortization Factor	0.06644
Fully Funded First Costs	\$26,545,516	Total Fully Funded Costs \$27,	774,583

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$25,720,492 \$505,786 \$155,316 \$97,380	\$1,708,903 \$33,605 \$10,319 \$6,470
Average Annual Cost	\$1,759,298	\$1,759,298
Average Annual Habitat Units	120.93	
Cost Per Habitat Unit	\$14,548	
Total Net Acres	222	

#### Coastal Wetlands Planning, Protection and Restoration Act East Bayou Lafourche Marsh Creation Project Priority List 26 (ver.062416)

Project Construction Years:	1	Total Project Years20
Interest Rate	2.875%	Amortization Factor 0.06644
Fully Funded First Costs	\$35,529,448	Total Fully Funded Costs \$36,784,975

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$34,244,496 \$503,183 \$173,167 \$98,936	\$2,275,249 \$33,432 \$11,505 \$6,573
Average Annual Cost	\$2,326,760	\$2,326,760
Average Annual Habitat Units	174.82	
Cost Per Habitat Unit	\$13,309	
Total Net Acres	325	

#### Coastal Wetlands Planning, Protection and Restoration Act Bayou Terrebonne FW Diversion Project Priority List 26 (ver.062416)

Project Construction Years:	1	Total Project Years	20
Interest Rate	2.875%	Amortization Factor 0.06	6644
Fully Funded First Costs	\$15,297,909	Total Fully Funded Costs \$22,636	5,335

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$15,034,722 \$897,656 \$2,927,056 \$558,156	\$998,927 \$59,641 \$194,477 \$37,085
Average Annual Cost	\$1,290,130	\$1,290,130
Average Annual Habitat Units	54.80	
Cost Per Habitat Unit	\$23,543	
Total Net Acres	173	

#### Coastal Wetlands Planning, Protection and Restoration Act West LA1 Marsh Creation Project Priority List 26 (ver.062416)

Project Construction Years:	1	Total Project Years	20
Interest Rate	2.875%	Amortization Factor 0.0	6644
Fully Funded First Costs	\$30,536,445	Total Fully Funded Costs \$31,868	8,399

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$29,698,299 \$576,729 \$168,721 \$99,226	\$1,973,194 \$38,319 \$11,210 <u>\$6,593</u>
Average Annual Cost	\$2,029,315	\$2,029,315
Average Annual Habitat Units	147.65	
Cost Per Habitat Unit	\$13,744	
Total Net Acres	267	

#### Coastal Wetlands Planning, Protection and Restoration Act Bayou DeCade Bankline and Marsh Restoration Project Priority List 26 (ver.062416)

Project Construction Years:	1	Total Project Years 2	20
Interest Rate	2.875%	Amortization Factor 0.06644	1
Fully Funded First Costs	\$32,292,491	Total Fully Funded Costs \$34,403,845	)

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$31,182,026 \$596,083 \$703,392 \$119,707	\$2,071,775 \$39,605 \$46,734 \$7,954
Average Annual Cost	\$2,166,067	\$2,166,067
Average Annual Habitat Units	133.37	
Cost Per Habitat Unit	\$16,241	
Total Net Acres	378	

#### Coastal Wetlands Planning, Protection and Restoration Act East Pecan Island marsh creation Project Priority List 26 (ver.062416)

Project Construction Years:	1	Total Project Years20
Interest Rate	2.875%	Amortization Factor 0.06644
Fully Funded First Costs	\$53,575,221	Total Fully Funded Costs \$54,825,078

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$52,690,181 \$511,685 \$160,929 \$97,965	\$3,500,805 \$33,997 \$10,692 \$6,509
Average Annual Cost	\$3,552,003	\$3,552,003
Average Annual Habitat Units	176.94	
Cost Per Habitat Unit	\$20,075	
Total Net Acres	459	

#### Coastal Wetlands Planning, Protection and Restoration Act North Mud Lake Marsh Creation Project Priority List 26 (ver.062416)

Project Construction Years:	1	Total Project Years 2	0
Interest Rate	2.875%	Amortization Factor 0.06644	ŀ
Fully Funded First Costs	\$58,624,838	Total Fully Funded Costs \$59,930,304	ŀ

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$57,647,904 \$504,500 \$200,642 \$98,622	\$3,830,202 \$33,520 \$13,331 \$6,553
Average Annual Cost	\$3,883,605	\$3,883,605
Average Annual Habitat Units	298.38	
Cost Per Habitat Unit	\$13,016	
Total Net Acres	590	

#### Coastal Wetlands Planning, Protection and Restoration Act Coastwide Salvinia Weevil Propagation Facility Project Priority List 26 (ver.062416)

Project Construction Years:	1	Total Project Years	20
Interest Rate	2.875%	Amortization Factor 0.06	6644
Fully Funded First Costs	\$439,267	Total Fully Funded Costs \$3,802	,748

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$451,746 \$347,981 \$1,369,374 \$387,690	\$30,015 \$23,120 \$90,983 \$25,759
Average Annual Cost	\$169,877	\$169,877
Average Annual Habitat Units	597.49	
Cost Per Habitat Unit	\$284	
Total Net Acres	26	

#### Coastal Wetlands Planning, Protection and Restoration Act Ecobale Shoreline Protection - Vegetated Project Priority List 26 (ver.062416)

Project Construction Years:	0	Total Project Years	20
Interest Rate	2.875%	Amortization Factor 0.066	i44
Fully Funded First Costs	\$2,010,086	Total Fully Funded Costs \$2,714,2	93

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$1,993,561 \$251,378 \$226,733 \$80,450	\$132,455 \$16,702 \$15,064 \$5,345
Average Annual Cost	\$169,566	\$169,566
Average Annual Habitat Units	N/A	
Cost Per Habitat Unit		
Total Net Acres	N/A	

#### Coastal Wetlands Planning, Protection and Restoration Act Plant Stress Acclimation DEMO Project Priority List 26 (ver.062416)

Project Construction Years:	0	Total Project Years	20
Interest Rate	2.875%	Amortization Factor 0.0664	4
Fully Funded First Costs	\$378,834	Total Fully Funded Costs \$1,044,63	2

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$389,833 \$49,784 \$554,457 \$35,710	\$25,901 \$3,308 \$36,839 \$2,373
Average Annual Cost	\$68,420	\$68,420
Average Annual Habitat Units	N/A	
Cost Per Habitat Unit		
Total Net Acres	N/A	

#### Coastal Wetlands Planning, Protection and Restoration Act Shorelinks Demo PPL 26 Project Priority List 26 (ver.062416)

Project Construction Years:	0	Total Project Years20
Interest Rate	2.875%	Amortization Factor 0.06644
Fully Funded First Costs	\$2,446,875	Total Fully Funded Costs \$3,404,704

Total Charges	Present Worth	Average Annual
First Costs Monitoring State O & M Costs Other Federal Costs	\$2,382,937 \$310,209 \$360,797 <u>\$86,015</u>	\$158,325 \$20,611 \$23,972 \$5,715
Average Annual Cost	\$208,623	\$208,623
Average Annual Habitat Units	N/A	
Cost Per Habitat Unit		
Total Net Acres	N/A	

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

## **26th Priority Project List Report**

## Appendix E

## **Public Support for Candidate Projects**

## **Elmer's Island Marsh Creation**

 David Camardelle – Mayor, Town of Grand Isle; President Grande Isle Independent Levee District

## Salvinia Weevil Propagation Proposal

• Kim Martin Nehrbass – Vice President, J.B. Mouton, LLC



David J. Camardelle - MAYOR GRANDISLE

POST OFFICE BOX 200 • LUDWIG LANE • GRAND ISLE, LOUISIANA 70358 • PHONE (985) 787-3196

November 17, 2016

Brad L. Inman, Chief Programs & Project Management Division Projects and Restoration Branch US Army Corps of Engineers - New Orleans District 7400 Leake Ave New Orleans, LA 70118

#### RE: CWPPRA Phase I Funding Recommendation - Elmer's Island Marsh Creation

#### Dear Mr. Inman:

The town of Grand Isle and the Grand Isle Independent Levee District strongly support the **Elmer's Island Marsh Creation** project for Phase 1 engineering and design funding. This project will create marsh in an area that has breached several times during past storm events. It will complete the two CWPPRA Caminada Headlands Back Barrier Marsh Creation Projects and the NFWF Caminada Headland Beach and Dune Restoration project. It will also provide critical protection to LA Highway 1, the only evacuation route for the residents of Grand Isle.

Grand Isle urges the CWPPRA Technical Committee to select this vital project for Phase I funding.

Thank you for providing this opportunity to provide our support for this important project that will protect Louisiana's only inhabited Barrier Island.

Sincerely,

Ne

David Camardelle Mayor, Town of Grand Isle President, Grand Isle Independent Levee District



October 3, 2016

Mr. Mark Wingate Deputy District Engineer U.S. Army Corps Of Engineers P.O. Box 60267 New Orleans, LA 70160

Re: PPL26 Salvinia Weevil Propagation Proposal

Dear Mr. Wingate:

As an avid outdoorsman who participates in hunting and fishing in our wetland areas on a frequent basis I have witnessed firsthand the negative effects of giant salvinia on our waterbodies.

Our one square mile duck lease in Vermilion parish has been overrun with salvinia for the past 2 years. In fact, this past year all of our ponds and canals were covered 100% with salvina. Prior to the arrival of salvinia, widgeon grass a favorite food of ducks, was prolific in these ponds but has since been choked out.

With the help of the LSU Ag Department we were able to locate and collect some weevil infested salvinia at the beginning of this summer and I am happy to report that in the past 4 months the weevils have almost completely eradicated the salvina on our lease. The majority of our ponds and canals are now open water once again and the weevils are continuing to work on the few remaining patches.

Please support the USFWS PPL26 proposal to create additional salvinia weevil breeding ponds in Southwest Louisiana as they are much needed.

Thank you for your consideration.

Sincerely,

J.B. Mouton, LLC Kon Martin Nehrbass

Kim Martin Nehrbass Vice President

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

## **26th Priority Project List Report**

## Appendix F

## Project Status Summary Report from 1st through 26th Priority Project Lists

## by Lead Agency, Priority List, and Basin

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#### CEMVN-PM-OR

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

04-May-2017

# Project Summary Report by Priority List

P/L	No. of Projects	Acres	CSA Executed	Under Const.	Const. Completed	Federal Const. Funds Available	Non/Fed Const. Funds Matching Share	Baseline Estimate	Current Estimate	Obligations To Date	Expenditures To Date
1	14	18,932	14	0	14	\$28,084,900	\$14,234,786	\$86,918,321	\$85,860,598	\$76,095,796	\$75,762,489
2	14	13,090	14	0	14	\$28,173,110	\$14,594,499	\$87,748,455	\$87,736,358	\$73,549,812	\$73,195,945
3	10	11,427	10	0	10	\$29,939,100	\$8,771,322	\$57,278,110	\$49,950,246	\$43,773,551	\$43,507,274
4	4	1,650	4	0	4	\$29,957,533	\$2,202,220	\$13,583,217	\$13,581,726	\$12,599,554	\$12,571,510
5	6	1,907	6	0	6	\$33,371,625	\$2,037,227	\$20,355,060	\$16,943,978	\$12,924,409	\$12,856,679
6	10	9,439	10	0	10	\$39,134,000	\$6,722,155	\$53,338,029	\$53,063,671	\$39,014,621	\$38,668,524
7	4	1,873	4	0	4	\$42,540,715	\$4,669,116	\$31,127,774	\$31,127,774	\$29,748,854	\$29,640,163
8	7	1,529	7	0	6	\$41,864,079	\$5,701,494	\$36,632,869	\$36,002,334	\$27,469,610	\$27,365,977
9	10	2,147	10	1	9	\$47,907,300	\$15,351,967	\$108,956,079	\$94,890,018	\$90,788,090	\$65,278,824
10	9	1,794	9	1	6	\$47,659,220	\$19,767,857	\$139,616,298	\$127,085,651	\$106,701,605	\$80,230,675
11	10	17,941	10	2	7	\$57,332,369	\$43,153,885	\$318,726,345	\$271,408,374	\$239,856,012	\$212,643,858
11.1	1	330	1	0	1	\$0	\$7,065,116	\$14,130,233	\$14,130,233	\$13,994,787	\$13,994,787
12	3	1,170	3	0	3	\$51,938,097	\$6,297,127	\$43,238,523	\$38,810,546	\$34,826,894	\$34,657,289
13	3	708	3	0	3	\$54,023,130	\$7,111,607	\$45,680,048	\$45,282,353	\$40,666,854	\$40,552,494
14	2	275	2	0	2	\$53,054,804	\$7,068,563	\$39,405,387	\$37,144,933	\$32,617,702	\$32,436,117
15	1	447	1	0	1	\$58,059,645	\$5,992,915	\$38,541,252	\$38,089,316	\$23,424,166	\$23,403,609
16	2	305	2	0	2	\$71,402,872	\$7,092,928	\$42,869,396	\$42,617,344	\$26,393,185	\$26,343,026
17	4	595	3	0	2	\$83,286,685	\$11,394,848	\$74,863,876	\$73,734,200	\$71,129,240	\$57,680,221
18	3	612	2	1	1	\$84,916,489	\$8,108,998	\$51,813,917	\$51,216,073	\$46,296,769	\$38,185,061
19	3	1,446	3	0	0	\$79,566,889	\$5,616,638	\$40,123,127	\$36,528,652	\$5,795,414	\$4,821,242
20	3	1,733	3	2	0	\$77,389,442	\$9,969,534	\$69,651,382	\$66,587,270	\$12,360,692	\$5,448,210
21	4	1,936	3	0	0	\$74,239,647	\$9,169,799	\$94,422,352	\$91,384,304	\$54,261,935	\$6,131,257
22	4	1,159	3	0	0	\$75,310,243	\$3,940,650	\$62,144,044	\$60,666,641	\$22,681,083	\$4,181,739
23	4	1,107	1	0	0	\$64,666,970	\$1,915,165	\$12,471,926	\$12,471,926	\$8,350,137	\$1,141,026
24	4	1,312	1	0	0	\$73,630,672	\$1,656,775	\$11,045,165	\$11,045,165	\$6,339,700	\$241,855
25	6	1,508	1	0	0	\$75,813,588	\$2,791,778	\$18,611,855	\$18,611,855	\$2,012,834	\$49
Active Projects	145	96,372	130	7	105	\$1,403,263,124	\$236,285,907	\$1,613,293,039	\$1,505,971,537	\$1,153,673,306	\$960,939,901
Deauthorized	60	18,492	39	2	0			\$91,777,295	\$84,957,461	\$61,668,626	\$60,119,206
Total Projects	205	114,864	169	9	105	\$1,403,263,124	\$236,285,907	\$1,705,070,333	\$1,590,928,998	\$1,215,341,932	\$1,021,059,10

Cons Plan	1		1	0	1	\$0	\$41,091	\$191,807	\$191,807	\$143,855	\$143,855
CPSSF	1	0	1	0	0	\$0	\$160,843	\$1,243,694	\$1,243,694	\$716,935	\$226,656
CRMS	1		1	1	0	\$0	\$15,703,793	\$114,607,082	\$114,607,082	\$69,034,246	\$65,794,766
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	210	114,864	174	12	106	\$1,403,263,124	\$252,341,229 604,353	\$1,823,182,502	\$1,709,041,167	\$1,286,329,728	\$1,088,317,144

Construction	Ph I Appr	Constru	ction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
	10-Jan-2001 A 20-Jan-2010 A	02-May-2013 A	01-Feb-2014 *	NRCS	10	64	GIWW Bank Restoration of Critical Areas in Terrebonne	\$7,919,007.00	\$7,782,764.46	\$7,782,764.46
	21-Jan-2009 A 21-Jan-2009 A	27-May-2013 *	24-Apr-2017 *	NRCS	18	0	Non-Rock Alternatives to Shoreline Protection Demo	\$4,705,689.00	\$4,731,792.92	\$3,751,171.07
	24-Apr-1997 A 28-Oct-2010 A	01-Jun-2013 *	01-Oct-2014 *	FWS	6	266	Lake Boudreaux Freshwater Introduction INACTIVE	\$12,493,289.00	\$11,129.12	\$11,129.12
			FY	Total		330		\$25,117,985.00	\$12,525,686.50	\$11,545,064.65

Construction	Ph I Appr	Constru	uction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2014	25-Oct-2007 A 19-Jan-2012 A	01-Apr-2014 *	01-Apr-2014 *	FWS	17	409	South Lake Lery Shoreline and Marsh Restoration	\$28,693,565.00	\$28,951,031.45	\$18,855,935.34
FY2014	25-Oct-2007 A 19-Jan-2011 A	21-Apr-2014 *	30-Sep-2015 *	NMFS	17	186	Bayou Dupont Ridge Creation & Marsh Restoration	\$35,077,416.00	\$35,101,282.67	\$32,366,707.79
FY2014	20-Jan-1999 A 19-Jan-2011 A	01-Aug-2014 *	07-Jul-2015 A	FWS	8	331	Sabine Refuge Marsh Creation, Cycles 4 & 5	\$8,505,341.00	\$5,909,035.64	\$5,828,858.34
FY2014	19-Jan-2011 A 22-Jan-2014 *	01-Sep-2014 *	01-Sep-2018	NRCS	20	274	Kelso Bayou Marsh Creation TRANSFER	\$0.00	\$0.00	\$0.00
			FY	Y Total		1,200		\$72,276,322.00	\$69,961,349.76	\$57,051,501.47

Construction	Ph I Appr	Constr	uction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2015	19-Jan-2012 A 22-Jan-2015 A	01-Sep-2015 *	15-Oct-2016 *	NMFS	21	433	Oyster Bayou Marsh Restoration	\$22,734,564.00	\$25,593,395.00	\$20,941.30
FY2015	18-Oct-2006 A	01-Dec-2015 *	01-Jul-2017	NMFS	16	334	Madison Bay Marsh Creation and Terracing INACTIVE	\$0.00	\$0.00	\$0.00
			F١	7 Total		767		\$22,734,564.00	\$25,593,395.00	\$20,941.30

Construction	n Ph I Appr	Constru	uction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2016	24-Jan-2013 A 14-May-2015 A	01-Feb-2016 *		EPA	22	118	Bayou Dupont Sediment Delivery- Marsh Creation 3	\$12,339,259.00	\$12,660,808.00	\$1,317.00
FY2016	10-Jan-2001 A	01-Apr-2016 *	15-Feb-2018	NMFS	10	256	Rockefeller Refuge Gulf Shoreline Stabilization	\$25,941,244.00	\$25,565,032.00	\$7,930.52
FY2016	10-Jan-2001 A 22-Jan-2016 *	05-Dec-2016 *	31-May-2017	EPA	10	0	Hydrologic Restoration & Vegetative Planting in the Lac des Allemands Swamp	\$1,715,768.00	\$0.00	\$27,758.01
			F	Y Total		374		\$39,996,271.00	\$38,225,840.00	\$37,005.53

Construction	n Ph I Appr	Constr	ruction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2017	20-Jan-2010 A 24-Jan-2013 A	01-Aug-2016 *	31-Oct-2017	FWS	19	452	Lost Lake Marsh Creation and Hydrologic Restoration	\$28,414,381.00	\$77,170.23	\$1,425.66
FY2017	16-Jan-2002 A 15-Feb-2007 A	01-Dec-2016 *	01-Feb-2017 *	NRCS	11	45	Grand Lake Shoreline Protection	\$5,578,845.00	\$5,795,722.00	\$19,242.06
FY2017	18-Oct-2006 A 20-Jan-2017 *	30-Jun-2017	10-Jul-2018	COE	16	888	Southwest LA Gulf Shoreline Nourish &Protect TRANSFER	\$0.00	\$0.00	\$0.00
FY2017	21-Jan-2009 A 22-Jan-2017 *	01-Sep-2017	01-Jul-2018	NRCS	18	233	Central Terrebonne Freshwater Enhancement TRANSFER	\$0.00	\$0.00	\$0.00
			F	/ Total		1,618		\$33,993,226.00	\$5,872,892.23	\$20,667.72

Construction	Ph I Appr	Const	ruction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2018	19-Jan-2012 A 12-Jan-2017 A	01-Oct-2017	01-Oct-2018	FWS	21	432	Turtle Bay Marsh Creation	\$24,558,643.00	\$0.00	\$0.00
FY2018	20-Jan-2010 A 22-Jan-2014 *	01-Jul-2018	01-Aug-2019	NRCS	19	279	Freshwater Bayou Marsh Creation	\$0.00	\$0.00	\$0.00
FY2018	20-Jan-2010 A 21-Jan-2018	01-Sep-2018	01-Sep-2019	NRCS	19	715	LaBranche East Marsh Creation	\$0.00	\$0.00	\$0.00
FY2018	19-Jan-2012 A 21-Jan-2018	01-Sep-2018	01-Sep-2019	NRCS	21	731	LaBranche Central Marsh Creation	\$0.00	\$0.00	\$0.00
			F	Y Total		2,157		\$24,558,643.00	\$0.00	\$0.00

Construction	n Ph I Appr	Const	ruction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2020	21-Jan-2016 A 01-Jan-2019	01-Nov-2019	01-Nov-2020	NRCS	25	251	Barataria Bay Rim Marsh Creation	\$0.00	\$0.00	\$0.00
			F	Y Total		251		\$0.00	\$0.00	\$0.00

Construction	Ph I Appr	Constru	ction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
			Grand T	otal		6,697		\$218,677,011.00	\$152,179,163.49	\$68,675,180.67

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT PROJECT STATUS SUMMARY REPORT

04 May 2017

Summary report on the status of CWPPRA projects prepared for the Louisiana Coastal Wetlands Conservation and Restoration Task Force.

