

# 27th PRIORITY PROJECT LIST REPORT (APPENDICES)

**PREPARED BY:** 

LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION

TASK FORCE

September 2018

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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** 

# 27th Priority Project List Report

# Appendix B

Wetland Value Assessment Methodology and Community Models

# Appendix B

# Wetland Value Assessment Methodology and Community Models

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### WETLAND VALUE ASSESSMENT METHODOLOGY

### **Emergent Marsh Community Models**

### **INTRODUCTION**

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

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

### VARIABLE SELECTION

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

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

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

Reptiles and Amphibians bullfrog slider turtle American alligator <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<sub>1</sub> - 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<sub>1</sub> and established optimal habitat conditions at 100 percent marsh cover.

Variable V<sub>2</sub> - Percent of open water area covered by aquatic vegetation. Fresh and intermediate marshes often support diverse communities of floating-leaved and submerged aquatic plants that provide important food and cover to a wide variety of fish and wildlife species. A fresh/intermediate open water area with no aquatics is assumed to have low suitability (SI=0.1). Optimal conditions (SI=1.0) are assumed to occur when 100 percent of the open water is dominated by aquatic vegetation. Habitat suitability may be assumed to decrease with aquatic plant coverage approaching 100 percent due to the potential for mats of aquatic vegetation to hinder fish and wildlife utilization; to adversely affect water quality by reducing photosynthesis by phytoplankton and other plant forms due to shading; and contribute to oxygen depletion spurred by warm-season decay of large quantities of aquatic vegetation. The EnvWG recognized, however, that those effects were highly dependent on the dominant aquatic plant species, their growth forms, and their arrangement in the water column; thus, it is possible to have 100 percent cover of a variety of floating and submerged aquatic plants without the above-mentioned problems due to differences in plant growth form and stratification of plants through the water column. Because predictions of which species may dominate at any time in the future would be tenuous, at best, the EnvWG decided to simplify the graph and define optimal conditions at 100 percent aquatic cover.

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

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

<u>Variable 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<sub>1</sub>. Without such an allowance, areas of relatively healthy, solid marsh, or projects designed to create marsh, would be penalized with respect to interspersion. Numerous small marsh ponds (Interspersion Class 2) offer a high degree of interspersion, but are also usually indicative of the beginnings of marsh break-up and degradation, and are therefore assigned a more moderate SI of 0.6. Large open water areas (Interspersion Classes 3 and 4) offer lower interspersion values and usually indicate advanced stages of marsh loss, and are thus assigned SI's of 0.4 and 0.2, respectively. The lowest expression of interspersion, Class 5 (i.e., no emergent marsh at all within the project area), is assumed to be least desirable and is assigned an SI=0.1.

<u>Variable V4 - Percent of open water area # 1.5 feet deep in relation to marsh</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<sub>6</sub> is determined by calculating an "access value" based on the interaction between the percentage of the project area wetlands considered accessible by aquatic organisms during normal tidal fluctuations, and the type of man-made structures (if any) across identified points of ingress/egress (bayous, canals, etc.). Standardized procedures for calculating the Access Value have been established (Appendix B). It should be noted that access ratings for man-made structures were determined by consensus among EnvWG members and that scientific research has not been conducted to determine the actual access value for each of those structures. Optimal conditions are assumed to exist when all of the study area is accessible and the access points are entirely open and unobstructed.

A fresh marsh with no access is assigned an SI=0.3, reflecting the assumption that, while fresh marshes are important to some species of estuarine-dependent fishes and shellfish, such a marsh lacking access continues to provide benefits to a wide variety of other wildlife and fish species, and is not without habitat value. An intermediate marsh with no access is assigned an SI=0.2, reflecting that intermediate marshes are somewhat more important to estuarine-dependent organisms than fresh marshes. The general rationale and procedure behind the V<sub>6</sub> Suitability Index graph for the brackish marsh model is identical to that established for the fresh/intermediate model. However, brackish marshes are assumed to be more important as habitat for estuarine-dependent fish and shellfish than fresh/intermediate marshes. Therefore, a brackish marsh providing no access is assigned an SI of 0.1. The Suitability Index graph for aquatic organism access in the saline marsh model is the same as that in the brackish marsh model.

### HABITAT SUITABILITY INDEX FORMULAS

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

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

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

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

The EnvWG acknowledged that the scaling problem presented a flaw in the WVA methodology resulting in unrealistic HSI values for certain project areas and eventually resulting in inflated wetland benefits for those projects. During 1996 and 1997, Dr. Gary Shaffer assisted the EnvWG in developing potential solutions to the scaling problem. After several unsuccessful attempts to develop a single HSI formula for each marsh type which scaled the Suitability Index values for V<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  $V_1$  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  $\Box \leq 1.5$  feet deep, in relation to marsh surface.

### Water Quality:

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

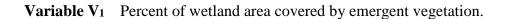
### **Aquatic Organism Access:**

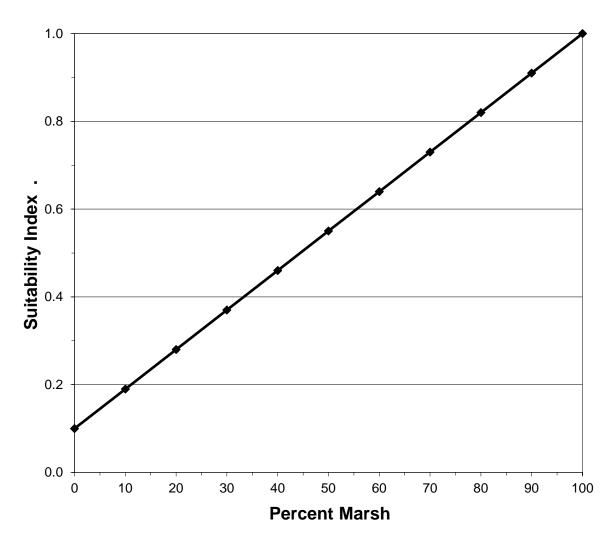
Variable V<sub>6</sub> Aquatic organism access.

### **HSI Calculations:**

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

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

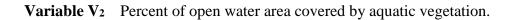


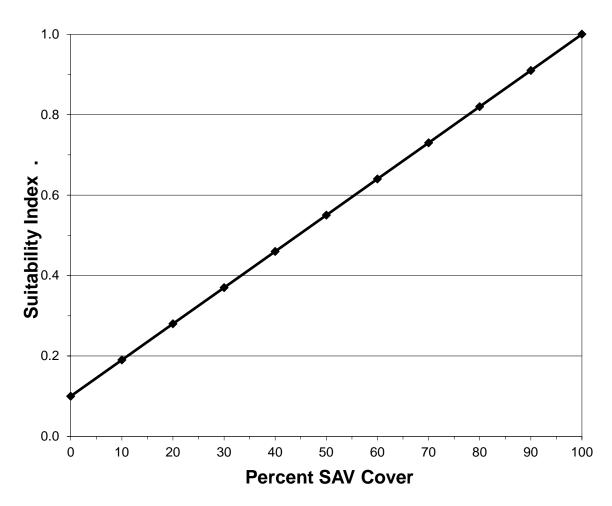


# Suitability Graph

Line Formula

SI = (0.009 \* %) + 0.1

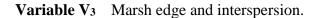


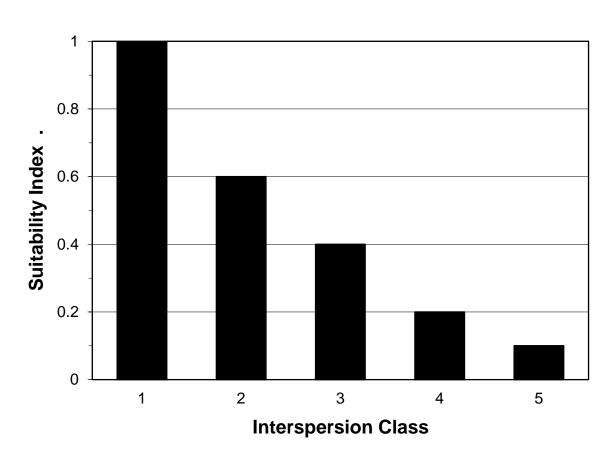


# **Suitability Graph**

Line Formula

SI = (0.009 \* %) + 0.1



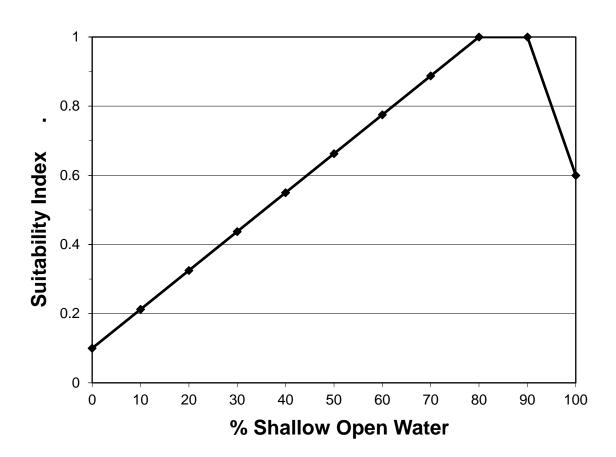


# **Suitability Graph**

## Instructions for Calculating the SI for Variable 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.





# **Suitability Graph**

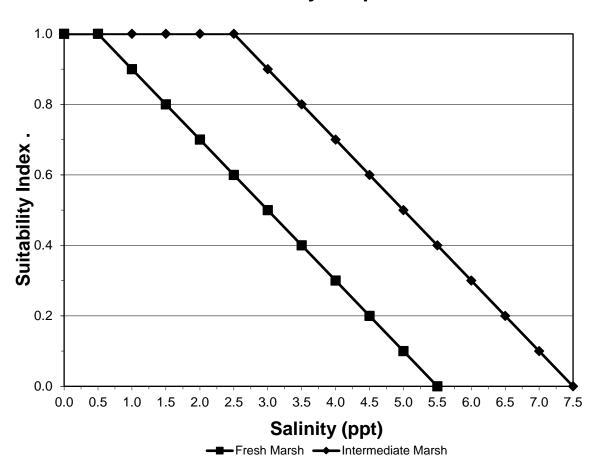
### **Line Formulas**

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

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

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

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



**Suitability Graph** 

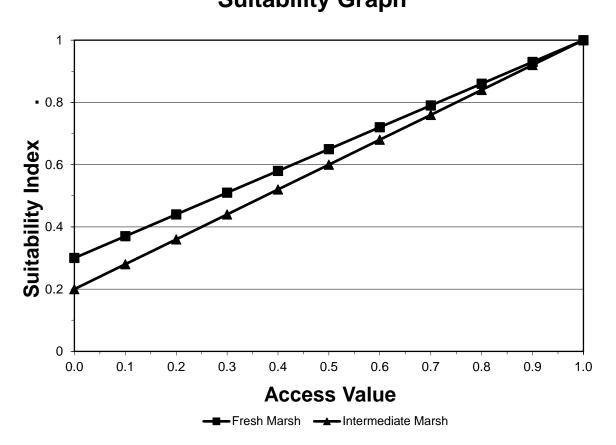
**Line Formulas** 

### Fresh Marsh:

If 0 < ppt <= 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



# Suitability Graph

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

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

Refer to Appendix B "Procedure For Calculating Access Value" for complete information on calculating the Access Value.

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

### Water Quality:

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

### **Aquatic Organism Access**

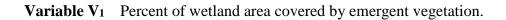
Variable V<sub>6</sub> Aquatic organism access.

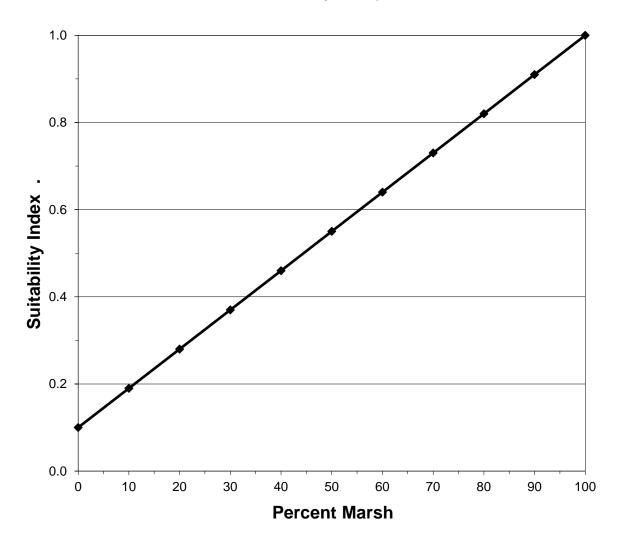
### **HSI Calculations:**

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

*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**





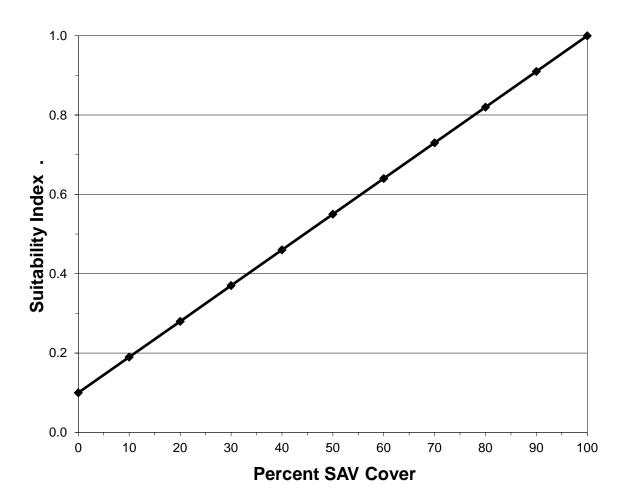
# Suitability Graph

# Line Formula

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

# **BRACKISH MARSH**

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

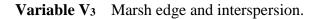


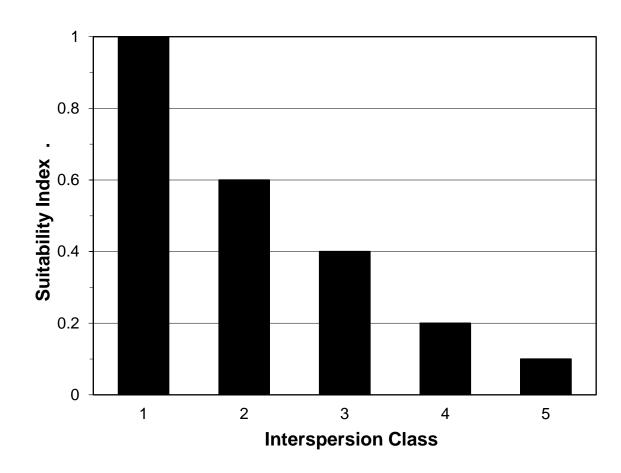
# **Suitability Graph**

Line Formula

SI = (0.009 \* %) + 0.1

#### **BRACKISH MARSH**





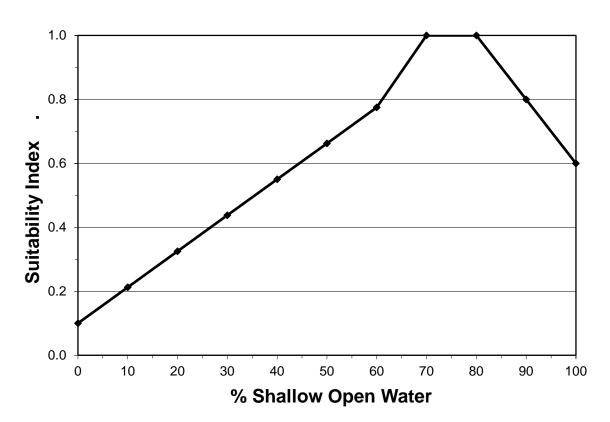
## **Suitability Graph**

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

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

## **BRACKISH MARSH**

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



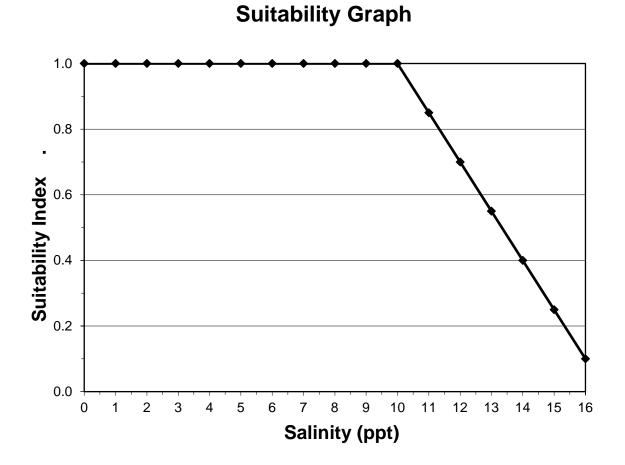
# **Suitability Graph**

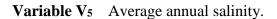
## **Line Formulas**

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



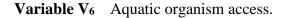


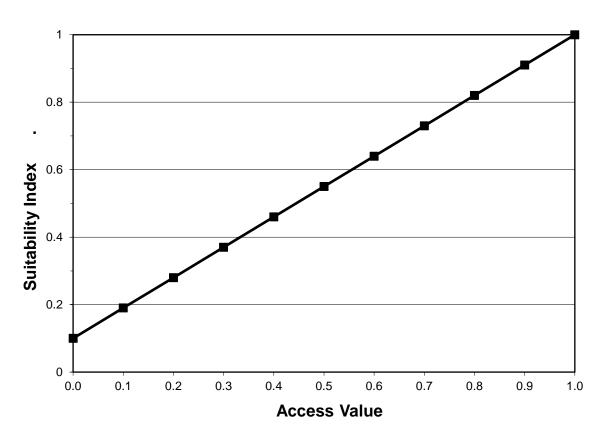
## Line Formulas

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  $V_1$  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  $\Box \le 1.5$  feet deep, in relation to marsh surface.

#### Water Quality:

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

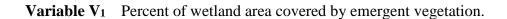
#### **Aquatic Organism Access:**

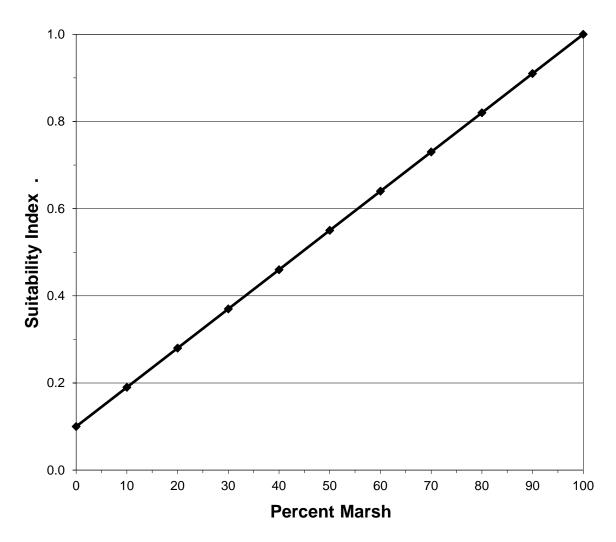
Variable V<sub>6</sub> Aquatic organism access.

#### **HSI Calculation:**

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

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

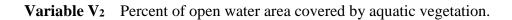


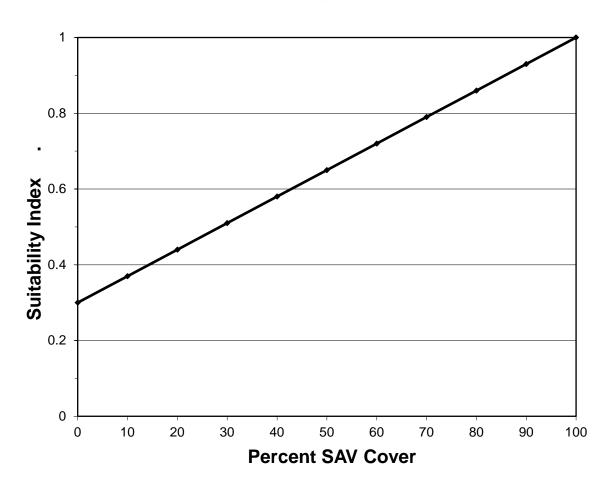


# Suitability Graph

#### Line Formula

SI = (0.009 \* %) + 0.1

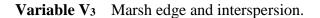


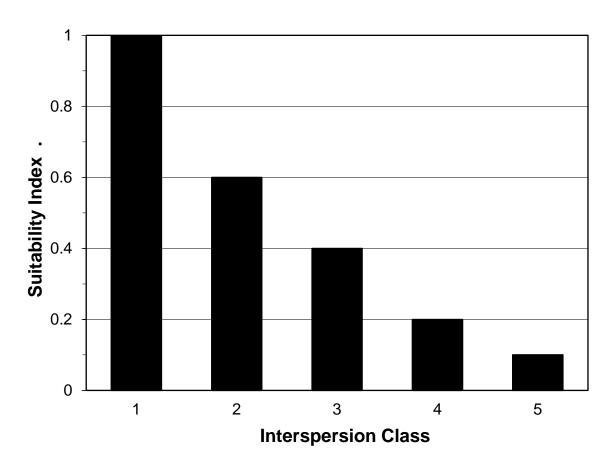


# **Suitability Graph**

## Line Formula

SI = (0.007 \* %) + 0.3



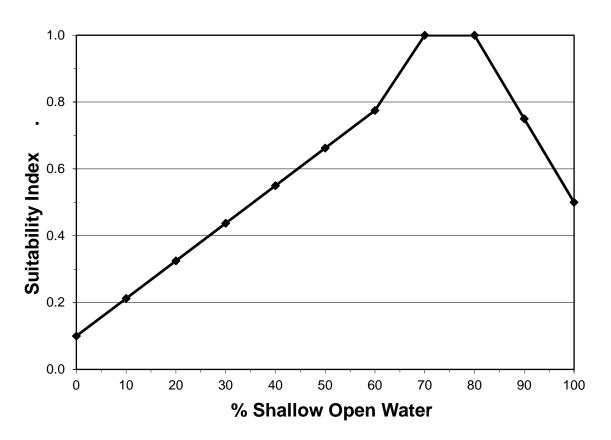


# **Suitability Graph**

#### 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.





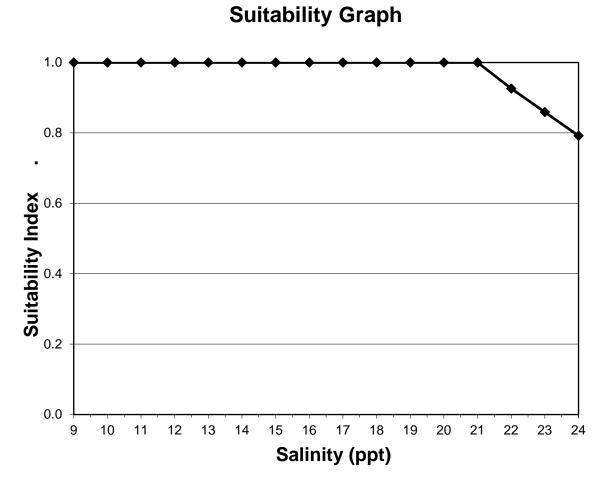
# **Suitability Graph**

## **Line Formulas**

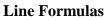
If  $0 \le \% < 70$ , then SI = (0.01286 \* %) + 0.1

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

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

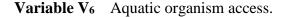


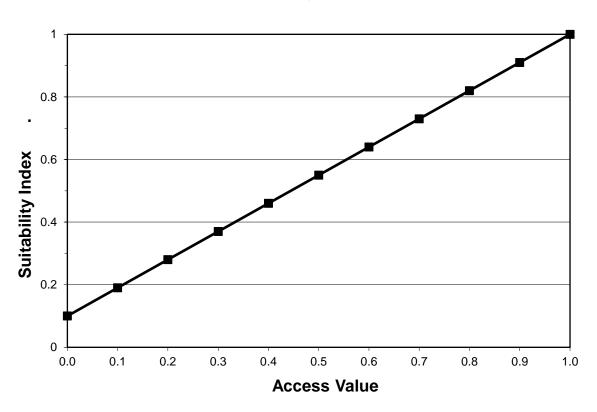
Variable V<sub>5</sub> Average annual salinity.



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

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





## **Suitability Graph**

#### Line Formula

SI = (0.9 \* Access Value) + 0.1

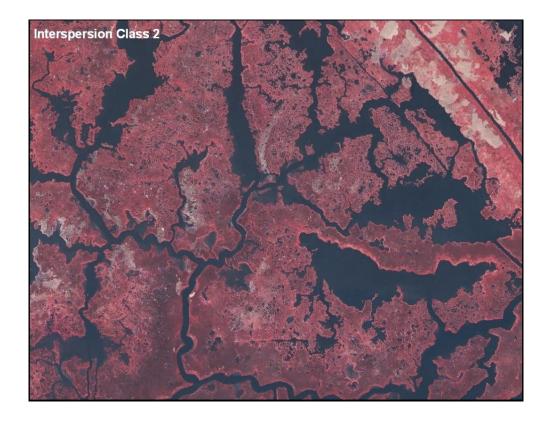
<u>Note</u>: Access Value = P \* R, where "P" = percentage of wetland area considered accessible by estuarine organisms during normal tidal fluctuations, and "R" = Structure Rating.

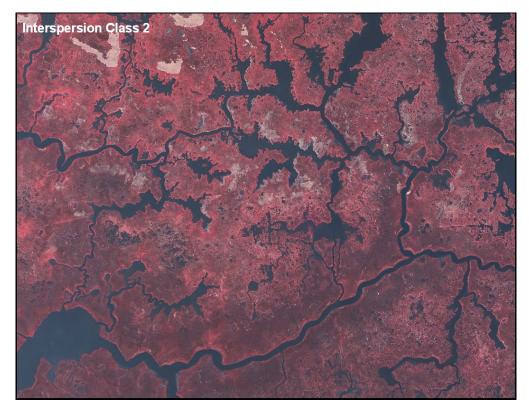
Refer to Appendix B "Procedure For Calculating Access Value" for complete information on calculating the Access Value.

# 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

= .90

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

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

Access Value  $= P * R_2$ 

<u>Note</u>: 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

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## 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.

Project/Habitat	Target Year						
Туре	0	1	3	5	10	20	>20
Coastal	Measured				Storm		Storm
Ridge/Chenier Restoration	baseline				Event (?)		Event (?)

Table 1. Summary of Target Years used for CWPPRA coastal chenier/ridge projects.

## 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.

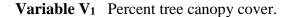
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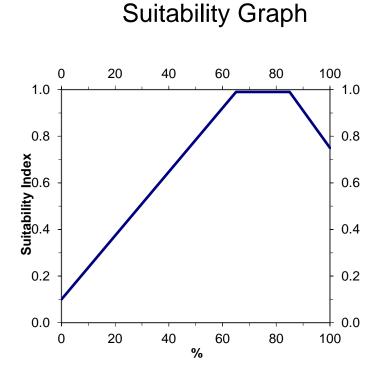
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#### **COASTAL CHENIER/RIDGE**





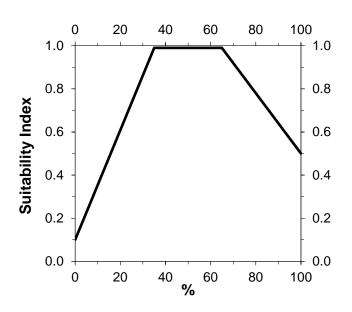
## **Line Formulas**

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**

Variable V<sub>2</sub> Percent shrub/midstory cover.