Reports enclosed:

Project Summary by Priority List Project Summary by Basin Project Summary Estimates

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















CEMVN-PM-W						AND RESTORA				04-May-2017 Page 1
	Project Stat	tus Summa	ry Report -	Lead Agency: I	ENVIRONME	NTAL PROTEC	TION AGENC	CY (EPA)		•
				********	** SCHEDULES	****	******* ES	TIMATES ***	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: EPA	A, REGION 6									
Priority List Co	onservation Pla	ın								
State of Louisiana	COAST	COAST		13-Jun-1995 A	03-Jul-1995 A	21-Nov-1997 A	\$191,807	\$191,807	100.0	\$143,855
Wetlands Conservation Plan	Status:	The date the reporting pur		ed to obligate the Fe	deral funds for the	development of the pla	n is used as the cons	truction start date	for	\$143,855
		Complete.								
	Total Priority List	Cons Plan					\$191,807	\$191,807	100.0	\$143,855 \$143,855
1 Project	(s)									

1 Cost Sharing Agreements Executed

1 Construction Started

1 Construction Completed

0 Project(s) Deferred/Deauthorized

CEMVN-PM-W	COAS	STAL WE	TLANDS P	LANNING,	PROTECTION A	AND RESTOR.	ATION ACT			04-May-2017
	Project Status	s Summar	y Report - I	lead Agency	: ENVIRONMEN	NTAL PROTEC	CTION AGENC	CY (EPA)		Page 2
PROJECT	BASIN	PARISH	ACRES	******** CSA	**** SCHEDULES * Const Start	********* Const End	******** ES Approved	TIMATES *** Funded	**** %	Actual Obligations/ Expenditures
Total							\$191,807	\$191,807	100.0	\$143,855 \$143,855
1 1 1	Project(s) Cost Sharing Agreements Construction Started Construction Completed Project(s) Deferred/Deaut									

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W

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

04-May-2017 Page 3

		- <b>j</b>	~~j	1	0		, , , , , , , , , , , , , , , , , , ,			Actual
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	Const End	Approved	STIMATES **** Funded	**** %	Obligations/ Expenditures
Lead Agency: USGS, U	J.S. Geolo	ogical Surve	У							
Priority List 0.1										
Coastwide Reference Monitoring System -	COAST	COAST		13-Feb-2013 A	14-Aug-2003 A		\$114,607,082	\$114,607,082	100.0	\$69,034,246 \$65,794,766
Wetlands	Status:	collection is o elevation/accr time continuo (http://www.la website is des CRMS analyti delivery. The indices are inc continues to e CRMS data an the 2012 CWF in peer review Coastwide Re http://pubs.usg Cretini, K.F., Louisiana: U.S	ccurring at all s etion, and soil p us hydrologic g acoast.gov/crms igned to facilita ical teams, inclu- teams have dev corporated in the volve to suppor re being used in PPRA Report to y, but the follow ference Monito gs.gov/fs/2010/2 and Steyer, G.E S. Geological S Visser, J.M., Kr	ites. All data are p properties and coas ages in September 2/Home.aspx). The te easy access to date reloped ecological e CRMS report car t the data and tools the Operations, M 9 U.S. Congress to ing documents hav ring System (CRM 3018/. 20 2011, Floristic Q urvey Fact Sheet 2 auss, K.W., and St	osted within the DNF twide aerial photogra 2010. A CRMS web the CRMS website pro- ata and products. cademic personnel, v indices in consultation of which was released s that are developed t faintenance, and Mon evaluate project effect re been published: (S): U.S. Geological S puality Index An as 011-3044, 4 p. http://	l sites (391) have app R SONRIS database. aphy and satellite ima osite has been establis ovides graphing, visua were established for la on with the CWPPRA d in 2011 and is access hrough the CRMS pr nitoring Reports for C ctiveness. Several arti- Survey Fact Sheet 20 assessment tool for ress /pubs.usgs.gov/fs/201 velopment and use of 403.	Available data inclu agery. Ten CRMS si shed as an offshoot of alizations, and data d andscape, hydrology. A Monitoring Work C ssed through the CRI rogram. CWPPRA projects an icles have been subr 10-3018, 2 p. toration projects and 11/3044/.	des hydrologic, ve tes were equipped f LaCoast.gov lownload functiona , vegetation, soils, Group. The ecologi MS website. The v d will be incorpora nitted for publication	getation, with real ality. The and data cal vebsite ated into on and are	

CEMVN-PM-W					ROTECTION A Agency: DEPT.			)		04-May-2017 Page 4
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES * Const Start	******** Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	0.1					\$114,607,082	\$114,607,082	100.0	\$69,034,246 \$65,794,766
1 C 1 C 0 C	Project(s) Cost Sharing Agreements Ex Construction Started Construction Completed Project(s) Deferred/Deautho									
Total							\$114,607,082	\$114,607,082	100.0	\$69,034,246 \$65,794,766
1 ( 1 ( 0 (	Project(s) Cost Sharing Agreements Construction Started Construction Completed Project(s) Deferred/Deau									

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W				,		AND RESTORA . OF THE INTE		)		04-Mav-2017 Page 5 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Obligations/ Expenditures
Lead Agency: USGS,	U.S. Geolo	gical Surve	ey .							
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	\$666,704
T und	Status:	multiple proj		plementation plan a		d (by P&E) continger amount of \$334,562.				\$666,704
						or 4 tasks associated v y survey (USGS) and			v land	
Tota	al Priority List	0.2					\$1,500,000	\$1,500,000	100.0	\$666,704 \$666,704
1 Project(s)										

1 Cost Sharing Agreements Executed

1 Construction Started

0 Construction Completed

0 Project(s) Deferred/Deauthorized

CEMVN-PM-W	EMVN-PM-W       COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT       04         Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (USGS)       04											
PROJECT	BASIN	***********************************										
Total							\$1,500,000	\$1,500,000	100.0	\$666,704 \$666,704		
1 Constr 0 Constr	et(s) Sharing Agreement ruction Started ruction Completed et(s) Deferred/Dea	l										

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W			STAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT ject Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (USGS)							
PROJECT	BASIN	PARISH A	**** %	Actual Obligations/ Expenditures						
Lead Agency: USC	GS, U.S. Geolo	gical Survey								
Priority List 0.3	3									
Storm Recovery	COAST	COAST	21-Aug-2007 A	18-Oct-2006 A		\$569,586	\$569,586	100.0	\$426,056	
Assessment Fund	Status:	Gustav and Ike. A	2008, the CWPPRA Task Forc mendment #1 to the original c re from Director's of CPRA and	cooperative agreemen					\$426,056	
	Total Priority List	0.3				\$569,586	\$569,586	100.0	\$426,056 \$426,056	

1 Project(s)

1 Cost Sharing Agreements Executed

1 Construction Started

0 Construction Completed

0 Project(s) Deferred/Deauthorized

CEMVN-PM-W				,	ANNING, PROTECTION AND RESTORATION ACT port - Lead Agency: DEPT. OF THE INTERIOR (USGS)							
PROJECT	BASIN	PARISH	ACRES									
1 Construe 0 Construe	s) aring Agreement ction Started ction Completed s) Deferred/Dear	l					\$569,586	\$569,586	100.0	\$426,056 \$426,056		

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W		COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (USGS)											
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES * Const Start	******** Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures			
Lead Agency:	USGS, U.S. Geolo	gical Surve	ey										
Priority List	0.4												
Construction Program Technical Support Services Fund	COAST Status:	COAST	0	19-Oct-2011 A			\$1,243,694	\$1,243,694	100.0	\$716,935 \$226,656			
	Total Priority List	0.4	0				\$1,243,694	\$1,243,694	100.0	\$716,935 \$226,656			
1 Co 0 Co 0 Co	oject(s) ost Sharing Agreements E onstruction Started onstruction Completed oject(s) Deferred/Deautho												
Total			0				\$1,243,694	\$1,243,694	100.0	\$716,935 \$226,656			
1 Cc 0 Cc 0 Cc	roject(s) ost Sharing Agreement onstruction Started onstruction Completed roject(s) Deferred/Dear												

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COA	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)									
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
Lead Agency: COE, C	ORPS OF	ENGINEE	RS								
Priority List 1											
Barataria Bay Waterway Wetland Creation	BARA	JEFF	445	24-Apr-1995 A	22-Jul-1996 A	15-Oct-1996 A	\$1,167,832	\$1,167,832	100.0	\$1,158,382 \$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 project expires on 15 Oct 2016.										
Bayou Labranche Wetland Creation	PONT	STCHA	203	17-Apr-1993 A	06-Jan-1994 A	07-Apr-1994 A	\$3,717,914	\$3,717,914	100.0	\$3,717,914	
wenand Creation	Status:	and placing in 13, 1994. The originally pla vegetation se is expected to area to a mini- contained abore reached an el vegetation co	n marsh creatie e project is bei nned for this p ems to have be b be supplanted imum of 70% out 82% land a evation that ap mmunity of th	on area. Contract fina ng monitored; the ma project. The goal of cr een partially met. As s d by more oblilgate w emergent marsh to 30 and 18% water, which opears to sustain the 7 e project have develo	l inspection was per jority of the monito eating a shallow was sediment continues to etland species. One % open water after a is higher than the r 0% (land and marsh ped into characteris	lging approximately 2, formed on April 7, 199 ring has already been of the rhabitat conductive t to consolidate and wate project goal is to incres 5 years following projen ninimum goal. The con n) component of the pri- tic wetland habitat for r life expires on 7 Apr	24. Site visit by Tas completed and is pro- o the natural establi- er is maintained in t ase the marsh:open ect completion. As isolidation of dredg oject area. The soil the region. The pro-	k Force took place occeeding in accord ishment of wetland the area, upland ve water ratio in the of 1997, the project ged material over ti properties and the	e on April lance as l getation project tt area ime has	\$3,717,914	

CEMVN-PM-W	COA			*		AND RESTORA PT. OF THE AF				04-May-2017 Page 11 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******* ES Approved	TIMATES **** Funded	**** %	Obligations/ Expenditures
Lake Salvador Shoreline Protection at Jean Lafitte	BARA	JEFF		29-Oct-1996 A	01-Jun-1995 A	21-Mar-1996 A	\$60,375	\$60,375	100.0	\$60,375
NHP&P	Status:			•		rce meeting. The Task or the design of the pro	**	expenditure of up	o to	\$60,375
		•	ion contract.		•	in May 1996 to resolv 996 for \$610,000 to B	· ·			
		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	\$2,047,479	\$2,047,479	100.0	\$2,013,208 \$2,012,210
Bark Protection	Status:	sediment rete	ntion fence or	the west bank is still	undetermined.	ast bank of the cutoff to	-	vetlands. The need	d for the	\$2,013,210
		The Task For	ce approved a	revised project estim	ate of \$2,500,000; h	nowever, current estim	ate is less.			
				e easements was requ s completed in Februa		ear ownership titles an	d significantly lengt	hened the project		
		Complete.								

CEMVN-PM-W

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

04-May-2017 Page 12

PROJECT	BASIN	PARISH	ACRES	, ************************************	** SCHEDULES Const Start	********* Const End	******* Es Approved	STIMATES ***' Funded	**** %	Actual Obligations/ Expenditures
West Bay Sediment	DELTA	PLAQ	9,831	29-Aug-2002 A	10-Sep-2003 A	28-Nov-2003 A	\$50,863,503	\$50,863,503	100.0	\$44,135,558 \$44,031,348
Diversion	Status:	project divers project was d monthly usin in the project In 2006 the U with the project event was per	ond of Mississippi R averaged 19,188 cfs. Discharge measureme ce monitoring. At this o remove induced sh or marsh creation in V ad use of this technol eficial use of dredged	Initial construction nts are taken rough is point there is no oal material in acco West Bay. The dree logy in Louisiana w	Φ <b>++</b> ,051,3 <b>+</b> 0					
		the project op under a reim will be comp 17, 2002. A I project descri Force meetin	pened 08 July bursable const leted in July 2 Record of Dec iption and rea g, approval w	2003 and bids were of truction agreement. A 2003. The project Cos cision finalizing the El uthorized the project as granted to proceed	ppened on 11 Augus real estate plan for t Sharing Agreemer IS was signed on M to comply with CW with the project at	s completed in Novem st 2003. Chevron-Texa the project was compl tt was signed August 2 arch 18, 2002. The Ta PPRA Section 3952 in the current price of \$2 ertaken in August 200	aco relocated a major leted in October 200 29, 2002. A 95% des ask Force, by fax vot n April 2002. At the 22 million due to the	r oil pipeline in Ma 2 and execution of sign review was hel e, approved a revis January 10, 2001	ay 2003 the plan ld May sed Fask	
	Total Priority List	1	10,544				\$57,857,103	\$57,857,103	100.0	\$51,085,438 \$50,981,230

5 Project(s)

- 5 Cost Sharing Agreements Executed
- 5 Construction Started
- 5 Construction Completed

0 Project(s) Deferred/Deauthorized

#### Priority List 1

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)										
					** SCHEDULES	****	******* ES	STIMATES ***	****	Actual Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures	
Isles Dernieres	TERRE	TERRE	9	17-Apr-1993 A	16-Jan-1998 A	15-Jun-1999 A	\$8,762,416	\$8,762,416	100.0	\$8,664,422 \$8,664,422	
Restoration East Island	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 1999.	start was Janu	ary 16, 1998. Hydra	ulic dredging was c	ompleted September	1998. Vegetation pl	anting was comple	eted June		
	Total Priority List	1	9				\$8,762,416	\$8,762,416	100.0	\$8,664,422 \$8,664,422	
	ruction Completed ct(s) Deferred/Deauth	orized									
Bayou Sauvage National	PONT	ORL	1,550	17-Apr-1993 A	01-Jun-1995 A	30-May-1996 A	\$1,680,193	\$1,680,193	100.0	\$1,601,663	
Wildlife Refuge Hydro			,			5		. , ,		\$1,001,003	
Restoration, Phase 1	Status:			d in May 1996. The ct in coordination wit					e lead		
		-	-	noved the two 30-incl done because larger p			-	-			
Cameron Creole Plugs	CA/SB	CAMER	865	17-Apr-1993 A	01-Oct-1996 A	28-Jan-1997 A	\$2,129,205	\$1,184,669	55.6	\$1,145,809	
	Status:		on Authority	project was construct (CPRA) finalized an (						\$1,136,999	

CEMVN-PM-W

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

04-May-2017 Page 14

	1	**************************************								Actual	
PROJECT	BASIN	PARISH	ACRES	CSA	*** SCHEDULES Const Start	Const End	Approved	STIMATES **** Funded	***** %	Obligations/ Expenditures	
Cameron Prairie National Wildlife Refuge Shoreline	MERM	CAMER	247	17-Apr-1993 A	19-May-1994 A	09-Aug-1994 A	\$1,227,123	\$1,227,123	100.0	\$1,061,657 \$1,061,657	
Protection	Status:	maintenance complaints th	has been need the rock was ob	led and \$39,963 expensions expension by vegetation	ended on O&M insp The rock dike is n	made in the near future ections. The Corps in ot within the GIWW n he rock dike is in good	stalled warning sign avigation channel. T	s in 2001 due to na	avigation	\$1,001,0 <i>5</i> 7	
				er rock allowing wate Those low areas were	Ũ	ted during the March 2 nspections.	2012 O&M inspection	on, but there was no	o need of		
Sabine National Wildlife	CA/SB	CAMER	5,542	17-Apr-1993 A	24-Oct-1994 A	01-Mar-1995 A	\$1,602,656	\$1,602,656	100.0	\$1,309,987	
Refuge Erosion Protection	Status:	performed w	ith CWPPRA	funds. The end of th	e project's 20-year (	led within the project's CWPPRA life was Mar ect close out upon read	rch 2015. The CWF	PRA Task Force o		\$1,309,987	
Tot	al Priority List	1	8,204				\$6,639,177	\$5,694,641	85.8	\$5,119,116 \$4,928,549	
4 Constructio 4 Constructio	ng Agreements H on Started on Completed Deferred/Deauth										
Priority List 1											
Fourchon Hydrologic Restoration	TERRE	LAFOU					\$7,703	\$7,703	100.0	\$7,703 \$7,703	
DEAUTHORIZED	Status:					S personnel that any ac and because they quest				φ1,105	

Government / general public involvement would result after implementation. ey qu

Deauthorized.

CEMVN-PM-W	Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)									
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** E Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Lower Bayou LaCache	TERRE	TERRE		17-Apr-1993 A			\$99,625	\$99,625	100.0	\$99,625
Hydrologic Restoration DEAUTHORIZED	Status:	two east-west	t connections b	etween Bayou Petit	Caillou and Bayou T	roject area, users stre errebonne. NMFS rrded the letter to CO	received a letter fro	m LA DNR, dated		\$99,625
		Deauthorized	1.							
To	otal Priority List	1					\$107,328	\$107,328	100.0	\$107,328 \$107,328
0 Constructi 0 Constructi	ing Agreements l ion Started ion Completed Deferred/Deauth									
Priority List 1										
GIWW to Clovelly Hydrologic Restoration	BARA	LAFOU	175	17-Apr-1993 A	21-Apr-1997 A	31-Oct-2000 A	\$12,896,358	\$12,783,171	99.1	\$10,463,555 \$10,425,023
	Status:	began May 1 and one plug	, 1997 and con	pleted November 30 y 1, 2000 and completed	, 1997, at a cost of \$	ementation. The first of 6646,691. The second 0, at a cost of \$3,400	l contract to install b	oank protection, on	e weir	\$10, <del>4</del> 25,025
Vegetative Plantings -	MERM	VERMI		17-Apr-1993 A	11-Jul-1994 A		\$92,147	\$92,147	100.0	\$92,147
Dewitt-Rollover Planting Demo DEAUTHORIZED	Status:	Sub-project of	of the Vegetativ	ve Plantings project.						\$92,147
		Complete and	d deauthorized.							

CEMVN-PM-W	Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)										
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
Vegetative Plantings - Falgout Canal Planting	TERRE	TERRE	0	17-Apr-1993 A	30-Aug-1996 A	30-Dec-1996 A	\$206,523	\$206,523	100.0	\$206,523	
Demo COMPLETE	Status:	Sub-project of	of the Vegetat	ive 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	\$300,492	\$300,492	100.0	\$300,492	
Timbalier Island Planting Demo COMPLETE	Status:	Sub-project of	of the Vegetat	ive Plantings project.						\$300,492	
		Complete.									
Vegetative Plantings -	CA/SB	CAMER	0	17-Apr-1993 A	15-Apr-1993 A	30-Mar-1994 A	\$256,251	\$256,251	100.0	\$256,251	
West Hackberry Planting Demo COMPLETE	Status:	Sub-project of	of the Vegetat	ive Plantings project.						\$256,251	
		Complete.									
Tot	al Priority List	1	175				\$13,751,771	\$13,638,584	99.2	\$11,318,968 \$11,280,436	
<ul> <li>5 Project(s)</li> <li>5 Cost Sharin</li> <li>5 Construction</li> <li>4 Construction</li> </ul>		Executed									

4 Construction Completed

CEMVN-PM-W	IVN-PM-W       COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT       04         Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)       04										
PROJECT		**************************************									
Total			18,932				\$87,117,796	\$86,060,073	98.8	\$76,295,272 \$75,961,964	
16 15 14	Project(s) Cost Sharing Agreements Exe Construction Started Construction Completed Project(s) Deferred/Deauthori										

Notes:

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COA			,		AND RESTOR. EPT. OF THE A				04-May-2017 Page 18
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********** Const End	******** E: Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Lead Agency: COE, C	CORPS OF	ENGINEE	RS							
Priority List 2										
Clear Marais Bank Protection	CA/SB	CALCA	1,067	29-Apr-1996 A	29-Aug-1996 A	03-Mar-1997 A	\$3,267,476	\$3,267,476	100.0	\$2,970,880
Protection	Status:	needed (base	d on the origin	nal design), and the e	stimate did not inclu	blan in that the rock qu ide a floatation channe ne original rock dike d	el needed for constru	ction. This account		\$2,956,678
		Complete.								
West Belle Pass Headland Restoration	TERRE	LAFOU	474	27-Dec-1996 A	10-Feb-1998 A	15-Aug-1998 A	\$6,826,754	\$6,826,754	100.0	\$6,654,966 \$6,654,966
	Status:	Hennington a shoreline pro area perimete copies are av	and Kaitlyn Ca tection and ro er; closures #2 ailable upon r	arriere of USACE-M ock closures #4 & 5 al 2 & 3 were not include	VN. Constructed fea ong Bayou Lafourcl ed in the 2016 inspe ctioning as designed	ees included Glen Cur tures inspected includ he and Belle Pass. Inte ction due to their boat & meeting project go t.gov website.	ed the vinyl bulkhea erior marsh areas we inaccessibility. Pho	ad Closure #1, the r re viewed from the tographs were take	rock project en and	
Tota	al Priority List	2	1,541				\$10,094,230	\$10,094,230	100.0	\$9,625,846 \$9,611,644
<ol> <li>Project(s)</li> <li>Cost Sharin</li> <li>Constructio</li> <li>Constructio</li> <li>Project(s) E</li> </ol>	n Completed									

CEMVN-PM-W		COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT 04 roject Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)								
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********** Const End		STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
FROJECT	DASIN	ГАКІЗП	ACKES	CSA	Collst Start	Collist Ella	Approved	Fullded	70	Expenditures
Isles Dernieres Restoration Trinity Island	TERRE	TERRE	109	17-Apr-1993 A	27-Jan-1998 A	15-Jun-1999 A	\$10,774,974	\$10,774,974	100.0	\$10,799,102
Restoration Trinity Island	Status:					rojected in plans and s anuary 16, 1998 Task		itional funds to cov	ver the	\$10,799,102
				he Tom James, mobili s was completed June		on about January 27, 1	998. Dredging was	s completed in Sept	tember	
То	tal Priority List	2	109				\$10,774,974	\$10,774,974	100.0	\$10,799,102 \$10,799,102
1 Project(s)										
1 Cost Shari	ng Agreements I	Executed								
1 Construction										
	on Completed									
0 Project(s)	Deferred/Deauth	lorized								
Priority List 2										
Bayou Sauvage National Wildlife Refuge Hydro	PONT	ORL	1,280	30-Jun-1994 A	15-Apr-1996 A	28-May-1997 A	\$1,692,552	\$1,692,552	100.0	\$1,513,635 \$1,453,429
Restoration, Phase 2	Status:	Plan was app The Corps of	proved in Octol f Engineers rer	ber 2004. The FWS is noved the two 33-incl	s the lead O&M age h diameter CWPPR	inal inspection on May ency for this project. A-constructed pumpir to accommodate the l	ng stations in 2010 a	nd replaced them i	n	Ψ1,755,727

2011.

CEMVN-PM-W		ASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)								
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Tot	al Priority List	2	1,280				\$1,692,552	\$1,692,552	100.0	\$1,513,635 \$1,453,429
1 Construction 1 Construction										
Atchafalaya Sediment	ATCH	STMRY	2,232	01-Aug-1994 A	25-Jan-1998 A	21-Mar-1998 A	\$2,455,669	\$2,455,669	100.0	\$2,152,324
Delivery	Status:	has partially bathymetric s dredge mater	been met. Lin survey is curre ial channel ex	are conducted on the l nited bathymetric data ently being discussed f cavation has also been project boundaries.	is suggesting partia for both AT-02 and	l shoaling at the head AT-03. The creation	of Natal Pass and C of delta lobe islands	astille Pass. More with beneficially u	extensive ising	\$2,126,378
Big Island Mining	ATCH	STMRY	1,560	01-Aug-1994 A	25-Jan-1998 A	08-Oct-1998 A	\$7,003,102	\$7,003,102	100.0	\$6,716,661
	Status:	Project cost i	ncrease was a	pproved by the Task I	Force at the January	16, 1998 meeting.				\$6,716,661
		Construction	project comp	lete. First costs accou	inting underway.					
Point Au Fer Canal Plugs	TERRE	TERRE	375	01-Jan-1994 A	01-Oct-1995 A	08-May-1997 A	\$5,514,145	\$5,514,145	100.0	\$3,260,148 \$3,253,072
	Status:		& 3 and the	noreline surveys are un possible extension of						φ <i>3,∠33,</i> 072

CEMVN-PM-W	A-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)											
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********** Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures		
TROJECT			ACKES	CSA	Collst Start	Collist Ella	Approved	Funded	/0	Experientures		
	Total Priority List	2	4,167				\$14,972,916	\$14,972,916	100.0	\$12,129,133 \$12,096,111		
3 3 3	Project(s) Cost Sharing Agreements F Construction Started Construction Completed Project(s) Deferred/Deauth											
Priority List	t 2											
Brown Lake Hydrol Restoration	ogic CA/SB	CAMER		28-Mar-1994 A			\$1,097,828	\$1,097,828	100.0	\$1,097,828		
DEAUTHORIZED	Status:			project has been with approve deathorization		es in project features	herefore 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	\$4,536,000	\$4,536,000	100.0	\$4,011,040		
Outfall Managemen	t Status:	DNR. The p	roject was mod	dified. The final plan	/EA has been prepa	ut was referred for rev red. Bids were open ction complete June 1	ed 23 February 2001			\$3,975,900		
East Mud Lake Mar	sh CA/SB	CAMER	1,520	24-Mar-1994 A	01-Oct-1995 A	15-Jun-1996 A	\$6,036,741	\$6,036,741	100.0	\$4,994,664		
Management	Status:			1995 and contract av he vegetation install		s. Construction starte 1996.	d in early October 1	995. Water contro	ol	\$4,971,678		
		Construction	complete. O&	M plan executed. M	laintenance needs or	a water control struc	ture is being evalua	ted.				

CEMVN-PM-W				,		AND RESTOR		)		04-May-2017 Page 22
PROJECT	BASIN	PARISH	ACRES		** SCHEDULES Const Start			ŚTIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Freshwater Bayou	MERM	VERMI	1,593	17-Aug-1994 A	29-Aug-1994 A	15-Aug-1998 A	\$6,059,651	\$6,047,554	99.8	\$3,563,468
Wetland Protection	Status:		is included as			d from the Wax Lake tract for the Wax Lake				\$3,506,642
		Project const	ruction is com	plete. Maintenance	contract underway t	o repair rock dike.				
Fritchie Marsh Restoration	PONT	STTAM	1,040	21-Feb-1995 A	01-Nov-2000 A	01-Mar-2001 A	\$2,201,674	\$2,201,674	100.0	\$1,863,617
	Status:	O&M plan e	xecuted Janua	ry 29, 2003.						\$1,850,956
Highway 384 Hydrologic	CA/SB	CAMER	150	13-Oct-1994 A	01-Oct-1999 A	07-Jan-2000 A	\$1,586,227	\$1,586,227	100.0	\$1,373,941
Restoration	Status:		start slipped fuary 7, 2000.	from November 1997	to July 1999 becaus	se of landright issues.	All landright agreen	nents signed. Const	ruction	\$1,355,470
		O&M plan e	xecuted. Main	tenance contract com	plete. Minor damag	ge from Hurricane Lili	to be repaired. Cor	stract in preparation	1.	
Jonathan Davis Wetland	BARA	JEFF	510	05-Jan-1995 A	22-Jun-1998 A	12-Jan-2012 A	\$28,896,380	\$28,896,380	100.0	\$22,778,259
Restoration	Status:	Construction	has begun to	repair vandalism to th	ne concrete walls. V	Vork is anticipated to	be completed by Oct	tober 2012.		\$22,677,903
Vermilion Bay/Boston	TECHE	VERMI	378	24-Mar-1994 A	13-Sep-1994 A	30-Nov-1995 A	\$897,109	\$897,109	100.0	\$897,109
Canal Shore Protection	Status:	Complete.								\$897,109

CEMVN-PM-W	Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)											
PROJECT	BASIN	PARISH	******         SCHEDULES         ******         ESTIMATES         ******         CONSTRUCTION           ACRES         CSA         Const Start         Const End         Approved         Funded         %         E           5,993         \$51,311,611         \$51,299,514         100.0         F									
	Total Priority List	2	5,993				\$51,311,611	\$51,299,514	100.0	\$40,579,924 \$40,333,487		
8 7 7	Project(s) Cost Sharing Agreements Ex Construction Started Construction Completed Project(s) Deferred/Deautho											
Total			13,090				\$88,846,283	\$88,834,186	100.0	\$74,647,640 \$74,293,773		
15 14 14	Project(s) Cost Sharing Agreements Construction Started Construction Completed Project(s) Deferred/Deau											

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COA			,		AND RESTORA EPT. OF THE AF				04-May-2017 Page 24
				******	** SCHEDULES	****	******* ES	STIMATES ***	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: COE, C	ORPS OF	ENGINEE	RS							
Priority List 3										
Channel Armor Gap	DELTA	PLAQ	936	13-Jan-1997 A	22-Sep-1997 A	02-Nov-1997 A	\$884,270	\$884,270	100.0	\$759,263
Crevasse	Status:	Cost increase	was due to ad	ditional project mana	agement costs, by be	oth Federal and Local S	Sponsor.			\$759,263
		reviewed their	r permit for th		nined that Shell Pipe	egatively impacted by t eline was required to 1				
		Construction	complete.							
MRGO Disposal Area Marsh Protection	PONT	STBER	755	17-Jan-1997 A	25-Jan-1999 A	29-Jan-1999 A	\$318,445	\$318,445	100.0	\$318,445 \$318,445
COMPLETE	Status:	is under \$100	),000. Bids re		an Government esti	ned via a simplified acc mate by 25%. Subseq 9 January 1999.				\$316,44 <i>3</i>
		the baseline e	estimate. Furt		icates that private ov	onmental investigatior wnership titles are uncl				
Pass-a-Loutre Crevasse	DELTA	PLAQ					\$119,835	\$119,835	100.0	\$119,835
DEAUTHORIZED	Status:	asked that the locations for	e Corps investi the cut. The C	gate alternative locat Corps has also review	ions to avoid or mined the design to det	increasing relocation continuities impacts to the permine whether relocated to 200 feet reduced to	ipelines, but there a ions cost-savings c	re no more suitablould be achieved.	le	\$119,835
			he project. CO			PRA Technical Comm ary 16, 1998 Task Forc	-	•		

CEMVN-PM-W	PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)										
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
	Total Priority List	3	1,691				\$1,322,550	\$1,322,550	100.0	\$1,197,543 \$1,197,543	
2 Co 2 Co	st Sharing Agreements I nstruction Started nstruction Completed ject(s) Deferred/Deauth										
Red Mud Demo DEAUTHORIZED	PONT	STJON		03-Nov-1994 A			\$520,129	\$520,129	100.0	\$520,129 \$520,120	
DEAUMORIZED	Status:			entially complete; proj ntly been deauthorized				by saltwater before	e planting	\$520,129	
		The Task For and Chemica		he deauthorization of t	the project on Augu	st 7, 2001. Escrowed	d funds will be retur	ned to Kaiser Alun	ninum		
Whiskey Island Restoration COMPLET	TERRE	TERRE	1,239	06-Apr-1995 A	13-Feb-1998 A	15-Jun-2000 A	\$7,043,188	\$7,043,188	100.0	\$7,043,188 \$7,043,188	
Restoration COWI EE	Status:	At the Janua received.	ry 16, 1998 m	eeting, the Task Force	approved additiona	al funds to cover the in	ncreased constructio	n cost on lowest b	id	\$7,043,188	
				uary 13, 1998. Dredg ing/planting was carri			ion with spartina on	bay shore, July 19	98.		

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

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PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	3	1,239				\$7,563,317	\$7,563,317	100.0	\$7,563,317 \$7,563,317
1 Construe 1 Construe	s) aring Agreements F ction Started ction Completed s) Deferred/Deauth									
Priority List 3										
Sabine Refuge Structure Replacement (Hog Island)	CA/SB	CAMER	953	25-Oct-1996 A	01-Nov-1999 A	10-Sep-2003 A	\$6,177,735	\$5,900,565	95.5	\$5,603,371 \$5,562,412
Replacement (Hog Island)	Status:	the following structure - Ju proper 3-Pha in the automa	dates: Headqu ne 2001. Initia se. Transforme atic mode beca	arters Canal structure Ily electrical problemers and filters were acture use the correct "3-Ph	re - February 9, 2000 ns were caused becau dded to the structures nase" electricity was	ed June 2001. The str ); Hog Island Gully st use the "3-Phase" elec s in December 2001. 7 not available. Rotary p lly and West Cove str	ructure - August 200 trical service to the The structures contin phase converters, ins	00; and the West Co structures was not to nued to operate inco stalled in Septembe	bye he prrectly r 2003,	\$5,563,412

year life ends in September 2023.

the Hog Island Gully structure, were fully operational until late October 2004. The Monitoring Plan was approved on June 17, 1999. The Service will be responsible for all structure operations and minor maintenance and the State CPRA will be responsible for the larger maintenance items. Hurricane Rita in October 2005 overtopped the structures and damaged the electric motors, guard rails and other equipment. Some FEMA funds were received by the State for limited repair of Hurricane Rita damage. Other funds from the Fish and Wildlife Service were used for structure repair and upgrade. The electoral systems of all structures and the structure gates of the Hog Island and West Cove structures were modified from one to "two-stem" systems to provide for greater stability. The structures are now operating well with only occasional minor operational problems. The project is currently in the operation and maintenance phase; it's 20-

CEMVN-PM-W				,		AND RESTORA Г. OF THE INTH				04-May-2017 Page 27 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	<**** %	Obligations/ Expenditures
Total F	Priority List	3	953				\$6,177,735	\$5,900,565	95.5	\$5,603,371 \$5,563,412
<ol> <li>Project(s)</li> <li>Cost Sharing A</li> <li>Construction S</li> <li>Construction C</li> <li>Project(s) Defe</li> </ol> Priority List 3	tarted Completed									
Bayou Perot/Bayou Rigolettes Marsh Restoration DEAUTHORIZED	BARA Status:	DNR has ind	icated a willing	ness to deauthorize	the project. In Apri	tlands benefits from c 1 1996, LA DNR had uthorized at January 1	asked to reconsider	the project with po		\$20,963 \$20,963
		Deauthorized	1.							
East Timbalier Island Sediment Restoration, Phase 1	TERRE Status:		-		-	01-May-2001 A one platform was achie ngs were completed M		\$3,621,544 and the installatio	100.0 n of sand	\$3,695,120 \$3,695,120
Lake Chapeau Sediment Input and Hydrologic Restoration	TERRE Status:	TERRE Maintenance	509 event to degrad	01-Mar-1995 A le the project feature	14-Sep-1998 A e identified as Weir 3	18-May-1999 A 8 began on 4/27/2011,	\$6,847,812 and the work was a	\$6,841,968 ccepted on 6/24/20	99.9 011.	\$5,809,766 \$5,747,435

				,		AND RESTORA T. OF COMME				04-May-2017 Page 28
					** SCHEDULES	****		STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lake Salvador Shore	BARA	STCHA	0	01-Mar-1995 A	02-Jul-1997 A	30-Jun-1998 A	\$2,801,782	\$2,801,782	100.0	\$2,801,782
Protection Demo COMPLETE	Status:					ction between Bayou c ll first costs have been		Lake Salvador.		\$2,801,782
		Closed out co	operative agre	eement between NOA	A and LADNR. Fir	rst costs accounting u	ndersay.			
		Project has se	erved its demo	nstration purpose and	l is being removed b	y DNR with O&M fu	nds, summer of 200	2.		
To	otal Priority List	3	2,422				\$13,292,101	\$13,286,257	100.0	\$12,327,631 \$12,265,300
<ul><li>4 Project(s)</li><li>4 Cost Sharin</li><li>3 Construction</li></ul>	ing Agreements E ion Started	xecuted								
<ul><li>4 Cost Sharin</li><li>3 Construction</li><li>3 Construction</li><li>1 Project(s) I</li></ul>										
4 Cost Sharin 3 Constructio 3 Constructio 1 Project(s) I Priority List 3	ion Started ion Completed Deferred/Deautho	orized	297	15-Mav-1998 A	01-May-1999 A	22-May-2000 A	\$7.593.752	\$7.352.678	96.8	\$6,755,802
<ul><li>4 Cost Sharin</li><li>3 Construction</li><li>3 Construction</li><li>1 Project(s) I</li></ul>	ion Started	TERRE Project delaye the area. In ac and design co	ddition, CSA 1	revisions were needed resulted in the CSA b	l to accommodate th	22-May-2000 A ons regarding monitor e landowner's interest so include Fina Oil Co	in providing non-Fe	ederal funding. Per	mitting	\$6,755,802 \$6,689,248
4 Cost Sharin 3 Construction 3 Construction 1 Project(s) I Priority List 3 Brady Canal Hydrologic	ion Started ion Completed Deferred/Deautho TERRE	TERRE Project delaye the area. In ac and design co project. The r	ed because of ddition, CSA 1 onditions have revised CSA is	landowner concerns a revisions were needed resulted in the CSA b	bout permit conditi to accommodate th being modified to al	ons regarding monitor e landowner's interest	ing, and objection f in providing non-F	rom a pipeline com ederal funding. Per	pany in mitting	
<ul> <li>4 Cost Sharin</li> <li>3 Construction</li> <li>3 Construction</li> <li>1 Project(s) I</li> </ul> Priority List 3 Brady Canal Hydrologic	ion Started ion Completed Deferred/Deautho TERRE	TERRE Project delaye the area. In ac and design co project. The r	ed because of ddition, CSA 1 onditions have revised CSA is	landowner concerns a revisions were needed resulted in the CSA b s complete.	bout permit conditi to accommodate th being modified to al	ons regarding monitor e landowner's interest	ing, and objection f in providing non-F	rom a pipeline com ederal funding. Per	pany in mitting	

CEMVN-PM-W				,		AND RESTOR		χ.		04-May-2017 Page 29
PROJECT	Pr BASIN	oject Status PARISH	ACRES	1	Agency: DEP1 *** SCHEDULES Const Start	C. OF AGRICUL	,	) STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Cote Blanche Hydrologic	TECHE	STMRY	2,223	01-Jul-1996 A	25-Mar-1998 A	15-Dec-1998 A	\$10,093,909	\$10,036,640	99.4	\$8,381,594
Restoration	Status:	project. Site	inspection for	bidder was held Jan	uary 12, 1998. Cor	B because of concern a accern for a source of sl on was completed Dec	hell may require bud			\$8,381,594
		O&M plan ex	kecuted. Maint	enance contract con	nplete.					
Southwest Shore White Lake Demo	MERM	VERMI		11-Jan-1995 A	30-Apr-1996 A		\$103,468	\$103,468	100.0	\$103,468 \$103,468
DEAUTHORIZED	Status:	Complete. P	roject deauthor	ized.						·
Violet Freshwater Distribution	PONT	STBER		13-Oct-1994 A			\$128,627	\$128,627	100.0	\$128,627 \$128,627
DEAUTHORIZED	Status:		y to gain access ate existing sip		oblem due to multip	ble landowner coordin	ation, and additional	questions have ari	isen about	,
		Project deaut	horized, Octob	er 4, 2000.						
West Pointe a la Hache	BARA	PLAQ		05-Jan-1995 A			\$5,370,516	\$4,269,295	79.5	\$1,168,631
Outfall Management DEAUTHORIZED	Status:	CPRA has w	ithdrawn suppo	rt for continuing thi	s project. Project be	gan Deauthorization i	n Fall 2014 Task Fo	rce meeting.		\$1,168,631
White Ditch Outfall	BRET	PLAQ		13-Oct-1994 A			\$32,862	\$32,862	100.0	\$32,862
Management DEAUTHORIZED	Status:	LA DNR con	curred with NR	CS to deauthorize t	the project. Project	deauthorized at the Ja	anuary 16, 1998 Tasl	c Force meeting.		\$32,862
		Deauthorized	l.							

CEMVN-PM-W			,	ROTECTION A Agency: DEPT.			)		04-May-2017 Page 30 Actual
PROJECT	BASIN PARISH	ACRES	******** CSA	** SCHEDULES * Const Start	******** Const End	******* ES Approved	TIMATES ***** Funded	*** %	Obligations/ Expenditures
7 4 3	Total Priority List 3 Project(s) Cost Sharing Agreements Executed Construction Started Construction Completed Project(s) Deferred/Deauthorized	5,122				\$35,218,807	\$27,072,736	76.9	\$19,176,204 \$19,012,217
16 11 10	00	11,427				\$63,574,511	\$55,145,426	86.7	\$45,868,066 \$45,601,790

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COA					AND RESTORA PT. OF THE AR				04-May-2017 Page 31
PROJECT	BASIN	PARISH	ACRES	******* CSA	*** SCHEDULES Const Start	********* Const End	******* ES Approved	TIMATES *** Funded	**** %	Actual Obligations/ Expenditures
Lead Agency: COE, C	CORPS OF	ENGINEE	RS							
Priority List 4										
Beneficial Use of Hopper Dredge Material Demo	DELTA	PLAQ		30-Jun-1997 A			\$58,310	\$58,310	100.0	\$58,310
DEAUTHORIZED	Status:		me was found to tof the Mississij		ntable due to inability	of the hopper dredge t	o get close enough	to the disposal are	ea to spray	\$58,310
		Project deaut	horized October	4, 2000.						
Grand Bay Crevasse DEAUTHORIZED	BRET	PLAQ					\$65,747	\$65,747	100.0	\$65,747 \$65,747
	Status:			icated non-suppo		as withheld ROE beca	use of concern abou	at sedimentation n	egatively	\$05,747
						PRA Technical Comm ry 16, 1998 Task Forc	•	•		
Tota	al Priority List	4					\$124,057	\$124,057	100.0	\$124,057 \$124,057
<ul><li>2 Project(s)</li><li>1 Cost Sharing</li></ul>	g Agreements I	Executed								

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

CEMVN-PM-W				,		AND RESTORANTAL PROTEC		CY (EPA)		04-May-2017 Page 32 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Obligations/ Expenditures
Compost Demo DEAUTHORIZED	CA/SB	CAMER		22-Jul-1996 A			\$255,391	\$255,391	100.0	\$255,391
DEAUTHORIZED	Status:	Plans and spe	ecifications hav	e been finalized. Al	l permits and constr	uction approvals have	been obtained.			\$255,391
			of compost veg on bids has bee		ot yet been supplied	. A smaller sized dem	onstration has been	designed. Adver	tisement	
		The Task For	ce approved de	authorization on Jar	nuary 16, 2002.					
	Total Priority List	4					\$255,391	\$255,391	100.0	\$255,391 \$255,391
	ction Completed (s) Deferred/Deauth	orized								
East Timbalier Island	TERRE	LAFOU	215	08-Jun-1995 A	01-May-1999 A	15-Jan-2000 A	\$7,600,150	\$7,600,150	100.0	\$7,548,066
Sediment Restoration, Phase 2	Status:	invoked on th	ne island as a re		ly and Tropical Stor	; for East Tinbalier Isla m Isadore, future cons				\$7,548,066
Eden Isles East Marsh	PONT	STTAM					\$39,025	\$39,025	100.0	\$39,025
Restoration DEAUTHORIZED	Status:	placed twice		and; both times the		rce to move forward w o higher bids by priva				\$39,025
		Deauthorized	l.							

CEMVN-PM-W				<i>,</i>		AND RESTORA T. OF COMME				04-May-2017 Page 33
				*******	** SCHEDULES	****	****** ES	TIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Т	otal Priority List	4	215				\$7,639,176	\$7,639,176	100.0	\$7,587,091 \$7,587,091
1 Construct 1 Construct	ring Agreements H									
Priority List 4										
Barataria Bay Waterway	BARA	JEFF	232	23-Jun-1997 A	01-Jun-2000 A	01-Nov-2000 A	\$3,369,006	\$3,367,515	100.0	\$2,821,826
West Side Shoreline Protection	Status:	The project is	s being coordir	nated with the COE d	redging program. C	ontract advertised Dec	ember 1999.			\$2,813,916
		Construction	complete. Dec	lication ceremony he	ld October 20, 2000	. O&M plan signed Ju	ly 15, 2002.			
Bayou Lours Ridge Hydrologic Restoration	BARA	LAFOU		23-Jun-1997 A			\$371,232	\$371,232	100.0	\$371,232
DEAUTHORIZED	Status:	The initial ste meeting.	ep of deauthori	zation was taken at th	ne January Task For	ce meeting. The proce	ss will be finalized a	at the April Task F	orce	\$371,232
Flotant Marsh Fencing	TERRE	TERRE		16-Jul-1999 A			\$115,775	\$115,775	100.0	\$115,775
Demo DEAUTHORIZED	Status:	Difficulty in	locating an app	propriate site for dem	onstration and diffic	culty in addressing eng	ineering constraints			\$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	\$2,289,090	\$2,289,090	100.0	\$1,904,692
Protection	Status:	Project comp	lete.							\$1,884,557

	Pro	oject Status	Summary	1	0	. OF AGRICUL	ATION ACT TURE (NRCS	)		04-May-2017 Page 34 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********** Const End	******** E Approved	STIMATES **** Funded	**** %	Obligations/ Expenditures
Plowed Terraces D	emo CA/SB	CAMER	0	22-Oct-1998 A	30-Apr-1999 A	31-Aug-2000 A	\$324,970	\$324,970	100.0	\$324,970
COMPLETE	Status:	The first atte		e terraces in the sum		nonstration project be successful. A second				\$324,970
	Total Priority List	4	1,435				\$6,470,074	\$6,468,583	100.0	\$5,538,495 \$5,510,451
	Project(s)									
	Cost Sharing Agreements E Construction Started	Executed								
	Construction Completed Project(s) Deferred/Deauthor	orized								
-										
Total			1,650				\$14,488,697	\$14,487,206	100.0	\$13,505,034 \$13,476,990
	Project(s)									
	Cost Sharing Agreement Construction Started	ts Executed								
	Construction Completed Project(s) Deferred/Dea									

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W				,		AND RESTORA PT. OF THE AF				04-May-2017 Page 35
				********	** SCHEDULES	****	******** F <b>(</b>	STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: COE, COE, COE, COE, COE, COE, COE, COE,	CORPS OF	ENGINEE	RS							
Priority List 5										
Bayou Chevee Shoreline	PONT	ORL	75	01-Feb-2001 A	25-Aug-2001 A	17-Dec-2001 A	\$2,589,403	\$2,589,403	100.0	\$2,318,441
Protection	Status:	As of Oct 20	13, CPRA was	in the process of wor	rking up a cost estin	nate for a scheduled ro	ck lift for the Bayou	a Chevee project.		\$2,317,688
Tot	al Priority List	5	75				\$2,589,403	\$2,589,403	100.0	\$2,318,441 \$2,317,688
1 Constructio 1 Constructio	ng Agreements E on Started on Completed Deferred/Deauth									
Priority List 5										
Bayou Lafourche Siphon	TERRE	IBERV		19-Feb-1997 A			\$1,500,000	\$1,500,000	100.0	\$1,500,000
·	TERRE Status:		eauthorized by	19-Feb-1997 A the Task Force on C	October 25, 2007.		\$1,500,000	\$1,500,000	100.0	\$1,500,000 \$1,500,000

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

CEMVN-PM-W				,		AND RESTOR. 1. OF THE INT				04-May-2017 Page 36 Actual
				*******	** SCHEDULES	****	****** ES	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Priority List 5										
Grand Bayou Hydrologic	TERRE	LAFOU		28-May-2004 A			\$1,452,357	\$1,452,357	100.0	\$1,452,357
Restoration DEAUTHORIZED	Status:					t salinity increases rat pursuing project de-		Staff of the Pointe	au Chene	\$1,452,357
Tot	al Priority List	5					\$1,452,357	\$1,452,357	100.0	\$1,452,357 \$1,452,357
Priority List 5	Deferred/Deauth									
Little Vermilion Bay	TECHE	VERMI	441	22-May-1997 A	10-May-1999 A	20-Aug-1999 A	\$886,030	\$886,030	100.0	\$751,392
Sediment Trapping	Status:	Emergent veg and retreat al	getation was no ong the norther	oted to be colonizing	in some locations be t resulting in some e	ported that the terrace etween terraces. The I rosion on the ends of d.	Freshwater Bayou ca	nal bank continues	s to erode	\$751,392
Myrtle Grove Siphon	BARA	PLAQ		20-Mar-1997 A			\$481,803	\$481,803	100.0	\$481,803
DEAUTHORIZED	Status:	funding in the		,000,000 for FY 97.		) for the FY 96 Phase athorized to fund the				\$481,803
			ADNR are clo ctive as authori		tive agreement and r	eturning remaining p	roject funds to the C	WPPRA program.	Project	

CEMVN-PM-W				,		AND RESTORA Г. OF COMME				04-May-2017 Page 37
					** SCHEDULES			TIMATES ****		Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
	Total Priority List	5	441				\$1,367,833	\$1,367,833	100.0	\$1,233,194 \$1,233,194
2 C 1 C 1 C	oject(s) ost Sharing Agreements I onstruction Started onstruction Completed oject(s) Deferred/Deauth									
Priority List	5									
Freshwater Bayou Ba	nk MERM	VERMI	511	01-Jul-1997 A	15-Feb-1998 A	15-Jun-1998 A	\$8,913,366	\$5,533,088	62.1	\$2,649,056
Stabilization	Status:	The local cos	t share is being	paid by Acadian Ga	as Company.					\$2,633,621
		Contract was	awarded Janua	ry 14, 1998. Const	ruction is complete.					
Naomi Outfall Management	BARA	JEFF	633	12-May-1999 A	01-Jun-2002 A	15-Jul-2002 A	\$2,286,064	\$2,255,260	98.7	\$1,994,123
Wanagement	Status:	This project v	was combined w	vith the BBWW "Du	pre Cut" East projec	t for planning and des	sign; construction w	ill be separate.		\$1,967,521
						alysis is complete; res June 2002 and compl		y both agencies.		
		O&M plan in	draft.							
Raccoon Island	TERRE	TERRE	0	03-Sep-1996 A	21-Apr-1997 A	31-Jul-1997 A	\$1,751,046	\$1,751,046	100.0	\$1,751,046
Breakwaters Demo	Status:	Complete.								\$1,751,046

CEMVN-	PM-W				,		AND RESTOR. T. OF AGRICUL		)		04-May-2017 Page 38
PRO	DJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********** Const End	******** Ex Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	e/Willow Lake Restoration	CA/SB	CAMER	247	23-Jun-1997 A	01-Nov-1999 A	02-Oct-2002 A	\$3,929,152	\$3,929,152	100.0	\$3,460,352 \$3,435,411
		Status:	The second c unable to con	ontract has be nplete the con		construction and veg	getative planting will b g work was advertised				
	<ol> <li>4 Project(s)</li> <li>4 Cost Sharin</li> <li>4 Constructio</li> <li>4 Constructio</li> </ol>	n Completed	Executed	1,391				\$16,879,628	\$13,468,546	79.8	\$9,854,577 \$9,787,599
Total	0 Project(s) D	eferred/Deauth	orized	1,907				\$23,789,220	\$20,378,138	85.7	\$16,358,568 \$16,290,838
	6 Constructi	on Completed	1								

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA) ************************************											
		**************************************										
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures		
Lead Agency: E	PA, REGION 6											
Priority List	5.1											
Mississippi River Reintroduction into	TERRE	IBERV		23-Jul-2003 A			\$7,452,191	\$7,452,191	100.0	\$7,452,191 \$7,452,191		
Bayou Lafourche DEAUTHORIZED	Status:	program. Ho Resources, ha	e Mississippi River Reintroduction into Bayou Lafourche Project (BA-25b) has been proposed for de-authorization from the CWPPRA ogram. However, recognizing the importance of this project, the State of Louisiana, through the Louisiana Department of Natural esources, has committed to developing this project and is continuing final design efforts toward completion beyond its authorization der the CWPPRA program.									
	Total Priority List	5.1					\$7,452,191	\$7,452,191	100.0	\$7,452,191		

\$7,452,191 \$7,452,191

0 Project(s)

1 Cost Sharing Agreements Executed

0 Construction Started

0 Construction Completed

CEMVN-PM-W	V COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT 0 Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)												
	Project Stat	tus Summar	ry Report - I	Lead Agency	ENVIRONMEN	NTAL PROTE	CTION AGENO	CY (EPA)		Page 40 Actual			
PROJECT	BASIN	PARISH	ACRES	******** CSA	**** SCHEDULES * Const Start	********** Const End	******** ES Approved	STIMATES *** Funded	ΓΙΜΑΤΕS ****** Funded %				
Total							\$7,452,191	\$7,452,191	100.0	\$7,452,191 \$7,452,191			
	haring Agreemen	ts Executed											
	ruction Started												
0 Construction Completed													
1 Projec	t(s) Deferred/Dea	uthorized											

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

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)										
				*******	** SCHEDULES	****	******* E	STIMATES ***	****	Actual Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures	
Lead Agency: COE, C	CORPS OF	ENGINEE	RS								
Priority List 6											
Flexible Dustpan Demo at Head of Passes Demo	DELTA	PLAQ	0	31-May-2002 A	03-Jun-2002 A	21-Jun-2002 A	\$1,904,646	\$1,904,646	100.0	\$1,890,321	
COMPLETE	Status:	CSA execute	d May 31, 20	02. Construction com	pleted June 21, 200	2.				\$1,890,321	
		At the Octobe demonstratio The project w project identi	er 25, 2001 Ta n project and vas completed fied some min	ask Force meeting, it was approved changing th as an operations and nor areas of concern w	was approved the m e name of the project maintenance task or vith regard to the dro	riginally approved, no otion to use the author ot to "Flexible Dustpa rder through an ERDC edge plants effectivene The final surveys and	rized funds for a "fle n Demo at Head of I C research and devel ess as a maintenance	exible dustpan" Passes". opment IDC contra e tool. The dredge	act. The was		
Marsh Creation E of the	TERRE	STMRY					\$66,869	\$66,869	100.0	\$66,869	
Atchafalaya Rvr-Avoca Island DEAUTHORIZED	Status:			d December 5, 1997 w d deauthorization at th		nical Committee Chain Task Force meeting.	rman requesting the	Task Force to dea	uthorize	\$66,869	
		Project deaut	horized July 2	23, 1998.							
Marsh Island Hydrologic	TECHE	IBERI	408	01-Feb-2001 A	25-Jul-2001 A	12-Dec-2001 A	\$5,143,323	\$5,143,323	100.0	\$4,441,660	
Restoration	Status:					ember 13, 2000. CSA ompleted December 20		ary 1, 2001. Adver	tised as	\$4,441,648	
		Revised desig	gn of closures	from earthen to rock	because soil boring	s indicate highly organ	nic material in borro	w area.			