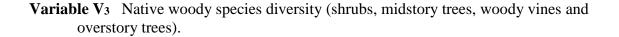
# Suitability Graph

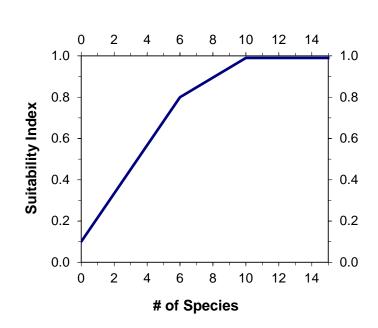
#### **Line Formulas**

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**





## 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 <math display="inline">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 –

## **Literature Cited**

## **Other Supporting Information**

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

27th Priority Project List Report

Appendix C

Wetland Value Assessment for Candidate Projects

## Appendix C

## Wetland Value Assessment for Candidate Projects Table of Contents

Project Name Pa	age
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## WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

Saline Marsh Project: Point aux Marchettes Shoreline Protection

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area Saline Marsh AAHUs 34.23

TOTAL BENEFITS = 34.23 AAHUS

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Point aux Marchettes Shoreline Protection

Project Area: 275

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	55	0.60	52	0.57	0	0.10
V2	% Aquatic	10	0.37	10	0.37	0	0.30
V3	Interspersion	%		%		%	
	Class 1	0	0.40	0	0.40	0	0.10
	Class 2	0		0		0	
	Class 3	100		100		0	
	Class 4	0		0		0	
	Class 5	0		0		100	
V4	%OW <= 1.5ft	15	0.29	15	0.29	0	0.10
V5	Salinity (ppt)	8.85	1.00	8.85	1.00	8.85	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.68	EM HSI =	0.66	EM HSI =	0.26
	Open Water HSI	=	0.71	OW HSI =	0.71	OW HSI =	0.64

Project: Point aux Marchettes Shoreline Protection Project Area: 275
FWOP
TY TY TY

		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:	Point aux Marchettes Shoreline Protection

Project Area: 275

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 Saline Marsh

Project: Point aux Marchettes Shoreline Protection

Project Area: 275

Condition: Future With Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	55	0.60	55	0.60	50	0.55
V2	% Aquatic	10	0.37	10	0.37	12	0.38
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	15	0.29	15	0.29	14	0.28
V5	Salinity (ppt)	8.85	1.00	8.85	1.00	8.85	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh	nHSI =	0.68	EM HSI =	0.68	EM HSI =	0.65
	Open Water HS	=	0.71	OW HSI =	0.71	OW HSI =	0.72

		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:	Point aux Marchettes Shoreline Protection

Project Area: 275

		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: Point aux Marchettes Shoreline Protection

Future Wit	uture Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	151	0.68	103.05	
1	143	0.66	95.01	99.01
20	0	0.26	0.00	719.74
Max=	20		AAHUs =	40.94

Future With	Future With Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	151	0.68	103.05	
1	151	0.68	103.05	103.05
20	138	0.65	90.02	1832.92
Max=	20		AAHUs	96.80

#### NET CHANGE IN AAHUS DUE TO PROJECT

A. Future With Project Emergent Marsh AAHUs =	96.80
B. Future Without Project Emergent Marsh AAHUs =	40.94
Net Change (FWP - FWOP) =	55.86

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

Project: Point aux Marchettes Shoreline Protection

Future With	out Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	124	0.71	88.14	
1	132	0.71	93.83	90.99
20	275	0.64	176.08	2596.09
Max=	20		AAHUs =	134.35

Future With	Future With Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	124	0.71	88.14	
1	124	0.71	88.14	88.14
20	137	0.72	98.11	1769.21
Max=	20		AAHUs	92.87

A. Future With Project Open Water AAHUs =	92.87
B. Future Without Project Open Water AAHUs =	134.35
Net Change (FWP - FWOP) =	-41.49

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TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	55.86					
B. Open Water Habitat Net AAHUs =	-41.49					
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	34.23					

## WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

#### Fresh/Intermediate Marsh Project: Bayou Cane Marsh Creation

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

AreaAAHUsFresh/Intermediate Marsh - Marsh Creation111.75

TOTAL BENEFITS = 111.75 AAHUS

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

Project:	Bayou Cane Ma	rsh Creation				Project Area:	449
						% Fresh	0
ondition:	Future Without	Project				% Intermediate	100
	1	TY	0	ΤY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	15	0.24	15	0.24	12	0.21
V2	% Aquatic	100	1.00	100	1.00	100	1.00
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	8	0.19	8	0.19	8	0.19
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	2.1		2.1		2.1	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.0000		1.0000		1.0000	
	Emergent Mar	sh HSI =	0.37	EM HSI =	0.37	EM HSI =	0.34
	Open Water H	ISI =	0.88	OW HSI =	0.88	OW HSI =	0.88

Project: Bayou Cane Marsh Creation

FWOP	_						
		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)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

Project: Bayou Cane 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 =	

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

Project: Bayou Cane Marsh Creation

Project Area:	449
% Fresh	0
% Intermediate	100

Condition: Future With Project

		ΤY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	15	0.24	16	0.24	40	0.46
V2	% Aquatic	100	1.00	0	0.10	50	0.55
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	8	0.19	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	2.1		2.1		2.1	
V6	Access Value						
	fresh		1.00		0.20		1.00
	intermediate	1		0.0001		1.0000	
	Emergent Mar	sh HSI =	0.37	EM HSI =	0.31	EM HSI =	0.56
	Open Water H	ISI =	0.88	OW HSI =	0.22	OW HSI =	0.64

Project: Bayou Cane Marsh Creation

FWP							
		TY	5	TY	6	ΤY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	98	0.98	97	0.97	91	0.92
V2	% Aquatic	100	1.00	100	1.00	100	1.00
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	97	0.72	90	1.00
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	2.1		2.1		2.1	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.0000		1.0000		1.0000	
		EM HSI =	0.92	EM HSI =	0.98	EM HSI =	0.95
		OW HSI =	0.93	OW HSI =	0.98	OW HSI =	1.00

Project: Bayou Cane 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: Bayou Cane Marsh Creation

Future With	Future Without Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	65	0.37	23.79	
1	65	0.37	23.79	23.79
20	54	0.34	18.55	401.44
Max=	20		AAHUs =	21.26

Future With	Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	65	0.37	23.79	
1	71	0.31	21.71	22.81
3	178	0.56	100.17	112.72
5	439	0.92	404.60	473.55
6	437	0.98	429.34	416.99
20	410	0.95	388.32	5721.39
Max=	20		AAHUs	337.37

#### NET CHANGE IN AAHUS DUE TO PROJECT

A. Future With Project Emergent Marsh AA	HUs =	337.37
B. Future Without Project Emergent Marsh	AAHUs =	21.26
Net Change (FWP - FWOP) =		316.11

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#### AAHU CALCULATION - OPEN WATER

Project: Bayou Cane Marsh Creation

Future Wit	uture Without Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	384	0.88	338.20	
1	384	0.88	338.20	338.20
20	395	0.88	347.89	6517.92
Max=	20		AAHUs =	342.81

Future With	Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	384	0.88	338.20	
1	2	0.22	0.44	127.15
3	6	0.64	3.87	3.74
5	10	0.93	9.26	12.75
6	12	0.98	11.75	10.49
20	39	1.00	39.00	353.95
Max=	20		AAHUs	25.40

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	25.40
B. Future Without Project Open Water AAHUs =	342.81
Net Change (FWP - FWOP) =	-317.40

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	316.11				
B. Open Water Habitat Net AAHUs =	-317.40				
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	111.75				

## WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

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

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Brackish Marsh - Marsh Creation	135.70
Area	AAHUs
Brackish Marsh - Terracing Area	2.69

TOTAL BENEFITS = 138.39 AAHUS

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: East Delacroix Marsh Creation and Terracing - MC area

Project Area: 406

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	15	0.24	14	0.23	10	0.19
V2	% Aquatic	60	0.64	60	0.64	60	0.64
V3	Interspersion	%		%		%	
	Class 1	0	0.20	0	0.20	0	0.10
	Class 2	0		0		0	
	Class 3	0		0		0	
	Class 4	100		100		0	
	Class 5	0		0		100	
V4	%OW <= 1.5ft	7	0.19	7	0.19	2	0.13
V5	Salinity (ppt)	4.4	1.00	4.4	1.00	4.4	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.39	EM HSI =	0.38	EM HSI =	0.34
	Open Water HS	SI =	0.70	OW HSI =	0.70	OW HSI =	0.69

Project: East Delacroix Marsh Creation and Terracing - MC area Project Area: 406

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: East Delacroix Marsh Creation and Terracing - MC area

Project Area:

Area: 406

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: East Delacroix Marsh Creation and Terracing - MC area

Project Area: 406

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	15	0.24	16	0.24	39	0.45
V2	% Aquatic	60	0.64	0	0.10	60	0.64
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	0.60	100	0.60
V5	Salinity (ppt)	4.4	1.00	4.4	1.00	4.4	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Marsh HSI =		0.39	EM HSI =	0.28	EM HSI =	0.58
	Open Water HS	SI =	0.70	OW HSI =	0.20	OW HSI =	0.74

Project: East Delacroix Marsh Creation and Terracing - MC area Project Area: 406

FWP	_						
		TY	5	ΤY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	96	0.96	84	0.86		
V2	% Aquatic	90	0.91	90	0.91		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	80	1.00		
V5	Salinity (ppt)	4.4	1.00	4.4	1.00		
V6	Access Value	1.0000	1.00	1.0000	1.00		
		EM HSI =	0.98	EM HSI =	0.91	EM HSI =	
		OW HSI =	0.93	OW HSI =	0.96	OW HSI =	

#### Project: East Delacroix Marsh Creation and Terracing - MC area

Project Area: 406

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: East Delacroix Marsh Creation and Terracing - MC area

Future With	out Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	59	0.39	22.93	
1	58	0.38	22.10	22.52
20	42	0.34	14.24	343.11
Max TY=	20		AAHUs =	18.28

Future With	Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	59	0.39	22.93	
1	64	0.28	17.71	20.41
3	159	0.58	91.76	99.96
5	389	0.98	380.59	441.58
20	342	0.91	312.01	5186.74
Max TY=	20		AAHUs	287.43

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	287.43
B. Future Without Project Emergent Marsh AAHUs =	18.28
Net Change (FWP - FWOP) =	269.15

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

Project: East Delacroix Marsh Creation and Terracing - MC area

Future With	out Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	347	0.70	242.22	
1	348	0.70	242.91	242.56
20	364	0.69	249.65	4679.99
Max TY=	20		AAHUs =	246.13

Future With	Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	347	0.70	242.22	
1	3	0.20	0.61	93.07
3	10	0.74	7.43	6.78
5	17	0.93	15.77	22.77
20	64	0.96	61.26	574.25
Max TY=	20		AAHUs	34.84

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	34.84
B. Future Without Project Open Water AAHUs =	246.13
Net Change (FWP - FWOP) =	-211.28

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	269.15					
B. Open Water Habitat Net AAHUs =	-211.28					
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	135.70					

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: East Delacroix Marsh Creation and Terracing

Project Area: 191

Terracing Area Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	3	0.13	3	0.13	2	0.12
V2	% Aquatic	60	0.64	60	0.64	60	0.64
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	5	0.16	5	0.16	3	0.14
V5	Salinity (ppt)	4.4	1.00	4.4	1.00	4.4	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.28	EM HSI =	0.28	EM HSI =	0.27
	Open Water HSI =		0.69	OW HSI =	0.69	OW HSI =	0.69

Project: East Delacroix Marsh Creation and Terracing

Project Area: 191

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: East Delacroix Marsh Creation and Terracing

Project Area: 191

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: East Delacroix Marsh Creation and Terracing

Project Area: 191

**Terracing Area** 

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	3	0.13	4	0.14	7	0.16
V2	% Aquatic	60	0.64	10	0.19	70	0.73
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	5	0.16	6	0.18	6	0.18
V5	Salinity (ppt)	4.4	1.00	4.4	1.00	4.4	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Mars	sh HSI 🛛 =	0.28	EM HSI =	0.32	EM HSI =	0.35
	Open Water HS	SI =	0.69	OW HSI =	0.40	OW HSI =	0.76

Project: East Delacroix Marsh Creation and Terracing

Project Area: 191

FWP			-			-	
		TY	20	TY		TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	6	0.15				
V2	% Aquatic	70	0.73				
V3	Interspersion	%		%		%	
	Class 1	0	0.40				
	Class 2	0					
	Class 3	100					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	4	0.15				
V5	Salinity (ppt)	4.4	1.00				
V6	Access Value	1.0000	1.00				
		EM HSI =	0.34	EM HSI =		EM HSI =	
		OW HSI =	0.76	OW HSI =		OW HSI =	

Project: East Delacroix Marsh Creation and Terracing

Project Area: 191

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: East Delacroix Marsh Creation and Terracing Terracing Area

Future With	Future Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	6	0.28	1.69	
1	6	0.28	1.69	1.69
20	4	0.27	1.09	26.33
Max TY=	20		AAHUs =	1.40

Future With	Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	6	0.28	1.69	
1	8	0.32	2.59	2.12
3	13	0.35	4.53	7.07
20	11	0.34	3.74	70.22
Max TY=	20		AAHUs	3.97

#### NET CHANGE IN AAHUS DUE TO PROJECT

A. Future With Project Emergent Marsh AAHUs =	3.97
B. Future Without Project Emergent Marsh AAHUs =	1.40
Net Change (FWP - FWOP) =	2.57

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## **AAHU CALCULATION - OPEN WATER**

#### Project: East Delacroix Marsh Creation and Terracing Terracing Area

Future With	Future Without Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	185	0.69	127.41	
1	185	0.69	127.41	127.41
20	187	0.69	128.43	2430.55
Max TY=	20		AAHUs =	127.90

Future With	Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	185	0.69	127.41	
1	177	0.40	71.50	99.08
3	178	0.76	135.42	206.80
20	180	0.76	136.60	2312.13
Max TY=	20		AAHUs	130.90

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	130.90
B. Future Without Project Open Water AAHUs =	127.90
Net Change (FWP - FWOP) =	3.00

TOTAL BENEFITS IN AAHUS DUE TO PROJECT				
A. Emergent Marsh Habitat Net AAHUs =	2.57			
B. Open Water Habitat Net AAHUs =	3.00			
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	2.69			

## WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

Fresh/Intermediate Marsh Project: Mid Breton Marsh Creation and Terracing

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Marsh Creation Area	115.73
Area	AAHUs
Terracing Area	5.52

TOTAL BENEFITS = 121.25 AAHUS

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

Project:	Project: Mid Breton Marsh Creation and Terracing					Project Area:	451
	Marsh Creation	n Area				% Fresh	0
Condition:	Future Without	Project				% Intermediate	100
				(r			
		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	7	0.16	7	0.16	4	0.14
V2	% Aquatic	70	0.73	70	0.73	70	0.73
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	33	0.47	33	0.47	8	0.19
V5	Salinity (ppt)						
	fresh		0.82		0.82		0.82
	intermediate	3.4		3.4		3.4	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.0000		1.0000		1.0000	
	Emergent Mar	sh HSI =	0.27	EM HSI =	0.27	EM HSI =	0.25
	Open Water H		0.72	OW HSI =	0.72	OW HSI =	0.70

Project: Mid Breton Marsh Creation and Terracing

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: Mid Breton Marsh Creation and Terracing

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

Project: Mid Breton Marsh Creation and Terracing Marsh Creation Area Condition: Future With Project Project Area:451% Fresh0% Intermediate100

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	7	0.16	13	0.22	34	0.41
V2	% Aquatic	70	0.73	0	0.10	60	0.64
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	33	0.47	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh		0.82		0.82		0.82
	intermediate	3.4		3.4		3.4	
V6	Access Value						
	fresh		1.00		0.20		1.00
	intermediate	1		0.0001		1.0000	
	Emergent Mar	sh HSI =	0.27	EM HSI =	0.27	EM HSI =	0.50
	Open Water H	Open Water HSI = 0.72			0.21	OW HSI =	0.69

Project: Mid Breton Marsh Creation and Terracing

FWP	-						
		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	95	0.96	82	0.84		
V2	% Aquatic	90	0.91	90	0.91		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	80	1.00		
V5	Salinity (ppt)						
	fresh		0.82		0.82		
	intermediate	3.4		3.4			
V6	Access Value						
	fresh		1.00		1.00		
	intermediate	1.0000		1.0000			
		EM HSI =	0.95	EM HSI =	0.87	EM HSI =	
		OW HSI =	0.90	OW HSI =	0.93	OW HSI =	

Project: Mid Breton Marsh Creation and Terracing

	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: Mid Breton Marsh Creation and Terracing Marsh Creation Area

Future With	uture Without Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	29	0.27	7.94	
1	29	0.27	7.94	7.94
20	20	0.25	4.99	122.18
Max=	20		AAHUs =	6.51

Future With	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	29	0.27	7.94	
1	57	0.27	15.32	11.65
3	152	0.50	76.38	84.30
5	429	0.95	407.86	442.86
20	369	0.87	322.32	5464.73
Max=	20		AAHUs	300.18

#### NET CHANGE IN AAHUS DUE TO PROJECT

NET CHANGE IN AAHUS DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	300.18
B. Future Without Project Emergent Marsh AAHUs	=	6.51
Net Change (FWP - FWOP) =		293.67

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

Project: Mid Breton Marsh Creation and Terracing Marsh Creation Area

Future Wit	uture Without Project		Total	Cummulative
ТΥ	Water Acres	x HSI	HUs	HUs
0	422	0.72	302.70	
1	422	0.72	302.70	302.70
20	431	0.70	300.18	5728.01
Max=	20		AAHUs =	301.54

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	422	0.72	302.70	
1	4	0.21	0.82	116.08
3	13	0.69	8.99	8.35
5	22	0.90	19.89	28.24
20	82	0.93	76.55	718.84
Max=	20		AAHUs	43.58

#### NET CHANGE IN AAHUS DUE TO PROJECT

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	43.58
B. Future Without Project Open Water AAHUs =	301.54
Net Change (FWP - FWOP) =	-257.96

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	293.67					
B. Open Water Habitat Net AAHUs =	-257.96					
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	115.73					

Project:	Mid Breton Ma	Project Area:	341				
	<b>Terracing Area</b>	% Fresh	0				
Condition:	% Intermediate	100					
	a 1		1.				
		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	4	0.14	4	0.14	2	0.12
V2	% Aquatic	60	0.64	60	0.64	60	0.64
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	5	0.16	5	0.16	0	0.10
V5	Salinity (ppt)						
	fresh		0.82		0.82		0.82
	intermediate	3.4		3.4		3.4	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.0000		1.0000		1.0000	
	Emergent Mar	sh HSI =	0.25	EM HSI =	0.25	EM HSI =	0.23
	Open Water H	ISI =	0.64	OW HSI =	0.64	OW HSI =	0.63

Project: Mid Breton Marsh Creation and Terracing

FWOP				-			
		TY		TY		TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion Class 1 Class 2	%		%		%	
	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: Mid Breton Marsh Creation and Terracing

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: Mid Breton Marsh Creation and Terracing Project Area: 341 Terracing Area % Fresh 0 Condition: Future With Project % Intermediate 100 ΤY TΥ ΤY 0 1 3 Value SI Value SI Value SI Variable . . .

V1	% Emergent	4	0.14	5	0.15	8	0.17
V2	% Aquatic	60	0.64	10	0.19	70	0.73
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	5	0.16	6	0.17	6	0.17
V5	Salinity (ppt)						
	fresh		0.82		0.82		0.82
	intermediate	3.4		3.4		3.4	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1		1.0000		1.0000	
	Emergent Mar	sh HSI =	0.25	EM HSI =	0.29	EM HSI =	0.31
	Open Water H	ISI =	0.64	OW HSI =	0.33	OW HSI =	0.72

Project: Mid Breton Marsh Creation and Terracing

		TY	20	TY		ΤY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	7	0.16				
V2	% Aquatic	70	0.73				
V3	Interspersion	%		%		%	
	Class 1	0	0.40				
	Class 2	0					
	Class 3	100					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	4	0.15				
V5	Salinity (ppt)						
	fresh		0.82				
	intermediate	3.4					
V6	Access Value						
	fresh		1.00				
	intermediate	1.0000					
		EM HSI =	0.31	EM HSI =		EM HSI =	
		OW HSI =	0.72	OW HSI =		OW HSI =	

Project: Mid Breton Marsh Creation and Terracing

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: Mid Breton Marsh Creation and Terracing

Terracing Area

Future With	Future Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	13	0.25	3.25	
1	12	0.25	3.00	3.12
20	9	0.23	2.10	48.26
Max=	20		AAHUs =	2.57

Future With	Future With Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	13	0.25	3.25	
1	17	0.29	4.95	4.07
3	29	0.31	9.13	13.99
20	24	0.31	7.37	140.17
Max=	20		AAHUs	7.91

NET CHANGE IN AAHUS DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	1	7.91
B. Future Without Project Emergent Marsh AAHUs	II	2.57
Net Change (FWP - FWOP) =		5.34

#### AAHU CALCULATION - OPEN WATER

Project: Mid Breton Marsh Creation and Terracing

**Terracing Area** 

		-		
Future With	Future Without Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	328	0.64	208.69	
1	329	0.64	209.33	209.01
20	332	0.63	209.85	3982.26
Max=	20		AAHUs =	209.56

Future With	Future With Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	328	0.64	208.69	
1	312	0.33	101.90	154.47
3	312	0.72	223.71	325.62
20	317	0.72	226.77	3829.14
Max=	20		AAHUs	215.46

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	215.46
B. Future Without Project Open Water AAHUs =	209.56
Net Change (FWP - FWOP) =	5.90

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	5.34				
B. Open Water Habitat Net AAHUs =	5.90				
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	5.52				

# WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

Fresh/Intermediate Marsh Project: Breton Landbridge Marsh Creation - West

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area Marsh Creation AAHUs 122.48

TOTAL BENEFITS = 122.48 AAHUS

Project:	Breton Landbrid	lge Marsh Crea	tion - We	st		Project Area:	423
						% Fresh	0
Condition:	Future Without	Project				% Intermediate	100
	1	<b>T</b> 1/	-			<b>T</b> 1/	
.,		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	26	0.33	25	0.33	19	0.27
V2	% Aquatic	55	0.60	55	0.60	55	0.60
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	33	0.47	33	0.47	16	0.28
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	2.5		2.5		2.5	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.0000		1.0000		1.0000	
	Emergent Mar	shHSI =	0.45	EM HSI =	0.44	EM HSI =	0.40
	Open Water H	ISI =	0.65	OW HSI =	0.65	OW HSI =	0.64

Project: Breton Landbridge Marsh Creation - West

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 =	

Project: B	Breton Landbridge Marsh Creation - West	
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Project Area:	423
% Fresh	0
% Intermediate	100

Condition: Future With Project

	ו ה	TV	-	TV		TV	-
		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	26	0.33	20	0.28	47	0.52
V2	% Aquatic	55	0.60	0	0.10	60	0.64
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	33	0.47	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	2.5		2.5		2.5	
V6	Access Value						
	fresh		1.00		0.20		1.00
	intermediate	1		0.0001		1.0000	
	Emergent Mar	shHSI =	0.45	EM HSI =	0.33	EM HSI =	0.61
	Open Water H	ISI =	0.65	OW HSI =	0.22	OW HSI =	0.70

Project: Breton Landbridge Marsh Creation - West

FWP	-					0	
		TY	5	ΤY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	96	0.96	85	0.87		
V2	% Aquatic	90	0.91	90	0.91		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.60	80	1.00		
V5	Salinity (ppt)						
	fresh		1.00		1.00		
	intermediate	2.5		2.5			
V6	Access Value						
	fresh		1.00		1.00		
	intermediate	1.0000		1.0000			
		EM HSI =	0.98	EM HSI =	0.91	EM HSI =	
		OW HSI =	0.92	OW HSI =	0.95	OW HSI =	

FWP	Breton Landbrid						
		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	out Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	108	0.45	48.08	
1	107	0.44	46.89	47.48
20	79	0.40	31.23	738.33
Max=	20		AAHUs =	39.29

Future With	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	108	0.45	48.08	
1	85	0.33	27.89	37.54
3	198	0.61	120.53	137.85
5	407	0.98	397.47	492.38
20	361	0.91	329.04	5441.35
Max=	20		AAHUs	305.46

NET CHANGE IN AAHUS DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	305.46
B. Future Without Project Emergent Marsh AAHUs	=	39.29
Net Change (FWP - FWOP) =		266.17

### AAHU CALCULATION - OPEN WATER

		1		
Future Wit	nout Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	315	0.65	204.98	
1	316	0.65	205.63	205.30
20	344	0.64	218.97	4034.94
Max=	20		AAHUs =	212.01

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	315	0.65	204.98	
1	3	0.22	0.66	80.34
3	10	0.70	7.05	6.57
5	16	0.92	14.68	21.30
20	62	0.95	58.71	546.97
Max=	20		AAHUs	32.76

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	32.76
B. Future Without Project Open Water AAHUs =	212.01
Net Change (FWP - FWOP) =	-179.25

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	266.17					
B. Open Water Habitat Net AAHUs =	-179.25					
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	122.48					

# WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

### Saline Marsh and Coastal Chenier/Ridge Project: Grand Bayou Ridge and Marsh Restoration

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Saline Marsh - Marsh Creation	147.15
Area	AAHUs
Coastal Chenier/Ridge - No ridge habitat FWOP	7.96

TOTAL BENEFITS = 155.11 AAHUS

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: Grand Bayou Ridge and Marsh Restoration - Marsh Creation Area

```
Project Area: 369
```

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	4	0.14	4	0.14	3	0.13
V2	% Aquatic	1	0.31	1	0.31	1	0.31
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	6	0.18	6	0.18	1	0.11
V5	Salinity (ppt)	9	1.00	9	1.00	9	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.30	EM HSI =	0.30	EM HSI =	0.29
	Open Water HSI	=	0.65	OW HSI =	0.65	OW HSI =	0.64

Project:	Grand Bayou Ridge and Marsh Restoration - Marsh Creation Area	Project Area:	369
FWOP			

FWOP	a .			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 =	

 Project:
 Grand Bayou Ridge and Marsh Restoration - Marsh Creation Area
 Project Area:
 369

 FWOP
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		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: Grand Bayou Ridge and Marsh Restoration - Marsh Creation Area

Project Area:

369

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	4	0.14	11	0.20	32	0.39
V2	% Aquatic	1	0.31	0	0.30	15	0.41
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	6	0.18	100	0.50	100	0.50
V5	Salinity (ppt)	9	1.00	9	1.00	9	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Marsh HSI =		0.30	EM HSI =	0.25	EM HSI =	0.54
	<b>Open Water HSI</b>	=	0.65	OW HSI =	0.23	OW HSI =	0.74

Condition: Future With Project

Project:	Grand Bayou Ridge and Marsh Restoration - Marsh Creation Area	Project Area:	369
FWP			

		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	96	0.96	85	0.87		
V2	% Aquatic	30	0.51	30	0.51		
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)	9	1.00	9	1.00		
V6	Access Value	1.0000	1.00	1.0000	1.00		
		EM HSI =	0.98	EM HSI =	0.92	EM HSI =	
		OW HSI =	0.83	OW HSI =	0.86	OW HSI =	

 Project:
 Grand Bayou Ridge and Marsh Restoration - Marsh Creation Area
 Project Area:
 369

 FWP
 <td

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

# AAHU CALCULATION - EMERGENT MARSH

Project: Grand Bayou Ridge and Marsh Restoration - Marsh Creation Area

Future With	out Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	16	0.30	4.74	
1	15	0.30	4.45	4.59
20	11	0.29	3.16	72.19
Max=	20		AAHUs =	3.84

Future With	Future With Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	16	0.30	4.74	
1	40	0.25	10.10	7.60
3	112	0.54	60.25	63.50
5	342	0.98	334.79	361.22
20	302	0.92	277.79	4588.42
Max=	20		AAHUs	251.04

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	251.04
B. Future Without Project Emergent Marsh AAHUs =	3.84
Net Change (FWP - FWOP) =	247.20

AAHU CALCULATION - OPEN WATER Project: Grand Bayou Ridge and Marsh Restoration - Marsh Creation Area

Future With	Future Without Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	353	0.65	229.32	
1	354	0.65	229.97	229.65
20	358	0.64	230.87	4378.05
Max=	20		AAHUs =	230.38

Future With Project			Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	353	0.65	229.32	
1	3	0.23	0.68	90.23
3	9	0.74	6.67	6.32
5	14	0.83	11.58	18.11
20	54	0.86	46.65	432.99
Max=	20		AAHUs	27.38

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	27.38
B. Future Without Project Open Water AAHUs =	230.38
Net Change (FWP - FWOP) =	-203.00

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	247.20				
B. Open Water Habitat Net AAHUs =	-203.00				
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	147.15				

### WETLAND VALUE ASSESSMENT COMMUNITY MODEL Coastal Chenier/Ridge

Project: Grand Bayou Ridge and Marsh Restoration

Project Area: 13

Condition: Future Without Project - No Ridge Habitat

		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: Grand Bayou Ridge and Marsh Restoration FWOP

Project Area:

13

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

Project: Grand Bayou Ridge and Marsh Restoration

Project Area: 13

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: Grand Bayou Ridge and Marsh Restoration

Project Area: 13

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: Grand Bayou Ridge and Marsh Restoration

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: Grand Bayou Ridge and Marsh Restoration

Project Area: 13

Project Area:

13

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 =	

# AAHU CALCULATION

Project: Grand Bayou Ridge and Marsh Restoration

Future Witho	out Project		Total	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		Total	
			CHUs =	0.00
			AAHUs =	0.00

Future With	Project		Total	Cummulative
TY	Acres	x HSI	HUs	HUs
0	0	0.10	0.00	
1	13	0.10	1.30	0.65
3	13	0.31	3.98	5.28
7	13	0.53	6.95	21.88
12	13	0.74	9.62	41.43
15	13	0.87	11.32	31.41
20	13	0.93	12.07	58.47
Max TY =	20		Total	
			CHUs =	159.11
			AAHUs =	7.96

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project AAHUs =	7.96
B. Future Without Project AAHUs =	0.00
Net Change (FWP - FWOP) =	7.96

### WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

### Fresh/Intermediate Marsh and Brackish Marsh Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Protection

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Fresh/Intermediate Marsh - Semi-contained marsh creation	20.17
Area	AAHUs
Brackish Marsh - Fully-contained marsh creation	161.71
Area	AAHUs
Fresh/Intermediate Marsh - Shoreline protection area	1.10

TOTAL BENEFITS = 182.98 AAHUS

Project:	Northeast Turtle	Bay Marsh Cro	eation & C	ritical Area Sho	oreline Prot	Project Area:	128
	% Fresh	0					
Condition:		% Intermediate	100				
						ù	
		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	67	0.70	67	0.70	65	0.69
V2	% Aquatic	75	0.78	75	0.78	75	0.78
V3	Interspersion	%		%		%	
	Class 1	0	0.50	0	0.50	0	0.47
	Class 2	50		50		35	
	Class 3	50		50		65	
	Class 4	0		0		0	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	6	0.17	6	0.17	3	0.13
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1.8		1.8		1.8	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.0000		1.0000		1.0000	
	Emergent Mar	sh HSI =	0.75	EM HSI =	0.75	EM HSI =	0.73
	Open Water H	ISI =	0.77	OW HSI =	0.77	OW HSI =	0.76

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot.