CEMVN-PM-W	Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)											
PROJECT	BASIN	PARISH	ACRES	******* CSA	*** SCHEDULES Const Start	********** Const End	******** ES Approved	STIMATES *** Funded	**** %	Actual Obligations/ Expenditures		
	Total Priority List	6	408				\$7,114,838	\$7,114,838	100.0	\$6,398,849 \$6,398,837		
2 Con 2 Con	ect(s) Sharing Agreements E struction Started struction Completed ect(s) Deferred/Deauth											
Priority List	6											
Bayou Boeuf Pump Station	TERRE	STMAR					\$3,452	\$3,452	100.0	\$3,452 \$3,452		
DEAUTHORIZED	Status:	Priority List	8 was scheduled	to fund \$100,000	thorized funding of \$ ). Total project cost we by and LA DNR agree	vas estimated to be \$50	00,000. By letter d			Φ3,τ32		
		Deauthorizat	ion was approve	d at the July 23, 1	998 Task Force meet	ng.						
	Total Priority List	6					\$3,452	\$3,452	100.0	\$3,452 \$3,452		
0 Con: 0 Con:	ect(s) t Sharing Agreements E struction Started struction Completed ect(s) Deferred/Deauth											

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

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PROJECT	BASIN	PARISH	ACRES		** SCHEDULES Const Start	T. OF THE INT ***************** Const End		STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Lake Boudreaux	TERRE	TERRE	266	22-Oct-1998 A	01-Jun-2013 *	01-Oct-2014 *	\$25,766,765	\$20,048,152	77.8	\$3,777,236
Freshwater Introduction INACTIVE	Status:	final landrigh hold until the	ts documents permitting age	which are being subn	nitted to property ow to address the concu	ights work. The upda ners for execution. F nrrent Parish proposal	Review of the permit	application has been	en put on	\$3,649,152
Nutria Harvest for Wetland Restoration	COAST	COAST	0	27-Oct-1998 A	20-Sep-1998 A	30-Oct-2003 A	\$806,220	\$806,220	100.0	\$806,220
Demo	Status:	Nutria Harve	st Demonstrati	on Project						\$806,220
		Status July 20	005							
		From April through June 2003 the following activities were completed: Promotional Events: 1) Chef Parola demonstrated nutria meat preparation and organized judging for the U. S. Army Corps of Engineers annual "Earth Day Celebration" in New Orleans, 2) LDWF assisted Chef Kevin Diez by providing nutria meat for the Baton Rouge Family Fun Fair, and 3) LDWF provided nutria sausage to the Opelousas Chamber of Commerce for a national cycling event.								
		1								
		LDWF contra				e "www.nutria.com" to pid user information.	be completed in Se	eptember 2003. The	eupgrade	
		LDWF contra will provide e	easier site navi	gational access and n	nore accurate and ra		-	-	e upgrade	

1 Construction Started

1 Construction Completed

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

04-May-2017 Page 44

**************************************									ماد ماد ماد	Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Obligations/ Expenditures
Black Bayou Hydrologic	CA/SB	CAMER	3,594	28-May-1998 A	01-Jul-2001 A	03-Nov-2003 A	\$12,698,222	\$12,423,864	97.8	\$6,158,635
Restoration	Status:	An O&M ins	pection is sch	eduled for 5-04-11.						\$6,021,642
Delta Wide Crevasses	DELTA	PLAQ	2,386	28-May-1998 A	21-Jun-1999 A	01-May-2005 A	\$4,728,319	\$4,728,319	100.0	\$3,158,194
	Status:	discussions v	vith both USF		entify the new, and	ly 19. All crevasses w final list of crevasse sp				\$3,116,004
Sediment Trapping at The Jaws	TECHE	STMAR	1,999	28-May-1998 A	14-Jul-2004 A	19-May-2005 A	\$1,653,792	\$1,653,792	100.0	\$1,383,852
Jaws	Status:			conducted on 4-05-11. of mud flats between		ion of the terraces is g oreline.	ood. Evidence of re	covery from herbiv	ory was	\$1,383,852
	Total Priority List	6	7,979				\$19,080,333	\$18,805,975	98.6	\$10,700,682 \$10,521,499
3 Project	(s)									
	naring Agreements E action Started	Executed								
3 Constru	action Completed									
0 Project	(s) Deferred/Deauth	orized								
Priority List 6										
Barataria Bay Waterway East Side Shoreline	BARA	JEFF	217	12-May-1999 A	01-Dec-2000 A	31-May-2001 A	\$5,224,477	\$5,224,477	100.0	\$4,837,019
Protection	Status:	This project	was combined	l with the Naomi Outf	fall Management pro	oject for planning and	design; construction	was separate.		\$4,774,945
		Project const	ruction comp	lete.						

O&M plan signed October 2, 2002.

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

04-May-2017 Page 45

				*******	*** SCHEDULES	****	******** ES	STIMATES ****	****	Actual Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures	
Cheniere au Tigre	TECHE	VERMI	0	20-Jul-1999 A	01-Sep-2001 A	02-Nov-2001 A	\$624,999	\$624,999	100.0	\$596,781 \$596,781	
Sediment Trapping DEMO	Status:	Status: A request for proposals was advertised in Feb 2000. No valid proposals received. Proceeding with design of a rock structure. Project advertised for bid. Bid came in over estimate. LDNR and NRCS shifted funds from monitoring to construction. Delay in getting new obligation due to internal COE procedures. Government order received July 13, 2001. Construction complete.									
Oaks/Avery Canal	TECHE	VERMI	160	22-Oct-1998 A	15-Apr-1999 A	11-Oct-2002 A	\$2,925,216	\$2,925,216	100.0	\$2,550,537	
Hydrologic Restoration	Status:	O&M plan wa	as finalized or	n 2/11/04.						\$2,545,537	
Penchant Basin Natural	TERRE	TERRE	675	23-Apr-2002 A	25-May-2010 A	24-Aug-2011 A	\$17,628,814	\$17,628,814	100.0	\$13,191,402	
Resources Plan, Increment 1	Status:	Project constr	ruction was co	ompleted on August 2	24, 2011.					\$13,091,575	

Total Priority List 6

1,052

\$26,403,506

\$21,175,739 \$21,008,837

100.0

\$26,403,506

4 Project(s)

4 Cost Sharing Agreements Executed

4 Construction Started

4 Construction Completed

CEMVN-PM-W	W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)												
PROJECT	BASIN	PARISH	ACRES	***********************************									
Total			9,705				\$79,175,115	\$73,182,144	92.4	\$42,862,177 \$42,387,997			
10 Constr 10 Constr	t(s) haring Agreemen ruction Started ruction Completec t(s) Deferred/Dea	1											

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS) ************************************											
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********** Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures		
Lead Agency: NMI	FS, NATIONA	AL MARIN	E FISHER	RIES SERVICE								
Priority List 7												
Grand Terre Vegetative	BARA	JEFF	127	23-Dec-1998 A	01-May-2001 A	01-Jul-2001 A	\$346,578	\$346,578	100.0	\$346,578		
Plantings	Status:	of approxima	tely 35,000 si		800 black mangrove	narshhay cordgrass on was completed in Jur				\$346,578		
Pecan Island Terracing	MERM	VERMI	442	01-Apr-1999 A	15-Dec-2002 A	10-Sep-2003 A	\$2,390,984	\$2,390,984	100.0	\$2,333,561		
	Status:	An O&M ins	pection is pla	nned for May 2011.						\$2,333,561		
·	Total Priority List	7	569				\$2,737,562	\$2,737,562	100.0	\$2,680,139 \$2,680,139		
<ul><li>2 Construct</li><li>2 Construct</li></ul>	s) aring Agreements l ction Started ction Completed s) Deferred/Deauth											
Priority List 7												
Barataria Basin Landbridge Shoreline	BARA	JEFF	1,304	16-Jul-1999 A	01-Dec-2000 A	05-Mar-2009 A	\$27,852,111	\$27,852,111	100.0	\$26,530,614 \$26,421,923		
Protection, Ph 1 & 2	Status:									φ <b>20,</b> <del>4</del> 21,723		
Thin Mat Floating Marsh Enhancement Demo	TERRE	TERRE	0	16-Oct-1998 A	15-Jun-1999 A	10-May-2000 A	\$538,101	\$538,101	100.0	\$538,101 \$538,101		
COMPLETE	Status:	Construction	complete. M	onitoring ongoing.					Pag	ge 47		

CEMVN-PM-W		COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)											
PROJECT	BASIN PARISH	ACRES	******* CSA	*** SCHEDULES * Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures				
	Total Priority List 7	1,304				\$28,390,212	\$28,390,212	100.0	\$27,068,715 \$26,960,024				
2 2 2	Project(s) Cost Sharing Agreements Executed Construction Started Construction Completed Project(s) Deferred/Deauthorized												
Total		1,873				\$31,127,774	\$31,127,774	100.0	\$29,748,854 \$29,640,163				
4 4 4	Project(s) Cost Sharing Agreements Executed Construction Started Construction Completed Project(s) Deferred/Deauthorized												

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)										
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
Lead Agency: COE, C	ORPS OF	ENGINEEI	RS								
Priority List 8											
Sabine Refuge Marsh	CA/SB	CAMER	214	09-Mar-2001 A	15-Aug-2001 A	26-Feb-2002 A	\$3,422,433	\$3,422,433	100.0	\$3,422,433	
Creation, Cycle 1	Status:	sites within th project cost to The first cycl- advertised for initiation was On January 2	ne Sabine Nati o construct all e was complet r bid as a comp s advanced in co 8, 2004 the C	onal Wildlife Refuge cycles is approximat ed on February 26, 2 ponent of the Calcasi conjunction with an a	using material dred ely \$21.4 million. 002. The total proje eu River and Pass M ccelerated maintena provided additional	oject List 8. The proje ged out of the Calcasi ect cost for dredging cy laintenance Dredging nce dredging schedule funding and construct nstructed in 2006.	eu River Ship Chan ycle 1 was \$3,412,4 contract on Februar e for the Calcasieu R	nel. The current es 15. The project was y 16, 2001. Constru- iver.	s s uction	\$3,422,433	
Sabine Refuge Marsh Creation, Cycle 2	CA/SB Status:	CAMER Currently this	261 s project is cor	17-Feb-2005 A nplete but are waiting	28-Apr-2009 A g on the O&M Manu	al to be completed by	\$14,351,767 the Corps before th	\$14,351,768 is pipeline can be t	100.0 1sed.	\$11,100,543 \$11,098,875	

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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

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\$17,298,437

#### Actual \*\*\*\*\*\*\* ESTIMATES \*\*\*\*\*\*\* Obligations/ PARISH ACRES Expenditures PROJECT BASIN CSA Const End Const Start Approved Funded % 187 28-Mar-2005 A \$3,038,248 97.9 \$2,777,129 Sabine Refuge Marsh CA/SB CAMER 25-Oct-2006 A 30-Sep-2010 A \$2,973,179 Creation, Cycle 3 \$2,777,129 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 \$20,812,448 \$20,747,380 99.7 \$17,300,105

3 Project(s)

3 Cost Sharing Agreements Executed

3 Construction Started

2 Construction Completed

0 Project(s) Deferred/Deauthorized

CEMVN-PM-W				PLANNING, P y Report - Lead						04-May-2017 Page 51 Actual
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES * Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Obligations/ Expenditures
Sabine Refuge Marsh Creation, Cycles 4 & 5	CA/SB	CAMER	331	06-May-2014 A	01-Aug-2014 *	07-Jul-2015 A	\$10,783,079	\$10,217,612	94.8	\$5,909,036
croation, cycles + & 5	Status:	Ship Channe platform bein pipeline. In a USACE in co placed in an o platform and place and cor nourished the	I through CWF g constructed addition to Cyconstructing low open water site was completed ntained with lo	1/15/2015 with 230 a PPRA's permanent pi with material pumper cles 4 & 5 being cons v level containment d c on Sabin Refuge jus d on 11/21/2014. CW w level earthen dikes marsh which was con to have created 300-4	peline. Cycle 5 was d from the ship chan tructed, CWPPRA h ikes to help contain t st south of Cycles 1-5 VPPRA also funded t in Unit 1A-South. ppleted on 6/15/2015	completed on 7/7/20 nel. This material wa ad the opportunity to he approximately 1 r 5 (Unit 1A-North). T he Corps to place ap This created approxir . The overflow of m	15 with approximate as also pumped throu work with the Port nillion Cyds of mate his created approxim proximately 1 million nately 171 acres of n aterial from the two	ely 232 acres of ma 1gh CWPPRA's pe of Lake Charles an perial the Port paid to nately 240 acres of on Cyds of material narsh platform and areas in Unit 1A is	rrsh rmanent d the o be marsh to be	\$5,828,858
	Total Priority List	8	331				\$10,783,079	\$10,217,612	94.8	\$5,909,036 \$5,828,858
0 Constr 1 Constr	t(s) haring Agreements E uction Started uction Completed t(s) Deferred/Deautho									
Priority List 8										
Bayou Bienvenue Pump Station Diversion	PONT	STBER		01-Jun-2000 A			\$212,153	\$212,153	100.0	\$212,153 \$212,153
DEAUTHORIZED	Status:	than originall At the Januar	y estimated du y 16, 2002 Tas	varded in June 1, 200 le to poor geo-technic sk Force meeting, DN ved by the Task Force	cal condition. The p	roject is estimated to S requested initiation	cost between \$17 a	nd \$20 million to b		φ212,133

CEMVN-PM-W				PLANNING, Pl ary Report - Lead		T. OF COMMI	ERCE (NMFS)	TTIN ( A TTEO - 4444	***	04-May-2017 Page 52 Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	STIMATES **** Funded	%	Obligations/ Expenditures
Hopedale Hydro Restoration	PONT Status:			11-Jan-2000 A as awarded January 11					100.0	\$1,956,368 \$1,949,394
		requirements COnstruction	are complete was complet	ogic modeling complete 2. A construction contra ted in January 2005, an ana Department of Nat	act was awarded in l ad the project is curr	November 2003, and	construction was init	tiated in March 200	04.	
	Total Priority List	8	134				\$2,493,439	\$2,493,439	100.0	\$2,168,521 \$2,161,546
1 Cons 1 Cons	ect(s) Sharing Agreements E struction Started struction Completed ect(s) Deferred/Deauth									
Priority List	3									
Humble Canal Hydrologic Restoration	MERM	CAMER	378	21-Mar-2000 A	01-Jul-2002 A	01-Mar-2003 A	\$1,574,926	\$1,574,926	100.0	\$1,188,540
Hydrologic Restoration	Status:	Construction	complete Ma	arch 2003.						\$1,177,231
Lake Portage Land Bridg	ge TECHE	VERMI	24	07-Apr-2000 A	15-Feb-2003 A	15-May-2004 A	\$1,181,129	\$1,181,129	100.0	\$1,115,562
	Status:	Project const	ruction was c	completed on May 15, 2	2004. Monitoring P	lan was finalized on	July 19, 2004			\$1,112,057

CEMVN-P	PM-W					PROTECTION A			)		04-May-2017 Page 53
PROJ	ECT	BASIN	PARISH	ACRES	******* CSA	**** SCHEDULES * Const Start	********* Const End	******** E Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Upper Oak F		BRET	PLAQ					\$56,476	\$56,476	100.0	\$56,476
Freshwater S DEAUTHOI		Status:				ority List 8 funded \$2, will be requested whe				truction	\$56,476
					ated. DNR has ed if project is de	solicited a cost estimat emed feasible.	e from one of their e	ngineering firms to	perform a feasibility	study.	
			Deauthorizat	ion procedures i	nitiated.						
	То	tal Priority List	8	402				\$2,812,531	\$2,812,531	100.0	\$2,360,578 \$2,345,764
	3 Project(s)										
	<ol> <li>Cost Sharin</li> <li>Construction</li> </ol>	ng Agreements E on Started	Executed								
	2 Construction	on Completed									
	1 Project(s) I	Deferred/Deauth	orized								
Total				1,529				\$36,901,498	\$36,270,962	98.3	\$27,738,239 \$27,634,605
	9 Project(s)										
		ing Agreemen	ts Executed								
		ion Started ion Completed	1								
		Deferred/Dea									

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COA			,		AND RESTORA PT. OF THE AF				04-May-2017 Page 54
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES *** Funded	**** %	Actual Obligations/ Expenditures
Lead Agency: COE, C	ORPS OF	ENGINEE	RS							
Priority List 9										
Freshwater Bayou Bank Stabilization - Belle Isle	TECHE	VERMI	241				\$1,101,738	\$1,101,738	100.0	\$1,101,738 \$1,101,738
Canal to Lock INACTIVE	Status:	14, 2001, and on cross-sect protection we	d data collection for ions and depth con	ollowed. The USA ntours. A 30% de a hydrologic rest	ACE team met with l sign review was held oration feature. A 95	downer. Right of entr LDNR staff after surve d in June 2002. The pr 5% design review was	ey data was processe oject was revised to	ed and obtained co include Area A -	onsensus	φ <b>1,101,73</b> 6
Opportunistic Use of the Bonnet Carre Spillway	PONT	STCHA					\$83,932	\$83,932	100.0	\$83,932
DEAUTHORIZED	Status:	accordance w requesting th	ith the CWPPRA	Project Standard advising them the	Operating Procedur at, at the next CWPF	voted to begin the dea es Manual, notices we PRA Task Force meeting	ere sent out in July 2	2007 to all interest	ed parties	\$83,932
Periodic Intro of Sediment &Nutrients	COAST	VARY					\$83,556	\$83,556	100.0	\$83,556
Demo DEAUTHORIZED	Status:	Modification working on u	to Caenarvon, to	ensure consistenc eflect post-Katrin	cy. Currently the tea	vember 2006 team beg m needs to fully devel the team is working o	op Preliminary Des	ign Report. Team	is	\$83,556
Weeks Bay MC & SP	TECHE	IBERI	278				\$534,057	\$534,057	100.0	\$534,057
TRANSFER	Status:				A Program per Task their 3 Jun 2013 rec	Force decision on 4 Ju juest.	in 2013. It was trans	ferred to the Iberi	a Parish	\$534,057

CEMVN-PM-W						AND RESTOR. PT. OF THE A				04-May-2017 Page 55
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	9	519				\$1,803,283	\$1,803,283	100.0	\$1,803,283 \$1,803,283
0 Construe 0 Construe	s) aring Agreements E ction Started ction Completed s) Deferred/Deauth									
Priority List 9										
LA Highway 1 Marsh Creation	BARA	LAFOU		05-Oct-2000 A			\$250,257	\$250,257	100.0	\$250,257 \$250,257
DEAUTHORIZED	Status:	The project w	vas deauthorize	ed at the February 17,	, 2005 Task Force n	neeting.				\$250,257
New Cut Dune and Marsh Restoration	TERRE	TERRE	102	01-Sep-2000 A	01-Oct-2006 A	30-Sep-2008 A	\$10,730,085	\$10,609,976	98.9	\$10,213,368
Resolution	Status:			vas held on April 23, ncrement activities in		for Phase II construc nual inspections.	tion activities was cl	losed-out on Septer	nber 30,	\$10,192,472
Timbalier Island Dune & Marsh Restoration	TERRE	TERRE	273	05-Oct-2000 A	01-Jun-2004 A	19-Mar-2009 A	\$15,280,979	\$15,215,838	99.6	\$15,151,708
Watsh Restoration	Status:			vas held on April 23, ncrement activities in		for Phase II construction inspections.	tion activities was cl	losed-out on March	19,	\$15,149,853

CEMVN-PM-W				*	PROTECTION A					04-May-2017 Page 56
	Project Stat	us Summai	ry Report - I		ENVIRONMEN					Actual
PROJECT	BASIN	PARISH	ACRES	CSA	*** SCHEDULES * Const Start	Const End	Approved	TIMATES **** Funded	%	Obligations/ Expenditures
	Total Priority List	9	375				\$26,261,321	\$26,076,071	99.3	\$25,615,334 \$25,592,582
3 Pro	ject(s)									
3 Cos	st Sharing Agreements E	xecuted								
2 Cor	nstruction Started									
2 Cor	nstruction Completed									
1 Pro	ject(s) Deferred/Deautho	orized								

Priority List 9

## COASTAL WETLANDS PLANNING. PROTECTION AND RESTORATION ACT

CEMVN-PM-W						AND RESTOR T. OF THE INT				04-May-2017 Page 57			
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********** Const End	******** Es Approved	STIMATES *** <sup>;</sup> Funded	**** %	Actual Obligations/ Expenditures			
Freshwater Introduction South of Highway 82	MERM Status:	CAMER	296 Erschwater Int	12-Sep-2000 A	01-Sep-2005 A	13-Dec-2006 A	\$6,342,505	\$5,304,970	83.6	\$5,072,581 \$5,072,179			
		Status July 2	Freshwater Int 005	louuenon									
	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 final report was presented in September 2003.								cation				
		Model Results											
		Hwy 82 to re removal of th four 3-48 inc	educe salinities ne Boundary L eh-diameter-cu	s in the project area. ine borrow canal plu lverted structures alo	The model results so g, 2) removal of the ong the boundary car	ures removed or reduc uggested the following northeastern north-so nal, 4) relocate the new of these recommenda	g modifications to th uth canal, 3) remova w Dyson structure to	e conceptual project al of 2 of the recom- the north, and 5) r	ct; 1) mended emoval of				
		30% Design Review Meeting											
						3 with USFWS concur proceed with project of		final design. On J	uly 10,				
		NEPA Revie	W										

CEMVN-PM-W				,		AND RESTORΛ Γ. OF THE INTI				04-Mav-2017 Page 58 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Obligations/ Expenditures
		modified Con applications of no objection on March 10	nsistency Deter were submitted on were receiv and March 18	rminations were recei 1 May 27, 2004. The ed on October 2, 200 , 2005. The draft En	ived on March 11, 2 Corps public notice 3, February 2, 2004 vironmental Assessr	y applications were su 004, and June 3, 2004 ss were issued on June , and April 19, 2004. nent was submitted fo Impact was distributed	respectively. The r 18, 2004. LA Dept The Corps Section 4 r agency review on 2	nodified Corps per t. of Transportation 404 permits were re	mit letters eceived	
		Phase II Con	struction Items	5						
		1, 2003. The		n 303(e) Determinatio		2004. The NRCS Ove Corps on May 6, 200				
		Phase II cons	struction fundi	ng approval was rece	ived at the October 2	2004 Task Force meet	ing.			
		Construction	bids were rece	eived by June 21, 200	05. Construction is a	anticipated to begin by	y July 15, 2005.			
Mandalay Bank Protection Demo	TERRE	TERRE	0	06-Dec-2000 A	25-Apr-2003 A	01-Sep-2003 A	\$1,732,498	\$1,732,498	100.0	\$1,732,498 \$1,732,498
COMPLETE	Status:	Construction	was complete	d 9/1/2003.						
	Total Priority List	9	296				\$8,075,003	\$7,037,468	87.2	\$6,805,079 \$6,804,677