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: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot.

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

 Semi-contained marsh creation area
 % Fresh
 0

 Condition:
 Future With Project
 % Intermediate
 100

	1	TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	67	0.70	37	0.43	76	0.78
V2	% Aquatic	75	0.78	0	0.10	35	0.42
V3	Interspersion	%		%		%	
	Class 1	0	0.50	0	0.10	0	0.40
	Class 2	50		0		0	
	Class 3	50		0		100	
	Class 4	0		0		0	
	Class 5	0		100		0	
V4	%OW <= 1.5ft	6	0.17	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1.8		1.8		1.8	
V6	Access Value						
	fresh		1.00		0.20		1.00
	intermediate	1		0.0001		1.0000	
	Emergent Mar	sh HSI =	0.75	EM HSI =	0.42	EM HSI =	0.79
	Open Water H	ISI =	0.77	OW HSI =	0.22	OW HSI =	0.55

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot.

FWP							
		TY	5	TY	6	ΤY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	98	0.98	97	0.97	91	0.92
V2	% Aquatic	75	0.78	75	0.78	75	0.78
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	1.8		1.8		1.8	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.0000		1.0000		1.0000	
		EM HSI =	0.92	EM HSI =	0.98	EM HSI =	0.95
		OW HSI =	0.79	OW HSI =	0.84	OW HSI =	0.86

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot.

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)						
	fresh						
	intermediate						
V6	Access Value						
	fresh						
	intermediate						
		EM HSI =		EM HSI =		EM HSI =	
		OW HSI =		OW HSI =		OW HSI =	

### AAHU CALCULATION - EMERGENT MARSH

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Semi-contained marsh creation area

Future With	out Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	86	0.75	64.20	
1	85	0.75	63.45	63.83
20	71	0.73	51.89	1095.03
Max=	20		AAHUs =	57.94

Future With	Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	86	0.75	64.20	
1	47	0.42	19.66	39.80
3	97	0.79	76.69	90.14
5	125	0.92	115.21	190.67
6	124	0.98	121.83	118.53
20	116	0.95	109.87	1621.19
Max=	20		AAHUs	103.02

NET CHANGE IN AAHUS DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	1	103.02
B. Future Without Project Emergent Marsh AAHUs	1	57.94
Net Change (FWP - FWOP) =		45.07

#### AAHU CALCULATION - OPEN WATER

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Semi-contained marsh creation area

Future Witl	Future Without Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	42	0.77	32.17	
1	43	0.77	32.94	32.55
20	57	0.76	43.39	725.31
Max=	20		AAHUs =	37.89

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	42	0.77	32.17	
1	1	0.22	0.22	12.45
3	2	0.55	1.10	1.21
5	3	0.79	2.37	3.39
6	4	0.84	3.34	2.85
20	12	0.86	10.38	95.46
Max=	20		AAHUs	5.77

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	5.77
B. Future Without Project Open Water AAHUs =	37.89
Net Change (FWP - FWOP) =	-32.13

TOTAL BENEFITS IN AAHUS DUE TO PROJECT							
A. Emergent Marsh Habitat Net AAHUs =	45.07						
B. Open Water Habitat Net AAHUs =	-32.13						
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1 20.17							

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Proj

Project Area: 549

Condition: Future Without Project

Fully-contained marsh creation cells

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	39	0.45	39	0.45	32	0.39
V2	% Aquatic	75	0.78	75	0.78	75	0.78
V3	Interspersion	%		%		%	
	Class 1	0	0.27	0	0.27	0	0.27
	Class 2	6		6		6	
	Class 3	21		21		21	
	Class 4	73		73		73	
	Class 5	0		0		0	
V4	%OW <= 1.5ft	13	0.27	13	0.27	3	0.14
V5	Salinity (ppt)	4.6	1.00	4.6	1.00	4.6	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Mars	sh HSI 🛛 =	0.56	EM HSI =	0.56	EM HSI =	0.52
	Open Water HS	6l =	0.78	OW HSI =	0.78	OW HSI =	0.77

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Project Area: 549

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: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Project Area: 549

,						,	
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: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Project Area: 549 Fully-contained marsh creation cells

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	39	0.45	25	0.33	56	0.60
V2	% Aquatic	75	0.78	0	0.10	35	0.42
V3	Interspersion	%		%		%	
	Class 1	0	0.27	0	0.10	0	0.40
	Class 2	6		0		0	
	Class 3	21		0		100	
	Class 4	73		0		0	
	Class 5	0		100		0	
V4	%OW <= 1.5ft	13	0.27	100	0.60	100	0.60
V5	Salinity (ppt)	4.6	1.00	4.6	1.00	4.6	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Mars	sh HSI 🛛 =	0.56	EM HSI =	0.31	EM HSI =	0.68
	Open Water HS	SI =	0.78	OW HSI =	0.20	OW HSI =	0.61

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Project Area: 549

FWP							
		TY	5	TY	6	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	98	0.98	97	0.97	91	0.92
V2	% Aquatic	75	0.78	75	0.78	75	0.78
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	90	0.80
V5	Salinity (ppt)	4.6	1.00	4.6	1.00	4.6	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
		EM HSI =	0.92	EM HSI =	0.98	EM HSI =	0.95
		OW HSI =	0.82	OW HSI =	0.86	OW HSI =	0.87

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Project Area: 549

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: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Fully-contained marsh creation cells

uture With	uture Without Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	214	0.56	120.31	
1	212	0.56	119.19	119.75
20	176	0.52	90.84	1990.01
Max TY=	20		AAHUs =	105.49

Future With	Future With Project		Total	Cummulative	
TY	Marsh Acres	x HSI	HUs	HUs	
0	214	0.56	120.31		
1	140	0.31	44.08	79.14	
3	310	0.68	211.82	235.02	
5	536	0.92	494.48	688.28	
6	533	0.98	524.36	509.45	
20	498	0.95	473.63	6983.30	
Max TY=	20		AAHUs	424.76	

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	424.76
B. Future Without Project Emergent Marsh AAHUs =	105.49
Net Change (FWP - FWOP) =	319.27

# **AAHU CALCULATION - OPEN WATER**

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Fully-contained marsh creation cells

Future With	Future Without Project		ture Without Project		Total	Cummulative	
ΤY	Water Acres	x HSI	HUs	HUs			
0	335	0.78	261.65				
1	337	0.78	263.21	262.43			
20	373	0.77	287.78	5235.49			
Max TY=	20		AAHUs =	274.90			

Future With	Future With Project		Total	Cummulative
TY	TY Water Acres		HUs	HUs
0	335	0.78	261.65	
1	3	0.20	0.61	99.19
3	8	0.61	4.86	4.80
5	13	0.82	10.60	15.11
6	16	0.86	13.76	12.16
20	51	0.87	44.62	407.45
Max TY=	20		AAHUs	26.94

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	26.94
B. Future Without Project Open Water AAHUs =	274.90
Net Change (FWP - FWOP) =	-247.96

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	319.27				
B. Open Water Habitat Net AAHUs =	-247.96				
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	161.71				

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project:	Northeast Turtle B	Project Area:	10				
	Shoreline prote					% Fresh	0
Condition:	Future Without	Project				% Intermediate	100
		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	50	0.55	47.5	0.53	0	0.10
V2	% Aquatic	0	0.10	0	0.10	0	0.10
V3	Interspersion	%		%		%	
	Class 1	0	0.40	0	0.40	0	0.10
	Class 2	0		0		0	
	Class 3	100		100		0	
	Class 4	0		0		0	
	Class 5	0		0		100	
V4	%OW <= 1.5ft	6.6	0.17	6.6	0.17	3.3	0.14
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1.8		1.8		1.8	
V6	Access Value						
	fresh		1.00		1.00		1.00
	intermediate	1.0000		1.0000		1.0000	
	Emergent Mar	sh HSI =	0.63	EM HSI =	0.61	EM HSI =	0.24
	Open Water H	SI =	0.25	OW HSI =	0.25	OW HSI =	0.23

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot.

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 =	
		OW HSI =		OW HSI =		OW HSI =	

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot.

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 =	

10

0

Project Area: Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Shoreline protection area % Fresh Condition: Future With Project % Intermediate 100

	1	TY	0	ΤY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	50	0.55	50	0.55	50	0.55
V2	% Aquatic	0	0.10	0	0.10	0	0.10
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	6.6	0.17	6.6	0.17	6.6	0.17
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1.8		1.8		1.8	
V6	Access Value						
	fresh		1.00		0.81		1.00
	intermediate	1		0.7600		1.0000	
	Emergent Mar	sh HSI =	0.63	EM HSI =	0.61	EM HSI =	0.63
	Open Water H	ISI =	0.25	OW HSI =	0.25	OW HSI =	0.25

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot.

FWP							
		TY	20	ΤY		TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	50	0.55				
V2	% Aquatic	0	0.10				
V3	Interspersion	%		%		%	
	Class 1	0	0.40				
	Class 2	0					
	Class 3	100					
	Class 4	0					
	Class 5	0					
V4	%OW <= 1.5ft	6.6	0.17				
V5	Salinity (ppt)						
	fresh		1.00				
	intermediate	1.8					
V6	Access Value						
	fresh		1.00				
	intermediate	1.0000					
		EM HSI =	0.63	EM HSI =		EM HSI =	
		OW HSI =	0.25	OW HSI =		OW HSI =	

Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot.

		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: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Shoreline protection area

uture Witl	hout Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	5	0.63	3.14	
1	4.75	0.61	2.91	3.02
20	0	0.24	0.00	21.97
Max=	20		AAHUs =	1.25

Future With	Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	5	0.63	3.14	
1	5	0.61	3.06	3.10
3	5	0.63	3.14	6.20
20	5	0.63	3.14	53.39
-				
Max=	20		AAHUs	3.13

 NET CHANGE IN AAHUS DUE TO PROJECT

 A. Future With Project Emergent Marsh AAHUs
 = 3.13

B. Future Without Project Emergent Marsh AAHUs =	1.25
Net Change (FWP - FWOP) =	1.89

#### AAHU CALCULATION - OPEN WATER

#### Project: Northeast Turtle Bay Marsh Creation & Critical Area Shoreline Prot. Shoreline protection area

Future Witl	nout Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	5	0.25	1.27	
1	5.25	0.25	1.34	1.31
20	10	0.23	2.30	34.94
Max=	20		AAHUs =	1.81

Future With	Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	5	0.25	1.27	
1	5	0.25	1.24	1.26
3	5	0.25	1.27	2.51
20	5	0.25	1.27	21.67
-				
Max=	20		AAHUs	1.27

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	1.27
B. Future Without Project Open Water AAHUs =	1.81
Net Change (FWP - FWOP) =	-0.54

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	1.89					
B. Open Water Habitat Net AAHUs =	-0.54					
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	1.10					

# WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

Saline Marsh Project: East Catfish Lake Marsh Creation and Shoreline Protection

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area Saline Marsh - Marsh Creation AAHUs 128.91

TOTAL BENEFITS = 128.91 AAHUS

# WETLAND VALUE ASSESSMENT COMMUNITY MODEL Saline Marsh

Project: East Catfish Lake Marsh Creation and Shoreline Protection

Project Area: 306

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	25	0.33	24	0.32	10	0.19
V2	% Aquatic	2	0.31	2	0.31	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	2	0.13
V5	Salinity (ppt)	14.1	1.00	14.1	1.00	14.1	1.00
V6	Access Value	1.0000	1.00	1.0000	1.00	1.0000	1.00
	Emergent Marsh HSI =		0.47	EM HSI =	0.46	EM HSI =	0.36
	Open Water HS	=	0.66	OW HSI =	0.66	OW HSI =	0.65

 Project:
 East Catfish Lake Marsh Creation and Shoreline Protection
 Project Area:
 306

 FWOP
 FWO

		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:	East Catfish Lake Marsh Creation and Shoreline Protection	Project Area:	306
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 Saline Marsh

Project Area: Project: East Catfish Lake Marsh Creation and Shoreline Protection

306

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	25	0.33	20	0.28	46	0.51
V2	% Aquatic	2	0.31	0	0.30	5	0.34
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)	14.1	1.00	14.1	1.00	14.1	1.00
V6	Access Value	1.0000	1.00	0.0001	0.10	1.0000	1.00
	Emergent Marsh HSI =		0.47	EM HSI =	0.29	EM HSI =	0.63
	Open Water HS	=	0.66	OW HSI =	0.23	OW HSI =	0.71

Condition: Future With Project

Project:	East Catfish Lake Marsh Creation and Shoreline Protection	Project Area:	306
FWP			

		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	97	0.97	89	0.90		
V2	% Aquatic	10	0.37	10	0.37		
V3	Interspersion	%		%		%	
	Class 1	100	1.00	100	1.00		
	Class 2	0		0			
	Class 3	0		0			
	Class 4	0		0			
	Class 5	0		0			
V4	%OW <= 1.5ft	100	0.50	80	1.00		
V5	Salinity (ppt)	14.1	1.00	14.1	1.00		
V6	Access Value	1.0000	1.00	1.0000	1.00		
		EM HSI =	0.98	EM HSI =	0.94	EM HSI =	
		OW HSI =	0.77	OW HSI =	0.81	OW HSI =	

		ΤY		TY		TY	
Variable		Value	SI	Value	SI	Value	
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 Catfish Lake Marsh Creation and Shoreline Protection

Future With	Future Without Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	75	0.47	35.11	
1	73	0.46	33.66	34.38
20	31	0.36	11.07	411.16
Max=	20		AAHUs =	22.28

Future With Project			Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	75	0.47	35.11	
1	60	0.29	17.44	25.83
3	142	0.63	89.13	97.36
5	298	0.98	293.29	363.89
20	274	0.94	257.97	4131.91
Max=	20		AAHUs	230.95

#### NET CHANGE IN AAHUS DUE TO PROJECT

A. Future With Project Emergent Marsh AAHUs =	230.95
B. Future Without Project Emergent Marsh AAHUs =	22.28
Net Change (FWP - FWOP) =	208.67

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## **AAHU CALCULATION - OPEN WATER**

Project: East Catfish Lake Marsh Creation and Shoreline Protection

Future Witl	uture Without Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	231	0.66	152.83	
1	233	0.66	154.15	153.49
20	275	0.65	178.64	3163.09
Max=	20		AAHUs =	165.83

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	231	0.66	152.83	
1	2	0.23	0.45	59.98
3	5	0.71	3.55	3.51
5	8	0.77	6.17	9.65
20	32	0.81	25.85	237.86
Max=	20		AAHUs	15.55

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	15.55
B. Future Without Project Open Water AAHUs =	165.83
Net Change (FWP - FWOP) =	-150.28

TOTAL BENEFITS IN AAHUS DUE TO PROJECT					
A. Emergent Marsh Habitat Net AAHUs =	208.67				
B. Open Water Habitat Net AAHUs =	-150.28				
Net Benefits= (3.5xEMAAHUs+OWAAHUs)/4.5	128.91				

## WETLAND VALUE ASSESSMENT

**Benefits Summary Sheet** 

## Fresh/Intermediate Marsh and Coastal Chenier/Ridge Project: North Bayou Decade Ridge Restoration and Marsh Creation

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Fresh/Intermediate Marsh - Marsh Creation	77.56
Area	AAHUs
Coastal Chenier/Ridge - No ridge habitat FWOP	12.24

TOTAL BENEFITS = 89.80 AAHUS

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

Project:	Project: North Bayou Decade Ridge Restoration and Marsh Creation Project Area: 319						
		% Fresh	0				
Condition:	Future Without	Project				% Intermediate	100
ſ		F		r		1	
		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	10	0.19	10	0.19	8	0.17
V2	% Aquatic	80	0.82	80	0.82	80	0.82
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	0.21	10	0.21	1	0.11
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1.05		1.05		1.05	
V6	Access Value						
	fresh		0.84		0.84		0.84
	intermediate	0.8000		0.8000		0.8000	
	Emergent Mar	sh HSI =	0.31	EM HSI =	0.31	EM HSI =	0.30
	Open Water H	ISI =	0.74	OW HSI =	0.74	OW HSI =	0.73

Project: North 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 =	

Project: North 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 =	

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

Project: North Bayou Decade Ridge Restoration and Marsh Creation

on and Marsh Creation	Project Area:
	% Fresh
	% Intermediate

319

0

100

Condition: Future With Project

1	1	TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
		value	51	value	51	value	51
V1	% Emergent	10	0.19	12	0.21	34	0.41
V2	% Aquatic	80	0.82	0	0.10	40	0.46
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	0.21	100	0.60	100	0.60
V5	Salinity (ppt)						
	fresh		1.00		1.00		1.00
	intermediate	1.05		1.05		1.05	
V6	Access Value						
	fresh		0.84		0.20		0.84
	intermediate	0.8		0.0001		0.8000	
	Emergent Mar	sh HSI =	0.31	EM HSI =	0.28	EM HSI =	0.51
	Open Water H	ISI =	0.74	OW HSI =	0.22	OW HSI =	0.56

Project: North Bayou Decade Ridge Restoration and Marsh Creation

FWP							
		TY	5	TY	6	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	98	0.98	97	0.97	91	0.92
V2	% Aquatic	80	0.82	80	0.82	80	0.82
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	1.05		1.05		1.05	
V6	Access Value						
	fresh		0.84		0.84		0.84
	intermediate	0.8000		0.8000		0.8000	
		EM HSI =	0.90	EM HSI =	0.96	EM HSI =	0.93
		OW HSI =	0.79	OW HSI =	0.83	OW HSI =	0.86

Project: North Bayou Decade Ridge Restoration and Marsh Creation FWP

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

## AAHU CALCULATION - EMERGENT MARSH

Project: North Bayou Decade Ridge Restoration and Marsh Creation

Future Without Project			Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	30	0.31	9.35	
1	30	0.31	9.35	9.35
20	26	0.30	7.71	161.83
Max=	20		AAHUs =	8.56

Future With	Future With Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	30	0.31	9.35	
1	37	0.28	10.47	9.94
3	102	0.51	52.23	57.73
5	292	0.90	262.71	290.39
6	291	0.96	279.56	271.15
20	273	0.93	252.90	3725.77
Max=	20		AAHUs	217.75

NET CHANGE IN AAHUS DUE TO PROJECT		
A. Future With Project Emergent Marsh AAHUs	=	217.75
B. Future Without Project Emergent Marsh AAHUs	=	8.56
Net Change (FWP - FWOP) =		209.19

## AAHU CALCULATION - OPEN WATER

Project: North Bayou Decade Ridge Restoration and Marsh Creation

1		1	r	r
Future Wit	nout Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	289	0.74	213.53	
1	289	0.74	213.53	213.53
20	293	0.73	214.29	4064.34
Max=	20		AAHUs =	213.89

Future With	Future With Project		Total	Cummulative
ΤY	Water Acres	x HSI	HUs	HUs
0	289	0.74	213.53	
1	1	0.22	0.22	81.89
3	4	0.56	2.26	2.13
5	7	0.79	5.53	7.56
6	8	0.83	6.67	6.09
20	26	0.86	22.46	202.69
Max=	20		AAHUs	15.02

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	15.02
B. Future Without Project Open Water AAHUs =	213.89
Net Change (FWP - FWOP) =	-198.88

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	209.19					
B. Open Water Habitat Net AAHUs =	-198.88					
Net Benefits=(2.1xEMAAHUs+OWAAHUs)/3.1	77.56					

#### WETLAND VALUE ASSESSMENT COMMUNITY MODEL Coastal Chenier/Ridge

Project: North Bayou Decade Ridge Restoration and Marsh Creation

Project Area: 20

20

Condition: Future Without Project - No Ridge Habitat

		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: North 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: North Bayou Decade 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

20

20

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

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: North Bayou Decade 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: North Bayou Decade 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 =	

## AAHU CALCULATION

Project: North Bayou Decade Ridge Restoration and Marsh Creation

uture Without F	Project		Total	Cummulative
TY	Acres	x HSI	HUs	HUs
0	0	0.10	0.00	
1	0	0.10	0.00	0.00
20	0	0.10	0.00	0.00
lax TY =	20		Total	
			CHUs =	0.00
			AAHUs =	0.00

Future With	Project		Total	Cummulative
TY	Acres	x HSI	HUs	HUs
0	0	0.10	0.00	
1	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		Total	
			CHUs =	244.79
			AAHUs =	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: Sabine Marsh Creation - Cycle 6 & 7

#### TOTAL BENEFITS IN AAHUS DUE TO PROJECT

Area	AAHUs
Sabine Marsh Creation - Cycle 6	190.46
Area	AAHUs
Sabine Marsh Creation - Cycle 7	155.28

TOTAL BENEFITS = 345.74 AAHUS

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Sabine Marsh Creation - Cycle 6

Project Area: 478

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	2	0.12	2	0.12	2	0.12
V2	% Aquatic	0	0.10	0	0.10	0	0.10
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	45	0.68	45	0.68	39	0.60
V5	Salinity (ppt)	9.69	1.00	9.69	1.00	9.69	1.00
V6	Access Value	0.4000	0.46	0.4000	0.46	0.4000	0.46
	Emergent Mars	sh HSI 🛛 =	0.25	EM HSI =	0.25	EM HSI =	0.25
	Open Water HS	SI =	0.27	OW HSI =	0.27	OW HSI =	0.27

Project: Sabine Marsh Creation - Cycle 6

Project Area: 478

FWOP	a	r					
		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: Sabine Marsh Creation - Cycle 6

Project Area: 478

- ,							
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				Ī		
	Class 5				İ		
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: Sabine Marsh Creation - Cycle 6

Project Area: 478

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	2	0.12	11	0.20	31	0.38
V2	% Aquatic	0	0.10	0	0.10	0	0.10
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	45	0.68	0	0.10	0	0.10
V5	Salinity (ppt)	9.69	1.00	9.69	1.00	9.69	1.00
V6	Access Value	0.4000	0.46	0.0001	0.10	0.4000	0.46
	Emergent Mars	sh HSI 🛛 =	0.25	EM HSI =	0.25	EM HSI =	0.46
	Open Water HS	6l =	0.27	OW HSI =	0.17	OW HSI =	0.25

Project: Sabine Marsh Creation - Cycle 6

Project Area: 478

FWP	_						
		TY	5	TY	20	TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	100	1.00	100	1.00		
V2	% Aquatic	0	0.10	0	0.10		
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	0	0.10	0	0.10		
V5	Salinity (ppt)	9.69	1.00	9.69	1.00		
V6	Access Value	0.4000	0.46	0.4000	0.46		
		EM HSI =	0.81	EM HSI =	0.81	EM HSI =	
		OW HSI =	0.25	OW HSI =	0.25	OW HSI =	

Project: Sabine Marsh Creation - Cycle 6

Project Area: 478

		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: Sabine Marsh Creation - Cycle 6

Future With	Future Without Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	8	0.25	1.98	
1	8	0.25	1.98	1.98
20	8	0.25	1.98	37.67
Max TY=	20		AAHUs =	1.98

Future With	Future With Project		Total	Cummulative	
ΤY	Marsh Acres	x HSI	HUs	HUs	
0	8	0.25	1.98		
1	51	0.25	12.97	7.43	
3	149	0.46	69.11	75.23	
5	478	0.81	385.14	416.75	
20	478	0.81	385.14	5777.09	
Max TY=	20		AAHUs	313.83	

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	313.83
B. Future Without Project Emergent Marsh AAHUs =	1.98
Net Change (FWP - FWOP) =	311.84

## AAHU CALCULATION - OPEN WATER

Project: Sabine Marsh Creation - Cycle 6

Future With	Future Without Project		Total	Cummulative	
TY	Water Acres	x HSI	HUs	HUs	
0	470	0.27	129.23		
1	470	0.27	129.23	129.23	
20	470	0.27	126.55	2429.88	
Max TY=	20		AAHUs =	127.96	

Future With	Future With Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	470	0.27	129.23	
1	0	0.17	0.00	56.13
3	0	0.25	0.00	0.00
5	0	0.25	0.00	0.00
20	0	0.25	0.00	0.00
Max TY=	20		AAHUs	2.81

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	2.81
B. Future Without Project Open Water AAHUs =	127.96
Net Change (FWP - FWOP) =	-125.15

TOTAL BENEFITS IN AAHUS DUE TO PROJECT						
A. Emergent Marsh Habitat Net AAHUs =	311.84					
B. Open Water Habitat Net AAHUs =	-125.15					
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	190.46					

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Sabine Marsh Creation - Cycle 7

Project Area: 451

Condition: Future Without Project

		TY	0	TY	1	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	5	0.15	5	0.15	5	0.15
V2	% Aquatic	0	0.10	0	0.10	0	0.10
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	44	0.67	44	0.67	41	0.63
V5	Salinity (ppt)	9.69	1.00	9.69	1.00	9.69	1.00
V6	Access Value	0.4000	0.46	0.4000	0.46	0.4000	0.46
	Emergent Marsh HSI =		0.27	EM HSI =	0.27	EM HSI =	0.27
	Open Water HS	SI =	0.27	OW HSI =	0.27	OW HSI =	0.27

Project: Sabine Marsh Creation - Cycle 7

Project Area: 451

FWOP	7			<b>T</b> 1/		<b>T</b> 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 =	

Project: Sabine Marsh Creation - Cycle 7

Project Area: 451

FWOP							
	]	TY		ТҮ		TY	
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent						
V2	% Aquatic						
V3	Interspersion	%		%		%	
	Class 1						
	Class 2						
	Class 3						
	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 =	

## WETLAND VALUE ASSESSMENT COMMUNITY MODEL Brackish Marsh

Project: Sabine Marsh Creation - Cycle 7

Project Area: 451

Condition: Future With Project

		TY	0	TY	1	TY	3
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	5	0.15	5	0.15	14	0.23
V2	% Aquatic	0	0.10	0	0.10	0	0.10
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	44	0.67	44	0.67	0	0.10
V5	Salinity (ppt)	9.69	1.00	9.69	1.00	9.69	1.00
V6	Access Value	0.4000	0.46	0.4000	0.46	0.0001	0.10
	Emergent Mars	sh HSI 🛛 =	0.27	EM HSI =	0.27	EM HSI =	0.27
	Open Water HS	SI =	0.27	OW HSI =	0.27	OW HSI =	0.17