2 Project(s)

2 Cost Sharing Agreements Executed

2 Construction Started

2 Construction Completed

0 Project(s) Deferred/Deauthorized

CEMVN-PM-W				,		AND RESTORA T. OF COMME				04-May-2017 Page 59
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******* ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Castille Pass Channel Sediment Delivery	ATCH	STMRY		29-Sep-2000 A			\$1,717,883	\$1,717,883	100.0	\$1,717,883
DEAUTHORIZED	Status:	issuance. The	ese special awa		enance dredging for	on features, the COE is perpetuity) are not ye				\$1,717,883
Chandeleur Islands Marsh	PONT	STBER	220	10-Sep-2000 A	01-Jun-2001 A	31-Jul-2001 A	\$839,927	\$839,927	100.0	\$839,927
Restoration	Status:	Cooperative A years.	Agreement was	awarded September	10, 2000. Vegetativ	ve planting is schedul	ed for spring, 2001,	and are phased ove	er two	\$839,927
						tive plantings comple meters. Project area				
East Grand Terre Island	BARA	JEFF	335	21-Sep-2000 A			\$2,211,739	\$2,211,739	100.0	\$2,211,739
Restoration TRANSFER	Status:	The project is	s anticipated to	be transfered to the (	CIAP program for co	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	\$3,792,936	\$2,175,357	57.4	\$2,119,533
Trapping	Status:					ported the project is sl t this time an O&M d			ig the 4-	\$2,095,613
LaBranche Wetlands	PONT	STCHA		21-Sep-2000 A			\$306,836	\$306,836	100.0	\$306,836
Terracing, Planting & Shoreline Prot DEAUTHORIZED	Status:	Cooperative A	Agreement was	awarded September	21, 2000. Enginee	ring and design comp	lete. Construction is	s scheduled for 200	)2.	\$306,836
				2 funding at January er support. Deauthor		In a letter dated Septe sted at this time.	ember 7, 2001, NMF	S returned Phase 2	funding	

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CEMVN-PM-W				,		AND RESTORA T. OF COMME				04-May-2017 Page 60
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	9	722				\$8,869,321	\$7,251,742	81.8	\$7,195,918 \$7,171,998
2 Con 2 Con 2 Pro	ject(s) st Sharing Agreements E nstruction Started nstruction Completed ject(s) Deferred/Deauth 9									
Barataria Basin Landbridge Shoreline	BARA	JEFF	264	25-Jul-2000 A	20-Oct-2003 A	31-Dec-2016 *	\$46,231,597	\$37,240,699	80.6	\$34,956,240 \$10,319,410
Protection, Ph 3	Status:	Construction	Units / &8 are t	inder construction	with completion sche	eduled for December 2	2016.			
Black Bayou Culverts Hydrologic Restoration	CA/SB	CAMER	540	25-Jul-2000 A	25-May-2005 A	26-Jan-2010 A	\$16,899,059	\$16,178,688	95.7	\$15,581,379 \$14,778,163
	Status:					een completed and we ag contracting decisio		or construction in S	ummer	\$1 <del>4</del> ,778,105
Little Pecan Bayou Hydrologic Restoration	MERM	CAMER		25-Jul-2000 A			\$1,303,713	\$1,303,713	100.0	\$1,303,713 \$1,303,713
DEAUTHORIZED	Status:	•The current lyears of main	ME-17 project f	eatures do not yield	orce meeting for the d sufficient wetland b concerns over publi	penefits to warrant a P	hase II request for c	construction and two	enty	. ,

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CEMVN-PM-W				PLANNING, P y Report - Lead				)		04-May-2017 Page 61 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Obligations/ Expenditures
Perry Ridge West Bank Stabilization	CA/SB Status:	CAMER The Perry Rie	83 dge project aj	25-Jul-2000 A pproved on Priority Li	01-Nov-2001 A ist 4 was the first pha	31-Jul-2002 A se of this project. Thi	\$2,204,709 is is the second and f	\$2,160,906 final phase of the pr	98.0 roject.	\$1,770,890 \$1,757,795
		Task Force a and vegetatio	• •	e 2 construction fund completed.	ing January 10, 2001	. The rock bank prote	ection is installed. Th	ne contract for the t	erraces	
South Lake Decade Freshwater Introduction	TERRE	TERRE	202	25-Jul-2000 A	24-Jan-2011 A	12-Jul-2011 A	\$4,901,784	\$3,431,160	70.0	\$3,349,965
Freshwater Introduction	Status:	Construction considered co		completed on July 12, closed out.	, 2011. CPRA did no	ot agree to proceed w	ith 2nd construction	unit, therefore proj	ject was	\$3,340,914
	Total Priority List	9	1,089				\$71,540,862	\$60,315,165	84.3	\$56,962,187 \$31,499,996
4 Const	ct(s) Sharing Agreements E ruction Started ruction Completed	Executed								

CEMVN-PM-W				,	PROTECTION A Agency: DEPT.			)		04-May-2017 Page 62
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES ' Const Start	********** Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Total			3,001				\$116,549,790	\$102,483,730	87.9	\$98,381,801 \$72,872,535
19	Project(s)									
15	Cost Sharing Agreements	Executed								
10	Construction Started									
9	Construction Completed									
6	Project(s) Deferred/Deaut	horized								

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)									
				******	*** SCHEDULES *	*****	******* ES	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: COE, C	CORPS OF	ENGINEERS	S							
Priority List 10										
Benneys Bay Diversion DEAUTHORIZED	DELTA	PLAQ					\$978,100	\$978,100	100.0	\$978,100
	Status:	Subcommittee i performed in O 2002. At the de sediment retenti developed and i	in May 2001. R october 2001 an esign review me ion enhanceme is being review	ight of Entry to d geotechnical b eting agreement nt devices) whic ed by the LDNR	on PPL9 in January 199 perform surveys and g orings were collected i was reached to procee h were removed at the A revised WVA and mplete all design work	eotechnical borings w n June 2002. A 30% d d further with the pro request of the local sp design cost estimate a	as received in Augu lesign review was c posed design excep ponsor. A Final Des re in preparation fo	ast 2001. Site surve completed in Septe t for one feature (S ign Report has been r review at the CW	eys were mber SREDs - en	\$978,100
Delta Building Diversion	BARA	JEFF	8,891				\$2,543,325	\$2,543,325	100.0	\$2,543,325
at Myrtle Grove TRANSFER	Status:	agencies involv will be required and allow them	ved with this pro d over and abov to outline majo	oject. The current the proposed r or data and analy	effort, and its relations nt view within the man nodeling. At this time rtic requirements for th iled. An initial Value	agement team is that a , it has been decided t e NEPA document. 7	additional fisheries o begin assembling The required NEPA	data collection and an inter-agency E scoping meetings	l analysis IS team have been	\$2,543,325
		WRDA may fur	nd Phase 2.							
Delta Building Diversion	BRET	PLAQ					\$1,178,640	\$1,178,640	100.0	\$1,178,640
North of Fort St. Philip DEAUTHORIZED	Status:	95% desgin rev	view anticipated	July 25, 2007.						\$1,178,640

CEMVN-PM-W				,		AND RESTOR. EPT. OF THE A				04-May-201 Page 64
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********* Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	10	8,891				\$4,700,066	\$4,700,066	100.0	\$4,700,066 \$4,700,066
0 Const 0 Const	ct(s) Sharing Agreements E truction Started truction Completed ct(s) Deferred/Deautho									
Priority List 1	0									
Hydrologic Restoration & Vegetative Planting in the		STJAM	0	08-Oct-2001 A	05-Dec-2016 *	31-May-2017	\$7,886,704	\$5,220,448	66.2	\$2,031,82
Lac des Allemands	Status:	Design Plans. project was p approved by	A 30% designesented to the electronic vote	n meeting was held o e Tech Committee at e the Technical Com	on July 23, 2015, fol the December 10, 2 mittee's recommend	d 2015, the Project Ma llowed by the 95% des 015 meeting. On Janu ation to approve the B I project construction.	ign meeting on Octo ary 22, 2016, the CV A 34-2 project for F	ober 28, 2015. The WPPRA Task Force Phase II funding. A	BA 34-2 new	\$1,467,262
ake Borgne Shoreline	PONT	STBER	165	02-Oct-2001 A	01-Aug-2007 A	12-Apr-2010 A	\$27,520,808	\$27,265,513	99.1	\$20,479,893
Protection	Status:	Construction	grant has exp	ired and final Phase	l activities in the pro	ocess of being closed-o	out.			\$20,346,825
	Total Priority List	10	165				\$35,407,512	\$32,485,961	91.7	\$22,511,716 \$21,814,087
1 Const 1 Const	ct(s) Sharing Agreements E truction Started truction Completed ct(s) Deferred/Deautho									

CEMVN-PM-W

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

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		5		*******	*** SCHEDULES	****	******* <b>D</b>	STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Priority List 10										
Delta Management at Fort	BRET	PLAQ	267	16-May-2001 A	19-Jun-2006 A	14-Dec-2006 A	\$2,739,727	\$2,300,079	84.0	\$1,822,873
St. Philip	Status:	This project v	was completed	l in 2006 and monitor	ring activities are on	going. No maintenan	ce has been conduct	ed.		\$1,782,171
East Sabine Lake Hydrologic Restoration	CA/SB	CAMER	225	17-Jul-2001 A	01-Dec-2004 A	11-Aug-2009 A	\$6,049,990	\$4,944,870	81.7	\$4,788,928 \$4,715,159
	Status:	proposed wat Hydrodynam Final Report, 2004. With-p Greens and R have very litt were removed were construct 4) 3,000 linea rock weir in S and more ear Sabine Lake adding 50,00 components i heavy damag breakwater no	ter control stru ic Modeling S " and the "Phi roject model i Light Prong Bl le effect in rea d from the pro- cted: 1) Pines ar feet of rock SE Section 16 then terraces shoreline com- 0 linear feet o in October 200 e caused by H ear Willow Ba trict No. 7 rep	actures at Right Prong Study Phase II: Calibr ase III Determination runs that included mo lack Bayous were con ducing project area sa oject. The first portio Ridge Bayou weir, 27 breakwater, with 50- . Project The propose were added using veg ducted by the State So f terraces, constructin 06 based on hydrodyn lurricane Rita. Four 5 ayou. 50,000 linear fe blaced the Section 16	g, Greens, Three and ation and Verification of Boundary Condi- odeling of fixed cress inpleted. Hydrodynam linities. Therefore P in of Construction U ) Bridge Bayou culv foot wide gaps, at the dol 11 miles (58,100) etative planting func- bil and Water Conse- ing 4, 50-foot-wide g namic modeling resu- 0-foot wide gaps we et of additional eart	July 17, 2001. FTN cc I Willow Bayous. The on Report," "Historica tions for Evaluating Pr t weirs with boat bays mic modeling results p thase 2 of the project th nit 1 was completed ir erts, 3) 171,000 linear he eastern Sabine Lake linear feet) of planned ds because of an unsuc rvation District and th aps in the rock breakwills. The Pines Bayou ere also installed in Au hen terraces were cons The project will be in	"East Sabine Lake H I Data Review Mode roject Alternatives" (10 feet wide by 4 fe predicted that the pro- hat involved structure n October 2006. The r feet of earthen terra e shoreline beginning I Sabine Lake shorel ccessful 7,500 linear ne NRCS. The CWPI water, and deleting C weir was rehabilitate igust 2007, in the 3,0 structed in January 2	Hydrologic Restora eling Phase III Data were completed Oc- eet deep) at Willow oposed structures w res on the above ba following project i cases in the Greens I g at Willow Bayou, ine plantings were foot test planting a PRA Task Force ap onstruction Unit 2 ed in August 2007 of 000 foot-long rock 008. The Cameron	tion a and ttober 5, 7, Three, rould yous features cake area, and, 5) a removed along the pproved due to Parish	

CEMVN-PM-W										
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Grand-White Lake Landbridge Restoration	MERM Status:	CAMER Grand-White Status July 20		24-Jul-2001 A	10-Jul-2003 A	01-Oct-2004 A	\$8,584,334	\$4,814,626	56.1	\$3,895,061 \$3,841,318
		Agreement w Project spons CWPPRA an 2002), 2) LA Water Qualit 303(e) Detern Conference w The project c to Proceed w Lake Terrace 15, 2003. Operation an shoreline roc the rock and erosion. The planted giant cutgrass vege	vas executed on sors received Pl d NEPA project state Coastal Z y Certification mination (Dece vas held Septer onstruction con as issued on Ju s) construction d maintenance k dike and mar the shoreline w Collicon Lake cutgrass veget	July 24, 2001. LDN hase II construction f et construction requir Zone Consistency Det (October 28, 2002), 4 mber 2002), and 6) t mber 12, 2002. htract for Construction ly 10, 2003, and consi began in early July 2 post construction fiel sh creation is perform with spoil from access lake-ward terrace top ation has eroded and	R certified landrigh funding approval fro rements have been of termination (Septer 4) the Environment he Corps' Section 4 on Unit 1 (Grand La struction for that pl 2004 and was comp ld trips in February ning well. The rock channel dredging. ps have eroded app a cut bank remains	Force on January 10, 2 tts completion on Deca om the CWPPRA Task completed; 1.) the NR( nber 19, 2002), 3) the al Assessment (Noven 404 Permit (December 404 Permit (December 405 April 2005), 3) the ase was completed in leted in October 2004 and April 2005 indica c has not subsided and Construction Unit 2 t roximately 66% since . Most of the inner sh e planted vegetation or	ember 12, 2001. k Force on August 7, CS Overgrazing Deta LA Department of E nber 19, 2002), 5) th 2002). A favorable vilization) was award October 2003. Com . The project ground ated that Construction a small strip of wetl verraces have experie project construction oreward terraces are	2002. All of the ermination (August Environmental Qua e Corps' CWPPRA 95% Design Revis ed in June 2003, th struction Unit 2 (C l breaking was held n Unit 1 - the Gran and was created be need post construc . Most of the lake- holding up well w	lity A Section ew he Notice collicon d August d Lake etween tion •ward ith giant	
North Lake Mechant Landbridge Restoration	TERRE Status:	TERRE Construction	604 of this project	16-May-2001 A has been completed.	01-Apr-2003 A This project is nov	16-Dec-2009 A v in the Operation and	\$36,734,873 I Maintenance Phase	\$35,197,570	95.8	\$34,347,491 \$34,346,162

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS) ************************************										
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
Terrebonne Bay Shore	COAST	TERRE	0	24-Jul-2001 A	25-Aug-2007 A	19-Dec-2007 A	\$2,747,094	\$2,747,094	100.0	\$2,612,393	
Protection Demo COMPLETE	Status:	This demons	tration projec	t is in its last year. W	e will start the close	out process soon.				\$2,607,770	
	Total Priority List	10	1,309				\$56,856,018	\$50,004,239	87.9	\$47,466,747 \$47,292,580	
5 Constru	uction Started uction Completed (s) Deferred/Deauth	orized									
Rockefeller Refuge Gulf	MERM	CAMER	256	27-Sep-2001 A	01-Apr-2016 *	15-Feb-2018	\$34,330,522	\$33,337,316	97.1	\$27,382,231	
Shoreline Stabilization	Status:			eting will occur on M thorization in Decemb		95% Design Meetin	g scheduled for Sept	ember 30, 2014. N	MFS	\$1,784,258	
	Total Priority List	10	256				\$34,330,522	\$33,337,316	97.1	\$27,382,231 \$1,784,258	
0 Constru 0 Constru	(s) haring Agreements E uction Started uction Completed (s) Deferred/Deauth										

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)									
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********* Const End	******** E Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
GIWW Bank Restoration	TERRE	TERRE	64	16-May-2001 A	02-May-2013 A	01-Feb-2014 *	\$13,022,246	\$11,258,135	86.5	\$9,340,910
of Critical Areas in Terrebonne	Status:	•	ned land rights in December 2	•	012. Project re-surve	eyed to verify design	was still current. Pr	oject is scheduled fo	r	\$9,339,750
1	Total Priority List	10	64				\$13,022,246	\$11,258,135	86.5	\$9,340,910 \$9,339,750
1 Project(s	)									
1 Cost Sha 1 Construc	ring Agreements E	Executed								
	tion Completed									
0 Project(s	) Deferred/Deauth	orized								
Total			10,685				\$144,316,363	\$131,785,716	91.3	\$111,401,670 \$84,930,741
12 Project										
	aring Agreement	ts Executed								
6 Constru	ction Completed									
2 Project	s) Deferred/Dea	uthorized								

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)										
				*******	** SCHEDULES	****	******** ES	TIMATES ****	****	Actual Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures	
Lead Agency: EPA, F	ISH & WII	LDLIFE SE	RVICE								
Priority List 11											
River Reintroduction into	PONT	STJON	5,438	04-Apr-2002 A			\$6,554,124	\$6,554,124	100.0	\$6,554,124	
Maurepas Swamp TRANSFER	Status:	the project fr funds cease a	om CWPPRA, s soon as the r	has been further delay to CPRA in the near equest is made, and E , so it is not possible f	future. However, C PA and CPRA still	WPPRA SOP require have some necessary	es that all project exp expenditures that wi	penditures of CWP	PRA	\$6,554,124	
Ship Shoal: Whiskey	TERRE	TERRE	195	17-Mar-2003 A			\$2,298,822	\$2,298,822	100.0	\$2,298,822	
West Flank Restoration INACTIVE	Status:			sted, but not recomme lests will be made.	nded, at the Decemb	per 2012 Technical Co	ommittee Meeting.	Sponsors will deter	rmine	\$2,298,822	
Tota	ll Priority List	11	5,633				\$8,852,946	\$8,852,946	100.0	\$8,852,946 \$8,852,946	
<ol> <li>Project(s)</li> <li>Cost Sharing</li> <li>Construction</li> <li>Construction</li> <li>Project(s) D</li> </ol>	n Started n Completed										
Priority List 11											
Dedicated Dredging on	BARA	JEFF	605	03-Apr-2002 A	11-Sep-2008 A	15-Apr-2010 A	\$16,286,153	\$15,886,313	97.5	\$15,772,316	
the Barataria Basin Landbridge	Status:	The project v	vas completed	in 2010 and monitori	ng activities are ong	oing.				\$15,734,495	

CEMVN-PM-W		ASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT roject Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)								
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
South Grand Chenier Hydrologic Restoration	MERM Status:	was held on 1 completed Se held between meetings wer Force on Jan construction remove the fr 2012. Landr	March 13, 20 eptember 200 a project spon re held on Au uary 20, 2010 funds were re reshwater intri ights were fir	03-Apr-2002 A for construction on Ja 02. The final hydrodyn 7. A wave analysis mo sors and the major lan gust 6, 2009, and Nov 0. Due to the inability to eturned to the CWPPR roduction feature and co nalized in 2012 and con 015. Permit modification	namic modeling repu- del and geotechnica downers in 2002, 20 ember 3, 2009, resp to receive landrights A Program at the Ja change the name to ' nstruction approval	ort was completed in S al investigations were 203, and 2006. Prelim ectively. Phase II con s approvals from two c nuary 19, 2012, Task 'South Grand Chenier was again received in	September 2004. De completed in 2008. inary design (30%) struction approval w of the seven major la Force meeting. A p Marsh Creation", w January 2014. Revi	sign surveying was Landrights meeting and 95% Design Re vas approved by the ndowners, project roject scope change as approved in Dec sed Plans and speci	s were eview Task e to cember fications	\$20,942,899 \$2,174,141
West Lake Boudreaux Shoreline Protection& Marsh Creation	TERRE Status:			03-Apr-2002 A mpleted on this project o be in good working		04-Apr-2011 A	\$19,449,961 nage to several signs	\$17,708,668	91.0	\$15,996,870 \$15,994,946
	Total Priority List	11	1,296				\$58,359,460	\$55,877,921	95.7	\$52,712,085 \$33,903,583
3 Cons 2 Cons	ect(s) Sharing Agreements E struction Started struction Completed ect(s) Deferred/Deauth									

CEMVN-PM-W

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

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	r	Toject Statt	is Summa		** SCHEDULES	*****************		STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Little Lake Shoreline Protection/Dedicated	BARA	LAFOU	713	06-Aug-2002 A	04-Aug-2005 A	30-Mar-2007 A	\$29,516,673	\$23,260,839	78.8	\$21,924,152
Dredging near Round Lake	Status:	hd settled. A	survey will b		ber 7 to help determ	the northern section ine the extent of settle				\$21,877,167
Pass Chaland to Grand Bayou Pass Barrier	BARA	PLAQ	263	06-Aug-2002 A	06-Jun-2008 A	25-Aug-2009 A	\$40,710,723	\$40,128,726	98.6	\$37,607,177
Shoreline Restoration	Status:	dune planting platform appe to determine	gs observed. The ar to be reguled and the second se	The marsh creation ar arly flooded by tides	ea and associated co and has about 50% ovide tidal exchange	ears largely intact and ontainment dikes were to 60% vegetative cov . Based on observed	also inspected. Maj ver. Marsh fill conta	or portions of the n inment dikes were i	narsh nspected	\$37,571,465
Pelican Island and Pass	BARA	PLAQ	334	06-Aug-2002 A	25-Mar-2006 A	28-Nov-2012 A	\$71,170,649	\$70,306,991	98.8	\$69,330,481
La Mer to Chaland Pass BBI	Status:			struction Start - 15 N letion - 14 Dec 2012(		ngs - Fall 2012/Sprin	g 2013(S)			\$69,262,047
	Total Priority List	11	1,310				\$141,398,046	\$133,696,557	94.6	\$128,861,810 \$128,710,679

3 Project(s)

3 Cost Sharing Agreements Executed

3 Construction Started

3 Construction Completed

0 Project(s) Deferred/Deauthorized

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)									
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********** Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Barataria Basin	BARA	JEFF	256	09-May-2002 A	27-Apr-2005 A	26-Apr-2006 A	\$17,709,217	\$13,186,411	74.5	\$7,032,197
Landbridge Shoreline Protection, Ph 4	Status:	Construction	Unit #6 was	completed on April 20	5, 2006.					\$6,577,211
Coastwide Nutria Control Program	COAST	COAST	14,963	26-Feb-2002 A	20-Nov-2002 A	15-Jul-2003 A	\$68,040,614	\$39,075,082	57.4	\$24,948,901 \$24,847,546
rogium	Status:		we been colle	Trapping Season, 38 ected per year. Over the						\$2 <b>4,047,34</b> 0
Grand Lake Shoreline Protection	MERM	CAMER	45	20-Sep-2011 A	01-Dec-2016 *	01-Feb-2017 *	\$10,055,616	\$7,075,050	70.4	\$6,776,844 \$999,601
	Status:	Construction	contract awa	rded. Complete const	ruction by July 2017	7.				ψ777,001
Raccoon Island Shoreline Protection/Marsh Creation	TERRE	TERRE	71	23-Apr-2002 A	13-Dec-2005 A	01-Mar-2013 *	\$23,163,392	\$22,497,353	97.1	\$19,524,175 \$17,605,238
Theeton Marsh creation	Status:			n on 12/12/2005 d on 9/16/2007						\$17,003,238
				n on 9/27/2012 d on 4/23/2103						
Tot	al Priority List	11	15,335				\$118,968,839	\$81,833,896	68.8	\$58,282,117 \$50,029,596
4 Project(s)										

4 Project(s)

4 Cost Sharing Agreements Executed

3 Construction Started

2 Construction Completed

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)										
PROJECT	BASIN PARISH		**************************************								
Total		23,574				\$327,579,291	\$280,261,320	85.6	\$248,708,959 \$221,496,805		
12 9 7	Project(s) Cost Sharing Agreements Executed Construction Started Construction Completed Project(s) Deferred/Deauthorized										

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)										
PROJECT	BASIN	PARISH									
Lead Agency: N	RCS, NATURAI	L RESOUR	CES CON	SERVATION	SERVICE						
Priority List	11.1										
Holly Beach Sand Management	CA/SB	CALCA	330	09-May-2002 A	01-Aug-2002 A	31-Mar-2003 A	\$14,130,233	\$14,130,233	100.0	\$13,994,787 \$13,994,787	
Management	Status: The placement of the sand material on to the beach was completed on Saturday, March 1, 2003. Required work that is now in progress consist of demobilization of the pipeline segments, dressing the completed beach work, erection of the Sand Fencing and installation of the vegetation.										
	Total Priority List	11.1	330				\$14,130,233	\$14,130,233	100.0	\$13,994,787 \$13,994,787	