Project: Sabine Marsh Creation - Cycle 7

Project Area: 451

FWP	_						
		TY	5	TY	7	TY	20
Variable		Value	SI	Value	SI	Value	SI
V1	% Emergent	33	0.40	100	1.00	100	1.00
V2	% Aquatic	0	0.10	0	0.10	0	0.10
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	0	0.10	0	0.10	0	0.10
V5	Salinity (ppt)	9.69	1.00	9.69	1.00	9.69	1.00
V6	Access Value	0.4000	0.46	0.4000	0.46	0.4000	0.46
		EM HSI =	0.48	EM HSI =	0.81	EM HSI =	0.81
		OW HSI =	0.25	OW HSI =	0.25	OW HSI =	0.25

Project: Sabine Marsh Creation - Cycle 7

Project Area: 451

FWP	<b>n</b> 1	(		r			
		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: Sabine Marsh Creation - Cycle 7

Future Witl	Future Without Project		Total	Cummulative
ΤY	Marsh Acres	x HSI	HUs	HUs
0	21	0.27	5.66	
1	21	0.27	5.66	5.66
20	21	0.27	5.66	107.50
Max TY=	20		AAHUs =	5.66

Future With	Project		Total	Cummulative
TY	Marsh Acres	x HSI	HUs	HUs
0	21	0.27	5.66	
1	21	0.27	5.66	5.66
3	54	0.27	14.47	20.14
5	150	0.48	71.25	79.09
7	451	0.81	363.38	401.45
20	451	0.81	363.38	4724.00
Max TY=	20		AAHUs	261.52

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Emergent Marsh AAHUs =	261.52
B. Future Without Project Emergent Marsh AAHUs =	5.66
Net Change (FWP - FWOP) =	255.86

## AAHU CALCULATION - OPEN WATER

Project: Sabine Marsh Creation - Cycle 7

Future With	out Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	430	0.27	117.82	
1	430	0.27	117.82	117.82
20	430	0.27	116.59	2226.97
Max TY=	20		AAHUs =	117.24

Future With	Project		Total	Cummulative
TY	Water Acres	x HSI	HUs	HUs
0	430	0.27	117.82	
1	430	0.27	117.82	117.82
3	0	0.17	0.00	102.44
5	0	0.25	0.00	0.00
7	0	0.25	0.00	0.00
20	0	0.25	0.00	0.00
Max TY=	20		AAHUs	11.01

NET CHANGE IN AAHUS DUE TO PROJECT	
A. Future With Project Open Water AAHUs =	11.01
B. Future Without Project Open Water AAHUs =	117.24
Net Change (FWP - FWOP) =	-106.23

TOTAL BENEFITS IN AAHUS DUE TO PROJECT	
A. Emergent Marsh Habitat Net AAHUs =	255.86
B. Open Water Habitat Net AAHUs =	-106.23
Net Benefits= (2.6xEMAAHUs+OWAAHUs)/3.6	155.28

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

27th Priority Project List Report

Appendix D

**Economic Analyses for Candidate Projects** 

## Appendix D Economic Analyses for Candidate Projects Table of Contents

Project Name Project Name	age
Candidate Projects	
Point aux Marchettes Shoreline ProtectionD	<b>)-</b> 1
Bayou Cane Marsh CreationD	)-2
East Delacroix Marsh Creation and TerracingD	)-3
Aid Breton Landbridge Marsh Creation and Terracing	<b>D-</b> 4
Breton Landbridge Marsh Creation (West)D	)-5
Grand Bayou Ridge and Marsh RestorationD	)-6
Northeast Turtle Bay Marsh Creation and Critical Area Shoreline ProtectionD	)-7
East Catfish Lake Marsh Creation and Shoreline Protection	<b>)-</b> 8
North Bayou Decade Ridge Restoration and Marsh Creation	<b>D-</b> 9
Sabine Marsh Creation Cycles 6 & 7D	<b>)-</b> 10

#### Coastal Wetlands Planning, Protection and Restoration Act Point aux Marchettes Shoreline Protection Project Priority List 27 (ver.070717)

Project Construction Years:	1	Total Project Years	21
Interest Rate	2.750%	Amortization Factor	0.06567
Fully Funded First Costs	\$24,215,633	Total Fully Funded Costs	\$42,889,765

Total Charges	Present Worth	Average Annual
First Costs Monitoring (State + Federal) State O & M Costs Other Federal Costs	\$23,795,282 \$355,348 \$9,119,354 \$453,446	\$1,562,677 \$23,336 \$598,884 \$29,779
Average Annual Cost	\$2,214,676	\$2,214,676
Average Annual Habitat Units	34.23	
Cost Per Habitat Unit	\$64,700	
Total Net Acres	138	

#### Coastal Wetlands Planning, Protection and Restoration Act Bayou Cane MC Project Priority List 27 (ver.070717)

Project Construction Years:	1	Total Project Years	21
Interest Rate	2.750%	Amortization Factor 0.0656	37
Fully Funded First Costs	\$32,678,395	Total Fully Funded Costs \$33,991,83	38

Total Charges	Present Worth	Average Annual
First Costs Monitoring (State + Federal) State O & M Costs Other Federal Costs	\$31,434,509 \$507,878 \$207,552 \$106,092	\$2,064,359 \$33,353 \$13,630 \$6,967
Average Annual Cost	\$2,118,309	\$2,118,309
Average Annual Habitat Units	111.75	
Cost Per Habitat Unit	\$18,956	
Total Net Acres	356	

#### Coastal Wetlands Planning, Protection and Restoration Act East Delacroix Marsh Creation and Terracing Project Priority List 27 (ver.070717)

Project Construction Years:	1	Total Project Years 21
Interest Rate	2.750%	Amortization Factor 0.06567
Fully Funded First Costs	\$33,703,914	Total Fully Funded Costs \$35,821,393

Total Charges	Present Worth	Average Annual
First Costs Monitoring (State + Federal) State O & M Costs Other Federal Costs	\$32,915,924 \$510,379 \$639,233 \$120,989	\$2,161,646 \$33,517 \$41,980 \$7,946_
Average Annual Cost	\$2,245,088	\$2,245,088
Average Annual Habitat Units	138.39	
Cost Per Habitat Unit	\$16,223	
Total Net Acres	307	

#### Coastal Wetlands Planning, Protection and Restoration Act Breton Marsh Creation and Terracing Project Priority List 27 (ver.070717)

Project Construction Years:	1	Total Project Years 21
Interest Rate	2.750%	Amortization Factor 0.06567
Fully Funded First Costs	\$39,572,268	Total Fully Funded Costs \$40,874,564

Total Charges	Present Worth	Average Annual
First Costs Monitoring (State + Federal) State O & M Costs Other Federal Costs	\$37,933,396 \$510,379 \$201,896 \$105,015	\$2,491,152 \$33,517 \$13,259 \$6,897
Average Annual Cost	\$2,544,825	\$2,544,825
Average Annual Habitat Units	121.25	
Cost Per Habitat Unit	\$20,988	
Total Net Acres	364	

#### Coastal Wetlands Planning, Protection and Restoration Act Breton Landbridge West Project Priority List 27 (ver.070717)

Project Construction Years:	1	Total Project Years	21
Interest Rate	2.750%	Amortization Factor	0.06567
Fully Funded First Costs	\$33,227,073	Total Fully Funded Costs	\$34,661,276

Total Charges	Present Worth	Average Annual
First Costs Monitoring (State + Federal) State O & M Costs Other Federal Costs	\$32,589,226 \$581,488 \$214,104 \$106,883	\$2,140,191 \$38,187 \$14,061 \$7,019
Average Annual Cost	\$2,199,458	\$2,199,458
Average Annual Habitat Units	122.48	
Cost Per Habitat Unit	\$17,958	
Total Net Acres	282	

#### Coastal Wetlands Planning, Protection and Restoration Act Grand Bayou Ridge and Marsh Restoration Project Priority List 27 (ver.070717)

Project Construction Years:	1	Total Project Years 21
Interest Rate	2.750%	Amortization Factor 0.06567
Fully Funded First Costs	\$38,337,080	Total Fully Funded Costs \$40,122,416

Total Charges	Present Worth	Average Annual
First Costs Monitoring (State + Federal) State O & M Costs Other Federal Costs	\$36,948,578 \$631,776 \$392,882 \$114,506	\$2,426,477 \$41,490 \$25,801 \$7,520
Average Annual Cost	\$2,501,288	\$2,501,288
Average Annual Habitat Units	155.11	
Cost Per Habitat Unit	\$16,126	
Total Net Acres	304	

#### Coastal Wetlands Planning, Protection and Restoration Act Northeast Turtle Bay MC Project Priority List 27 (ver.070717)

Project Construction Years:	1	Total Project Years 21
Interest Rate	2.750%	Amortization Factor 0.06567
Fully Funded First Costs	\$42,232,092	Total Fully Funded Costs \$44,109,317

Total Charges	Present Worth	Average Annual
First Costs Monitoring (State + Federal) State O & M Costs Other Federal Costs	\$40,481,402 \$510,379 \$657,741 \$123,249	\$2,658,484 \$33,517 \$43,195 \$8,094
Average Annual Cost	\$2,743,290	\$2,743,290
Average Annual Habitat Units	182.98	
Cost Per Habitat Unit	\$14,992	
Total Net Acres	372	

#### Coastal Wetlands Planning, Protection and Restoration Act East Catfish Lake MC and SP Project Priority List 27 (ver.070717)

Project Construction Years:	1	Total Project Years 21
Interest Rate	2.750%	Amortization Factor 0.06567
Fully Funded First Costs	\$34,624,890	Total Fully Funded Costs \$38,312,892

Total Charges	Present Worth	Average Annual
First Costs Monitoring (State + Federal) State O & M Costs Other Federal Costs	\$33,172,063 \$557,489 \$1,511,415 \$157,246	\$2,178,467 \$36,611 \$99,257 \$10,327
Average Annual Cost	\$2,324,662	\$2,324,662
Average Annual Habitat Units	128.91	
Cost Per Habitat Unit	\$18,033	
Total Net Acres	243	

#### Coastal Wetlands Planning, Protection and Restoration Act North Bayou Decade MC and RR Project Priority List 27 (ver.070717)

Project Construction Years:	1	Total Project Years 21
Interest Rate	2.750%	Amortization Factor 0.06567
Fully Funded First Costs	\$34,210,861	Total Fully Funded Costs \$36,196,906

Total Charges	Present Worth	Average Annual
First Costs Monitoring (State + Federal) State O & M Costs Other Federal Costs	\$33,003,448 \$601,514 \$581,427 \$120,938	\$2,167,394 \$39,502 \$38,183 \$7,942
Average Annual Cost	\$2,253,022	\$2,253,022
Average Annual Habitat Units	89.80	
Cost Per Habitat Unit	\$25,089	
Total Net Acres	267	

#### Coastal Wetlands Planning, Protection and Restoration Act Sabine MC Cycle 6 & 7 Project Priority List 27 (ver.070717)

Project Construction Years:	1	Total Project Years 21
Interest Rate	2.750%	Amortization Factor 0.06567
Fully Funded First Costs	\$13,309,758	Total Fully Funded Costs \$27,914,651

Total Charges	Present Worth	Average Annual
First Costs Monitoring (State + Federal) State O & M Costs Other Federal Costs	\$13,176,008 \$564,209 \$531,080 \$11,201,890	\$865,291 \$37,053 \$34,877 \$735,648
Average Annual Cost	\$1,672,868	\$1,672,868
Average Annual Habitat Units	345.74	
Cost Per Habitat Unit	\$4,839	
Total Net Acres	900	

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

27th Priority Project List Report

Appendix E

**Public Support for Candidate Projects** 

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

## 27th Priority Project List Report

## Appendix E

## **Public Support for Candidate Projects**

## <u>Pointe aux Marchettes Shoreline Protection and Terracing; East Delacroix Marsh Creation</u> <u>and Terracing</u>

- Bill Cassidy U.S. Senator (LA); United States Senate
- John Kennedy U.S. Senator (LA); United States Senate
- Steve Scalise Member of Congress; Congress of the United States, House of Representatives
- Ray Garofalo, Jr. Chairman, House Committee on Civil Law and Procedure; Louisiana House of Representatives
- James "Jay" Prather, III Vice-President; ELOS Environmental, LLC
- Guy McInnis Parish President; St. Bernard Parish Government

## Sabine Marsh Creation, Cycles 6 & 7

- Kevin D. Guidry President; Calcasieu Parish Police Jury
- Kathy P. Smith Parish Secretary; State of Louisiana Parish of Calcasieu
- Ryan Bourriaque President; Chenier Plain CRPA
- Curtis Fountain President; Cameron Parish Police Jury
- George Swift President/CEO; SWLA Economic Development Alliance

## **Cameron-Creole Freshwater Introduction**

• Stuart Weatherford – President or Presiding Officer; City of Lake Charles

## Caminada Headlands Back Barrier Marsh Creation, Increment I

 Edward Wisner Donation Advisory Committee: Zach Butterworth (Chairman and Representative for the Trustee; L. Amanda Phillips (Secretary Treasurer and Land Manager); Michael J. Peneguy (Representative for the Wisner Interest); Sen. Edwin R. Murrary (Representative for Charity Hospital/ LSU); Patrick J. Norton (Representative for Tulane University); Major Ernest Hull (Representative for the Salvation Army)

## <u>Three (3) projects in the Calcasieu-Sabine Basin and the Cameron-Creole Watershed for</u> <u>Phase II</u>

• Dennis Scott – President; Calcasieu Parish Police Jury

## **Cameron-Creole Freshwater Introduction**

• Kathy P. Smith – Parish Secretary; State of Louisiana Parish of Calcasieu

## **Cameron-Creole Watershed Grand Bayou Marsh Creation**

• Kathy P. Smith – Parish Secretary; State of Louisiana Parish of Calcasieu

## **Oyster Bayou Marsh Restoration**

• Kathy P. Smith – Parish Secretary; State of Louisiana Parish of Calcasieu

# **Bayou Grande Chenier Marsh & Ridge Restoration BA-173 Construction Funding and BA-04-C plan development funding**

• Camille Jones Strachan – Corporate Secretary; Conner & Strachan, L.L.P.

# **PPL 27 SUPPORT LETTERS**



WASHINGTON, DC OFFICE: SUITE SH-520 HART SENATE OFFICE BUILDING WASHINGTON, DC 20510 (202) 224-5824

July 7, 2017

# United States Senate

COMMITTEES: FINANCE HEALTH, EDUCATION, LABOR, AND PENSIONS ENERGY AND NATURAL RESOURCES VETERANS' AFFAIRS JOINT ECONOMIC COMMITTEE

DC-

20-

DPN-

Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Task Force Attn: Colonel Michael Clancy U.S. Army Corps of Engineers New Orleans District 7400 Leake Avenue New Orleans, LA 70118

Dear Members,

I respectfully ask that you favorably consider the following projects for inclusion in CWPPRA Priority Project List 27: the Point aux Marchettes Shoreline Protection and Terracing project (Pontchartrain Basin).and the East Delacroix Marsh Creation and Terracing project (Breton Sound Basin).

The Point aux Marchettes Shoreline Protection and Terracing project would protect approximately 41,000 feet of shoreline and 522 acres of marsh habitat. The East Delacroix Marsh Creation and Terracing project would create and nourish approximately 375 acres of marsh and construct nearly 13,860 feet of terraces. Continued erosion and natural disasters have led to the rapid degradation of Louisiana's coastal ecosystem resulting in growing threats to South Louisiana communities from future flooding and hurricane storm surge. Supporting these projects would be extremely helpful in restoring our State's wetlands and mitigating the damages to our coastal ecosystem from future natural disasters.

I appreciate your consideration of these worthwhile coastal restoration projects and feel free to contact my office if you have any additional questions.

Sincerely,

Bill Cassidy, M.D.

Bill Cassidy M.D. U.S. Senator (LA)

US AMO COIDS OF LIGHT60/S New Orleans Diskict

JUL 18 2017

3600 JACKSON STREET SUITE 115A ALEXANDRIA, LA 71301 (318) 448-7176

5555 HILTON AVENUE SUITE 100 BATON ROUGE, LA 70808 (225) 929-7711

101 LA RUE FRANCE SUITE 505 LAFAYETTE, LA 70508 (337) 261-1400

**1 LAKESHORE DRIVE SUITE 1155** LAKE CHARLES, LA 70629 (337) 261-1400

3421 N. CAUSEWAY BOULEVARD 1651 LOUISVILLE AVENUE SUITE 204 METAIRIE, LA 70002 (504) 838-0130

SUITE 123 MONROE, LA 70201 (318) 324-2111

6425 YOUREE DRIVE SUITE 415 SHREVEPORT, LA 71105 (318) 798-3215

JOHN KENNEDY LOUISIANA SUITE SR-383

RUSSELL BUILDING WASHINGTON, DC 20510 (202) 224–4623

# United States Senate

17-030

June 29, 2017

APPROPRIATIONS BANKING, HOUSING, AND URBAN AFFAIRS BUDGET JUDICIARY SMALL BUSINESS AND ENTREPRENEURSHIP

COMMITTEES

Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Task Force ATTN: Colonel Michael Clancy U.S. Army Corps of Engineers New Orleans District 7400 Leake Avenue New Orleans, LA 70118

Dear Members:

I respectfully ask that you carefully consider the following projects for CWPPRA Priority Project List 27: the Point aux Marchettes Shoreline Protection and Terracing project (Ponchartrain Basin) and the East Delacroix Marsh Creation and Terracing project (Breton Sound Basin).

These projects are designed to protect approximately 41,000 feet of critical shoreline and 522 acres of marshland. These projects would also create and nourish approximately 375 acres of marsh and construct nearly 13,860 feet of terraces. With the rapid degradation to our coastal ecosystem, our communities in South Louisiana are exposed to the growing threat to hurricane storm surge. These projects would go a long way in restoring our wetlands and mitigating against future natural disasters.

I am asking for your careful attention and consideration for these vital projects in coastal Louisiana. Please contact my office with any questions you may have.

Sincerely.

John Kennedy United States Senator (LA)



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STEVE SCALISE 1ST DISTRICT, LOUISIANA

MAJORITY WHIP

THE COMMITTEE ON ENERGY AND COMMERCE

17-032

**Congress of the United States** House of Representatives

Washington, DC 20515–1801

October 23, 2017

2338 RAYBURN HOUSE OFFICE BUILDING WASHINGTON, DC 20515–1801 (202) 225–3015

110 VETERANS BOULEVARD, SUITE 500 METAIRIE, LA 70005 (504) 837–1259

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8026 MAIN STREET, SUITE 700 HOUMA, LA 70360 (985) 879–2300

1514 MARTENS DRIVE, SUITE 10 HAMMOND, LA 70401 (985) 340–2185

DD-ZCCA DPM-@mw PAR-INMAN

Coastal Wetlands Planning, Protection and Restoration Act Task Force (CWPPRA) Attention: Colonel Michael Clancy U.S. Army Corps of Engineers New Orleans District 7400 Leake Avenue New Orleans, LA 70118

Dear Colonel Clancy:

I am writing to you regarding your consideration of St. Bernard Parish Government's Point Aux Marchettes Shoreline Protection and Terracing and East Delacroix Marsh Creation and Terracing Projects (CWPPRA PPL27). These projects are designed to protect and restore 41,000 feet of critical coastline and 522 acres of marshland. Further, these projects have been included in various coastal restoration planning efforts for decades to restore wetlands and mitigate against future natural disasters.

I have an interest in this matter and would appreciate your keeping me informed of the progress or outcome of the application. Knowing funds are limited and projects are reviewed through a competitive process, I am respectfully hoping for full and fair consideration of the application within the applicable laws and regulations.

If you have any questions, please contact me through Pam Marphis in my Metairie District office at 110 Veterans Memorial Boulevard, Suite 500, Metairie, LA 70005, (504) 837-1259.

Thank you for your time and attention.

Sincerely,

teve Scaline

Steve Scalise Member of Congress

US Army Corps of Engineers New Orleans District OCT 25 2017

SS:pm

## LOUISIANA HOUSE OF REPRESENTATIVES

District Office 100 Port Boulevard, 2<sup>nd</sup> Floor Chalmette, Louisiana 70043 (504) 277-4729 • Fax (504) 278-6597 GarofaloR@legis.la.gov State Capitol Office 900 N. Third Street, Room 1212 Baton Rouge, Louisiana 70802 (225) 342-5105 • Fax (225) 342-6282



Chairman, House Committee on Civil Law and Procedure House Leadership Committee CPRA Finance Corporation Governor's Coastal Advisory Commission Louisiana State Law Institute Louisiana International Gulf Transfer Terminal Board

Raymond E. "Ray" Garofalo, Jr. State Representative – District 103

Chairman, House Committee on Civil Law and Procedure

October 20, 2017

Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Task Force ATTN: Colonel Michael Clancy U.S. Army Corps of Engineers New Orleans District 7400 Leake Avenue New Orleans, LA 701

**RE:** CWPPRA PPL27:

Point aux Marchettes Shoreline Protection and Terracing, and East Delacroix Marsh Creation and Terracing Projects

Dear Colonel Clancy:

I respectfully ask that you and the CWPPRA Task Force carefully consider the following projects for CWPPRA Priority Project List 27: the Point aux Marchettes Shoreline Protection and Terracing project (Ponchartrain Basin) and the East Delacroix Marsh Creation and Terracing project (Breton Sound Basin).

These projects are designed to protect approximately 41,000 feet of critical shoreline and 522 acres of marshland. These projects would also create and nourish approximately 375 acres of marsh and construct nearly 13 ,860 feet of terraces. With the rapid degradation to our coastal ecosystem, our communities in South Louisiana are exposed to the growing threat to hurricane storm surge. These projects would go a long way in restoring our wetlands and mitigating against future natural disasters.

For these reasons, I offer this letter of support. If I can be of any further assistance, please do not hesitate to contact me.

Sincerely Ray Gatofalo, Jr. House Committee on Civil Law and Procedure

REG/js



November 1, 2017

Colonel Michael N. Clancy District Commander - New Orleans District U.S. Army Corps of Engineers 7400 Leake Avenue New Orleans, LA 70118

Mr. William K. Honker U.S. Environmental Protection Agency Region 6 - Water Division (6WQ) 1445 Ross Avenue Dallas, Texas 75202

Mr. Kevin Norton State Conservationist Natural Resources Conservation Service 3737 Government Street Alexandria, LA 71302 Mr. Johnny Bradberry Executive Assistant to the Governor for Coastal Activities Governor's Office of Coastal Activities Capital Annex 1051 North Third Street, Suite 138 Baton Rouge, LA 70802

Mr. Jeff Weller Program Supervisor (AR, LA, MS, AL) U.S. Fish and Wildlife Service Louisiana Field Office 646 Cajundome Blvd., Suite 400 Lafayette, Louisiana 70506

Mr. Christopher Doley Director, NOAA Restoration Center National Oceanic & Atmospheric Administration NMFS / NOAA Fisheries 1315 East-West Highway, Room 14853 Silver Spring, MD 20910

Re: Letter of Support Point Aux Marchettes Shoreline Protection and Terracing Project 2017 CWPPRA PPL 27 - Region 1 - Pontchartrain Basin

CWPPRA Task Force Members,

On behalf of Biloxi Marsh Lands Corporation and in my capacity of Vice President of ELOS Environmental, LLC, please allow this letter to voice my support for the Point Aux Marchettes Shoreline Protection and Terracing project located in the Biloxi Marsh Complex in St. Bernard Parish, Louisiana.

I offer the following points supporting this project:

#### MRGO Ecosystem Restoration Plan

Point Aux Marchettes was previously included in the MRGO Ecosystem Plan, which garnered considerable accolades and backing for its comprehensive approach to restoration and conservation of habitat affected by the MRGO. Regardless of the statutory interpretation battles that hamper that plan's implementation, Point Aux Marchettes' function and purpose of effectively restoring near shore habitat and stopping land loss are not questioned.

#### **Biloxi Marsh Sustainability**

The Biloxi Marsh Complex is sustainable and resilient. Projects that seek to protect an area from shoreline erosion that, absent that corrosive factor, would be sustainable or even more so thrive, provide a long-term prognosis far better than many of other restoration projects currently considered or previously approved.

#### **Biloxi Marsh Storm Surge Protection**

The BMC offers vital storm surge and tropical event protection and mitigation features for the greater New Orleans area, which includes the Northshore, as well as the Mississippi Coast. The BMC's 200,000+ acres of habitat are an essential part of our multiple lines of defense strategy that will ensure a better likelihood of long term protection and sustainability for the region.

#### Local and Personal Support

Earlier this year, the project was voted #1 for the Pontchartrain Basin, evidencing strong local support from the parishes for its implementation. As an avid recreational user of this area for fishing, hunting, and other recreational activities, I am one of the thousands that enjoy and utilize this ecosystem, including the State's Biloxi Wildlife Management Area (BWMA), and in doing so support the local economy.

I wholeheartedly support the Point Marchettes project and respectfully request its selection by this Task Force.

Very truly yours,

Vitto

James "Jay" Prather, III Vice-President ELOS Environmental, LLC



St. Bernard Parish Government

8201 West Judge Perez Drive Chalmette, Louisiana, 70043 (504) 278-4227 Fax (504) 278-4330 www.sbpg.net

Guy McInnis Parish President

November 15, 2017

Colonel Michael Clancy District Engineer, New Orleans District United States Army Corps of Engineers 7400 Leake Avenue New Orleans, Louisiana 70118

Re: CWPPRA PPL27: Point aux Marchettes Shoreline Protection and Terracing and East Delacroix Marsh Creation and Terracing Projects

Dear Colonel Clancy:

St. Bernard Parish Government is proud to have worked with the United States Fish and Wildlife Service, the National Oceanic and Atmospheric Administration, and the National Marine Fisheries Service to nominate the above referenced projects for the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Project Priority List (PPL) 27. As the below tables indicate, both projects have been included in various coastal restoration planning efforts for decades. We are truly excited by the prospect of finally having these long-anticipated projects funded.

#### Point aux Marchettes Shoreline Protection and Terracing

Voted #7 by the CWPPRA Technical Committee	April 2017
Endorsed by 18 NGOs and Others	March 2017
Voted #1 (PPL 27) in the Lake Pontchartrain Basin	February 2017
Consistent with the 2017 CPRA Master Plan	January 2017
Designated as a Tier 1 Priority by St. Bernard	August 2016
Included in the 2012 CPRA Master Plan	March 2012
Included in the USACE MRGO Restoration Plan	June 2011
Included in the 2007 CPRA Master Plan	April 2007
Included in the Biloxi Marsh Corp. Restoration Plan	June 2006
Included in LPBF Multiple Lines of Defense Plan	January 2006

#### East Delacroix Marsh Creation and Terracing

Voted #5 by the CWPPRA Technical Committee	April 2017
Endorsed by 6 NGOs and Others	March 2017
Voted #2 (PPL 27) in the Breton Sound Basin	February 2017
Included in the 2017 CPRA Master Plan	January 2017
Designated as a Tier 1 Priority by St. Bernard	December 2016
Included in the USACE MRGO Restoration Plan	June 2011
Included in the Biloxi Marsh Corp. Restoration Plan	June 2006

The following coastal stakeholders have also recently endorsed the projects:

#### **Point aux Marchettes Shoreline Protection and Terracing**

US Senator Bill Cassidy US Senator John Kennedy US Congressman Steve Scalise Louisiana State Senator Sharon Hewitt Louisiana State Representative Ray Garafolo State of Mississippi American Rivers Citizens Against Widening the Industrial Canal Environmental Defense Fund Global Green Gulf Restoration Network Lake Pontchartrain Basin Foundation Levees.org Louisiana Environmental Action Network Lower 9th Ward Center for Sustainable Engagement and Development Lower Mississippi Riverkeeper Mary Queen of Vietnam Community Development Corporation National Wildlife Federation Sierra Club Delta Chapter Biloxi Marsh Lands Corporation Save Louisiana Coalition Foundation for Louisiana Meraux Foundation

#### **East Delacroix Marsh Creation and Terracing**

US Senator Bill Cassidy US Senator John Kennedy US Congressman Steve Scalise Louisiana State Senator Sharon Hewitt Louisiana State Representative Ray Garafolo Lower 9<sup>th</sup> Ward Center for Sustainable Engagement and Development Biloxi Marsh Lands Corporation Foundation for Louisiana Save Louisiana Coalition Meraux Foundation We respectfully request your continued support for these projects as they navigate the PPL 27 process. The CWPPRA Technical Committee will be making its final recommendations to the CWPPRA Task Force on December 7, 2017. In the interim, please contact John Lane (jlane@sbpg.net) if you have any questions regarding the proposed projects.

Thank you for your time and consideration.

Sincerely,

1 4 f,

Guy McInnis Parish President St. Bernard Parish Government



Kevin D. Guidry President

> Guy Brame Vice President

Bryan C. Beam Parish Administrator

> Kevin White District 1

Calvin Collins District 2

Shelly Mayo District 3

Tony Guillory District 4

Charles S. Mackey, D.D.S. District 5

> Dennis Scott District 6

Chris E. Landry District 7

> Guy Brame District 8

Kevin D. Guidry District 9

Shalon Latour District 10

Sandy Treme District 11

Judd Bares District 12

Francis Andrepont District 13

> Hal McMillin District 14

Les Farnum District 15 CALCASIEU PARISH POLICEJU

P.O. Drawer 3287 • 1015 Pithon Street • Lake Charles, Louisiana 70602-3287 337/721-3500 • Fax 337/437-3399 www.cppj.net

## **MEMORANDUM**

Members of CWPPRA Task Force

FROM: Kevin D. Guidry, President Kar Calcasieu Parish Police Jury

DATE: July 13, 2017

Support of Sabine Marsh Creation, Cycles 6 & 7 Project

Enclosed is a certified copy of a resolution adopted by the Calcasieu Parish Police Jury on July 6, 2017, wherein the Police Jury respectfully requests support by the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force for Phase I funding needed for engineering and design of the Sabine Marsh Creation, Cycles 6 & 7 Project in the Calcasieu-Sabine Basin.

Your support of the Police Jury in this matter would be greatly appreciated.

ars/s

TO:

RE:

Enclosure

cc: Ms. Laurie Cormier, Division of Planning and Development



RESOLUTION

WHEREAS, the Calcasieu-Sabine Basin marshes have experienced an increased inundation of saltwater due to Hurricanes Rita and Ike, and it is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts; and

WHEREAS, the marsh area is experiencing degradation due to saltwater intrusion and freshwater loss, resulting in the conversion of vegetated intermediate marsh to large shallow open water areas; and

WHEREAS, this marsh restoration project (Sabine Marsh Creation, Cycles 6 and 7) would disperse dredge material as a result of maintenance dredging of the Calcasieu River by utilizing the 3.57 mile permanent pipeline, with specific goals of the project to restore coastal marsh habitat through the creation of approximately 1000 acres of brackish intertidal marsh habitat and the dredge material will be contained by earthen dikes.

NOW, THEREFORE,

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**BE IT RESOLVED BY THE POLICE JURY OF CALCASIEU PARISH, LOUISIANA,** convened in Regular Session on the 6<sup>th</sup> day of July, 2017, that it does hereby support the "Sabine Marsh Creation, Cycles 6 and 7 Project" for Phase I funding from the Coastal Wetland Planning, Protection and Restoration (CWPPRA) Task Force for engineering and design of the project which is located in Cameron Parish on the Sabine National Wildlife Refuge, west of Highway 27.

**BE IT FURTHER AND FINALLY RESOLVED** that certified copies of this resolution be forwarded to members of CWPPRA Task Force fo support in this matter.

THUS DONE AND PASSED on the date above inscribed

\* \* \* \* \* \* \* \* \* \* \* \*

STATE OF LOUISIANA PARISH OF CALCASIEU

I HEREBY CERTIFY that the foregoing is a true and correct copy of the original resolution as adopted by the Calcasieu Parish Police Jury in Regular Session convened on the 6<sup>th</sup> day of July, 2017.

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IN TESTIMONY WHEREOF witness my official signature and the seal of the Parish of Calcasieu, Louisiana, on this the the day of

1

. Smith, Parish Secretary

ar

Kathy P

#### RESOLUTION

#### CHENIER PLAIN COASTAL RESTORATION & PROTECTION AUTHORITY

WHEREAS, the Chenier Plain Coastal Restoration & Protection Authority (Chenier Plain Authority) was created pursuant to the provisions of the Louisiana Constitution of 1974, Article VI, Sections 38, 38.1 and 44, and La. R.S. 38:329.5; and

WHEREAS, the Chenier Plain Authority is a political subdivision of the State of Louisiana, and through its board of commissioners, is organized with the primary duty to establish, construct, operate, or maintain flood control works as they relate to hurricane protection, tidewater flooding, saltwater intrusion, and conservation, and a secondary duty to establish flood control, adequate drainage relating to tidal or riverine flooding, and water resources development including but not limited to construction of reservoirs, diversion canals, gravity and pump drainage systems, erosion control measures, and marsh management; and

WHEREAS, the Chenier Plain Authority is inclusive of the Parishes of Calcasieu, Cameron, & Vermilion; and

WHEREAS, marsh restoration is needed in the Calcasieu-Sabine Basin; and

**WHEREAS**, the Calcasieu-Sabine Basin marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

WHEREAS, the project area is experiencing marsh degradation due to saltwater intrusion and freshwater loss. This has resulted in the conversion of vegetated intermediate marsh to large shallow open water areas, and

**WHEREAS**, this marsh restoration project would disperse dredge material as a result of maintenance dredging of the Calcasieu River by utilizing the 3.57 mile permanent pipeline. Specific goals of the project are to restore coastal marsh habitat through the creation of approximately 1000 acres of brackish intertidal marsh habitat. The dredge material will be contained by earthen dikes; and

**NOW, THEREFORE BE IT RESOLVED**, by the Chenier Plain Coastal Restoration & Protection Authority on this 20 day of June 2017, that the Executive Director is hereby authorized, empowered and directed to forward this Resolution of support for the "Sabine Marsh Creation Cycles 6 & 7 Project" to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

**BE IT FURTHER RESOLVED**, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, are requested to support the "Sabine Marsh Creation Cycles 6 & 7 Project" for Phase I Funding to engineer and design this project.

**THUS DONE AND APOTED** by a unanimous vote of the Chenier Plain Coastal Restoration & Protection Authority, in regular session convened on this <u>20 June 2017</u>.

I hereby certify that the above is a true and correct copy of a resolution duly adopted by the Chenier Plain Coastal Restoration and Protection Authority Board at its meeting of June 20, 2017, Abbeville, Louisiana, at which a quorum was present.

APPROVED:

ATTEST:

RVAN BOURRIAQUE, PRESIDENT CHENIER PLAIN CRPA



DAVID MINTON, SECRETARY

CURTIS FOUNTAIN PRESIDENT

JOE DUPONT VICE PRESIDENT

RYAN BOURRIAQUE Parish Administrator

DARRELL WILLIAMS SECRETARY/ASSISTANT ADMINISTRATOR

KATIE ARMENTOR TREASURER



P.O. BOX 1280 CAMERON, LA 70631 (337) 775-5718 (337) 775-5567 FAX www.parishofcameron.net

DISTRICT 1 CURTIS FOUNTAIN DISTRICT 2 ANTHONY HICKS DISTRICT 3 KIRK QUINN DISTRICT 4 TERRY BEARD DISTRICT 5 DAVY L. DOXEY DISTRICT 6 JOE DUPONT DISTRICT 7 DARRYL FARQUE DISTRICT 8 LAWRENCE FAULK, JR.

#### RESOLUTION

**RESOLUTION NO. 1058** 

### STATE OF LOUISIANA PARISH OF CAMERON

WHEREAS, marsh restoration is needed in the Calcasieu-Sabine Basin; and

WHEREAS, the Calcasieu-Sabine Basin marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike and it is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts; and

WHEREAS, the project area is experiencing marsh degradation due to saltwater intrusion and freshwater loss. This has resulted in the conversion of vegetated intermediate marsh to large shallow open water areas; and

WHEREAS, a proposed marsh restoration project would disperse dredge material as a result of maintenance dredging of the Calcasieu River by utilizing the 3.57 mile permanent pipeline. Specific goals of the project are to restore coastal marsh habitat through the creation of approximately 1000 acres of brackish intertidal marsh habitat. The dredge material will be contained by earthen dikes;

**NOW, THEREFORE, BE IT RESOLVED,** by the Cameron Parish Police Jury on this 13<sup>th</sup> day of July 2017, that the Secretary is hereby authorized, empowered and directed to forward this Resolution of support for the "Sabine Marsh Creation Cycles 6 & 7 Project" to the Coastal Wetland Planning, Protection and Restoration Act Task Force; and

**BE IT FURTHER RESOLVED,** that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, is requested to support the "Sabine Marsh Creation Cycles 6 & 7 Project" for Phase I Funding to engineer and design this project.

**THUS DONE AND ADOPTED** by a the following votes of the Cameron Parish Police Jury, in regular session convened on this July 13, 2017.

- YEAS: Mr. Davy Doxey, Mr. Anthony Hicks, Mr. Terry Beard, Mr. Kirk Quinn, Mr. Curtis Fountain, Mr. Joe Dupont, Mr. Darryl Farque, and Mr. Lawrence Faulk
- NAYS: None

ABSENT: None

APPROVED:

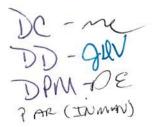
CURTIS FOUNTAIN, PRESIDENT

ATTEST: DARRELL WILLIAMS, SECRETARY

GATEWAY TO THE GULF







July 3, 2017

Colonel Michael Clancy, Member Coastal Wetland Planning, Protection and Restoration Act Task Force U.S. Army Corps of Engineers, New Orleans District 7400 Leake Avenue New Orleans, Louisiana 70118

Dear Colonel Clancy,

The Board of Directors for the Chamber SWLA at its June 19, 2017 regular meeting passed the attached resolution. This resolution urges your task force to begin the planning for coastal restoration on the Calcasieu/Sabine Basin wetlands. The Chamber SWLA is composed of more than 1500 of the top businesses in the five parish region of Allen, Beauregard, Calcasieu, Cameron, and Jefferson Davis.

The erosion and depletion of coastal wetlands are top concerns for the citizens and businesses in Southwest Louisiana. We call upon you, in the important work that your taskforce does to protect our natural resources, to see that our region of the state is not forgotten nor delayed in the coastal restoration projects you manage.

If you desire additional information, please contact me.

Sincerely,

George Swift, President/CEO Enclosure (1)





4310 Ryan Street • Lake Charles, Louisiana Mailing Address: PO Box 3110, Lake Charles, LA 70602-3110 Phone: 337.433.3632 • Fax: 337.436.3727 www.allianceswla.org



### CHAMBER SOUTHWEST LOUISIANA BOARD LAKE CHARLES, LOUISIANA

#### **RESOLUTION 06-19-2017**

WHEREAS, marsh restoration is needed in the Calcasieu-Sabine Basin; and

WHEREAS, the Calcasieu-Sabine Basin marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike and it is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts; and

WHEREAS, the project area is experiencing marsh degradation due to saltwater intrusion and freshwater loss. This has resulted in the conversion of vegetated intermediate marsh to large shallow open water areas; and

WHEREAS, a proposed marsh restoration project would disperse dredge material as a result of maintenance dredging of the Calcasieu River by utilizing the 3.57 mile permanent pipeline. Specific goals of the project are to restore coastal marsh habitat through the creation of approximately 1000 acres of brackish intertidal marsh habitat. The dredge material will be contained by earthen dikes;

**NOW, THEREFORE BE IT RESOLVED**, by the Chamber SWLA on this 19<sup>th</sup> day of June 2017, that the President is hereby authorized, empowered and directed to forward this Resolution of support for the "Sabine Marsh Creation Cycles 6 & 7 Project" to the Coastal Wetland Planning, Protection and Restoration Act Task Force; and

**BE IT FURTHER RESOLVED**, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, is requested to support the "Sabine Marsh Creation Cycles 6 & 7 Project" for Phase I Funding to engineer and design this project.

ATTEST:

This Resolution was declared adopted by the Chamber Southwest Louisiana Board at its meeting this 19<sup>th</sup> day of June, 2017.

George Swift, President/CEO SWLA Economic Development Alliance

DATE

Us Amy Consol Engineers



4310 Ryan Street • Lake Charles, Louisiana Mailing Address: PO Box 3110, Lake Charles, LA 70602-3110 Phone: 337.433.3632 • Fax: 337.436.3727 www.allianceswla.org



Signature Copy

File Number: 445-14

Enactment Number: 178-14

A resolution to the Coastal Wetland Planning, Protection and Restoration Act Task Force requesting their support of the "Cameron-Creole Freshwater Introduction Project" (CS-49)

WHEREAS, freshwater introduction is needed in the Cameron Creole Watershed; and

WHEREAS, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricane Rita and Hurricane Ike. It is unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts, and

WHEREAS, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway, and

WHEREAS, this freshwater introduction project would restore the function, value, and sustainability to approximately 22,247 acres of marsh and open water by improving hydrologic conditions via freshwater input and increasing organic productivity.

NOW, THEREFORE BE IT RESOLVED, by the Lake Charles City Council on this 3rd of September, 2014, the Secretary is hereby authorized, empowered and directed to forward this Resolution of support for the "Cameron-Creole Freshwater Introduction Project" (CS-49) to the Coastal Wetland Planning, Protection and Restoration Act Task Force.

BE IT FURTHER RESOLVED, that the Coastal Wetland Planning, Protection and Restoration Act Task Force, through this Resolution, are requested to support the "Cameron-Creole Freshwater Introduction Project" (CS-49) for Phase II Funding to construct this project.

At a meeting of the City Council on 9/3/2014, this Resolution was adopted by the following vote.

For: 7 Stuart Weatherford, Mark Eckard, John leyoub, Rodney Geyen, Dana Carl Jackson, Luvertha August, and Mary Morris

Against: 0 Absent: 0

Passed and Adopted

Most O

Date

Stuart Weatherford, President or Presiding Officer

Attesť

F. Thibodeaux, Clerk of the Council

Date

# PHASE II SUPPORT LETTERS

#### EDWARD WISNER DONATION ADVISORY COMMITTEE

L. AMANDA PHILLIPS SECRETARY TREASURER AND LAND MANAGER

935 GRAVIER STREET SUITE 825 NEW ORLEANS, LA 70112 (504) 210-1152 FAX (504) 210-1156 WISNERDONATION@AOL.COM

MAILING ADDRESS P. O. BOX 52204 NEW ORLEANS, LA 70152-2204 Wisner

REPRESENTING CHARITY HOSPITAL / MEDICAL CENTER OF LOUISIANA CITY OF NEW ORLEANS THE SALVATION ARMY TULANE UNIVERSITY THE WISNER FAMILY

26 September 2017

Colonel Michael N. Clancy District Commander US Army Corps of Engineers, New Orleans District Executive Office 7400 Leake Avenue New Orleans, LA 70118

#### RE: CAMINADA HEADLANDS BACK BARRIER MARSH CREATION, INCREMENT I (BA-171) VOTE FOR PHASE II CONSTRUCTION FUNDING LAFOURCHE PARISH, LOUISIANA

Dear Colonel Clancy and Members of the CWPPRA Task Force,

The Caminada Headland is one of the last natural land form barriers that mitigates storm-surge flooding, coastal erosion, land retreat and sea level rise. It also has the highest rates of erosion of any region in the Nation due to its geologic character, frequent storms, rapid land subsidence, and global sea level rise. Once it is gone, the wetlands behind it will submerge and the coastal protection given to the other natural land forms and the man-made infrastructure of southeastern Louisiana will be in imminent danger.

Long-term viability of Port Fourchon, Highway LA 1 (the only way in and out of Grand Isle), commercial enterprises, and residences depend on protecting and preserving the Headland. The impacts are not just local: 18-20% of the Nation's oil and gas supply comes through and over this Headland.

The Headland is home to endangered and threatened species and critical habitat for Piping Plovers; essential fish habitat; and strong stands of black mangroves, which fortify the remaining land masses. The environmental and financial importance of this area was recognized by the Louisiana Coastal Ecosystem Restoration (LCA) Study's Barataria Basin Barrier Shoreline Restoration Project (BBBS), which was authorized under WRDA 2007. BBBS is one of the top 5 LCA projects.

The beach and dune features of the Caminada Headland were restored using State Surplus funds, CIAP funds, and a grant from the National Fish and Wildlife Foundation's Gulf Environmental Benefit Fund. State project BA-45 Caminada Headland Beach and Dune (CAM I) project was completed in December 2014 for \$70 million dollars. State project BA-143 Caminada Headland Beach and Dune (CAM II) was completed in December 2016 for \$146 million dollars. Page 2 Colonel Michael N. Clancy 26 September 2017

The State of Louisiana has invested a total of \$216 million in the Caminada Headland, which clearly indicates its importance to the State. The BA-171 project would protect the State's massive investment by extending CAM I's life by providing a platform on which the beach and dune can migrate and accumulate. Without the BA-171 project, the 3,310,000 cubic yards of sand used to rebuild CAM I will be lost in the open water and lose functionality. Recent storms, such as Hurricane Harvey, are already eroding the State's investment in this area (see photos below).

The Edward Wisner Donation (Wisner) is a established in 1914, which owns approximately 36,000 acres of coastal wetlands in the Fourchon and Leeville areas of Lafourche Parish, including much of the area that would be restored with BA-171. Wisner has watched this area degrade and has fought for it to be restored and to be protected for decades.

Wisner is committed to this project. Wisner signed a 30-year servitude to the State for this project, effective July 2014. But time is of the essence, and not just because of the reasons listed above. If a construction contract for this project has not been awarded by July 31, 2019, this servitude terminates.

Your vote in favor of BA-171 for construction funding is greatly appreciated! Thank you for your consideration.

Sincerely,

Zach Butterworth Chairman and Representative for the Trustee

L. Amanda Phillips Secretary Treasurer and Land Manager

Michael J. Peneguy

Michael J. Peneguy Representative for the Wisner Interest

Patrick J. Norton Representative for Tulane University

Sen. Edwin R. Murrary

Representative for Charity Hospital/LSU

Major Ernest Hull Representative for the Salvation Army

Page 3 Colonel Michael N. Clancy 26 September 2017



Caillouet Land Corportion/Wisner Property Line (Both pictures taken September 7, 2017) The signs circled in yellow are the same signs.



*Eastern End of Geotubes Note the "riverbed" developing behind the GeoTube.* 



Eastern End of GeoTubes and Caillouet Land Corporation/Wisner Property Line – September 9, 2015

Cc: Ms. Renee Bennett, Louisiana Coastal Protection and Restoration Authority Mr. Adrian Chavarria, Environmental Protection Agency, Region 6 Mr. Brad Inman, CWPPRA Program Manager



.

Dennis Scott President

Tony Guillory Vice President

Bryan C. Beam Parish Administrator

> Shannon Spell District 1

James L. Mayo District 2

Elizabeth Conway Griffin District 3

> Tony Guillory District 4

Nic Hunter District 5

Dennis Scott District 6

Chris E. Landry District 7

> Guy Brame District 8

Kevin Guidry District 9

Tony Stelly District 10

Sandy Treme District 11

Ray Taylor District 12

Francis Andrepont District 13

> Hal McMillin District 14

Les Farnum District 15 CALCASIEU PARISH POLICE JURY

P.O. Drawer 3287 • 1015 Pithon Street • Lake Charles, Louisiana 70602-3287 337/721-3500 • Fax 337/437-3399 www.cppj.net

## **MEMORANDUM**

Members of CWPPRA Task Force

FROM: Dennis Scott, President D5//C8-Calcasieu Parish Police Jury

DATE: September 19, 2014

Support of Phase II Funding Projects

Enclosed are certified copies of resolutions which were adopted by the Calcasieu Parish Police Jury on September 18, 2014, wherein the Police Jury expresses its support of three (3) projects in the Calcasieu-Sabine Basin and the Cameron-Creole Watershed for Phase II funding by the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force.

Your support of the Police Jury in this matter would be greatly appreciated.

ars/s

TO:

RE:

Enclosure

Vcc:

Ms. Laurie Cormier, Division of Planning and Development



WHEREAS, freshwater introduction is needed in the Cameron-Creole Watershed; and

WHEREAS, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricanes Rita and Ike, making it unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts; and

WHEREAS, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway; and

WHEREAS, this freshwater introduction project would restore the function, value, and sustainability to approximately 22,247 acres of marsh and open waters by improving hydrologic conditions via freshwater input and increasing organic productivity.

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**BE IT RESOLVED BY THE POLICE JURY OF CALCASIEU PARISH, LOUISIANA**, convened in Regular Session on the 18<sup>th</sup> day of September, 2014, that it does hereby support the "Cameron-Creole Freshwater Introduction Project" (CS-49) and does respectfully request that the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force support said project for Phase II funding.

**BE IT FURTHER AND FINALLY RESOLVED** that a certified copy of this resolution be forwarded to the CWPPRA Task Force for consideration.

THUS DONE AND PASSED on the date above inscribed.

\* \* \* \* \* \* \* \* \* \* \* \*

STATE OF LOUISIANA PARISH OF CALCASIEU

I HEREBY CERTIFY that the foregoing is a true and correct copy of the original resolution as adopted by the Calcasieu Parish Police Jury in Regular Session convened on the 18<sup>th</sup> day of September, 2014.

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Kathy P Smith arish Secretary

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# RESOLUTION

WHEREAS, marsh creation is needed in the Cameron-Creole Watershed; and

WHEREAS, the Cameron-Creole Watershed marshes have experienced an increased inundation of saltwater due to Hurricanes Rita and Ike, making it unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts; and

WHEREAS, repairs to the Cameron-Creole Watershed Project structures and levees are being completed, however, the project area remains disconnected from freshwater, sediments, and nutrients by the Gulf Intracoastal Waterway; and

WHEREAS, this marsh creation project would restore and nourish hurricane-scoured marsh in the Cameron Prairie National Wildlife Refuge and adjacent brackish marshes of the Calcasieu Lake Estuary, whereby approximately 3 million cubic yards of material would be dredged from a borrow site proposed in Calcasieu Lake and placed into two marsh creation areas north of Grand Bayou to restore 609 acres and nourish approximately 7 acres of brackish marsh, resulting in approximately 534 net acres of brackish marsh over the 20-year project life.

#### NOW, THEREFORE,

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**BE IT RESOLVED BY THE POLICE JURY OF CALCASIEU PARISH, LOUISIANA**, convened in Regular Session on the 18<sup>th</sup> day of September, 2014 that it does hereby support the "Cameron-Creole Watershed Grand Bayou Marsh Creation Project" (CS-54) and does respectfully request that the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force support said project for Phase II funding.

**BE IT FURTHER AND FINALLY RESOLVED** that a certified copy of this resolution be forwarded to the CWPPRA Task Force for consideration.

THUS DONE AND PASSED on the date above inscribed.

STATE OF LOUISIANA

PARISH OF CALCASIEU

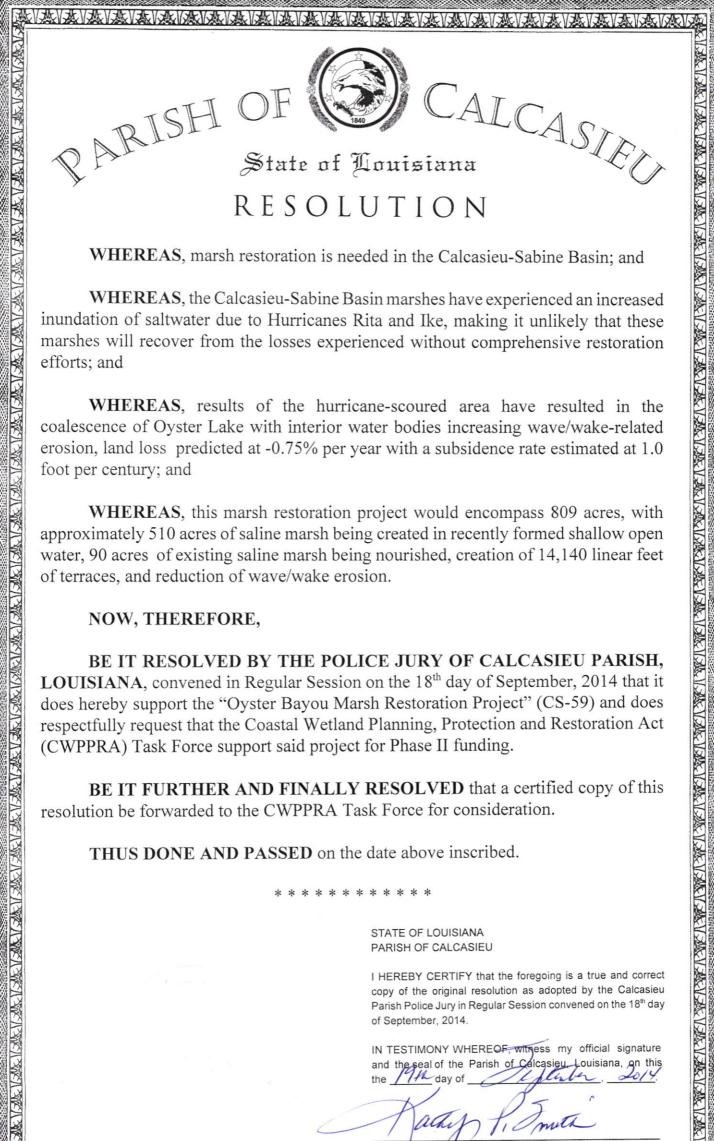
I HEREBY CERTIFY that the foregoing is a true and correct copy of the original resolution as adopted by the Calcasieu Parish Police Jury in Regular Session convened on the 18<sup>th</sup> day of September, 2014.

IN TESTIMONY WHEREOF, witness my official signature and the seal of the Parish of Calcasieu, Louisiana, on this the day of

mill

Kathy P. Smith, Parish Secretary

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WHEREAS, marsh restoration is needed in the Calcasieu-Sabine Basin; and

WHEREAS, the Calcasieu-Sabine Basin marshes have experienced an increased inundation of saltwater due to Hurricanes Rita and Ike, making it unlikely that these marshes will recover from the losses experienced without comprehensive restoration efforts; and

WHEREAS, results of the hurricane-scoured area have resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake-related erosion, land loss predicted at -0.75% per year with a subsidence rate estimated at 1.0 foot per century; and

WHEREAS, this marsh restoration project would encompass 809 acres, with approximately 510 acres of saline marsh being created in recently formed shallow open water, 90 acres of existing saline marsh being nourished, creation of 14,140 linear feet of terraces, and reduction of wave/wake erosion.

## NOW, THEREFORE,

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1294 A 2944 
BE IT RESOLVED BY THE POLICE JURY OF CALCASIEU PARISH, LOUISIANA, convened in Regular Session on the 18th day of September, 2014 that it does hereby support the "Oyster Bayou Marsh Restoration Project" (CS-59) and does respectfully request that the Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) Task Force support said project for Phase II funding.

**BE IT FURTHER AND FINALLY RESOLVED** that a certified copy of this resolution be forwarded to the CWPPRA Task Force for consideration.

THUS DONE AND PASSED on the date above inscribed.

\* \* \* \* \* \* \* \* \* \* \* \*

STATE OF LOUISIANA PARISH OF CALCASIEU

I HEREBY CERTIFY that the foregoing is a true and correct copy of the original resolution as adopted by the Calcasieu Parish Police Jury in Regular Session convened on the 18th day of September, 2014.

IN TESTIMONY WHEREOF, witness my official signature and the seal of the Parish of Calcasieu, Louisiana, on this the day of the

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arish Secretary Kathy R Smith

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## Carriere, Kaitlyn M CIV USARMY CEMVN (US)

From:	Bradley, Sarah C CIV USARMY CEMVN (US)
Sent:	Tuesday, November 21, 2017 5:00 PM
То:	Carriere, Kaitlyn M CIV USARMY CEMVN (US)
Cc:	Inman, Brad L CIV USARMY CEMVN (US)
Subject:	Fw: [EXTERNAL] BA-173 Construction Funding and BA-04-C plan development funding

Sent from my BlackBerry 10 smartphone on the Verizon Wireless 4G LTE network. Original Message
From: Clancy, Michael N COL USARMY CEMVN (US) <Michael.N.Clancy@usace.army.mil>
Sent: Tuesday, November 21, 2017 4:53 PM
To: Inman, Brad L CIV USARMY CEMVN (US); Bradley, Sarah C CIV USARMY CEMVN (US)
Subject: FW: [EXTERNAL] BA-173 Construction Funding and BA-04-C plan development funding

FYI

-----Original Message-----

From: Camille Strachan [mailto:cjstrachan@gmail.com]

Sent: Tuesday, November 21, 2017 10:56 AM

To: Clancy, Michael N COL USARMY CEMVN (US) <Michael.N.Clancy@usace.army.mil>; johnnybradberry@la.gov; Honker, William <honker.william@epa.gov>; jeff\_weller@fws.gov; kevin.norton@la.usda.gov; chris.doley@noaa.gov Cc: Trahan, Angela <angela\_trahan@fws.gov>; Roy, Kevin <kevin\_roy@fws.gov> Subject: [EXTERNAL] BA-173 Construction Funding and BA-04-C plan development funding

Dear Members of the Task Force:

On behalf of the Bradish Johnson Co., Limited, (BJCo), I am writing to urge your support for the captioned projects at your meeting in Baton Rouge on 7 December 2017. BA 173 is seeking construction funding and BA-04-C is competing for development planning.