1 Project(s)

1 Cost Sharing Agreements Executed

1 Construction Started

1 Construction Completed

CEMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT 0 Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)												
DROIECT	DACINI		ACDES	*******	SCHEDULLS			STIMATES ****		Actual Obligations/		
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures		
Total			330				\$14,130,233	\$14,130,233	100.0	\$13,994,787 \$13,994,787		
1 Pr	oject(s)											
1 Co	ost Sharing Agreement	ts Executed										
1 Co	onstruction Started											
1 Co	onstruction Completed	l										
0 Pr	roject(s) Deferred/Dear	uthorized										

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COA					AND RESTORA PT. OF THE AI				04-May-2017 Page 76
				******	** SCHEDULES	****	******* ES	STIMATES ***	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: COE, C	ORPS OF	ENGINEEI	RS							
Priority List 12										
Avoca Island Diversion	TERRE	STMRY					\$1,736,137	\$1,736,137	100.0	\$1,736,137
DEAUTHORIZED	Status:	The TE-49 A	voca Diversio	n and Land Building	Project was deautho	rized per CWPPRA T	ask Force decision	on 4 June 2013.		\$1,736,137
Lake Borgne and MRGO Shoreline Protection	PONT	STBER					\$1,089,193	\$1,089,193	100.0	\$1,089,193 \$1,089,193
DEAUTHORIZED	Status:	project work geotechnical fall 2003. A p	plan for Phase borings was re reliminary de	e I was submitted to the equested in June 2003 sign report was comp	he P&E Subcommitt 3 and received in Au aleted in December 2	003. A kickoff meetir ee in October 2003. F gust 2003. Surveys ar 003. A 30% design re- tion approval from the	Right of Entry to per ad geotechnical bori eview was held in A	form surveys and ngs were collected ugust 2004. A 95%	during 6 design	\$1,089,195
Mississippi River	DELTA	PLAQ					\$354,791	\$354,791	100.0	\$354,791
Sediment Trap DEAUTHORIZED	Status:		plan is under			ugust 2002. A kickof n meeting with the LA				\$354,791
South White Lake	MERM	VERMI	844	24-Mar-2005 A	01-Nov-2005 A	29-Aug-2006 A	\$14,466,981	\$10,563,558	73.0	\$10,476,989
Shoreline Protection	Status:		•	ess of setting up the 2 timeframe with repo	•	ection trip for the ME	2-22 project; it is ten	tatively set to occu	ir in the	\$10,475,399

CEMVN-PM-W	Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)												
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures			
	Total Priority List	12	844				\$17,647,101	\$13,743,678	77.9	\$13,657,109 \$13,655,519			
1 Co 1 Co 1 Co	oject(s) st Sharing Agreements E nstruction Started nstruction Completed oject(s) Deferred/Deauth												
Bayou Dupont Sedime Delivery System		PLAQ	326	21-Mar-2004 A	04-Feb-2009 A	03-Jun-2010 A	\$27,702,941	\$27,178,387	98.1	\$23,281,303 \$23,113,288			
Denrery System	Status:	Additional po activities.	ost-primary co	onstruction activities v	vill not be pursued.	Sponsors will be proc	eeding with constru	ction grant close-ou	ıt	φ23,113,200			
	Total Priority List	12	326				\$27,702,941	\$27,178,387	98.1	\$23,281,303 \$23,113,288			
<ol> <li>Project(s)</li> <li>Cost Sharing Agreements Executed</li> <li>Construction Started</li> <li>Construction Completed</li> <li>Project(s) Deferred/Deauthorized</li> </ol>													

CEMVN-PM-W		COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)										
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures		
Freshwater Floating Marsh Creation Demo COMPLETE	COAST Status:	the end of 20 structures and increasingly of Some of the of storms well v structures per	008 (the third g d are beginning extensive netw deployed struc vith less than 5	growing season in the g to interweave with ork of the fibrous roo tures at Mandalay we % of the structures d hely well in the areas	e field), vegetation in plants from adjacent ots and rhizomes nec ere damaged, but ove amaged or lost. In t	01-Jun-2006 A een in place since Sprin in the floating structure structures, and the be cessary to establish the erall the project structu- his project, the P. hen reases in water salinit	es has spread signific clowground plant ma e foundation of a sus ures and associated y nitomon plants estab	cantly from their m aterial was generati stainable organic m vegetation weather plished in the floati	other ing an harsh mat. ed the ng	\$1,068,602 \$1,068,602		

Total Priority List 12

0

\$1,068,602 \$1,068,602 100.0 \$1,068,602 \$1,068,602 \$1,068,602

1 Project(s)

1 Cost Sharing Agreements Executed

1 Construction Started

1 Construction Completed

CEMVN-PM-W	MVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT 04 Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)											
PROJECT	**************************************											
Total			1,170				\$46,418,643	\$41,990,666	90.5	\$38,007,014 \$37,837,409		
<ul><li>3 Const</li><li>3 Const</li></ul>	ct(s) Sharing Agreement ruction Started ruction Completed ct(s) Deferred/Dea	l										

Notes:

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)										
				******	** SCHEDULES	****	******** ES	STIMATES ****	****	Actual Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures	
Lead Agency: COE, COE, COE, COE, COE, COE, COE, COE,	CORPS OF	ENGINEE	RS								
Priority List 13											
Shoreline Protection Foundation	COAST	COAST	0	24-Mar-2005 A	01-Nov-2005 A	29-Aug-2006 A	\$707,839	\$707,839	100.0	\$707,839 \$707,839	
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 DEAUTHORIZED	DELTA	PLAQ					\$310,152	\$310,152	100.0	\$310,152	
DEAUTIONIZED	Status:	The MR-14 S	Spanish Pass D	Diversion project was	deauthorized per C	WPPRA Task Force de	ecision on 4 June 20	13.		\$310,152	
Tot	al Priority List	13	0				\$1,017,991	\$1,017,991	100.0	\$1,017,991 \$1,017,991	
1 Constructio 1 Constructio											
Priority List 13											
Whiskey Island Back Barrier Marsh Creation	TERRE	TERRE	272	29-Sep-2004 A	11-Feb-2009 A	18-Jun-2010 A	\$30,414,086	\$30,164,311	99.2	\$25,934,819 \$25,844,780	
	Status:	After further	rsue an additional veg	etation planting eve	nt.		φ23,044,700				

CEMVN-PM-W			TAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT S Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)							
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********** Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Т	otal Priority List	13	272				\$30,414,086	\$30,164,311	99.2	\$25,934,819 \$25,844,780
1 Construct 1 Construct	ring Agreements E									
Priority List 13										
Goose Point/Point Platte	PONT	STTAM	436	14-May-2004 A	02-Apr-2008 A	12-Feb-2009 A	\$14,558,123	\$14,410,203	99.0	\$14,024,196
Marsh Creation	Status:		e marsh creation be completed ir		eted in 2014. Site in	spections were condu	cted in 2014 and 20	15. An analysis of	the	\$13,999,875
Т	otal Priority List	13	436				\$14,558,123	\$14,410,203	99.0	\$14,024,196 \$13,999,875
1 Construct 1 Construct	ring Agreements E									
Priority List 13										
Bayou Sale Shoreline	TECHE	STMRY		16-Jun-2004 A			\$1,855,824	\$1,855,824	100.0	\$1,855,824
Protection DEAUTHORIZED	Status:					Project team reviewi			a test	\$1,855,824

Status: Project scope change did not get approved by Technical Committee. Project team reviewing option suggested by Parish to allow a test section of an alternative shoreline protection product, funded by Parish. Project Team currently assessing viability.

CEMVN-PM-W	Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)												
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES <sup>*</sup> Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures			
1 0 0	Total Priority List Project(s) Cost Sharing Agreements Ex Construction Started Construction Completed Project(s) Deferred/Deautho						\$1,855,824	\$1,855,824	100.0	\$1,855,824 \$1,855,824			
4 3 3	Project(s) Cost Sharing Agreements Construction Started Construction Completed Project(s) Deferred/Deau		708				\$47,846,025	\$47,448,330	99.2	\$42,832,830 \$42,718,470			

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W				PLANNING, Pl ry Report - Lead						04-May-2017 Page 83
				*******	** SCHEDULES	****	******** ES	STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: NMFS	, NATIONA	AL MARIN	E FISHER	IES SERVICE						
Priority List 14										
Riverine Sand	BARA	PLAQ		04-Oct-2005 A			\$2,935,025	\$2,935,025	100.0	\$2,935,025
Mining/Scofield Island Restoration DEAUTHORIZED	Status:		siana planning 9 January 201	g to construct the proje 2 meeting.	ect using state-only	funds. Final CWPPR.	A deauthorization w	as approved by the	Task	\$2,935,025
То	tal Priority List	14					\$2,935,025	\$2,935,025	100.0	\$2,935,025 \$2,935,025
0 Construction										
Priority List 14										
East Marsh Island Marsh Creation	TECHE	IBERI	169	04-Oct-2006 A	15-Feb-2010 A	22-Jul-2011 A	\$17,765,813	\$17,291,809	97.3	\$15,522,339
Creation	Status:	Construction	of marsh crea	tion has been complet	ed. Vegetative Plar	ntings began March 2	011, expected to be	completed by July	2011.	\$15,489,968
South Shore of the Pen	BARA	JEFF	106	07-Dec-2005 A	17-Jun-2010 A	06-Jun-2012 A	\$21,639,574	\$19,853,124	91.7	\$17,095,363
Shoreline Protection & Marsh Creation	Status:	Project was c	completed on J	une 6, 2012.						\$16,946,148
White Ditch Resurrection and Outfall Management	BRET	PLAQ		11-Aug-2005 A			\$1,020,420	\$1,020,420	100.0	\$1,020,420
DEAUTHORIZED	Status:	Project team	has agreed to	move to deauthorizati	on due to issues reg	arding location & ope	eration of siphon.			\$1,020,420

CEMVN-PM-W	Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)												
PROJECT	BASIN	PARISH	ACRES	******* CSA	*** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures			
	Total Priority List	14	275				\$40,425,806	\$38,165,352	94.4	\$33,638,122 \$33,456,537			
3 2 2	Project(s) Cost Sharing Agreements Ex Construction Started Construction Completed Project(s) Deferred/Deautho												
Total			275				\$43,360,831	\$41,100,377	94.8	\$36,573,147 \$36,391,561			
4 2 2	Project(s) Cost Sharing Agreements Construction Started Construction Completed Project(s) Deferred/Deau												

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W				,		AND RESTORA		CY (EPA)		04-Mav-2017 Page 85 Actual
					** SCHEDULES			TIMATES ****		Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: EPA, I	FISH & WII	LDLIFE SE	RVICE							
Priority List 15										
Bayou Lamoque	BRET	PLAQ	620				\$9,510	\$9,510	100.0	\$9,510
Freshwater Diversion TRANSFER	Status:	CORRECTIO	ON: The projec	t was TRANSFERRI	ED to the state by th	e CWPPRA Task For	ce on October 25, 20	007.		\$9,510
Venice Ponds Marsh Creation and Crevasses	DELTA	PLAQ	318	19-Jun-2009 A			\$634,027	\$634,027	100.0	\$634,027 \$634,027
INACTIVE	Status:			ted, but not recomme lests will be made.	ended, at the Decem	ber 2012 Technical Co	ommittee Meeting.	Sponsors will deter	rmine	\$034,027
To	tal Priority List	15	938				\$643,537	\$643,537	100.0	\$643,537 \$643,537
0 Constructio 0 Constructio										
Priority List 15										
Lake Hermitage Marsh Creation	BARA	PLAQ	447	28-Mar-2006 A	24-Feb-2012 A	19-May-2015 A	\$38,541,252	\$38,089,316	98.8	\$23,424,166
Creation	Status:	The project w	vas completed	in 2015. Monitoring	activities are ongoi	ng.				\$23,403,609

CEMVN-PM-W	Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)											
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES * Const Start	********* Const End	******* ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures		
T	otal Priority List	15	447				\$38,541,252	\$38,089,316	98.8	\$23,424,166 \$23,403,609		
<ol> <li>Construct</li> <li>Construct</li> <li>Project(s)</li> </ol>	ing Agreements E ion Started ion Completed Deferred/Deautho											
Priority List 15 South Pecan Island	MERM	VERMI		21-Sep-2006 A			\$779,422	\$779,422	100.0	\$779,422		
Freshwater Introduction DEAUTHORIZED	Status:				sful with one of the ethis project proceed t	eight landowners. Th to deauthorization.	erefore, the NMFS a	and OCPR will be		\$779,422		
To	otal Priority List	15					\$779,422	\$779,422	100.0	\$779,422 \$779,422		
<ol> <li>Project(s)</li> <li>Cost Shar</li> </ol>	ing Agreements E	xecuted										

0 Construction Started

0 Construction Completed

CEMVN-PM-W	EMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT 04 Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)											
PROJECT	BASIN	PARISH	ACRES	**************************************			. ,	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures		
Total			1,385				\$39,964,210	\$39,512,274	98.9	\$24,847,124 \$24,826,567		
1 Cons 1 Cons	cct(s) Sharing Agreement truction Started truction Completed cct(s) Deferred/Dea	1										

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

CEMVN-PM-W	COA	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE ARMY (COE)									
				******	** SCHEDULES	****	******* ES	TIMATES ***	****	Actual Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures	
Lead Agency: CO	E, CORPS OF	ENGINEE	RS								
Priority List 16	5										
Southwest LA Gulf Shoreline Nourish	MERM	CAMER	888		30-Jun-2017	10-Jul-2018	\$10,657	\$10,657	100.0	\$10,657	
&Protect TRANSFER	Status:	attainment of Mar 2009, a	f a Cost Share A project Fact She	Agreement with CPR eet and map was app	A, a Phase 1 work p proved by the New C	E internal project deliv plan will be developed Drleans District for pla RA until a Cost Share	and a kickoff meetir cement on the LaCoa	ng/site visit sched ast website. At thi	uled. In	\$10,657	
	Total Priority List	16	888				\$10,657	\$10,657	100.0	\$10,657 \$10,657	
0 Constr 0 Constr	t(s) haring Agreements I uction Started uction Completed t(s) Deferred/Deauth										
Priority List 16	5										
Enhancement of Barrier	COAST	COAST	0	27-Jul-2007 A	14-Jun-2010 A	31-Dec-2010 A	\$618,979	\$618,979	100.0	\$618,979	
Island Vegetation Demo	Status:	A draft final	report was rece	ived and reviewed, v	with minimal comme	ents. Subsequently, a	final report was com	pleted.		\$618,979	

CEMVN-PM-W						AND RESTOR		CY (EPA)		04-May-2017 Page 89
					*** SCHEDULES	****	******* ES	STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
	Total Priority List	16	0				\$618,979	\$618,979	100.0	\$618,979 \$618,979
1 C 1 C 1 C	roject(s) Cost Sharing Agreements E Construction Started Construction Completed roject(s) Deferred/Deauth									
Priority List	16									
Madison Bay Marsh	TERRE	TERRE	334	31-May-2007 A	01-Dec-2015 *	01-Jul-2017	\$1,731,039	\$1,731,039	100.0	\$1,731,039
Creation and Terracir INACTIVE	ig Status:	NMFS intend	ls to seek Pha	se 2 authorization in 7	December 2014.					\$1,731,039
West Belle Pass Barr		LAFOU	305	31-May-2007 A	09-Sep-2011 A	04-Jun-2013 A	\$42,250,417	\$41,998,365	99.4	\$25,774,206
Headland Restoration Project	i Status:	Readjusted d	escription and	l changed constructio	n completion date ba	ased on plantings date	to fit with O&M pla	an.		\$25,724,047
	Total Priority List	16	639				\$43,981,456	\$43,729,404	99.4	\$27,505,245 \$27,455,087
2 C 1 C 1 C	roject(s) Cost Sharing Agreements E Construction Started Construction Completed roject(s) Deferred/Deauth									

Priority List 16

CEMVN-P	M-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)										
PROJ	ECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** Ex Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
Alligator Be		PONT	ORL	181	11-Jun-2008 A			\$1,364,230	\$1,364,230	100.0	\$1,364,230	
Protection (I	and Shoreline (nactive)	Status:		een placed on astruction fund	Inactive list until CW	PPRA is reauthorize	ed, receives further fu	unding, or another p	rogram is found tha	t can	\$1,364,230	
	Т	otal Priority List	16	181				\$1,364,230	\$1,364,230	100.0	\$1,364,230 \$1,364,230	
	1 Project(s)	)										
		ring Agreements E	Executed									
	0 Construc 0 Construc	tion Started tion Completed										
		) Deferred/Deauth	orized									
Total				1,708				\$45,975,322	\$45,723,270	99.5	\$29,499,111 \$29,448,953	
	5 Project(											
		aring Agreement	ts Executed									
		ction Completed	l									
		s) Deferred/Dea										

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W		STAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT us Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)									
PROJECT	BASIN	PARISH	ACRES		** SCHEDULES Const Start			STIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
Lead Agency:	EPA, FISH & WII	LDLIFE SE	RVICE								
Priority List	17										
Bohemia Mississippi	BRET	PLAQ		16-Jul-2008 A			\$502,592	\$502,592	100.0	\$502,592	
River Reintroduction DEAUTHORIZED	Status:	Project delay of Task Force		iderations of State M	aster Plan consisten	cy. Project deauthoriz	zation process to be	initiated pending d	irection	\$502,592	
	Total Priority List	17					\$502,592	\$502,592	100.0	\$502,592 \$502,592	
	oject(s)										
	ost Sharing Agreements I construction Started	Executed									
	onstruction Completed										
1 Pr	oject(s) Deferred/Deauth	orized									
Priority List	17										
South Lake Lery Shoreline and Marsh	BRET	MULTI	409	19-Feb-2008 A	01-Apr-2014 *	01-Apr-2014 *	\$32,663,173	\$32,295,816	98.9	\$31,497,449	
Restoration	Status:	•				oreline restoration nea s one marsh creation c	• •			\$20,818,199	

will be arriving soon and marsh creation will accelerate.

CEMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)										
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	17	409				\$32,663,173	\$32,295,816	98.9	\$31,497,449 \$20,818,199
0 Constr 0 Constr 0 Projec	Sharing Agreements E ruction Started ruction Completed et(s) Deferred/Deauth									
Priority List 1							<b>AAAAAAAAAAAAA</b>			
Bayou Dupont Ridge Creation & Marsh	BARA	JEFF	186	17-Jul-2008 A	21-Apr-2014 *	30-Sep-2015 *	\$38,985,192	\$38,222,873	98.0	\$36,675,330 \$33,917,045
Restoration	Status:			s are complete. The e currently being pla		ridge have been const	ructed and the conta	inment dikes have	been	
Bio-Engineered Oyster Reef DEMO	MERM	MULTI	0		02-Aug-2011 A	17-Feb-2014 A	\$2,244,785	\$2,244,785	100.0	\$2,072,759 \$2,061,275
	Status:	Project const	ruction was co	mpleted in early Feb	oruary 2012. Biologi	ical and structural mo	nitoring are underwa	ay.		\$2,001,275
	Total Priority List	17	186				\$41,229,977	\$40,467,658	98.2	\$38,748,089 \$35,978,320
1 Constr	et(s) Sharing Agreements E ruction Started ruction Completed	Executed								

0 Project(s) Deferred/Deauthorized

Priority List 17

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

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		**************************************								Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Sediment Containment System for Marsh	COAST	COAST	0	28-Jan-2008 A	08-Jan-2013 A	11-Sep-2013 A	\$970,726	\$970,726	100.0	\$883,702 \$883,702
Creation Demo	Status:	LA-9 Demo I	Project was ind	cluded with the PO-75	5 Pilot Study. Proje	ct was awarded on Jan	uary 7, 2013.			\$000,702
West Pointe a la Hache Marsh Creation	BARA	PLAQ		24-Jan-2008 A			\$1,620,740	\$1,620,740	100.0	\$617,876 \$617,876
DEAUTHORIZED	Status:	47 footprint a	and cover mos		d to be built under t	mental funding and wa his project. Therefore rogram.				\$017,870

Total Priority List 17

0

\$2,591,466 \$2,591,466

\$1,501,577 \$1,501,577

100.0

2 Project(s)

2 Cost Sharing Agreements Executed

1 Construction Started

1 Construction Completed

CEMVN-PM-W	CEMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)											
PROJECT	BASIN	PARISH	ACRES	**************************************								
Total			595				\$76,987,208	\$75,857,532	98.5	\$72,249,708 \$58,800,689		
<ul><li>2 Cons</li><li>2 Cons</li></ul>	ect(s) Sharing Agreemen struction Started struction Completed ect(s) Deferred/Dea	1										

Notes:

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)										
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES *********** Const Start Const End		******* ESTIMATES **** Approved Funded		**** %	Actual Obligations/ Expenditures	
Lead Agency: EPA,	NATIONAL	MARINE	FISHERIE	ES SERVICE							
Priority List 18											
Bertrandville Siphon DEAUTHORIZED	BRET	PLAQ		15-Jun-2011 A			\$554,376	\$554,376	100.0	\$554,376 \$554,376	
DEAUTHORIZED	Status: Project delays due to considerations of State Master Plan consistency and pursuit of landowner support.										
Т	otal Priority List	18					\$554,376	\$554,376	100.0	\$554,376 \$554,376	
	ion Completed Deferred/Deautho	prized									
Grand Liard Marsh and	BARA	PLAQ	370		01-Jul-2014 A	01-Oct-2015 A	\$42,579,616	\$42,138,670	99.0	\$38,383,585	
Ridge Restoration	Status:						+ · _ ,	+ · _ , ,		\$31,978,871	
Т	otal Priority List	18	370				\$42,579,616	\$42,138,670	99.0	\$38,383,585 \$31,978,871	
1 Construct 1 Construct	ring Agreements E tion Started tion Completed Deferred/Deautho										

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)									
PROJECT	BASIN	PARISH	ACRES	-	** SCHEDULES Const Start			STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Priority List 18										
Cameron-Creole Freshwater Introduction	CA/SB Status:	information r		structural components	1 1	01-Jul-2016 * iject only. Federal Spo Phase II approval Jan		0	94.3 e	\$1,944,220 \$1,825,899
Central Terrebonne Freshwater Enhancement TRANSFER	TERRE Status:	TERRE Project featur	233 res are being i	04-May-2009 A ncorporated into the I	01-Sep-2017 Restore Act Project:	01-Jul-2018 Bayou Dularge Ridge	\$2,326,289 , Marsh, and Hydrol	\$2,326,289 logic Restoration.	100.0	\$1,883,179 \$1,255,246

	Pre	Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)											
PROJECT	BASIN	PARISH	ACRES	********** SCHEDULES ********** CSA Const Start Const End			******** ES Approved	Actual Obligations/ Expenditures					
Non-Rock Alternatives to Shoreline Protection	COAST	COAST	0	04-May-2009 A	27-May-2013 *	24-Apr-2017 *	\$6,472,800	\$6,472,800	100.0	\$5,968,963 \$4,380,291			
Demo	Status:	Projected Tir	nelines							ψ <del>1</del> ,500,291			
		Project was a	dvertised on I	Nov. 15, 2011									
		Site VisitsNo	ov. 16 & 17, 2	011									
		Proposals Du	ie on RFPMa	r. 15, 2012)									
		< Phase I > Review of Pr	coposalsMay 1	4, 2012)									
		Interview Pro	ocessJune 28,	2012)									
		< Phase 2 > Notice of Sel	lection (for Ph	ase 2 design) (July 1	3, 2012)								
		Draft Design Schedule from NRCS(Aug. 3, 2012)											
		Phase 2 Cont											
		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 Sel	lection (for Ph	ase III)(Jan. 25, 2013	3)								
	Advertise NRCS Dredging Contract(Mar. 18, 2013)												
		Finalize NRCS Plans & Specifications(May 25, 2013)											
		Phase 3 Contract Award (May 27, 2013) Page 97											

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

04-May-2017

CEMVN-PM-W

CEMVN-PM-W				,	PROTECTION A Agency: DEPT.		)		04-May-2017 Page 98
PROJECT	BASIN	PARISH	ACRES	•	*** SCHEDULES Const Start		, TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
		NTP on NRC	CS Dredging Cont	ract(May 31, 20	13)				
		Construction	of Shoreline Prot	ection Systems(.	Jan. 22, 2014)				
		Construction	Report(Feb. 21, 2	2014)					
		Monitoring F	Period(Jan. 23, 20	17)					
		Completion I	Report and Projec	t Closeout(Apr. 2	24, 2017)				
	Total Priority List	18	475			\$11,560,590	\$11,403,692	98.6	\$9,796,363 \$7,461,436
	ct(s) Sharing Agreements F	Executed							

1 Construction Started

0 Construction Completed

CEMVN-PM-W		COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)										
PROJECT	BASIN	PARISH	summary Report - Lead Agency. DEPT. OF AGRICOLTORE (INCCS)         ************************************									
Total			845				\$54,694,582	\$54,096,738	98.9	\$48,734,324 \$39,994,683		
2 Const 1 Const	ct(s) Sharing Agreement ruction Started ruction Completed ct(s) Deferred/Dea	1										

Notes:

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W				PLANNING, P y Report - Lead				1		04-Mav-2017 Page 100 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********** Const End	******** E Approved	STIMATES **** Funded	**** %	Obligations/ Expenditures
Lead Agency: FWS,	FISH & WI	LDLIFE SE	ERVICE							
Priority List 19										
Lost Lake Marsh Creation and Hydrologic	TERRE	TERRE	452	22-Apr-2010 A	01-Aug-2016 *	31-Oct-2017	\$35,125,857	\$31,531,382	89.8	\$1,364,844 \$1,289,099
Restoration	Status:	A construction	on contract ha	s been awarded to We	eeks Marine. Constr	ruction is estimated to	begin in January 20	017.		\$1,209,099
То	tal Priority List	19	452				\$35,125,857	\$31,531,382	89.8	\$1,364,844 \$1,289,099
0 Constructio 0 Constructio										
Priority List 19										
Chenier Ronquille Barrier Island Restoration	BARA	PLAQ		18-Aug-2010 A			\$1,042,540	\$1,042,540	100.0	\$1,042,540 \$1,042,540
DEAUTHORIZED	Status:	Project was o	leauthorized a	s a CWPPRA project	as it was successful	lly included as a Phas	e III Early Restoration	on Project for the D	eepwater	\$1,042,340

Project was deauthorized as a CWPPRA project as it was successfully included as a Phase III Early Restoration Project for the Deepwater Horizon Oil Spill.

CEMVN-PM-W				*		AND RESTOR T. OF COMME				04-May-2017 Page 101
PROJECT	DACIN	PARISH	ACRES		** SCHEDULES			TIMATES ****		Actual Obligations/
PROJECT	BASIN	PARISH	ACKES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
	Total Priority List	19					\$1,042,540	\$1,042,540	100.0	\$1,042,540 \$1,042,540
1 C 0 C 0 C	Project(s) Cost Sharing Agreements E Construction Started Construction Completed Project(s) Deferred/Deauth									
Priority List	19									
Freshwater Bayou M	Iarsh MERM	VERMI	279	01-Apr-2010 A	01-Jul-2018	01-Aug-2019	\$2,425,997	\$2,425,997	100.0	\$2,142,502
Creation	Status:	Scheduled Da 30% Review 95% Review Contracting		16 2016 7	l Sponsor does not l	nave access to change	the information.			\$1,298,081
LaBranche East Mar Creation		STCHA	715	01-Apr-2010 A	01-Sep-2018	01-Sep-2019	\$2,571,273	\$2,571,273	100.0	\$2,288,068 \$2,234,062
	Status:	Scheduled Da 30% Review 95% Review Contracting		16 2016 7	I Sponsor does not l	nave access to change	the information.			

CEMVN-PM-W	00115				PROTECTION A Agency: DEPT.			)		04-May-2017 Page 102 Actual
PROJECT	BASIN	PARISH	ACRES	******* CSA	*** SCHEDULES * Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Obligations/ Expenditures
	Total Priority List	19	994				\$4,997,270	\$4,997,270	100.0	\$4,430,570 \$3,532,143
2 0 0	Project(s) Cost Sharing Agreements Exec Construction Started Construction Completed Project(s) Deferred/Deauthoriz									
Total			1,446				\$41,165,667	\$37,571,192	91.3	\$6,837,954 \$5,863,783
4 0 0	Project(s) Cost Sharing Agreements I Construction Started Construction Completed Project(s) Deferred/Deauth									

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W				PLANNING, P y Report - Lead						04-May-2017 Page 103
					** SCHEDULES	****	******* E	STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: FW	YS, FISH & WI	LDLIFE SE	RVICE							
Priority List 20	)									
Bayou Bonfouca Marsh Creation	PONT	STTAM	478	14-Mar-2011 A	05-Sep-2016 A	18-Jul-2017	\$28,253,969	\$27,648,895	97.9	\$1,666,350 \$1,555,909
	Status:	Dewatering s articulating n	tructures have hats have been in the marsh	then containment dik e also been installed a n installed across the l creation sites. A 30"	long the exterior con akeside containment	tainment dikes and t dike along marsh cr	the marsh pond conta reation site 1. Settler	inment dikes. Conc nent plates have als	crete so been	¢1,335,707
Cameron-Creole Watershed Grand Bayou	CA/SB	CAMER	476	24-Oct-2011 A			\$28,707,688	\$28,122,302	98.0	\$1,005,693
Marsh Creation	Status:	95% Design 12/11/2014.	completed in	2013. Phase 2 funds	requested in Dec. 20	13 was not awarded.	. Requesting Phase 2	Construction fund	s on	\$899,880
Terrebonne Bay Marsh	TERRE	TERRE					\$2,901,750	\$2,901,750	100.0	\$778,895
Creation-Nourishment DEAUTHORIZED	Status:	This project l	nas been put o	on hold and no work is	s currently being dor	e on the project.				\$778,895
	Total Priority List	20	954				\$59,863,407	\$58,672,947	98.0	\$3,450,938 \$3,234,685
	t(s) haring Agreements E uction Started	Executed								

0 Construction Completed

1 Project(s) Deferred/Deauthorized

Priority List 20

CEMVN-PM-W				PLANNING, P Report - Lead				)		04-Mav-2017 Page 104 Actual
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********** Const End	******** ES Approved	STIMATES **** Funded	**** %	Obligations/ Expenditures
Coastwide Vegetative	COAST	COAST	779	20-Sep-2011 A	27-Jul-2012 A	01-Jun-2013 *	\$12,689,725	\$10,816,073	85.2	\$9,688,649
Planting	Status:			Decade Area (Terrebon Lafourche Par)awarde		South Bayou Decade	e (Terrebonne Par), C	Gentilly Unit (Orlea	ns Par);	\$2,992,420
Kelso Bayou Marsh Creation TRANSFER	CA/SB	CAMER	274	20-Sep-2011 A	01-Sep-2014 *	01-Sep-2018	\$2,360,609	\$2,360,609	100.0	\$2,012,183 \$1,218,781
	Status:	Milestones s	hown above a	re not correct. Federa	l Sponsor does not	have access to change	e the information.			., ., ., .
		Scheduled D 30% Review	May 20							
		95% Review Contracting Construction	August April 20 Start Septen	17						
	Total Priority List	20	1,053				\$15,050,334	\$13,176,682	87.6	\$11,700,832 \$4,211,201
2 Proj 2 Cost	ect(s) t Sharing Agreements I	Executed								

1 Construction Started

0 Construction Completed

CEMVN-PM-W				,	PROTECTION A			)		04-May-2017 Page 105
PROJECT	BASIN	PARISH	ACRES	******* CSA	**** SCHEDULES Const Start	********* Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Total			2,007				\$74,913,741	\$71,849,629	95.9	\$15,151,771 \$7,445,886
<ul><li>2 Const</li><li>0 Const</li></ul>	ct(s) Sharing Agreemen ruction Started ruction Completed ct(s) Deferred/Dea	1								

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W						AND RESTOR T. OF THE INT				04-May-2017 Page 106
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Lead Agency: FWS, 1	FISH & WI	LDLIFE SE	RVICE							
Priority List 21										
Turtle Bay Marsh Creation	BARA	JEFF	432	10-May-2012 A	01-Oct-2017	01-Oct-2018	\$33,664,671	\$32,607,095	96.9	\$943,095
	Status:	A 95% design	n review meet	ing was held in Octob	per 2016. A request	for Phase 2 construct	tion funds will take p	place in December 2	2016.	\$905,444
Tot	al Priority List	21	432				\$33,664,671	\$32,607,095	96.9	\$943,095 \$905,444
0 Constructio 0 Constructio	ng Agreements I on Started on Completed Deferred/Deauth									
Priority List 21										
Coles Bayou Marsh	TECHE	VERMI	340				\$25,635,641	\$24,169,491	94.3	\$21,377,604
Restoration	Status:	Project is on	course for a p	hase 2 (construction)	request in Decembe	er 2015.				\$1,783,466
Oyster Bayou Marsh Restoration	CA/SB	CAMER	433	05-Feb-2013 A	01-Sep-2015 *	15-Oct-2016 *	\$31,236,742	\$30,722,420	98.4	\$28,307,434
Restoration	Status:	NMFS intend	ls to seek Pha	se 2 authorization in I	December 2014.					\$1,852,343

CEMVN-PM-W				,		AND RESTOR T. OF COMME				04-Mav-2017 Page 107 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Obligations/ Expenditures
	Total Priority List	21	773				\$56,872,383	\$54,891,911	96.5	\$49,685,038 \$3,635,809
1 0 0	Project(s) Cost Sharing Agreements E Construction Started Construction Completed Project(s) Deferred/Deauthor t 21									
LaBranche Central I Creation		Scheduled Da 30% Review 95% Review Contracting		16 2016 7	01-Sep-2018 al Sponsor does not l	01-Sep-2019 nave access to change	\$3,885,298 the information.	\$3,885,298	100.0	\$3,633,801 \$1,590,004
	Total Priority List	21	731				\$3,885,298	\$3,885,298	100.0	\$3,633,801 \$1,590,004
1 0 0	Project(s) Cost Sharing Agreements E Construction Started Construction Completed Project(s) Deferred/Deauth									

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)										
PROJECT	BASIN	PARISH	************************************								
Total			1,936				\$94,422,352	\$91,384,304	96.8	\$54,261,935 \$6,131,257	
0 Cons 0 Cons	ct(s) Sharing Agreemen truction Started truction Completed ct(s) Deferred/Dea	1									

Notes:

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W				PLANNING, P - Lead Agency: 1				CY (EPA)		04-May-2017 Page 109
				******	** SCHEDULES	****	******** E	STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: EPA, F	ISH & WII	LDLIFE SE	RVICE							
Priority List 22										
Bayou Dupont Sediment	BARA	PLAQ	118	23-Aug-2013 A	01-Feb-2016 *		\$18,119,679	\$17,638,184	97.3	\$15,735,074
Delivery-Marsh Creation 3	Status:	Phase 2 was	approved at th	ne May 14, 2015 Task	Force meeting based	d on a reduced scope	to fit available CWI	PPRA funding.		\$589,160
		Phase 2 gran	t was awarded	on December 7, 201	5.					
Tota	al Priority List	22	118				\$18,119,679	\$17,638,184	97.3	\$15,735,074 \$589,160
0 Constructio 0 Constructio	g Agreements E n Started n Completed Deferred/Deauth									
Priority List 22										
Terracing & Marsh Creation South of Big Mar	BARA	PLAQ	314	31-Oct-2013 A			\$2,308,599	\$2,308,599	100.0	\$1,384,270 \$1,141,029
Steamon bout of big Mu	Status	Phase II Fun	ding will be re	consted at the Decem	ber 2016 Technical (	Committee Meeting				ψ1,141,029

Status: Phase II Funding will be requested at the December 2016 Technical Committee Meeting.

CEMVN-PM-W		COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)								
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	22	314				\$2,308,599	\$2,308,599	100.0	\$1,384,270 \$1,141,029
0 Con 0 Con	ject(s) at Sharing Agreements E nstruction Started nstruction Completed ject(s) Deferred/Deauth									
Priority List	22									
Cameron Meadows Aarsh Creation	CA/SB	CAMER	326				\$38,499,572	\$37,503,664	97.4	\$2,972,073 \$2,076,101
	Status:									\$2,076,101
	Total Priority List	22	326				\$38,499,572	\$37,503,664	97.4	\$2,972,073 \$2,076,101
0 Con 0 Con	ject(s) at Sharing Agreements E astruction Started astruction Completed ject(s) Deferred/Deauth									
Priority List	22									
North Catfish Lake Mar Creation	rsh TERRE	LAFOU	401	11-Oct-2013 A		21-Jan-2018	\$3,216,194	\$3,216,194	100.0	\$2,589,666
acation	Status:	be delivered	to project team	Agnetometer surveys n in November 2014.	Geotechnical Invest	tigation permit is bei	ng sent to Corps of E	Engineers in Decem		\$375,450

2014. Current response time for permits is average of 6-9 months. Design is anticipated to begin in June 2015.

CEMVN-PM-W	Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)											
PROJECT	BASIN PARISI	I ACRES	******* CSA	**** SCHEDULES * Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures			
1 0 0	Total Priority List 22 Project(s) Cost Sharing Agreements Executed Construction Started Construction Completed Project(s) Deferred/Deauthorized	401				\$3,216,194	\$3,216,194	100.0	\$2,589,666 \$375,450			
3 0 0	Project(s) Cost Sharing Agreements Executed Construction Started Construction Completed Project(s) Deferred/Deauthorized	1,159				\$62,144,044	\$60,666,641	97.6	\$22,681,083 \$4,181,739			

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W       COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT       04         Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)       04												
PROJECT	BASIN	PARISH	ACRES	********** CSA	* SCHEDULES * Const Start	«******* Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures		
Lead Agency: EPA, FI	SH & WILI	OLIFE SEI	RVICE									
Priority List 23												
Caminada Headlands Back Barrier Marsh	BARA		165				\$3,354,935	\$3,354,935	100.0	\$3,019,442 \$577,645		
Creation	Status:											
Total	Priority List	23	165				\$3,354,935	\$3,354,935	100.0	\$3,019,442 \$577,645		
1 Project(s) 0 Cost Sharing	0	ecuted										
0 Construction 0 Construction												
0 Project(s) De	ferred/Deauthor	rized										
Priority List 23												
Bayou Grande Cheniere Marsh & Ridge	BARA		237	23-Jan-2015 A			\$2,742,302	\$2,742,302	100.0	\$165,176 \$35,265		
Restoration		Phase II Appr Meeting.	oval will be re	equested at the Deceml	ber 2016 Technical	Committee Meeting	& subsequent Janua	ry 2017 Task Force	e	<i>фээ</i> ,20 <i>5</i>		

CEMVN-PM-W										04-May-2017 Page 113
		DADIGU			** SCHEDULES			STIMATES ****		Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
	Total Priority List	23	237				\$2,742,302	\$2,742,302	100.0	\$165,176 \$35,265
0 Const 0 Const	ct(s) Sharing Agreements E ruction Started ruction Completed ct(s) Deferred/Deautho									
Priority List 2	3									
Island Road Marsh	TERRE		312	01-Jul-2014 *			\$3,721,447	\$3,721,447	100.0	\$3,377,428
Creation & Nourishment	Status:									\$306,360
	Total Priority List	23	312				\$3,721,447	\$3,721,447	100.0	\$3,377,428 \$306,360
0 Const 0 Const	ct(s) Sharing Agreements E ruction Started ruction Completed ct(s) Deferred/Deautho									
Priority List 2	3									
South Grand Chenier Marsh Creation – Baker	MERM	CAMER	393	30-Jun-2015 *	30-Nov-2017	30-Nov-2018	\$2,653,242	\$2,653,242	100.0	\$1,788,091 \$221,756
Tract	Status:	Project desig	n is on hold du	e to difficulty in obta	aining landrights.					φ221,730

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)											
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES * Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures		
0 0 0	Total Priority List Project(s) Cost Sharing Agreements Exe Construction Started Construction Completed Project(s) Deferred/Deauthori		393				\$2,653,242	\$2,653,242	100.0	\$1,788,091 \$221,756		
1 0 0	Project(s) Cost Sharing Agreements Construction Started Construction Completed Project(s) Deferred/Deauth		1,107				\$12,471,926	\$12,471,926	100.0	\$8,350,137 \$1,141,026		

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W				,		AND RESTOR NTAL PROTEC		CY (EPA)		04-Mav-2017 Page 115 Actual
				*******	** SCHEDULES	****	******* ES	TIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: EPA, I	FISH & WIL	LDLIFE SE	RVICE							
Priority List 24										
Shell Beach South Marsh	PONT	STBER	344	22-Jul-2015 A		30-Sep-2019	\$3,176,569	\$3,176,569	100.0	\$846,983
Creation	Status:	TF Approved	Phase 1 on 1/2	22/15.						\$57,975
		Grant awarde	ed to the CPRA	for Phase 1 on 7/22	/15.					
		MOA betwee	en EPA/USACI	E signed by Colonel	Hansen on 9/25/15.					
		Phase 1 Kick	off meeting he	ld at USACE offices	on 10/20/15.					
To	tal Priority List	24	344				\$3,176,569	\$3,176,569	100.0	\$846,983 \$57,975
0 Constructio 0 Constructio										
Priority List 24										
New Orleans Landbridge Shoreline & Marsh	PONT	ORL	167				\$1,942,143	\$1,942,143	100.0	\$156,912
Creation	Status:									\$11,165

CEMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT 04. Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)											
PROJECT	BASIN	PARISH	ACRES	******** CSA	**** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
	Total Priority List	24	167				\$1,942,143	\$1,942,143	100.0	\$156,912 \$11,165	
0 Constr 0 Constr	t(s) haring Agreements E uction Started uction Completed t(s) Deferred/Deauth										
Priority List 24	1										
No Name Bayou Marsh Creation & Nourishment	CA/SB Status:	CAMER Approved for	497 Phase I Enginee	ering and Design	in January 2015		\$2,724,524	\$2,724,524	100.0	\$2,454,070 \$163,383	
West Fourchon Marsh Creation & Marsh Nourishment	TERRE Status:	LAFOU	304				\$3,201,929	\$3,201,929	100.0	\$2,881,735 \$9,332	
2 Projec	Total Priority List	24	801				\$5,926,453	\$5,926,453	100.0	\$5,335,805 \$172,715	

0 Cost Sharing Agreements Executed

0 Construction Started

0 Construction Completed

CEMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)											
PROJECT	BASIN	***********************************									
Total			1,312				\$11,045,165	\$11,045,165	100.0	\$6,339,700 \$241,855	
0 Con 0 Con	ect(s) t Sharing Agreement struction Started struction Completed ect(s) Deferred/Dea	1									

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	Project Status Summary Report - Lead Agency: (EPA)										
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********* Const End	******* ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
Lead Agency: EPA, N	ATIONAL	MARINE	FISHERIE:	S SERVICE							
Priority List 25											
Caminada Headlands Back Barrier Marsh Creation II	BARA Status:	LAFOU	207				\$3,034,310	\$3,034,310	100.0	\$0 \$0	
Tota 1 Project(s) 0 Cost Sharin 0 Constructio 0 Constructio 0 Project(s) D	n Started n Completed	Executed	207				\$3,034,310	\$3,034,310	100.0	\$0 \$0	
Priority List 25											
East Leeville Marsh Creation and Nourishment	BARA Status:	LAFOU	322				\$4,026,090	\$4,026,090	100.0	\$0 \$0	
Frichie Marsh Creation and Terracing	PONT Status:	STTAM	290				\$3,033,294	\$3,033,294	100.0	\$0 \$0	
Oyster Lake Marsh Creation and Nourishment	CA/SB Status:	CAMER	438				\$3,608,939	\$3,608,939	100.0	\$0 \$0	

CEMVN-PM-W		COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)										
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	S ********* Const End	******** E Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures		
Shoreline Protection, Preservation, and Restoration Panel (DEMO)	COAST Status:	COAST					\$2,215,514	\$2,215,514	100.0	\$0 \$0		
	Total Priority List	25	1,050				\$12,883,837	\$12,883,837	100.0	\$0 \$0		
	struction Completed ect(s) Deferred/Deauth 25	orized										
Barataria Bay Rim Mars Creation		JEFF	251	25-Jul-2017 A	01-Nov-2019	01-Nov-2020	\$2,693,708	\$2,693,708	100.0	\$2,012,834 \$49		
	Total Priority List	25	251				\$2,693,708	\$2,693,708	100.0	\$2,012,834 \$49		
0 Con	ect(s) t Sharing Agreements E struction Started struction Completed	Executed										

CEMVN-PM-W	CEMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF AGRICULTURE (NRCS)										
PROJECT	BASIN	***********************************									
Total			1,508				\$18,611,855	\$18,611,855	100.0	\$2,012,834 \$49	
0 Const 0 Const	et(s) Sharing Agreement ruction Started ruction Completed et(s) Deferred/Dea	1									

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CEMVN-PM-W	COA				PROTECTION . ead Agency: DE					04-May-2017 Page 121 Actual
PROJECT	BASIN	PARISH	ACRES	******* CSA	*** SCHEDULES Const Start	********** Const End	******** ES Approved	TIMATES **** Funded	**** %	Obligations/ Expenditures
Lead Agency: NMFS	, FISH & W	'ILDLIFE S	SERVICE							
Priority List 26										
Bayou LaLoutre Ridge and Marsh Creation	PT/BR Status:	STBER	187				\$3,236,952	\$3,236,952	100.0	\$0 \$0
Salvinia Weevil Propagation Facility	COAST Status:	COAST	26				\$3,802,748	\$934,567	24.6	\$0 \$0
St. Catherine Island Marsh Creation & Shoreline Protection	PONT Status:	STTAM	214				\$2,389,308	\$2,389,308	100.0	\$0 \$0
То	tal Priority List	26	427				\$9,429,008	\$6,560,827	69.6	\$0 \$0
0 Constructi 0 Constructi										
Priority List 26										
Bayou DeCade Ridge and Marsh Creation	TERRE Status:	TERRE	378				\$3,282,292	\$3,282,292	100.0	\$0 \$0

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)									04-May-2017 Page 122
PROJECT	BASIN PARISH		ACRES	************ SCHEDULES ************************************			******* ESTIMATES ******* Approved Funded %			Actual Obligations/ Expenditures
	Total Priority List	26	378				\$3,282,292	\$3,282,292	100.0	\$0 \$0
0 0 0	<ol> <li>Project(s)</li> <li>Cost Sharing Agreements Executed</li> <li>Construction Started</li> <li>Construction Completed</li> <li>Project(s) Deferred/Deauthorized</li> </ol>									
Total			805				\$12,711,300	\$9,843,119	77.4	\$0 \$0
0 0 0	Project(s) Cost Sharing Agreement Construction Started Construction Completed Project(s) Deferred/Dear									

1. Expenditures based on Corps of Engineers financial data.

2. Date codes: A = Actual date \* = Behind schedule

CELMN-PM-W

## COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Total All Priority Lists

PROJECT		ACRES	******** EST Baseline	IMATES ***** Current	*** %	Obligations	Expenditures
SUMMARY	Total All Projects	115,669	\$1,835,893,802	\$1,718,884,286	5 93.6	\$1,286,329,728	\$1,088,317,144
214 Pr	oject(s)						
174 Co	ost Sharing Agreements Executed			7	Fotal Availa	ble Funds	
17 Co	onstruction Started			Federal	l Funds	\$1,403,263,124	
106 Co	onstruction Completed			Non/Fe	deral Funds	\$252,341,229	
60 Pr	oject(s) Deauthorized/Transfer/In	active		Total F	Funds	\$1,655,604,353	

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Atchafala	ya									
Priority List:	2	2	3,792	2	2	2	0	\$9,458,771	\$9,458,771	\$8,843,039
Priority List:	9	1		1	0	0	1	\$1,717,883	\$1,717,883	\$1,717,883
Basin Tot	al	3	3,792	3	2	2	1	\$11,176,653	\$11,176,653	\$10,560,921

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

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#### 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: Barataria										
Priority List:	1	3	620	3	3	3	0	\$14,124,565	\$14,011,378	\$11,643,780
Priority List:	2	1	510	1	1	1	0	\$28,896,380	\$28,896,380	\$22,677,903
Priority List:	3	3	0	3	1	1	2	\$8,193,261	\$7,092,040	\$3,991,376
Priority List:	4	2	232	2	1	1	1	\$3,740,239	\$3,738,748	\$3,185,149
Priority List:	5	2	633	2	1	1	1	\$2,767,867	\$2,737,063	\$2,449,324
Priority List:	6	1	217	1	1	1	0	\$5,224,477	\$5,224,477	\$4,774,945
Priority List:	7	2	1,431	2	2	2	0	\$28,198,689	\$28,198,689	\$26,768,501
Priority List:	9	3	599	3	1	0	1	\$48,693,594	\$39,702,696	\$12,781,407
Priority List:	10	2	8,891	1	0	0	0	\$10,430,029	\$7,763,773	\$4,010,587
Priority List:	11	5	2,171	5	5	5	0	\$175,393,415	\$162,769,280	\$151,022,386
Priority List:	12	1	326	1	1	1	0	\$27,702,941	\$27,178,387	\$23,113,288
Priority List:	14	2	106	2	1	1	1	\$24,574,599	\$22,788,149	\$19,881,173
Priority List:	15	1	447	1	1	1	0	\$38,541,252	\$38,089,316	\$23,403,609
Priority List:	17	2	186	2	0	0	1	\$40,605,932	\$39,843,613	\$34,534,921
Priority List:	18	1	370	0	1	1	0	\$42,579,616	\$42,138,670	\$31,978,871
Priority List:	19	1		1	0	0	1	\$1,042,540	\$1,042,540	\$1,042,540
Priority List:	21	1	432	1	0	0	0	\$33,664,671	\$32,607,095	\$905,444
Priority List:	22	2	432	2	0	0	0	\$20,428,278	\$19,946,783	\$1,730,189
Priority List:	23	2	402	1	0	0	0	\$6,097,237	\$6,097,237	\$612,911
Priority List:	25	3	780	1	0	0	0	\$9,754,108	\$9,754,108	\$49
Basin To	otal	40	18,785	35	20	19	8	\$570,653,689	\$539,620,421	\$380,508,351