As aerial photographs taken over the years illustrate, the BJCo property in Plaquemines Parish in Townships 17 and 18 S, R 26 E has been severely impacted by the loss of marshland. The only hope for its reclamation and return as a storm surge barrier and wildlife habitat is to expand on the excellent work of the State of Louisiana and the Fish and Wildlife Service through the Coastal Protection and Restoration Authority.

What effect this can have is well illustrated the by Lake Hermitage Project --the marsh is back and so is hope for the future. This success can be complemented, economically expanded, and supported by the 2 projects coming before you. Impressed by what it now sees, our small company is privately undertaking hydrological studies to determine what it can do to aid in this effort.

With the BJCo board joining me in thanks for your attention and consideration, I am,

Yours very truly, Camille Strachan, Corporate Secretary

Camille Jones Strachan Conner & Strachan, L.L.P. 1113 St. Andrew Street New Orleans, LA 70130 Tel: (504) 523-7784 Fax: (504) 525-3985 cjstrachan@gmail.com <mailto:cjstrachan@gmail.com> **Coastal Wetlands Planning, Protection, and Restoration Act** 

27th Priority Project List Report

## Appendix F

Project Status Summary Report from 1<sup>st</sup> through 27<sup>th</sup> Priority Project Lists

by Lead Agency, Priority List, and Basin

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

## 27th Priority Project List Report

## Appendix F

## Project Status Summary Report from 1st through 27th Priority Project Lists

## by Lead Agency, Priority List, and Basin

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#### CEMVN-PM-OR

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

24-Apr-2018

### 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	Current Approved Estimate	Current Funded 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	\$76,076,425	\$75,822,360
2	14	13,090	14	0	14	\$28,173,110	\$14,594,499	\$88,121,945	\$88,121,945	\$74,177,748	\$73,878,234
3	10	11,427	10	0	10	\$29,939,100	\$8,771,322	\$57,278,110	\$50,105,682	\$45,253,710	\$45,094,507
4	4	1,650	4	0	4	\$29,957,533	\$2,202,220	\$13,583,217	\$13,581,726	\$12,675,434	\$12,647,993
5	6	1,907	6	0	6	\$33,371,625	\$2,037,227	\$20,378,635	\$16,986,667	\$13,070,261	\$13,000,028
6	10	9,439	10	0	10	\$39,134,000	\$6,722,155	\$53,338,029	\$53,079,124	\$39,080,853	\$38,828,799
7	4	1,873	4	0	4	\$42,540,715	\$4,669,116	\$31,118,524	\$31,118,524	\$29,751,372	\$29,642,681
8	7	1,529	7	0	7	\$41,864,079	\$5,701,494	\$32,430,250	\$31,799,715	\$27,345,250	\$27,350,088
9	10	2,147	10	1	9	\$47,907,300	\$15,351,967	\$108,954,769	\$95,084,868	\$90,938,255	\$80,218,457
10	9	1,794	9	0	7	\$47,659,220	\$19,767,857	\$139,575,449	\$127,232,925	\$111,165,705	\$81,680,405
11	10	17,941	10	1	9	\$57,332,369	\$43,153,885	\$318,726,345	\$273,029,426	\$241,378,949	\$219,299,244
11.1	1	330	1	0	1	\$0	\$7,065,116	\$14,130,233	\$14,130,233	\$13,998,261	\$13,998,261
12	3	1,170	3	0	3	\$51,938,097	\$6,297,127	\$43,238,523	\$38,821,199	\$34,963,838	\$34,955,830
13	3	708	3	0	3	\$54,023,130	\$7,111,607	\$45,680,048	\$45,328,352	\$39,697,362	\$39,666,158
14	2	275	2	0	2	\$53,054,804	\$7,068,563	\$39,405,387	\$37,160,238	\$34,154,012	\$34,098,534
15	1	447	1	0	1	\$58,059,645	\$5,992,915	\$24,092,500	\$23,640,564	\$34,544,179	\$34,514,659
16	2	305	2	0	2	\$71,402,872	\$7,092,928	\$42,842,415	\$42,635,856	\$26,440,002	\$26,394,142
17	4	595	3	1	3	\$83,286,685	\$11,394,848	\$74,863,876	\$73,741,267	\$71,220,499	\$64,417,874
18	3	588	2	2	1	\$84,916,489	\$8,108,998	\$51,813,917	\$51,287,516	\$47,571,153	\$40,709,487
19	3	1,446	3	1	0	\$79,566,889	\$5,616,638	\$40,123,127	\$36,528,652	\$6,682,906	\$7,154,594
20	3	1,733	3	2	0	\$77,389,442	\$9,969,534	\$69,651,382	\$67,917,665	\$13,533,823	\$9,820,220
21	4	1,936	3	1	0	\$74,239,647	\$9,169,799	\$94,422,352	\$91,384,304	\$53,494,977	\$18,605,972
22	4	1,159	3	0	1	\$75,310,243	\$3,940,650	\$62,144,044	\$60,666,641	\$52,132,905	\$16,105,035
23	4	1,107	1	0	0	\$64,666,970	\$1,915,165	\$42,640,552	\$41,198,855	\$9,079,758	\$3,306,340
24	4	1,312	1	0	0	\$73,630,672	\$1,656,775	\$11,045,165	\$11,045,165	\$6,597,989	\$3,003,330
25	6	1,508	1	0	0	\$75,783,982	\$2,791,778	\$18,611,855	\$18,611,855	\$2,012,834	\$531,405
26	4	805	0	0	0	\$74,434,809	\$1,476,478	\$12,711,300	\$9,843,119	\$3,539,397	\$1,967
27	4		0	0	0			\$14,732,575	\$14,732,575	\$0	\$0
Active Projects	153	97,153	130	9	111	\$1,477,668,327	\$237,762,385	\$1,652,572,844	\$1,544,675,255	\$1,210,577,857	\$1,044,746,604
Deauthorized	60	18,492	39	2	0			\$86,425,235	\$80,706,622	\$61,427,724	\$60,695,092
Total Projects	213	115,645	169	11	111	\$1,477,668,327	\$237,762,385	\$1,738,998,079	\$1,625,381,877	\$1,272,005,580	\$1,105,441,69

Cons Plan	1		1	1	0	\$0	\$41,091	\$191,807	\$191,807	\$143,855	\$143,855
CPSSF	1	0	1	1	0	\$0	\$160,843	\$1,415,104	\$1,415,104	\$900,874	\$760,046
CRMS	1		1	1	0	\$0	\$15,703,793	\$316,907,558	\$126,560,910	\$84,306,742	\$84,306,742
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	218	115,645	174	16	111	\$1,477,668,327	\$253,817,707	\$2,059,582,134	\$1,755,619,283	\$1,358,449,812	\$1,191,745,100
Program						\$1,731,4	486,034				

Construction	Ph I Appr	Constru	uction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2013	10-Jan-2001 A 20-Jan-2010 A	02-May-2013 A	01-Feb-2014 A	NRCS	10	64	GIWW Bank Restoration of Critical Areas in Terrebonne	\$7,919,007.00	\$7,782,764.46	\$7,782,764.46
FY2013	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		\$20,412,296.00	\$7,793,893.58	\$7,793,893.58

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-2011 A	21-Apr-2014 A	30-Jun-2015 A	NMFS	17	186	Bayou Dupont Ridge Creation & Marsh Restoration	\$35,077,416.00	\$35,101,282.67	\$33,946,134.15
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	Total		460		\$35,077,416.00	\$35,101,282.67	\$33,946,134.15

Construction	Ph I Appr	Constru	iction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2015	21-Jan-2009 A 21-Jan-2009 A	05-Mar-2015 A	24-Apr-2017 *	NRCS	18	0	Non-Rock Alternatives to Shoreline Protection Demo	\$4,705,689.00	\$4,749,580.33	\$4,676,063.92
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	(Total		334		\$4,705,689.00	\$4,749,580.33	\$4,676,063.92

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	25-Oct-2007 A 19-Jan-2012 A	31-Jul-2015 A	01-Jun-2018	FWS	17	409	South Lake Lery Shoreline and Marsh Restoration	\$28,693,565.00	\$29,030,085.96	\$23,962,642.26
FY2016	24-Jan-2013 A 14-May-2015 A	07-Dec-2015 A	29-Jun-2017 A	EPA	22	118	Bayou Dupont Sediment Delivery- Marsh Creation 3	\$12,339,259.00	\$12,660,808.00	\$10,051,251.22
			F١	' Total		527		\$41,032,824.00	\$41,690,893.96	\$34,013,893.48

Constructior	n Ph I Appr	Constru	uction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2017	19-Jan-2012 A 22-Jan-2015 A	01-Oct-2016 A	15-Oct-2016 *	NMFS	21	433	Oyster Bayou Marsh Restoration	\$22,734,564.00	\$24,245,636.06	\$11,010,301.64
FY2017	16-Jan-2002 A 15-Feb-2007 A	01-Dec-2016 A	07-Jul-2017 A	NRCS	11	45	Grand Lake Shoreline Protection	\$5,578,845.00	\$5,795,722.00	\$3,626,692.71
FY2017	20-Jan-2010 A 24-Jan-2013 A	25-Jan-2017 A	26-Aug-2018	FWS	19	452	Lost Lake Marsh Creation and Hydrologic Restoration	\$28,414,381.00	\$81,778.03	\$819,068.15
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		2,051		\$56,727,790.00	\$30,123,136.09	\$15,456,062.50

Construction	Ph I Appr	Constr	uction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2018	19-Jan-2011 A 22-Jan-2015 A	01-Sep-2017 *	01-Dec-2018	FWS	20	476	Cameron-Creole Watershed Grand Bayou Marsh Creation	\$20,600,445.00	\$106,240.00	\$4,543.78
FY2018	10-Jan-2001 A 22-Jan-2016 *	01-Nov-2017 *	31-Mar-2018 *	EPA	10	0	Hydrologic Restoration & Vegetative Planting in the Lac des Allemands Swamp	\$1,715,768.00	\$2,004,218.00	\$35,822.66
FY2018	10-Jan-2001 A	01-Nov-2017 *	15-Feb-2018 *	NMFS	10	256	Rockefeller Refuge Gulf Shoreline Stabilization	\$25,941,244.00	\$27,100,351.00	\$92,154.40
FY2018	19-Jan-2012 A 21-Jan-2016 A	01-Apr-2018 *	31-Mar-2019	NMFS	21	340	Coles Bayou Marsh Restoration	\$15,921,120.00	\$18,486,426.00	\$987.29
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-2020	NRCS	21	731	LaBranche Central Marsh Creation	\$0.00	\$0.00	\$0.00
			F	Y Total		2,797		\$64,178,577.00	\$47,697,235.00	\$133,508.13

Construction	Ph I Appr	Const	ruction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2019	19-Jan-2012 A 12-Jan-2017 A	01-Oct-2018	01-Oct-2019	FWS	21	432	Turtle Bay Marsh Creation	\$24,558,643.00	\$35,000.00	\$232.63
FY2019	24-Jan-2013 A 21-Jan-2017 A	21-May-2019	24-Aug-2020	NMFS	22	326	Cameron Meadows Marsh Creation	\$25,799,995.00	\$29,309,455.00	\$9,643.08
			F	Y Total		758		\$50,358,638.00	\$29,344,455.00	\$9,875.71

Construction	n Ph I Appr	Const	ruction						Construction	
Start FY	Ph II Appr	Start Date	Compl Date	Agency	PL	Acres	Project	Estimate	Obligations	Expenditures
FY2021	21-Jan-2016 A 01-Jan-2019	01-Nov-2020	01-Nov-2021	NRCS	25	251	Barataria Bay Rim Marsh Creation	\$0.00	\$0.00	\$0.00
			F	/ 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		7,508		\$272,493,230.00	\$196,500,476.63	\$96,029,431.47

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

25 April 2018

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 7400 Leake Avenue New Orleans, LA 70118















CEMVN-PM-W						AND RESTORA		Ύ (ΕΡΔ)		24-Apr-2018 Page 1
PROJECT	BASIN	PARISH	ACRES	0.	** SCHEDULES Const Start			TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Lead Agency: EP.	A, REGION 6									
Priority List C	onservation Pla	ın								
State of Louisiana Wetlands Conservation	COAST	COAST		13-Jun-1995 A	03-Jul-1995 A	21-Nov-1997 *	\$191,807	\$191,807	100.0	\$143,855
Plan	Status:	The date the reporting pur		ed to obligate the Fee	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 Projec 1 Cost S	t(s) haring Agreements E	Executed								

1 Construction Started

0 Construction Completed

0 Project(s) Deferred/Deauthorized

CEMVN-PM-W	COA	ASTAL WE	ETLANDS P	LANNING,	PROTECTION A	AND RESTOR.	ATION ACT			24-Apr-2018
	Project Stat	tus Summai	ry Report - I	Lead Agency	: ENVIRONMEN	NTAL PROTEC	CTION AGENO	CY (EPA)		Page 2
PROJECT	BASIN	PARISH	ACRES	******* CSA	**** SCHEDULES * Const Start	********* Const End	******** ES Approved	STIMATES *** Funded	**** %	Actual Obligations/ Expenditures
Total							\$191,807	\$191,807	100.0	\$143,855 \$143,855
1 Cons 0 Cons	ct(s) Sharing Agreement truction Started truction 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 COASTAL WETLANDS PLANNING. PROTECTION AND RESTORATION ACT 24-Apr-2018 Page 3 Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (USGS) Actual \*\*\*\*\*\*\* ESTIMATES \*\*\*\*\*\*\* Obligations/ PROJECT BASIN PARISH ACRES CSA Const Start Const End Funded Expenditures Approved % Lead Agency: USGS, U.S. Geological Survey Priority List 0.1 Coastwide Reference COAST COAST 13-Feb-2013 A 14-Aug-2003 A \$316.907.558 \$126,560,910 39.9 \$84.306.742 Monitoring System -\$84,306,742 The status of the CRMS network and data collection is as follows: all sites (391) have approved landrights and are fully constructed. Data Status: Wetlands collection is occurring at all sites. All data are posted within the DNR SONRIS database. Available data includes hydrologic, vegetation, elevation/accretion, and soil properties and coastwide aerial photography and satellite imagery. Ten CRMS sites were equipped with real time continuous hydrologic gages in September 2010. A CRMS website has been established as an offshoot of LaCoast.gov (http://www.lacoast.gov/crms2/Home.aspx). The CRMS website provides graphing, visualizations, and data download functionality. The website is designed to facilitate easy access to data and products. CRMS analytical teams, including agency and academic personnel, were established for landscape, hydrology, vegetation, soils, and data delivery. The teams have developed ecological indices in consultation with the CWPPRA Monitoring Work Group. The ecological indices are incorporated in the CRMS report card which was released in 2011 and is accessed through the CRMS website. The website continues to evolve to support the data and tools that are developed through the CRMS program. CRMS data are being used in the Operations, Maintenance, and Monitoring Reports for CWPPRA projects and will be incorporated into the 2012 CWPPRA Report to U.S. Congress to evaluate project effectiveness. Several articles have been submitted for publication and are in peer review, but the following documents have been published: Coastwide Reference Monitoring System (CRMS): U.S. Geological Survey Fact Sheet 2010-3018, 2 p. http://pubs.usgs.gov/fs/2010/3018/. Cretini, K.F., and Steyer, G.D. 2011, Floristic Quality Index -- An assessment tool for restoration projects and monitoring sites in coastal Louisiana: U.S. Geological Survey Fact Sheet 2011-3044, 4 p. http://pubs.usgs.gov/fs/2011/3044/. Cretini, K.F., Visser, J.M., Krauss, K.W., and Steyer, G.D. 2012. Development and use of a floristic quality index for coastal Louisiana marshes. Environmental Monitoring and Assessment. 184(4):2389-2403.

CEMVN-PM-W					PROTECTION A Agency: DEPT.			)		24-Apr-2018 Page 4
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES * Const Start	******** Const End	******** ES Approved	STIMATES ***** Funded	*** %	Actual Obligations/ Expenditures
	Total Priority List	0.1					\$316,907,558	\$126,560,910	39.9	\$84,306,742 \$84,306,742
1 C 1 C 0 C	Project(s) Cost Sharing Agreements E: Construction Started Construction Completed Project(s) Deferred/Deautho									
Total							\$316,907,558	\$126,560,910	39.9	\$84,306,742 \$84,306,742
1 C 1 C 0 C	Project(s) Cost Sharing Agreement 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		)		24-Apr-2018 Page 5
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	сy							
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
Fund	Status:	multiple proj		plementation plan a		d (by P&E) continger amount of \$334,562.5				\$666,704
						or 4 tasks associated v y survey (USGS) and			v land	
To	tal Priority List	0.2					\$1,500,000	\$1,500,000	100.0	\$666,704 \$666,704
1 Project(s)	ng Agreements F	waqutad								

1 Cost Sharing Agreements Executed

1 Construction Started

0 Construction Completed

0 Project(s) Deferred/Deauthorized

CEMVN-PM-W				,	PROTECTION A d Agency: DEPT					24-Apr-2018 Page 6
		-	-	******	**** SCHEDULES	****	******* ES	STIMATES ***		Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Total							\$1,500,000	\$1,500,000	100.0	\$666,704 \$666,704
1 Project	(s)									
1 Cost Sh	aring Agreemen	ts Executed								
1 Constru	ction Started									
0 Constru	ction Completed	1								
0 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				· · · · · · · · · · · · · · · · · · ·		AND RESTORA OF THE INTE				24-Apr-2018 Page 7
PROJECT	BASIN	PARISH	ACRES	_	** SCHEDULES * Const Start			TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Lead Agency: USG	S, U.S. Geolo	gical Surve	у							
Priority List 0.3										
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 Ik	e. Amendment #		operative agreement	nal \$266,227.00 to cc was submitted by US				\$426,056
7	Cotal Priority List	0.3					\$569,586	\$569,586	100.0	\$426,056

1 Project(s)

1 Cost Sharing Agreements Executed

1 Construction Started

0 Construction Completed

0 Project(s) Deferred/Deauthorized

\$426,056

CEMVN-PM-W					PROTECTION A d Agency: DEPT			)		24-Apr-2018 Page 8 Actual
				******	**** SCHEDULES	*****	******* ES	STIMATES ***	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Total							\$569,586	\$569,586	100.0	\$426,056 \$426,056
1 Projec	t(s)									
1 Cost S	haring Agreemen	ts Executed								
1 Constr	ruction Started									
0 Constr	ruction Completed	1								
0 Projec	t(s) Deferred/Dea	uthorized								

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W				PLANNING, Pl Report - Lead				)		24-Apr-2018 Page 9
					** SCHEDULES *			STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency:	USGS, U.S. Geolo	ogical Surve	ey							
Priority Lis	t 0.4									
Construction Progra	am COAST	COAST	0	19-Oct-2011 A	19-Oct-2011 A		\$1,415,104	\$1,415,104	100.0	\$900,874
Technical Support Services Fund	Status:									\$760,046
	Total Priority List	0.4	0				\$1,415,104	\$1,415,104	100.0	\$900,874 \$760,046
1 1 0	Project(s) Cost Sharing Agreements F Construction Started Construction Completed Project(s) Deferred/Deauth									
Total			0				\$1,415,104	\$1,415,104	100.0	\$900,874 \$760,046
1 1 0	Project(s) Cost Sharing Agreemen Construction Started Construction Completed Project(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					AND RESTORA EPT. OF THE AF				24-Apr-2018 Page 10 Actual
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********** Const End	******** ES Approved	STIMATES **** Funded	**** %	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	\$1,167,832 \$1,167,832
	Status:	1996, at a cos removed from maintenance beneficial use the local spor	st of \$945,678 n the remainin cycles. The U e sites along th	Remaining funds magnetic stress of the second stres	by be used to clear n to these areas will be LDWF are currently l monitoring of the 0	pject and the construction marsh creation sites of the pincorporated into the pursuing an administ Queen Bess site was displayed by the maintenance plan for the	oyster leases. If oys Corp's O&M dispos rative process to ide iscontinued in 2002	ter-related conflict sal plan for the nex entify and prioritize on the recommend	s are at three e dation of	
Bayou Labranche	PONT	STCHA	203	17-Apr-1993 A	06-Jan-1994 A	07-Apr-1994 A	\$3,717,914	\$3,717,914	100.0	\$3,672,403
Wetland 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 creati- e project is bei unned for this p ems to have bo b be supplanted imum of 70% out 82% land a evation that ap ommunity of th	on area. Contract fina ing 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 te project have develo	l inspection was per jority of the monito eating a shallow was sediment continues to etland species. One % open water after i is higher than the r 0% (land and marsh ped into characteris	lging approximately 2, rformed on April 7, 19 ring has already been of the habitat conducive to to consolidate and wate project goal is to increa 5 years following proj ninimum goal. The con n) component of the pr ttic wetland habitat for r life expires on 7 Apr	94. Site visit by Tas completed and is pro- to the natural establi- er is maintained in t ease the marsh:open ect completion. As nsolidation of dredg oject area. The soil the region. The pro-	k Force took place occeeding in accord ishment of wetland he area, upland ve water ratio in the of 1997, the projec red material over ti properties and the	e on April lance as l getation project et area me has	\$3,672,403

CEMVN-PM-W	COA					AND RESTORA PT. OF THE AF				24-Apr-2018 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	to	\$60,375
			on 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	\$2,011,627
Daik Plotecton	Status:	sediment rete	ntion fence or	the west bank is still	undetermined.	ist bank of the cutoff to nowever, current estim	-	vetlands. The need	d for the	\$2,011,627
		The Task For	ce approved a	revised project estim	ate of \$2,500,000; h	owever, current estim	ate is less.			
				e easements was requ s completed in Februa		ear ownership titles ar	d significantly lengt	hened the project		
		Complete.								

CEMVN-PM-W				,		AND RESTOR. EPT. OF THE A				24-Apr-2018 Page 12
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********* Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
West Bay Sediment Diversion	DELTA Status:	project divers project was d monthly usin in the project In 2006 the U with the project event was per restoration. T construction Project const the project op under a reiml will be comp 17, 2002. A I description a meeting, app	sion channel. lesigned to all g an accousti area of mars JSACE perfo ect operations formed using to date appro- and maintain ruction began pened 08 July pursable cons leted in July 2 Record of De- nd reauthoriz roval was gra	Since constructed in 2 low the discharge of 2 c doppler profiler as p h accretion from the d rmed maintenance dre s plan. Material from t g a hopper dredge link kimately 225 acres of ing the anchorage area a in September 2003 a 2003 and bids were of truction agreement. A 2003. The project Cos cision finalizing the E ed the project to comp	2003 the diversion p 0,000 cfs at the 50% art of project survei eposition of diverte- dging in the Pilotto he dredging work w ed to a pump out sy marsh have been cro a. nd construction was pened on 11 Augus real estate plan for t Sharing Agreemen IS was signed on M oly with CWPPRA S	wn Anchorage Area to vas used benefcially fo stem - a first of its kin eated through the bene completed in Novemi t 2003. Chevron-Texa the project was compl it was signed August 2 arch 18, 2002. The Ta Section 3952 in April 2 rent price of \$22 milli	veraged 19,188 cfs. ischarge measureme e monitoring. At thi o remove induced sho r marsh creation in V d use of this technol ficial use of dredged ber 2003. An adverti co relocated a major eted in October 2002 9, 2002. A 95% des isk Force, by fax vot 2002. At the January	Initial construction ints are taken rough s point there is no of oal material in acco West Bay. The dred ogy in Louisiana w I material from the asement for constru- oil pipeline in Ma 2 and execution of ign review was held e, approved a revise 10, 2001 Task For	of the ly evidence ordance lging vetlands channel ction of y 2003 the plan d May ed project rce	\$44,006,027 \$43,901,866
	Total Priority List	1	10,544				\$57,857,103	\$57,857,103	100.0	\$50,918,264 \$50,814,103
5 Constru	(s) haring Agreements E action Started action Completed	executed								

0 Project(s) Deferred/Deauthorized

## Priority List 1

CEMVN-PM-W				PLANNING, Pl Lead Agency: I				CY (EPA)		24-Apr-2018 Page 13 Actual
				*******	** SCHEDULES	****	******** ES	STIMATES ****	****	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
Restoration East Island	Status:			nieres restoration proj ne increased construct						\$8,664,422
		Construction 1999.	start was Janu	ary 16, 1998. Hydra	ulic dredging was co	ompleted September 1	1998. Vegetation pl	anting was comple	ted June	
	Total Priority List	1	9				\$8,762,416	\$8,762,416	100.0	\$8,664,422 \$8,664,422
	ruction Completed t(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	\$1,606,530
Wildlife Refuge Hydro Restoration, Phase 1	Status:			d in May 1996. The ( ct in coordination with		tenance Plan was app			e lead	\$1,485,847
				noved the two 30-inch 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	\$1,153,211
	Status:		on Authority (	project was construct CPRA) finalized an C						\$1,144,505

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)										
PROJECT	BASIN	PARISH				STIMATES **** Funded	**** %	Actual Obligations/ Expenditures			
Cameron Prairie National	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	
Wildlife Refuge Shoreline Protection	Status:	The 20-year project end date is August 9, 2014. A decision will be made in the near future concerning project close-out. To date no maintenance has been needed and \$39,963 expended on O&M inspections. The Corps installed warning signs in 2001 due to navigation complaints the rock was obscured by vegetation. The rock dike is not within the GIWW navigation channel. Those signs are not a project feature for maintenance. The 2012 O&M inspection reported that the rock dike is in good condition.								\$1,061,657	
				r rock allowing water hose low areas were		ed during the March 2 aspections.	012 O&M inspectio	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 \$1,309,987	
Refuge Erosion Protection	Status:	The project was closed March 2015. No maintenance has been needed within the project's 20-year life and no future maintenance will be performed with CWPPRA funds. The end of the project's 20-year CWPPRA life was March 2015. The CWPPRA Task Force on in May 2014, upon the recommendation of project sponsors, approved project close out upon reaching its 20-year life.									
Tot	al Priority List	1	8,204				\$6,639,177	\$5,694,641	85.8	\$5,131,386 \$5,001,996	
4 Constructio 4 Constructio											
Priority List 1											
Fourchon Hydrologic Restoration	TERRE	LAFOU					\$7,703	\$7,703	100.0	\$7,703 \$7,703	
DEAUTHORIZED	Status: In a meeting on October 7, 1993, Port Fourchon conveyed to NMFS personnel that any additional work in the project area could be conducted by the Port and they did not wish to see the project pursued because they question its benefits and are concerned that undesired										

conducted by the Port and they did not wish to see the project pursued because they question its benefits and are concerned that undesired Government / general public involvement would result after implementation.

Deauthorized.

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	******** E Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Lower Bayou LaCache	TERRE	TERRE		17-Apr-1993 A			\$99,625	\$99,625	100.0	\$99,625 \$99,625
Hydrologic Restoration DEAUTHORIZED	Status:	In a public hearing on September 22, 1993, with landowners in the project area, users strenuously objected to the proposed closure of the two east-west connections between Bayou Petit Caillou and Bayou Terrebonne. NMFS received a letter from LA DNR, dated February 6, 1995, recommending deauthorization of the project. NMFS forwarded the letter to COE for Task Force approval.								
		Deauthorized								
To	otal Priority List	1					\$107,328	\$107,328	100.0	\$107,328 \$107,328
	on Completed Deferred/Deauth	orized								
GIWW to Clovelly	BARA	LAFOU	175	17-Apr-1993 A	21-Apr-1997 A	31-Oct-2000 A	\$12,896,358	\$12,783,171	99.1	\$10,599,087
Hydrologic Restoration	Status:	began May 1, one plug, beg	The project was divided into two contracts in order to expedite implementation. The first contract to install most of the weir structures, began May 1, 1997 and completed November 30, 1997, at a cost of \$646,691. The second contract to install bank protection, one weir and one plug, began January 1, 2000 and completed October 31, 2000, at a cost of \$3,400,000. All project construction is complete. O&M Plan signed September 16, 2002.							\$10,578,574
Vegetative Plantings - Dewitt-Rollover Planting	MERM	VERMI		17-Apr-1993 A	11-Jul-1994 A		\$92,147	\$92,147	100.0	\$92,147
Demo DEAUTHORIZED	Status:	Sub-project o	f the Vegetative	Plantings project.						\$92,147
		Complete and	l deauthorized.							

CEMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: (NRCS)											
PROJECT	BASIN	PARISH	ACRES	******** CSA	*********** SCHEDULES ******* CSA Const Start Cons		******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
Vegetative Plantings -	TERRE	TERRE	0	17-Apr-1993 A	30-Aug-1996 A	30-Dec-1996 A	\$206,523	\$206,523	100.0	\$206,523 \$206,523	
Falgout Canal Planting Demo COMPLETE	Status:	Sub-project of the Vegetative Plantings project. Wave-stilling devices are in place. Vegetative plantings are in place.									
		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 \$300,492	
Fimbalier Island Planting Demo COMPLETE	Status:	Sub-project of the Vegetative Plantings project.									
		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 the Vegetative Plantings project.								\$256,251	
		Complete.									
То	tal Priority List	1	175				\$13,751,771	\$13,638,584	99.2	\$11,454,500 \$11,433,987	
5 Project(s) 5 Cost Shari	ng Agreements F	Executed									

5 Cost Sharing Agreements Executed

5 Construction Started

4 Construction Completed

1 Project(s) Deferred/Deauthorized

CEMVN-PM-W	EMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: (NRCS)										
PROJECT	BASIN	PARISH	ACRES	******** CSA	Actual Obligations/ Expenditures						
	(s) naring Agreemen uction Started	ts Executed	18,932				\$87,117,796	\$86,060,073	98.8	\$76,275,900 \$76,021,836	
14 Constru	uction Completed (s) Deferred/Dea										

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W	IVN-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	******** 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	\$2,981,474	
Trotection	Status:	needed (base	d on the origi	nal design), and the es	stimate did not inclu	blan in that the rock qu de a floatation channe ne original rock dike do	l needed for constru	ction. This account		\$2,967,700	
		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	\$6,637,245 \$6,637,245	
	Status:	Hennington a shoreline pro area perimete copies are av	and Kaitlyn C. tection and ro r; closures #2 ailable upon r	arriere of USACE-MV 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 Curd tures inspected include ne and Belle Pass. Inte ction due to their boat & meeting project go t.gov website.	ed the vinyl bulkhea rior marsh areas we inaccessibility. Pho	ad Closure #1, the r re viewed from the tographs were take	ock project n and		
Tota	al Priority List	2	1,541				\$10,094,230	\$10,094,230	100.0	\$9,618,718 \$9,604,945	
<ol> <li>Project(s)</li> <li>Cost Sharin,</li> <li>Construction</li> <li>Construction</li> <li>Project(s) D</li> </ol>	n Started n Completed										

Priority List 2

CEMVN-PM-W       COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT       2         Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)       2											
	DAGDI	DADIGU		********	SCHEDULLS		******* ESTIMATES ****			Actual Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures	
Isles Dernieres	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 \$10,799,102	
Restoration Trinity Island	Status:	Costs increased due to construction bids significantly greater than projected in plans and specifications. Additional funds to cover the increased project construction/dredging cost were approved at the January 16, 1998 Task Force meeting.									
		•	0	he Tom James, mobili was completed June		n about January 27, 1	998. Dredging was	completed in Sept	ember		
То	otal Priority List	2	109				\$10,774,974	\$10,774,974	100.0	\$10,799,102 \$10,799,102	
1 Constructi 1 Constructi	ng Agreements I on Started on Completed Deferred/Deauth										
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	\$1,516,449 \$1,485,279	
Restoration, Phase 2	Status:	Construction was completed on March 18, 1997 and accepted at a final inspection on May 28, 1997. The Operation and Maintenance Plan was approved in October 2004. The FWS is the lead O&M agency for this project. The Corps of Engineers removed the two 33-inch diameter CWPPRA-constructed pumping stations in 2010 and replaced them in December 2011. This was done because larger pumps were needed to accommodate the larger hurricane protection levees modified in 2011.									

CEMVN-PM-W			CAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT ect Status Summary Report - Lead Agency: DEPT. OF THE INTERIOR (FWS)								
PROJECT	BASIN	PARISH	ACRES		** SCHEDULES Const Start		× ,	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
	Total Priority List	2	1,280				\$1,692,552	\$1,692,552	100.0	\$1,516,449 \$1,485,279	
1 Cor 1 Cor	t Sharing Agreements F astruction Started astruction Completed ject(s) Deferred/Deauth										
Atchafalaya Sediment	2 ATCH	STMRY	2,232	01-Aug-1994 A	25-Jan-1998 A	21-Mar-1998 A	\$2,455,669	\$2,455,669	100.0	\$2,247,530	
Delivery	Status:	Annual O&M has partially bathymetric s dredge mater	I inspections a been met. Lim survey is curre ial channel ex	are conducted on the I ited bathymetric data ntly being discussed f	Project. Project goa is suggesting partia for both AT-02 and	ls to increase the distr l shoaling at the head AT-03. The creation of and enlargement of th	ibutary potential of l of Natal Pass and Ca of delta lobe islands	Natal Pass and Cas astille Pass. More with beneficially u	tille Pass extensive sing	\$2,221,583	
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	\$6,816,461	
	Status:	Project cost i	ncrease was a	pproved by the Task I	Force at the January	16, 1998 meeting.				\$6,816,461	
		Construction	project compl	lete. First costs accou	inting underway.						
Point Au Fer Canal Plu	gs TERRE	TERRE	375	01-Jan-1994 A	01-Oct-1995 A	08-May-1997 A	\$5,514,145	\$5,514,145	100.0	\$3,263,783 \$3,260,274	
	Status:		2 & 3 and the j			th maintenance recom ne shoreline. This con				<i>40,200,27</i>	

CEMVN-PM-W	-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						
	Total Priority List	2	4,167				\$14,972,916	\$14,972,916	100.0	\$12,327,774 \$12,298,318						
3 Constru 3 Constru	t(s) haring Agreements E uction Started uction Completed t(s) Deferred/Deauth															
Priority List 2																
Brown Lake Hydrologic Restoration	CA/SB	CAMER		28-Mar-1994 A			\$1,097,828	\$1,097,828	100.0	\$1,097,828 \$1,097,828						
DEAUTHORIZED	Status:															
Caernaryon Diversion	BRET	PLAQ	802	13-Oct-1994 A	01-Jun-2001 A	19-Jun-2002 A	\$4,536,000	\$4,536,000	100.0	\$4,068,622						
Outfall Management Status: This project was proposed for deauthorization in December 1996, but was referred for revisions at the request of the landowners and DNR. The project was modified. The final plan/EA has been prepared. Bids were opened 23 February 2001. The low bid exceeded the funds available. Task Force approved additional funds. Construction complete June 19, 2002.										\$4,036,746						
East Mud Lake Marsh	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	\$5,154,379						
Management	Status:				warded to Crain Bros ed in the summer of	<ol> <li>Construction starte 1996.</li> </ol>	d in early October 1	995. Water contro	\$5,131,702							
	Construction complete. O&M plan executed. Maintenance needs on a water control structure is being evaluated.															

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

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Project Status Summary Report - Lead Agency: (NRCS)										Page 22
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** Es Approved	STIMATES **** 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	\$6,059,651	100.0	\$3,614,507 \$3,557,681
Wetland Protection	Status:	The project was expedited in order to allow the use of stone removed from the Wax Lake Outlet Weir at a substantial cost savings. Construction is included as an option in the Corps of Engineers contract for the Wax Lake Outlet Weir removal. Option was exercised on September 2, 1994.								
		Project constr	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	\$1,881,652 \$1,869,476
	Status:	O&M plan executed January 29, 2003.								
Highway 384 Hydrologic	CA/SB	CAMER	150	13-Oct-1994 A	01-Oct-1999 A	07-Jan-2000 A	\$1,813,079	\$1,813,079	100.0	\$1,482,235 \$1,478,983
Restoration	Status:	Construction start slipped from November 1997 to July 1999 because of landright issues. All landright agreements signed. Construction complete January 7, 2000.								
		O&M plan ex	kecuted. Main	tenance contract com	plete. Minor damag	ge from Hurricane Lili	to be repaired. Con	tract in preparation	l.	
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	\$22,810,763
Restoration	Status:	Construction	has begun to	repair vandalism to th	ne concrete walls. V	Vork is anticipated to I	be completed by Oct	ober 2012.		\$22,712,457
Vermilion Bay/Boston	TECHE	VERMI	378	24-Mar-1994 A	13-Sep-1994 A	30-Nov-1995 A	\$1,043,748	\$1,043,748	100.0	\$903,545
Canal Shore Protection	Status:	Complete.								\$903,545

CEMVN-PM-W	V COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: (NRCS)										
PROJECT	BASIN PARISH	ACRES	******** CSA	***********************************					Actual Obligations/ Expenditures		
8 7 7	Total Priority List 2 Project(s) Cost Sharing Agreements Executed Construction Started Construction Completed Project(s) Deferred/Deauthorized	5,993				\$51,685,102	\$51,685,102	100.0	\$41,013,532 \$40,788,418		
15 14 14		13,090				\$89,219,774	\$89,219,774	100.0	\$75,275,576 \$74,976,062		

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				24-Apr-2018 Page 24 Actual
				******	** SCHEDULES	****	******* ES	STIMATES ***	****	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 bo	oth Federal and Local S	Sponsor.			\$759,263
		reviewed thei	r permit for th		nined that Shell Pipe	gatively impacted by the eline was required to be				
		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
COMPLETE	Status:	is under \$100	,000. Bids red		an Government esti	ned via a simplified acc mate by 25%. Subseq 9 January 1999.				\$318,445
		the baseline e	stimate. Furt		icates that private ov	onmental investigation 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	tions to avoid or min red the design to det	increasing relocation containing impacts to the permine whether relocated to 200 feet reduced to	ipelines, but there a ions cost-savings co	re no more suitabl ould be achieved.	e	\$119,835
			he project. CO			PRA Technical Comm ary 16, 1998 Task Forc				

CEMVN-PM-W	COA			PLANNING, PH						24-Apr-2018 Page 25
PROJECT	BASIN	Project Sta	ACRES	ry Report - Lea ********** CSA	d Agency: DEI ** SCHEDULES * Const Start			TIMATES **** 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 2 Co	oject(s) ost Sharing Agreements H onstruction Started onstruction Completed oject(s) Deferred/Deauth									
Red Mud Demo DEAUTHORIZED	PONT	STJON		03-Nov-1994 A			\$520,129	\$520,129	100.0	\$520,129 \$520,129
	Status:			ntially complete; projultion to the second sec				by saltwater before	e planting	
		The Task For and Chemica		e deauthorization of t	he project on Augus	t 7, 2001. Escrowed	l funds will be returr	ned to Kaiser Alum	iinum	
Whiskey Island Restoration COMPLE	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
	Status:	At the Janua received.	ry 16, 1998 me	eting, the Task Force	approved additional	funds to cover the in	ncreased construction	n cost on lowest bi	d	\$7,0 <del>1</del> 3,100
				ary 13, 1998. Dredg ng/planting was carrie	• •	Ũ	ion with spartina on	bay shore, July 19	98.	

#### CEMVN-PM-W

# 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	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	3	1,239				\$7,563,317	\$7,563,317	100.0	\$7,563,317 \$7,563,317
2 Co 1 Co 1 Co	oject(s) ost Sharing Agreements E onstruction Started onstruction Completed oject(s) Deferred/Deauthor									
Sabine Refuge Structu Replacement (Hog Isla		the following structure - Jun proper 3-Phas in the automa eliminated mo the Hog Island Service will b maintenance i equipment. So	dates: Headqua he 2001. Initiall se. Transformers tic mode becaus otor reversal and d Gully structur e responsible for tems. Hurricano ome FEMA fun	rters Canal structur y electrical problen s and filters were ac se the correct "3-Ph d other problems fo e, were fully operat or all structure oper- e Rita in October 20 ds were received by	e - February 9, 2000 ns were caused becau lded to the structures ase" electricity was n r the Hog Island Gul tional until late Octo ations and minor ma 205 overtopped the s v the State for limited	10-Sep-2003 A ed June 2001. The stru b; Hog Island Gully stru ise the "3-Phase" elect is in December 2001. The not available. Rotary p ly and West Cove stru- ber 2004. The Monito intenance and the Stat tructures and damaged i repair of Hurricane I storal systems of all st	ucture - August 200 trical service to the s 'he structures contin shase converters, ins icture sites. All struc- ring Plan was appro e CPRA will be resp d the electric motors Rita damage. Other f	0; and the West Co structures was not to ued to operate inco- talled in September stures, except for o ved on June 17, 19 ponsible for the lar , guard rails and ot unds from the Fish	ove the prrectly rr 2003, ne bay of 099. The ger ther and	\$5,685,766 \$5,732,619

year life ends in September 2023.

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				24-Apr-2018 Page 27
	P	roject Statu	s Summary	Report - Lead	Agency: DEP	Γ. OF THE INTI	ERIOR (FWS)			Actual
					** SCHEDULES			STIMATES ****		Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
	Total Priority List	3	953				\$6,177,735	\$5,950,414	96.3	\$5,685,766 \$5,732,619
1 Construc	s) aring Agreements E ction Started ction Completed	Executed								
	s) Deferred/Deauth	orized								
Priority List 3										
Bayou Perot/Bayou Rigolettes Marsh	BARA	JEFF		03-Mar-1995 A			\$20,963	\$20,963	100.0	\$20,963 \$20,963
Restoration DEAUTHORIZED	Status:	DNR has ind	icated a willing	gness to deauthorize t	the project. In Apri	tlands benefits from c 1 1996, LA DNR had authorized at January 1	asked to reconsider	the project with po		¢20,703
		Deauthorized	l.							
East Timbalier Island Sediment Restoration,	TERRE	LAFOU	1,913	01-Feb-1995 A	01-May-1999 A	01-May-2001 A	\$3,621,544	\$3,621,544	100.0	\$3,695,120
Phase 1	Status:		-		-	ne platform was achie ngs were completed M		and the installation	n of sand	\$3,695,120
Lake Chapeau Sediment Input and Hydrologic	TERRE	TERRE	509	01-Mar-1995 A	14-Sep-1998 A	18-May-1999 A	\$6,847,812	\$6,844,040	99.9	\$5,855,170
Restoration	Status:	Maintenance	event to degrad	le the project feature	e identified as Weir 3	3 began on 4/27/2011,	and the work was a	ccepted on 6/24/20	11.	\$5,821,258

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CEMVN-PM-W				PLANNING, Pl ry Report - Lead						24-Apr-2018 Page 28 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Obligations/ 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:			otember 1997. Phase 11998 and completed				Lake Salvador.		\$2,801,782
		Closed out co	ooperative agre	eement between NOA	A and LADNR. Fin	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 2002	2.		
T	otal Priority List	3	2,422				\$13,292,101	\$13,288,329	100.0	\$12,373,035 \$12,339,123
	tion Completed ) Deferred/Deauth	orized								
Brady Canal Hydrologic	TERRE	TERRE	297	15-May-1998 A	01-May-1999 A	22 May 2000 A	\$7,593,752	\$7,352,678	96.8	\$6,845,365
Restoration	Status:	Project delay the area. In a 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	e landowner's interest	ring, and objection fit	rom a pipeline com ederal funding. Per	pany in mitting	\$6,799,706
		Construction	project is com	plete. O&M plan sign	neu July 10, 2002.					
Cameron-Creole Maintenance	CA/SB	CAMER	2,602	09-Jan-1997 A	30-Sep-1997 A	30-Sep-1997 A	\$11,895,673	\$5,251,332	44.1	\$2,913,626 \$2,816,688
	Status:	The first three	e contracts for	maintenance work ar	e complete. The pro-	oject provides for mai	ntenance on an as-ne	eeded basis.		φ2,010,000

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### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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			Project St	atus Summary	Report - Lead	Agency: (NRCS	S)			Page 29
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********* Const End	******** Ex Approved	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	\$10,037,989	99.4	\$9,335,985
Restoration	Status:	Site inspectio	on for bidder w	as held January 12,	1998. Concern for a	B because of concern a a source of shell may r ompleted December 19	require budget modif			\$9,306,438
		O&M plan ex	xecuted. Main	tenance contract con	nplete.					
Southwest Shore White	MERM	VERMI		11-Jan-1995 A	30-Apr-1996 A		\$103,468	\$103,468	100.0	\$103,468
Lake Demo DEAUTHORIZED	Status:	Complete. Pr	roject deauthor	rized.						\$103,468
Violet Freshwater	PONT	STBER		13-Oct-1994 A			\$128,627	\$128,627	100.0	\$128,627
Distribution DEAUTHORIZED	Status:		y to gain acces ate existing sig		oblem due to multip	le landowner coordin	ation, and additional	l questions have ari	sen about	\$128,627
		Project deaut	horized, Octob	per 4, 2000.						
West Pointe a la Hache	BARA	PLAQ		05-Jan-1995 A			\$1,168,631	\$1,168,631	100.0	\$1,168,631
Outfall Management DEAUTHORIZED	Status:	CPRA has wi	ithdrawn suppo	ort for continuing thi	s project. Project be	gan Deauthorization i	in 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 N	RCS to deauthorize	the project. Project	deauthorized at the Ja	anuary 16, 1998 Tasi	k Force meeting.		\$32,862
		Deauthorized	l.							

CEMVN-PM-W	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: (NRCS)											
PROJECT	BASIN PA	ARISH	ACRES	********* CSA	* SCHEDULES * Const Start	******** Const End	******** ES Approved	TIMATES ***** Funded	**** %	Actual Obligations/ Expenditures		
7 4 3	Total Priority List 3 Project(s) Cost Sharing Agreements Execute Construction Started Construction Completed Project(s) Deferred/Deauthorized		5,122				\$31,016,922	\$24,075,587	77.6	\$20,528,564 \$20,356,420		
16 11 10	Project(s) Cost Sharing Agreements Exe Construction Started Construction Completed Project(s) Deferred/Deauthor		11,427				\$59,372,625	\$52,200,197	87.9	\$47,348,225 \$47,189,022		

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				24-Apr-2018 Page 31
DECIFICT	DAGDI	DADIGU			*** SCHEDULES			TIMATES ***		Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: COE, O	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 \$58,310
DEAUTHORIZED	Status:		me was found to c of the Mississij	•	table due to inability o	of the hopper dredge to	o get close enough t	to the disposal area	a to spray	ψ50,510
		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-support s within the depos		s withheld ROE beca	use of concern abou	it sedimentation no	egatively	\$05,747
						PRA Technical Commi ry 16, 1998 Task Force				
Tot	al Priority List	4					\$124,057	\$124,057	100.0	\$124,057 \$124,057
2 Project(s)										
1 Cost Sharin	ng Agreements H	Executed								
0 Constructio										
0 Constructio	on Completed									

2 Project(s) Deferred/Deauthorized

Priority List 4

CEMVN-PM-W				,		AND RESTORANTAL PROTEC		CY (EPA)		24-Apr-2018 Page 32
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******* ES Approved	STIMATES **** Funded	**** %	Actual 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	cifications hav	e been finalized. Al	l permits and constru	action approvals have	been obtained.			\$255,391
			of compost vego on bids has bee		ot yet been supplied	. A smaller sized dem	onstration has been	designed. Advert	isement	
		The Task For	ce approved de	eauthorization on Jar	uary 16, 2002.					
	Гotal Priority List	4					\$255,391	\$255,391	100.0	\$255,391 \$255,391
1 Project(s Priority List 4	) 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	e 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	1	and; both times they		rce to move forward w o higher bids by priva		1 5		\$39,025
		Deauthorized								

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CEMVN-PM-W				,		AND RESTORA T. OF COMME				24-Apr-2018 Page 33 Actual
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Obligations/ Expenditures
	Total Priority List	4	215				\$7,639,176	\$7,639,176	100.0	\$7,587,091 \$7,587,091
1 Cons 1 Cons	ect(s) Sharing Agreements I struction Started struction Completed ect(s) Deferred/Deauth									
Priority List	4									
Barataria Bay Waterway West Side Shoreline	BARA	JEFF	232	23-Jun-1997 A	01-Jun-2000 A	01-Nov-2000 A	\$3,369,006	\$3,367,515	100.0	\$2,897,709
Protection	Status:	The project is	s being coordin	nated with the COE d	redging program. C	ontract advertised Dec	ember 1999.			\$2,890,368
		Construction	complete. Ded	lication ceremony hel	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 \$371,232
DEAUTHORIZED	Status:	The initial ste meeting.	ep of deauthori	zation was taken at th	he January Task For	ce meeting. The proce	ss will be finalized a	at the April Task Fo	orce	\$571,252
Flotant Marsh Fencing	TERRE	TERRE		16-Jul-1999 A			\$115,775	\$115,775	100.0	\$115,775
Demo DEAUTHORIZE	D Status:	Difficulty in I	locating an app	propriate site for demo	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	\$1,904,689
Protection	Status:	Project comp	lete.							\$1,884,588

CEMVN-PM-W	COA	ASTAL WE		,		AND RESTOR				24-Apr-2018 Page 34
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********** Const End	******** E Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Plowed Terraces Demo COMPLETE	CA/SB Status:	The first atte		e terraces in the sumr		31-Aug-2000 A monstration project be t successful. A second				\$324,970 \$324,970
3 Constr 3 Constr	Total Priority List et(s) Sharing Agreements E ruction Started ruction Completed et(s) Deferred/Deauth	Executed	1,435				\$6,470,074	\$6,468,583	100.0	\$5,614,375 \$5,586,934
Total			1,650				\$14,488,697	\$14,487,206	100.0	\$13,580,913 \$13,553,472
4 Const 4 Const	ct(s) Sharing Agreemen truction Started truction 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. PT. OF THE A				24-Apr-2018 Page 35 Actual
				*****	** SCHEDULES	****	******** E <b>S</b>	STIMATES ****	****	Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: 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	\$2,345,736
Protection	Status:	As of Oct 202	13, CPRA was	in the process of wo	rking up a cost estim	nate for a scheduled re	ock lift for the Bayou	ı Chevee project.		\$2,341,760
Tot	tal Priority List	5	75				\$2,589,403	\$2,589,403	100.0	\$2,345,736 \$2,341,760
1 Constructio 1 Constructio										
Priority List 5										
Bayou Lafourche Siphon DEAUTHORIZED	TERRE	IBERV		19-Feb-1997 A			\$1,500,000	\$1,500,000	100.0	\$1,500,000
DEAUMORIZED	Status:	Project was d	eauthorized by	the Task Force on O	October 25, 2007.					\$1,500,000
Tot	tal Priority List	5					\$1,500,000	\$1,500,000	100.0	\$1,500,000 \$1,500,000
1 Project(s)										

1 Cost Sharing Agreements Executed

0 Construction Started

0 Construction Completed

1 Project(s) Deferred/Deauthorized

CEMVN-PM-W				,		AND RESTORA				24-Apr-2018 Page 36
				******	** SCHEDULES	****	******** E	STIMATES ***	****	Actual 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-a		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 Sediment Trapping	TECHE	VERMI	441	22-May-1997 A	10-May-1999 A	20-Aug-1999 A	\$886,030	\$886,030	100.0	\$756,192 \$756,192
	Status:	Emergent veg and retreat al	getation was no	ted to be colonizing	in some locations b t resulting in some e	ported that the terrace etween terraces. The F rosion on the ends of d.	Freshwater Bayou ca	nal bank continues	s to erode	\$130,172
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 uthorized to fund the				\$481,803
			ADNR are clos ctive as authori	<b>U</b>	tive agreement and 1	eturning remaining pr	roject funds to the C	WPPRA program.	Project	

CEMVN-PM-W				,		AND RESTORA T. OF COMME				24-Apr-2018 Page 37
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	5	441				\$1,367,833	\$1,367,833	100.0	\$1,237,995 \$1,237,995
1 Con 1 Con	ect(s) t Sharing Agreements I struction Started struction Completed ect(s) Deferred/Deauth									
Priority List	5									
Freshwater Bayou Bank	MERM	VERMI	511	01-Jul-1997 A	15-Feb-1998 A	15-Jun-1998 A	\$8,913,366	\$5,546,185	62.2	\$2,707,993
Stabilization	Status:	The local cos	t share is being	g paid by Acadian Ga	as Company.					\$2,693,002
		Contract was	awarded Janu	ary 14, 1998. Const	ruction is complete.					
Naomi Outfall	BARA	JEFF	633	12-May-1999 A	01-Jun-2002 A	15-Jul-2002 A	\$2,309,638	\$2,284,851	98.9	\$2,048,192
Management	Status:	This project v	was combined	with the BBWW "Du	pre Cut" East projec	et for planning and de	sign; construction w	ill be separate.		\$2,021,868
						alysis is complete; res June 2002 and comp		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-I	PM-W	COA	ASTAL WE				AND RESTORA Agency: (NRCS				24-Apr-2018 Page 38
PRO	JECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******* E Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	e/Willow Lake Restoration	CA/SB Status:	CAMER The rock ban	247 k protection fe	23-Jun-1997 A ature of the project is	01-Nov-1999 A s complete.	02-Oct-2002 A	\$3,929,152	\$3,929,152	100.0	\$3,461,101 \$3,436,160
			unable to con		truction. Contract ter		etative planting will b work was advertised				
	Tot	al Priority List	5	1,391				\$16,903,202	\$13,511,234	79.9	\$9,968,332 \$9,902,076
	<ol> <li>4 Constructio</li> <li>4 Constructio</li> </ol>	ng Agreements E n Started n Completed Deferred/Deautho									
Total				1,907				\$23,812,794	\$20,420,826	85.8	\$16,504,420 \$16,434,188
	6 Constructi 6 Constructi	ing Agreement	l								

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W						AND RESTORA				24-Apr-2018 Page 39
PROJECT	Project Stat BASIN	us Summar PARISH	y Report - Le		EN VIRONMEI ** SCHEDULES <sup>:</sup> Const Start	NTAL PROTEC		CY (EPA) STIMATES **** Funded	****	Actual Obligations/ Expenditures
Lead Agency: E	PA, REGION 6						- TF			
Priority List Mississippi River	5.1 Terre	IBERV		23-Jul-2003 A			\$7,452,191	\$7,452,191	100.0	\$7,452,191
Reintroduction into Bayou Lafourche DEAUTHORIZED	Status:	program. Ho Resources, ha	wever, recognizing	g the importance	of this project, the S	BA-25b) has been pro cate of Louisiana, thro g final design efforts t	ugh the Louisiana D	Department of Natu	ıral	\$7,452,191
	Total Priority List	5.1					\$7,452,191	\$7,452,191	100.0	\$7,452,191

\$7,452,191

0 Project(s)

1 Cost Sharing Agreements Executed

0 Construction Started

0 Construction Completed

1 Project(s) Deferred/Deauthorized

CEMVN-PM-W	COA	ASTAL WE	ETLANDS P	LANNING,	PROTECTION A	AND RESTOR	ATION ACT			24-Apr-2018
	Project Stat	us Summa	ry Report - I	Lead Agency	: ENVIRONMEN	NTAL PROTE	CTION AGEN	CY (EPA)		Page 40
PROJECT	BASIN	PARISH	ACRES	******* CSA	**** SCHEDULES * Const Start	********* Const End	******** Es Approved	STIMATES *** Funded	**** %	Actual Obligations/ Expenditures
Total							\$7,452,191	\$7,452,191	100.0	\$7,452,191 \$7,452,191
0 Const	ct(s) Sharing Agreemen truction Started truction Completed									
	ct(s) 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				24-Apr-2018 Page 41
				******	** 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, 200	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 a vas completed fied some mir	ask Force meeting, it v approved changing th as an operations and for 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 et to "Flexible Dustpar der through an ERDC edge plants effectivene The final surveys and	rized funds for a "fle n Demo at Head of l c research and devel css as a maintenance	exible dustpan" Passes". opment IDC contra 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:	the project.		d deauthorization at th		iical Committee Chair Task Force meeting.	man requesting the	Task Force to deau	uthorize	\$66,869
		i iojeet deddi	nonzed sury z	.5, 1990.						
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	\$4,376,787
Restoration	Status:					ember 13, 2000. CSA ompleted December 20		ary 1, 2001. Advert	tised as	\$4,376,787
		Revised desig	gn of closures	from earthen to rock	because soil borings	s indicate highly organ	nic material in borro	w area.		