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

Project Status	Summary	Report by	Basin
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		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	\$4,536,000	\$4,536,000	\$3,975,900
Priority List:	3	1		1	0	0	1	\$32,862	\$32,862	\$32,862
Priority List:	4	1		0	0	0	1	\$65,747	\$65,747	\$65,747
Priority List:	8	1		0	0	0	1	\$56,476	\$56,476	\$56,476
Priority List:	10	2	267	1	1	1	1	\$3,918,368	\$3,478,720	\$2,960,811
Priority List:	14	1		1	0	0	1	\$1,020,420	\$1,020,420	\$1,020,420
Priority List:	15	1	620	0	0	0	0	\$9,510	\$9,510	\$9,510
Priority List:	17	2	409	2	0	0	1	\$33,165,765	\$32,798,408	\$21,320,791
Priority List:	18	1		1	0	0	1	\$554,376	\$554,376	\$554,376
Basin To	otal	11	2,098	7	2	2	7	\$43,359,524	\$42,552,519	\$29,996,893

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

Project Status	Summary	Report by Basin	
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		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Calcasie	u/Sabir	ne								
Priority List:	1	3	6,407	3	3	3	0	\$3,988,112	\$3,043,576	\$2,703,237
Priority List:	2	4	2,737	4	3	3	1	\$11,988,273	\$11,988,273	\$10,381,655
Priority List:	3	2	3,555	2	2	2	0	\$18,073,408	\$11,049,731	\$8,071,199
Priority List:	4	3	1,203	3	2	2	1	\$2,869,451	\$2,869,451	\$2,464,918
Priority List:	5	1	247	1	1	1	0	\$3,929,152	\$3,929,152	\$3,435,411
Priority List:	6	1	3,594	1	1	1	0	\$12,698,222	\$12,423,864	\$6,021,642
Priority List:	8	4	993	4	3	3	0	\$31,595,527	\$30,964,992	\$23,127,295
Priority List:	9	2	623	2	2	2	0	\$19,103,768	\$18,339,593	\$16,535,958
Priority List:	10	1	225	1	1	1	0	\$6,049,990	\$4,944,870	\$4,715,159
Priority List:	11.1	1	330	1	1	1	0	\$14,130,233	\$14,130,233	\$13,994,787
Priority List:	18	1	242	1	1	0	0	\$2,761,501	\$2,604,603	\$1,825,899
Priority List:	20	2	750	2	0	0	0	\$31,068,297	\$30,482,911	\$2,118,661
Priority List:	21	1	433	1	0	0	0	\$31,236,742	\$30,722,420	\$1,852,343
Priority List:	22	1	326	0	0	0	0	\$38,499,572	\$37,503,664	\$2,076,101
Priority List:	24	1	497	0	0	0	0	\$2,724,524	\$2,724,524	\$163,383
Priority List:	25	1	438	0	0	0	0	\$3,608,939	\$3,608,939	\$0
Basin Te	otal	29	22,600	26	20	19	2	\$234,325,710	\$221,330,795	\$99,487,651

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

Project Status	Summary	Report by	' Basin
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		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Coastal I	Basins									
Priority List:	Cons Plan	ı 1		1	1	1	0	\$191,807	\$191,807	\$143,855
Priority List:	0.1	1		1	1	0	0	\$114,607,082	\$114,607,082	\$65,794,766
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	\$1,243,694	\$1,243,694	\$226,656
Priority List:	6	1	0	1	1	1	0	\$806,220	\$806,220	\$806,220
Priority List:	9	1		0	0	0	1	\$83,556	\$83,556	\$83,556
Priority List:	10	1	0	1	1	1	0	\$2,747,094	\$2,747,094	\$2,607,770
Priority List:	11	1	14,963	1	1	1	0	\$68,040,614	\$39,075,082	\$24,847,546
Priority List:	12	1	0	1	1	1	0	\$1,068,602	\$1,068,602	\$1,068,602
Priority List:	13	1	0	1	1	1	0	\$707,839	\$707,839	\$707,839
Priority List:	16	1	0	1	1	1	0	\$618,979	\$618,979	\$618,979
Priority List:	17	1	0	1	1	1	0	\$970,726	\$970,726	\$883,702
Priority List:	18	1	0	1	0	0	0	\$6,472,800	\$6,472,800	\$4,380,291
Priority List:	20	1	779	1	1	0	0	\$12,689,725	\$10,816,073	\$2,992,420
Priority List:	25	1		0	0	0	0	\$2,215,514	\$2,215,514	\$0
Priority List:	26	1	26	0	0	0	0	\$3,802,748	\$934,567	\$0
Basin T	otal	17	15,768	14	12	8	1	\$218,336,586	\$184,629,221	\$106,254,963

## COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status	Summary	Report by	Basin
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		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
asin: Miss. Riv	ver Del	ta								
Priority List:	1	1	9,831	1	1	1	0	\$50,863,503	\$50,863,503	\$44,031,348
Priority List:	3	2	936	1	1	1	1	\$1,004,105	\$1,004,105	\$879,098
Priority List:	4	1		1	0	0	1	\$58,310	\$58,310	\$58,310
Priority List:	6	2	2,386	2	2	2	0	\$6,632,965	\$6,632,965	\$5,006,325
Priority List:	10	1		0	0	0	1	\$978,100	\$978,100	\$978,100
Priority List:	12	1		0	0	0	1	\$354,791	\$354,791	\$354,791
Priority List:	13	1		0	0	0	1	\$310,152	\$310,152	\$310,152
Priority List:	15	1	318	1	0	0	0	\$634,027	\$634,027	\$634,027
Basin To	tal	10	13,471	6	4	4	5	\$60,835,953	\$60,835,953	\$52,252,151

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

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### 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: Merment	au									
Priority List:	1	2	247	2	2	1	1	\$1,319,270	\$1,319,270	\$1,153,804
Priority List:	2	1	1,593	1	1	1	0	\$6,059,651	\$6,047,554	\$3,506,642
Priority List:	3	1		1	1	0	1	\$103,468	\$103,468	\$103,468
Priority List:	5	1	511	1	1	1	0	\$8,913,366	\$5,533,088	\$2,633,621
Priority List:	7	1	442	1	1	1	0	\$2,390,984	\$2,390,984	\$2,333,561
Priority List:	8	1	378	1	1	1	0	\$1,574,926	\$1,574,926	\$1,177,231
Priority List:	9	2	296	2	1	1	1	\$7,646,218	\$6,608,683	\$6,375,892
Priority List:	10	2	469	2	1	1	0	\$42,914,856	\$38,151,942	\$5,625,576
Priority List:	11	2	459	2	1	0	0	\$32,678,962	\$29,357,990	\$3,173,742
Priority List:	12	1	844	1	1	1	0	\$14,466,981	\$10,563,558	\$10,475,399
Priority List:	15	1		1	0	0	1	\$779,422	\$779,422	\$779,422
Priority List:	16	1	888	0	0	0	0	\$10,657	\$10,657	\$10,657
Priority List:	17	1	0	0	1	1	0	\$2,244,785	\$2,244,785	\$2,061,275
Priority List:	19	1	279	1	0	0	0	\$2,425,997	\$2,425,997	\$1,298,081
Priority List:	23	1	393	0	0	0	0	\$2,653,242	\$2,653,242	\$221,756
Basin To	otal	19	6,799	16	12	9	4	\$126,182,786	\$109,765,567	\$40,930,127

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

Project Status	Summary	Report by	Basin
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		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditure To Date
in: Pontchart	rain									
Priority List:	1	2	1,753	2	2	2	0	\$5,398,108	\$5,398,108	\$5,137,82
Priority List:	2	2	2,320	2	2	2	0	\$3,894,225	\$3,894,225	\$3,304,38
Priority List:	3	3	755	3	1	1	2	\$967,201	\$967,201	\$967,20
Priority List:	4	1		0	0	0	1	\$39,025	\$39,025	\$39,02
Priority List:	5	1	75	1	1	1	0	\$2,589,403	\$2,589,403	\$2,317,68
Priority List:	8	2	134	2	1	1	1	\$2,493,439	\$2,493,439	\$2,161,54
Priority List:	9	3	220	2	1	1	2	\$1,230,695	\$1,230,695	\$1,230,69
Priority List:	10	1	165	1	1	1	0	\$27,520,808	\$27,265,513	\$20,346,82
Priority List:	11	1	5,438	1	0	0	0	\$6,554,124	\$6,554,124	\$6,554,12
Priority List:	12	1		0	0	0	1	\$1,089,193	\$1,089,193	\$1,089,19
Priority List:	13	1	436	1	1	1	0	\$14,558,123	\$14,410,203	\$13,999,87
Priority List:	16	1	181	1	0	0	0	\$1,364,230	\$1,364,230	\$1,364,23
Priority List:	19	1	715	1	0	0	0	\$2,571,273	\$2,571,273	\$2,234,06
Priority List:	20	1	478	1	1	0	0	\$28,253,969	\$27,648,895	\$1,555,90
Priority List:	21	1	731	1	0	0	0	\$3,885,298	\$3,885,298	\$1,590,00
Priority List:	24	2	511	1	0	0	0	\$5,118,712	\$5,118,712	\$69,14
Priority List:	25	1	290	0	0	0	0	\$3,033,294	\$3,033,294	9
Priority List:	26	1	214	0	0	0	0	\$2,389,308	\$2,389,308	\$
Basin To	tal	26	14,416	20	11	10	7	\$112,950,429	\$111,942,140	\$63,961,72
in: Lake Pon	t. & B	reton								
Priority List:	26	1	187	0	0	0	0	\$3,236,952	\$3,236,952	:
Basin To	tal	1	187	0	0	0	0	\$3,236,952	\$3,236,952	

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

Project Status Sum	mary Report by Basin
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		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditures To Date
Basin: Teche / V	/ermili	on								
Priority List:	1	1	65	1	1	1	0	\$2,047,479	\$2,047,479	\$2,013,210
Priority List:	2	1	378	1	1	1	0	\$897,109	\$897,109	\$897,109
Priority List:	3	1	2,223	1	1	1	0	\$10,093,909	\$10,036,640	\$8,381,594
Priority List:	5	1	441	1	1	1	0	\$886,030	\$886,030	\$751,392
Priority List:	6	4	2,567	4	4	4	0	\$10,347,331	\$10,347,331	\$8,967,818
Priority List:	8	1	24	1	1	1	0	\$1,181,129	\$1,181,129	\$1,112,057
Priority List:	9	3	686	1	1	1	0	\$5,428,731	\$3,811,152	\$3,731,408
Priority List:	13	1		1	0	0	1	\$1,855,824	\$1,855,824	\$1,855,824
Priority List:	14	1	169	1	1	1	0	\$17,765,813	\$17,291,809	\$15,489,968
Priority List:	21	1	340	0	0	0	0	\$25,635,641	\$24,169,491	\$1,783,466
Basin To	otal	15	6,893	12	11	11	1	\$76,138,995	\$72,523,993	\$44,983,845

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

Project Status	Summary	Report by	/ Basin
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		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Baseline Estimate	Current Estimate	Expenditure To Date
asin: Terrebor	nne									
Priority List:	1	5	9	4	3	3	2	\$9,376,759	\$9,376,759	\$9,278,76
Priority List:	2	3	958	3	3	3	0	\$23,115,874	\$23,115,874	\$20,707,14
Priority List:	3	4	3,958	4	4	4	0	\$25,106,295	\$24,859,377	\$23,174,99
Priority List:	4	2	215	2	1	1	1	\$7,715,925	\$7,715,925	\$7,663,84
Priority List:	5	3	0	3	1	1	2	\$4,703,403	\$4,703,403	\$4,703,40
Priority List:	5.1	1		1	0	0	1	\$7,452,191	\$7,452,191	\$7,452,19
Priority List:	6	4	941	2	1	1	2	\$43,465,900	\$37,747,287	\$16,811,04
Priority List:	7	1	0	1	1	1	0	\$538,101	\$538,101	\$538,10
Priority List:	9	4	577	4	4	4	0	\$32,645,346	\$30,989,472	\$30,415,73
Priority List:	10	2	668	2	2	1	0	\$49,757,119	\$46,455,705	\$43,685,9
Priority List:	11	3	543	3	2	1	0	\$44,912,175	\$42,504,843	\$35,899,00
Priority List:	12	1		0	0	0	1	\$1,736,137	\$1,736,137	\$1,736,13
Priority List:	13	1	272	1	1	1	0	\$30,414,086	\$30,164,311	\$25,844,78
Priority List:	16	2	639	2	1	1	0	\$43,981,456	\$43,729,404	\$27,455,0
Priority List:	18	1	233	1	0	0	0	\$2,326,289	\$2,326,289	\$1,255,2
Priority List:	19	1	452	1	0	0	0	\$35,125,857	\$31,531,382	\$1,289,09
Priority List:	20	1		0	0	0	1	\$2,901,750	\$2,901,750	\$778,8
Priority List:	22	1	401	1	0	0	0	\$3,216,194	\$3,216,194	\$375,4
Priority List:	23	1	312	0	0	0	0	\$3,721,447	\$3,721,447	\$306,3
Priority List:	24	1	304	0	0	0	0	\$3,201,929	\$3,201,929	\$9,33
Priority List:	26	1	378	0	0	0	0	\$3,282,292	\$3,282,292	:
Basin Te	otal	43	10,860	35	24	22	10	\$378,696,525	\$361,270,072	\$259,380,5
tal All Basins		214	115,669	174	118	1E ⊥0	46	\$1,835,893,802	\$1,718,884,286	\$1,088,317,14

CWPPRA	Priority	List	Estimates	

			Туре	Total	Engineering	Real Estate	Construction	Monitoring	O & M	Contingency
Priority List	0	Total	Approved Amt	191,807.00	191,807.00	0.00	0.00	0.00	0.00	0.00
			Funded Amt	191,807.00	191,807.00	0.00	0.00	0.00	0.00	0.00
Priority List	0.1	Total	Approved Amt	114,607,082.00	0.00	0.00	0.00	114,607,082.00	0.00	0.00
			Funded Amt	114,607,082.00	0.00	0.00	0.00	114,607,082.00	0.00	0.00
Priority List	0.2	Total	Approved Amt	1,500,000.00	0.00	0.00	0.00	1,500,000.00	0.00	0.00
			Funded Amt	1,500,000.00	0.00	0.00	0.00	1,500,000.00	0.00	0.00
Priority List	0.3	Total	Approved Amt	569,585.92	0.00	0.00	0.00	0.00	569,585.92	0.00
			Funded Amt	569,585.92	0.00	0.00	0.00	0.00	569,585.92	0.00
Priority List	0.4	Total	Approved Amt	1,243,694.00	1,243,694.00	0.00	0.00	0.00	0.00	0.00
			Funded Amt	1,243,694.00	1,243,694.00	0.00	0.00	0.00	0.00	0.00
Priority List	1	Total	Approved Amt	87,117,795.81	3,964,516.66	1,224,777.18	25,916,415.97	4,636,008.31	51,376,077.69	0.00
			Funded Amt	86,060,072.81	3,964,516.66	1,224,777.18	25,916,415.97	4,636,008.31	50,318,354.69	0.00
Priority List	2	Total	Approved Amt	88,846,282.65	6,085,079.25	680,028.71	53,018,618.04	7,774,731.10	21,287,825.55	0.00
			Funded Amt	88,834,185.65	6,082,897.89	680,028.71	53,020,799.40	7,803,106.10	21,247,353.55	0.00
Priority List	3	Total	Approved Amt	63,574,510.54	4,577,636.92	252,556.37	27,334,974.35	6,826,684.90	24,582,658.00	0.00
			Funded Amt	55,145,425.54	4,577,636.92	252,556.37	26,889,929.35	5,381,629.90	18,043,673.00	0.00
Priority List	4	Total	Approved Amt	14,488,697.23	1,874,591.96	224,438.57	10,233,178.28	626,747.95	1,529,740.47	0.00
			Funded Amt	14,487,206.23	1,874,591.96	224,438.57	10,233,178.28	626,747.95	1,528,249.47	0.00

Task Force - (12) Report: Estimates - Grand Total by P/L

**CWPPRA Priority List Estimates** 

04-May-2017

			Туре	Total	Engineering	Real Estate	Construction	Monitoring	O & M	Contingency
Priority List	5	Total	Approved Amt	23,789,219.56	4,637,807.60	162,120.25	8,916,757.54	1,715,555.79	8,356,978.38	0.00
			Funded Amt	20,378,137.56	4,637,807.60	162,120.25	8,916,757.54	1,684,751.79	4,976,700.38	0.00
Priority List	5.1	Total	Approved Amt	7,452,190.98	7,355,189.24	40,595.10	0.00	56,406.64	0.00	0.00
			Funded Amt	7,452,190.98	7,355,189.24	40,595.10	0.00	56,406.64	0.00	0.00
Priority List	6	Total	Approved Amt	79,175,114.64	7,409,228.28	891,137.60	41,509,244.93	5,553,800.83	20,816,729.00	2,994,974.00
			Funded Amt	73,182,143.64	7,409,228.28	891,137.60	41,509,244.93	4,727,944.83	15,649,614.00	2,994,974.00
Priority List	7	Total	Approved Amt	31,127,774.02	1,782,965.66	87,162.93	26,678,166.92	851,337.21	1,728,141.30	0.00
			Funded Amt	31,127,774.02	1,782,965.66	87,162.93	26,678,166.92	851,337.21	1,728,141.30	0.00
Priority List	8	Total	Approved Amt	36,901,498.07	2,458,869.18	913,528.98	25,649,206.81	2,201,090.85	4,432,923.25	1,245,879.00
			Funded Amt	36,270,962.37	2,458,869.48	913,528.98	25,649,206.81	1,729,464.85	4,274,013.25	1,245,879.00
Priority List	9	Total	Approved Amt	116,549,790.42	14,826,389.30	651,074.50	73,148,555.36	2,498,890.55	25,424,880.71	0.00
			Funded Amt	102,483,729.71	15,297,248.30	651,074.50	72,683,081.36	1,528,917.55	12,323,408.00	0.00
Priority List	10	Total	Approved Amt	144,316,363.13	16,865,178.49	868,278.54	96,081,290.28	3,802,086.82	21,192,718.00	5,506,811.00
			Funded Amt	131,785,716.13	16,865,178.49	868,278.54	97,538,613.28	1,581,368.82	10,882,788.00	4,049,489.00
Priority List	11	Total	Approved Amt	327,579,291.02	25,169,315.95	3,003,687.99	192,391,605.35	6,141,089.73	97,247,573.00	3,626,019.00
			Funded Amt	280,261,320.02	25,169,315.95	3,003,687.99	192,391,605.35	3,541,496.73	52,529,195.00	3,626,019.00
Priority List	11.1	Total	Approved Amt	14,130,232.86	531,498.25	13,142.53	12,964,592.08	281,000.00	340,000.00	0.00
			Funded Amt	14,130,232.86	531,498.25	13,142.53	12,964,592.08	281,000.00	340,000.00	0.00

Task Force - (12) Report: Estimates - Grand Total by P/L

**CWPPRA Priority List Estimates** 

04-May-2017

			Туре	Total	Engineering	Real Estate	Construction	Monitoring	O & M	Contingency
Priority List	12	Total	Approved Amt	46,418,643.49	5,971,677.67	314,398.23	29,791,525.59	869,866.03	4,590,963.97	4,880,212.00
			Funded Amt	41,990,666.49	5,971,677.67	314,398.23	29,791,525.59	836,122.03	196,730.97	4,880,212.00
Priority List	13	Total	Approved Amt	47,846,024.61	6,082,859.83	220,861.64	37,055,204.18	481,001.96	925,124.00	3,080,973.00
			Funded Amt	47,448,329.61	6,082,859.83	220,861.64	40,136,177.18	332,888.96	675,542.00	0.00
Priority List	14	Total	Approved Amt	43,360,831.33	7,080,766.40	116,545.28	26,599,343.65	369,974.00	6,329,034.00	2,865,168.00
			Funded Amt	41,100,377.33	7,080,766.40	116,545.28	29,464,511.65	120,111.00	4,318,443.00	0.00
Priority List	15	Total	Approved Amt	39,964,210.11	2,716,706.26	92,160.85	31,770,208.00	501,094.00	187,994.00	4,696,047.00
			Funded Amt	39,512,274.11	2,716,706.26	92,160.85	31,770,208.00	213,606.00	23,546.00	4,696,047.00
Priority List	16	Total	Approved Amt	45,975,322.23	6,787,786.93	127,174.79	29,058,957.88	134,541.00	2,798,525.63	7,068,336.00
			Funded Amt	45,723,270.20	6,787,786.93	127,174.79	29,058,957.88	97,407.00	2,583,607.63	7,068,335.97
Priority List	17	Total	Approved Amt	76,987,208.12	8,151,909.10	474,652.91	62,392,178.11	1,094,077.00	1,210,198.00	3,664,193.00
			Funded Amt	75,857,532.12	8,151,909.10	474,652.91	66,056,371.11	509,813.00	664,786.00	0.00
Priority List	18	Total	Approved Amt	54,694,582.23	8,671,286.15	1,960,984.13	36,610,533.49	1,075,023.29	1,748,347.00	4,628,408.17
			Funded Amt	54,096,738.23	8,671,286.15	1,960,984.13	36,610,533.49	813,337.29	1,412,189.00	4,628,408.17
Priority List	19	Total	Approved Amt	41,165,667.43	8,396,465.32	365,463.11	28,414,381.00	783,478.00	3,205,880.00	0.00
			Funded Amt	37,571,192.43	8,396,465.32	365,463.11	28,414,381.00	195,993.00	198,890.00	0.00
Priority List	20	Total	Approved Amt	74,913,741.00	9,905,954.00	498,032.00	41,660,096.00	1,944,782.00	11,444,926.00	9,459,951.00
			Funded Amt	71,849,629.00	9,905,953.00	498,032.00	41,660,096.00	900,065.00	9,425,532.00	9,459,951.00

Task Force - (12) Report: Estimates - Grand Total by P/L

**CWPPRA Priority List Estimates** 

04-May-2017

			Туре	Total	Engineering	Real Estate	e Construction	Monitoring	0 & M	Contingency
Priority List	21	Total	Approved Amt	94,422,352.0	0 13,425,171.00	450,776.00	63,214,327.00	2,379,167.00	2,064,565.00	12,888,346.00
			Funded Amt	91,384,304.0	0 13,425,171.00	450,776.00	63,214,327.00	830,218.00	575,466.00	12,888,346.00
Priority List	22	Total	Approved Amt	62,144,044.0	0 12,957,073.00	2,649,893.00	38,139,254.00	1,123,218.00	2,306,687.00	4,967,919.00
			Funded Amt	60,666,641.0	0 12,957,073.00	2,649,893.00	38,139,254.00	183,334.00	1,769,168.00	4,967,919.00
Priority List	23	Total	Approved Amt	12,471,926.0	0 11,159,746.00	1,312,180.00	0.00	0.00	0.00	0.00
			Funded Amt	12,471,926.0	0 11,159,746.00	1,312,180.00	0.00	0.00	0.00	0.00
Priority List	24	Total	Approved Amt	11,045,165.0	0 10,257,022.00	788,143.00	0.00	0.00	0.00	0.00
			Funded Amt	11,045,165.0	0 10,257,022.00	788,143.00	0.00	0.00	0.00	0.00
Priority List	25	Total	Approved Amt	18,611,855.0	0 15,399,337.00	1,510,468.00	936,542.00	172,140.00	373,545.00	219,823.00
			Funded Amt	18,611,855.0	0 15,399,337.00	1,510,468.00	936,542.00	172,140.00	373,545.00	219,823.00
Priority List	26	Total	Approved Amt	12,711,300.0	0 8,586,644.00	582,946.00	142,583.00	912,430.00	2,451,051.00	35,646.00
			Funded Amt	9,843,119.0	0 8,586,644.00	582,946.00	142,583.00	216,836.00	278,464.00	35,646.00
Grand T	otal	App	proved Amt 1,83	35,893,802.40	234,524,172.40	20,477,208.19	1,019,627,739.81	170,913,304.96	318,522,671.87	71,828,705.17
		Fun	ided Amt 1,7	18,884,285.96	234,992,849.34	20,477,208.19	1,029,787,059.17	155,959,133.96	216,906,986.16	60,761,049.14