CEMVN-PM-W	CO				PROTECTION A ead Agency: DE					24-Apr-2018 Page 42
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	\$6,333,976 \$6,333,976
2 2 2	Project(s) Cost Sharing Agreements Construction Started Construction Completed Project(s) Deferred/Deaut									
Priority Lis	t 6									
Bayou Boeuf Pump Station DEAUTHO	TERRE RIZED Status:	This was a 3 Priority List EPA notified	8 was scheduled the Technical (	l to fund \$100,000 Committee that the	thorized funding of \$1 . Total project cost w y and LA DNR agree 998 Task Force meeti	as estimated to be \$50 to deauthorize the pro	0,000. By letter d			\$3,452 \$3,452
0 0 0	Total Priority List Project(s) Cost Sharing Agreements Construction Started Construction Completed Project(s) Deferred/Deaut	Executed					\$3,452	\$3,452	100.0	\$3,452 \$3,452

Priority List 6

CEMVN-PM-W				,		AND RESTORA Γ. OF THE INT				24-Apr-2018 Page 43
PROJECT	BASIN	PARISH	ACRES		** SCHEDULES Const Start		· · · ·	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	\$4,225,924
Freshwater Introduction INACTIVE	Status:	final landrigh hold until the	ts documents permitting ag	which are being subn	nitted to property ow to address the concu	ights work. The upda ners for execution. R urrent Parish proposal	Review of the permit	application has been	en put on	\$4,275,329
Nutria Harvest for	COAST	COAST	0	27-Oct-1998 A	20-Sep-1998 A	30-Oct-2003 A	\$806,220	\$806,220	100.0	\$806,220
Wetland Restoration Demo	Status:	Nutria Harve	st Demonstrati	on Project						\$806,220
		Status July 20	005							
		preparation a assisted Chef	nd organized j Kevin Diez b	udging for the U.S.	Army Corps of Engi eat for the Baton Ro	ed: Promotional Even neers annual "Earth D uge Family Fun Fair, a	Day Celebration" in N	New Orleans, 2) LE	OWF	
						"www.nutria.com" to pid user information.	o be completed in Se	eptember 2003. The	e upgrade	
		This project v	was completed	in October 2003. Th	e project sponsors h	ave completed project	t close-out activities.			
	Total Priority List	6	266				\$26,572,985	\$20,854,372	78.5	\$5,032,144

1 Construction Started

1 Construction Completed

0 Project(s) Deferred/Deauthorized

CEMVN-PM-W						AND RESTORA T. OF COMME				24-Apr-2018 Page 44
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********** Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Black Bayou Hydrologic Restoration	CA/SB Status:	CAMER An O&M ins	3,594 pection is sch	28-May-1998 A eduled for 5-04-11.	01-Jul-2001 A	03-Nov-2003 A	\$12,698,222	\$12,439,317	98.0	\$6,300,413 \$6,165,959
Delta Wide Crevasses	DELTA Status:	discussions w	with both USF		entify the new, and f	01-May-2005 A ly 19. All crevasses we final list of crevasse sp				\$3,167,065 \$3,139,692
Sediment Trapping at The Jaws	TECHE Status:			28-May-1998 A onducted on 4-05-11. of mud flats between		19-May-2005 A on of the terraces is go oreline.	\$1,653,792 ood. Evidence of rea	\$1,653,792	100.0 ory was	\$1,385,173 \$1,385,173
<ul> <li>3 Project(s)</li> <li>3 Cost Sharin</li> <li>3 Construction</li> <li>3 Construction</li> </ul>			7,979				\$19,080,333	\$18,821,428	98.6	\$10,852,651 \$10,690,823
Priority List 6 Barataria Bay Waterway East Side Shoreline Protection	BARA Status:	JEFF This project v Project constr O&M plan si	ruction compl	ete.	01-Dec-2000 A all Management pro	31-May-2001 A aject for planning and o	\$5,224,477 design; construction	\$5,224,477 was separate.	100.0	\$4,839,972 \$4,778,556

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

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\$21,064,648

			Project St	tatus Summary ]	Report - Lead	Agency: (NRCS	5			Page 45
PROJECT	BASIN	PARISH	ACRES		*** SCHEDULES Const Start			TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Cheniere au Tigre Sediment Trapping DEMO	TECHE Status:	advertised for	r bid. Bid car	ne in over estimate. I	LDNR and NRCS sh	02-Nov-2001 A sals received. Proceed ifted funds from moni ved July 13, 2001. C	toring to construction	on. Delay in getting	5	\$596,781 \$596,781
Oaks/Avery Canal Hydrologic Restoration	TECHE Status:	VERMI O&M plan w	160 as finalized o	22-Oct-1998 A n 2/11/04.	15-Apr-1999 A	11-Oct-2002 A	\$2,925,216	\$2,925,216	100.0	\$2,591,255 \$2,586,942
Penchant Basin Natural Resources Plan, Increment 1	TERRE Status:	TERRE Project const	675 ruction was co	23-Apr-2002 A ompleted on August 2	25-May-2010 A 24, 2011.	24-Aug-2011 A	\$17,628,814	\$17,628,814	100.0	\$13,126,867 \$13,102,370
	Total Priority List	6	1,052				\$26,403,506	\$26,403,506	100.0	\$21,154,875

4 Project(s)

4 Cost Sharing Agreements Executed

4 Construction Started

4 Construction Completed

0 Project(s) Deferred/Deauthorized

CEMVN-PM-W	COA	ASTAL WE	ETLANDS F	LANNING,	PROTECTION A	AND RESTOR	ATION ACT			24-Apr-2018 Page 46
			Project Sta	tus Summary	Report - Lead A	gency: (NRC	S)			•
				******	SCHEDULLS			STIMATES ****		Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Total			9,705				\$79,175,115	\$73,197,597	92.5	\$43,377,098 \$43,174,448
13 Proje	ect(s)									
	Sharing Agreement	ts Executed								
10 Cons	truction Started									
10 Cons	truction Completed	1								
2 Proje	ect(s) Deferred/Dea	uthorized								

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W						AND RESTORA T. OF COMME				24-Apr-2018 Page 47 Actual
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** Ex Approved	STIMATES *** <sup>;</sup> Funded	**** %	Obligations/ Expenditures
Lead Agency: NMFS	, NATIONA	AL MARIN	E FISHER	RIES SERVICE						
Priority List 7										
Grand Terre Vegetative Plantings	BARA	JEFF	127	23-Dec-1998 A	01-May-2001 A	01-Jul-2001 A	\$346,578	\$346,578	100.0	\$346,578
Trancings	Status:	of approxima	tely 35,000 sr		800 black mangrove	arshhay cordgrass on was completed in Jun				\$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	\$2,336,079
	Status:	An O&M ins	pection is pla	nned for May 2011.						\$2,336,079
Tot	tal Priority List	7	569				\$2,737,562	\$2,737,562	100.0	\$2,682,657 \$2,682,657
<ul><li>2 Construction</li><li>2 Construction</li></ul>										
Priority List 7										
Barataria Basin Landbridge Shoreline Protection, Ph 1 & 2	BARA Status:	JEFF	1,304	16-Jul-1999 A	01-Dec-2000 A	05-Mar-2009 A	\$27,842,861	\$27,842,861	100.0	\$26,530,614 \$26,421,923
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.					Pa	ge 47

CEMVN-PM-W	V COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: (NRCS)												
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES * Const Start	********* Const End	******* ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures			
	Total Priority List	7	1,304				\$28,380,962	\$28,380,962	100.0	\$27,068,715 \$26,960,024			
	Project(s)												
<ul> <li>2 Cost Sharing Agreements Executed</li> <li>2 Construction Started</li> </ul>													
	Construction Completed												
0	Project(s) Deferred/Deauthor	rized											
Total			1,873				\$31,118,524	\$31,118,524	100.0	\$29,751,372			
Total			1,075				ψ <b>51,110,52</b> +	ψ <b>51,110,52</b> 4	100.0	\$29,642,681			
4 4 4	<ul> <li>4 Project(s)</li> <li>4 Cost Sharing Agreements Executed</li> <li>4 Construction Started</li> <li>4 Construction Completed</li> <li>0 Project(s) Deferred/Deauthorized</li> </ul>												

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			STIMATES ****		Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: COE, C	CORPS 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	ne Sabine Nati		e using material dred	oject List 8. The proje ged out of the Calcasi				\$3,422,433
		advertised for	bid as a com	ponent of the Calcasi	eu River and Pass M	ect cost for dredging c laintenance Dredging nce dredging schedule	contract on Februar	y 16, 2001. Constru		
		•		WPPRA Task Force jonstructed in 2005. C	•	funding and construct nstructed in 2006.	ion approval for Cyc	eles 2 and 3. Cycle	2 is	
Sabine Refuge Marsh	CA/SB	CAMER	261	17-Feb-2005 A	28-Apr-2009 A	28-Apr-2010 A	\$14,331,667	\$14,331,668	100.0	\$11,017,525
Creation, Cycle 2	Status:				I	al to be completed by	- , ,	. , ,		\$11,016,072

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

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	**************************************						Actual Obligations/			
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Sabine Refuge Marsh Creation, Cycle 3	CA/SB Status:	within the Sa cost to constr dredging cycl Dredging cor schedule for t for Cycles 2 a material dred sediment mat to assist in th between elev- allowed 10 to	bine National ruct all cycles le 1 was \$3,41 htract on Febru the Calcasieu and 3. Constru ged from the 0 erial were pla e dewatering 0 ations 2.03 N. o 20 percent of	Wildlife Refuge usin is approximately \$21 2,415. The project w lary 16, 2001. Constr River. On January 28 action of Cycle 2 was Calcasieu River Ship ced into the Sabine R of the marsh creation AVD 88 and 2.71 NA	g material dredged of 4 million. The first as advertised for bid uction initiation was , 2004, the CWPPR completed in 2009. Channel. Between F efuge Cycle 3 marsh disposal area and to VD 88. Constructio I to splay into the su	30-Sep-2010 A oject List 8. The proje out of the Calcasieu Ri cycle was completed of a sa component of th s advanced in conjunc A Task Force provide Cycle 3 consists of th February 12 and March a creation area. Lower create fringe marsh w n of low level weirs a rrounding area. Conta	iver Ship Channel. T on February 26, 2002 e Calcasieu River ar tion with an accelera d additional funding e creation of 232 acc h 31, 2007, 828,767 level earthen overfl <i>v</i> ith the overflow. Th long north and west	The current estimate 2. The total project and Pass Maintenance ated maintenance day and construction a res of marsh platfor cubic yards of dred ow weirs were consu- ted dredged slurry we boundary of Cycle	ed project cost for re redging pproval rm using lged structed as placed 3	\$2,763,802 \$2,763,802
	Fotal Priority List	8	662				\$20,792,348	\$20,727,280	99.7	\$17,203,760 \$17,202,306

3 Project(s)

3 Cost Sharing Agreements Executed

3 Construction Started

3 Construction Completed

0 Project(s) Deferred/Deauthorized

Priority List 8

CEMVN-PM-W				<i>,</i>		AND RESTORΑ Γ. OF THE INTI				24-Apr-2018 Page 51
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Sabine Refuge Marsh Creation, Cycles 4 & 5	CA/SB Status:	Ship Channe platform beir pipeline. In a USACE in co placed in an platform and place and con nourished the	I through CWP ng constructed v addition to Cyc onstructing low open water site was completed ntained with lov e surrounding m	PRA's permanent pi vith material pumped les 4 & 5 being cons level containment d on Sabin Refuge jus on 11/21/2014. CV v level earthen dikes narsh which was con	peline. Cycle 5 was d from the ship char structed, CWPPRA I ikes to help contain st south of Cycles 1- VPPRA also funded in Unit 1A-South. npleted on 6/15/2012	07-Jul-2015 A rm being constructed v s completed on 7/7/201 anel. This material wa had the opportunity to the approximately 1 n 5 (Unit 1A-North). Th the Corps to place app This created approxim 5. The overflow of ma ts that will hopefully b	15 with approximate s also pumped throu work with the Port hillion Cyds of mate his created approxim proximately 1 millio hately 171 acres of r tterial from the two	ely 232 acres of ma agh CWPPRA's pe of Lake Charles an rial the Port paid to nately 240 acres of n Cyds of material narsh platform and areas in Unit 1A is	rsh rmanent d the o be marsh to be	\$5,851,427 \$5,862,784
1 Project( 1 Cost Sh	aring Agreements E		331				\$6,600,560	\$6,035,093	91.4	\$5,851,427 \$5,862,784
1 Constru	ction Started ction Completed s) Deferred/Deauth	orized								
Priority List 8										
Bayou Bienvenue Pump Station Diversion DEAUTHORIZED	PONT Status:	than original	ly estimated due ty 16, 2002 Tas	e to poor geo-technic	cal condition. The	gn analyses indicate th project is estimated to FS requested initiation	cost between \$17 a	nd \$20 million to b		\$212,153 \$212,153

CEMVN-PM-W	Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)										
					** SCHEDULES	****		STIMATES ****	****	Actual Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures	
Hopedale Hydro Restoration	PONT	STBER	134	11-Jan-2000 A	10-Jan-2004 A	15-Jan-2005 A	\$2,281,287	\$2,281,287	100.0	\$1,958,080 \$1,957,710	
	Status: Cooperative Agreement was awarded January 11, 2000. Engineering and design is complete, with design surveys, geo-technical investigations and hydrologic modeling complete. Landrights for the major project feature are complete. NEPA compliance and regulatory requirements are complete. A construction contract was awarded in November 2003, and construction was initiated in March 2004. COnstruction was completed in January 2005, and the project is currently being operated by St. Bernard Parish under a cooperative agreement with the Louisiana Department of Natural Resources.										
	Total Priority List	8	134				\$2,493,439	\$2,493,439	100.0	\$2,170,232 \$2,169,862	
1 Con 1 Con	ect(s) Sharing Agreements E struction Started struction Completed ect(s) Deferred/Deautho										
Priority List	8										
Humble Canal Hydrolog	cic MERM	CAMER	378	21-Mar-2000 A	01-Jul-2002 A	01-Mar-2003 A	\$1,574,926	\$1,574,926	100.0	\$1,195,221	
Restoration	Status:	Construction	complete Mar	rch 2003.						\$1,193,481	
Lake Portage Land Brid	ge TECHE	VERMI	24	07-Apr-2000 A	15-Feb-2003 A	15-May-2004 A	\$1,181,129	\$1,181,129	100.0	\$1,136,762	
	Status:	Project constr	ruction was co	ompleted on May 15, 2	2004. Monitoring P	an was finalized on J	July 19, 2004			\$1,133,807	

CEMVN-PM-W	Project Status Summary Report - Lead Agency: (NRCS)											
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES * Const Start	******** Const End	******** E Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures		
Upper Oak River	BRET	PLAQ					\$56,476	\$56,476	100.0	\$56,476		
Freshwater Siphon DEAUTHORIZED					ority List 8 funded \$2, will be requested wher				ruction	\$56,476		
				ated. DNR has s ad if project is dee	olicited a cost estimate med feasible.	from one of their er	ngineering firms to j	perform a feasibility	study.			
		Deauthorizati	on procedures ir	iitiated.								
	Total Priority List	8	402				\$2,812,531	\$2,812,531	100.0	\$2,388,459 \$2,383,764		
2 2 2	Construction Started											
Total			1,529				\$32,698,879	\$32,068,343	98.1	\$27,613,879 \$27,618,717		
8 7 7		1										

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

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PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES *** Funded	**** %	Actual Obligations/ Expenditures
Lead Agency: COE, CO	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	l data collection fo	ollowed. The USA ntours. A 30% des a hydrologic resto	CE team met with I sign review was held pration feature. A 95	downer. Right of entry DNR staff after surve in June 2002. The pro % design review was	y data was processe oject was revised to	ed and obtained co include Area A -	nsensus	\$1,101,750
Opportunistic Use of the Bonnet Carre Spillway	PONT	STCHA					\$83,932	\$83,932	100.0	\$83,932
DEAUTHORIZED	Status:	accordance w requesting the	vith the CWPPRA	Project Standard advising them that	Operating Procedure	voted to begin the dea es Manual, notices we RA Task Force meetin	re sent out in July 2	007 to all intereste	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 e	ensure consistenc eflect post-Katrina	y. Currently the team	vember 2006 team beg m needs to fully develo the team is working o	op Preliminary Des	ign Report. Team	is	\$83,556
Weeks Bay MC & SP TRANSFER	TECHE	IBERI	278				\$534,057	\$534,057	100.0	\$534,057
INANOFER	Status:				Program per Task I their 3 Jun 2013 req	Force decision on 4 Ju uest.	n 2013. It was trans	ferred to the Iberia	a Parish	\$534,057

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	9	519				\$1,803,283	\$1,803,283	100.0	\$1,803,283 \$1,803,283			
<ul> <li>4 Project(s)</li> <li>0 Cost Sharing</li> <li>0 Construction</li> <li>0 Construction</li> <li>2 Project(s) Def</li> </ul>	Started Completed												
Priority List 9 LA Highway 1 Marsh Creation DEAUTHORIZED	BARA Status:	LAFOU The project w	vas deauthorize	05-Oct-2000 A d at the February 17,	, 2005 Task Force n	neeting.	\$250,257	\$250,257	100.0	\$250,257 \$250,257			
New Cut Dune and Marsh Restoration	TERRE Status:			01-Sep-2000 A vas held on April 23, ncrement activities ir		30-Sep-2008 A for Phase II construct nual inspections.	\$10,730,085 ion activities was cle	\$10,609,976 osed-out on Septen	98.9 1ber 30,	\$10,192,472 \$10,192,472			
Timbalier Island Dune & Marsh Restoration	TERRE Status:			05-Oct-2000 A vas held on April 23, ncrement activities ir		19-Mar-2009 A for Phase II construct nual inspections.	\$15,279,669 ion activities was cle	\$15,265,451 osed-out on March	99.9 19,	\$15,199,419 \$15,197,826			

CEMVN-PM-W	W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)											
	Project Stat	us Summar	ry Report - I	Lead Agency:	ENVIRONMEN	NTAL PROTEC	CTION AGENC	CY (EPA)		Page 56 Actual		
	**************************************											
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures		
	Total Priority List	9	375				\$26,260,011	\$26,125,684	99.5	\$25,642,148 \$25,640,555		
3 Pro	oject(s)											
3 Co	ost Sharing Agreements E	xecuted										
2 Co	onstruction Started											
2 Co	onstruction Completed											
1 Pro	oject(s) Deferred/Deautho	orized										

Priority List 9

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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		
Freshwater Introduction South of Highway 82	MERM Status:	Status July 20 The project w 2000; field tr	vas approved fo ips were held i arsh levels and	or Phase I engineerir n May and June 200	0. The FWS/DNR (	13-Dec-2006 A nuary 11, 2000. An in Cost Share Agreement control points were con	t was signed on Sept	ember 12, 2000. El	levational	\$5,158,621 \$5,182,711		
	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											
		were complet final report w Model Result	ted November 2 vas presented in	21, 2002, and Decen a September 2003.	nber 12, 2002 respec	nodel was used for the ctively. A draft model	ling report was prese	ented in April 2003.	, and a			
	The model indicated that the project, with a number of original features removed or reduced, would significantly flow freshwater south of Hwy 82 to reduce salinities in the project area. The model results suggested the following modifications to the conceptual project; 1) removal of the Boundary Line borrow canal plug, 2) removal of the northeastern north-south canal, 3) removal of 2 of the recommended four 3-48 inch-diameter-culverted structures along the boundary canal, 4) relocate the new Dyson structure to the north, and 5) removal of the Big Constance structure modification feature. The incorporation of these recommendations would significantly reduce project costs. 30% Design Review Meeting											
A favorable 30% Design Review meeting was held on May 14, 2003 with USFWS concurrence to proceed to final design. On July 10, 2003 the LA Department of Natural Resources gave concurrence to proceed with project construction. NEPA Review												
			**									

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	Approved	Funded	**** %	Obligations/ Expenditures		
		modified Con applications w no objection w March 10 and	sistency Detern vere submitted were received o March 18, 200	ninations were recei May 27, 2004. The n October 2, 2003, 1 95. The draft Enviro	ved on March 11, 20 Corps public notice February 2, 2004, an onmental Assessmen	y applications were su 004, and June 3, 2004 s were issued on June id April 19, 2004. The t was submitted for ag act was distributed on	respectively. The n 18, 2004. LA Dept corps Section 404 ency review on Sep	nodified Corps per t. of Transportation permits were rece	mit letters of ived on			
		Phase II Construction Items										
		1, 2003. The	•	303(e) Determinatio	U I	004. The NRCS Over Corps on May 6, 2004	0 0					
		Phase II const	truction funding	g approval was recei	ived at the October 2	2004 Task Force meeti	ng.					
		Construction	bids were recei	ved by June 21, 200	5. Construction is a	nticipated to begin by	July 15, 2005.					
Mandalay Bank Protection Demo	TERRE	TERRE	0	06-Dec-2000 A	25-Apr-2003 A	01-Sep-2003 A	\$1,732,498	\$1,732,498	100.0	\$1,732,498		
COMPLETE	Status:	Construction	was completed	9/1/2003.						\$1,732,498		
	Total Priority List	9	296				\$8,075,003	\$7,065,250	87.5	\$6,891,119 \$6,915,209		

2 Project(s)

2 Cost Sharing Agreements Executed

2 Construction Started

2 Construction Completed

0 Project(s) Deferred/Deauthorized

Priority List 9

CEMVN-PM-W				,		AND RESTORA T. OF COMME				24-Apr-2018 Page 59
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Castille Pass Channel	ATCH	STMRY		29-Sep-2000 A			\$1,717,883	\$1,717,883	100.0	\$1,717,883
Sediment Delivery DEAUTHORIZED	Status:	issuance. Th	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 years.	Agreement was	s awarded September	10, 2000. Vegetativ	ve planting is schedul	ed for spring, 2001,	and are phased over	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 i	s anticipated to	be transfered to the	CIAP program for co	onstruction.				\$2,211,739
Four Mile Canal	TECHE	VERMI	167	25-Sep-2000 A	10-Jun-2003 A	23-May-2004 A	\$3,792,936	\$2,233,123	58.9	\$2,120,855
Terracing and Sediment Trapping	Status:					ported the project is sl t this time an O&M d			ng the 4-	\$2,099,937
LaBranche Wetlands	PONT	STCHA		21-Sep-2000 A			\$306,836	\$306,836	100.0	\$306,836
Terracing, Planting & Shoreline Prot DEAUTHORIZED	Status:	Cooperative	Agreement was	s awarded September	21, 2000. Enginee	ring and design comp	lete. Construction i	s scheduled for 20	02.	\$306,836
				2 funding at January er support. Deauthor		In a letter dated Septe sted at this time.	mber 7, 2001, NMF	S returned Phase 2	funding	

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					** SCHEDULES			STIMATES ****		Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
	Total Priority List	9	722				\$8,869,321	\$7,309,508	82.4	\$7,197,240 \$7,176,322
<ul><li>2 Const</li><li>2 Const</li></ul>	et(s) Sharing Agreements E ruction Started ruction Completed et(s) Deferred/Deauth									
Priority List 9										
Barataria Basin Landbridge Shoreline	BARA	JEFF	264	25-Jul-2000 A	20-Oct-2003 A	30-Sep-2018	\$46,231,596	\$37,245,701	80.6	\$35,179,961 \$25,273,375
Protection, Ph 3	Status:			e completed in Febr issued to address th		eption of about 400 fe	et with poor underly	ring soils. An addit	ional	\$2 <i>3,213,313</i>
Black Bayou Culverts	CA/SB	CAMER	540	25-Jul-2000 A	25-May-2005 A	26-Jan-2010 A	\$16,899,059	\$16,213,587	95.9	\$15,339,929
Hydrologic Restoration	Status:					een completed and wo		or construction in S	ummer	\$14,544,434
Little Pecan Bayou	MERM	CAMER		25-Jul-2000 A			\$1,303,713	\$1,303,713	100.0	\$1,303,713
Hydrologic Restoration DEAUTHORIZED	Status:	Project was d	eauthorized at	Spring 2012 Task Fo	orce meeting for the	following reasons:				\$1,303,713
		years of main	tenance.		l sufficient wetland b concerns over publi	eenefits to warrant a P c vandalism.	hase II request for c	onstruction and twe	enty	

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

Project Status Summary Report - Lead Agency: (NRCS)

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			5	********	** SCHEDULES	****	******** ES	STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Perry Ridge West Bank	CA/SB	CAMER	83	25-Jul-2000 A	01-Nov-2001 A	31-Jul-2002 A	\$2,204,709	\$2,179,808	98.9	\$1,812,430
Stabilization	Status:	The Perry Rie	dge project app	proved on Priority Li	st 4 was the first pha	se of this project. Thi	s is the second and f	inal phase of the pr	oject.	\$1,799,602
			pproved Phase n has been cor		ng January 10, 2001	. The rock bank prote	ction is installed. Th	e contract for the to	erraces	
South Lake Decade	TERRE	TERRE	202	25-Jul-2000 A	24-Jan-2011 A	12-Jul-2011 A	\$4,901,784	\$3,432,045	70.0	\$3,362,143
Freshwater Introduction	Status:		Unit #1 was co ompleted and c		2011. CPRA did no	ot agree to proceed wi	th 2nd construction	unit, therefore proj	ect was	\$3,355,675
	Total Priority List	9	1,089				\$71,540,861	\$60,374,854	84.4	\$56,998,176

4 Construction Started

3 Construction Completed

CEMVN-PM-W	COA	STAL WE		,	PROTECTION A				24-Apr-2018 Page 62
PROJECT	BASIN	PARISH	ACRES	tus Summary ******** CSA	7 Report - Lead A **** SCHEDULES * Const Start		STIMATES ***** Funded	**** %	Actual Obligations/ Expenditures
10 Constru 9 Constru	(s) naring Agreement action Started action Completed (s) Deferred/Dea	l	3,001			\$116,548,480	\$102,678,579	88.1	\$98,531,966 \$87,812,168

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W	COA			y Report - L	PROTECTION A ead Agency: DE	PT. OF THE AF	RMY (COE)			24-Apr-2018 Page 63 Actual
PROJECT	BASIN	PARISH	ACRES	******* CSA	**** SCHEDULES Const Start	********** Const End	******** ES Approved	STIMATES *** Funded	**** %	Obligations/ Expenditures
		ENGINEE							70	
Priority List 10										
Benneys Bay Diversion	DELTA	PLAQ					\$978,100	\$978,100	100.0	\$978,100
DEAUTHORIZED	Status:	Subcommitte performed in 2002. At the sediment rete developed an	e in May 2001. F October 2001 an design review mo ntion enhanceme d is being review	Right of Entry to d geotechnical b ceting agreement ent devices) whic yed by the LDNR	on PPL9 in January 199 perform surveys and g oorings were collected t was reached to proceed the were removed at the R. A revised WVA and omplete all design work	eotechnical borings w in June 2002. A 30% of d further with the pro request of the local sp design cost estimate a	as received in Augu design review was c posed design excep ponsor. A Final Des ure in preparation fo	ist 2001. Site surve completed in Septe t for one feature (S ign Report has bee 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 invo will be requir and allow the	lved with this pr ed over and abov m to outline maj	oject. The curre ve the proposed 1 or data and analy	effort, and its relation nt view within the mar modeling. At this time ytic requirements for th iled. An initial Value	hagement team is that a , it has been decided t he NEPA document. 7	additional fisheries o begin assembling Fhe required NEPA	data collection and an inter-agency El scoping meetings	l analysis IS team have been	\$2,543,325
		WRDA may	fund 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 r	eview anticipated	d July 25, 2007.						\$1,178,640

CEMVN-PM-W				,		AND RESTORA				24-Apr-2018 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 Construe 0 Construe	s) aring Agreements E ction Started ction Completed s) Deferred/Deautho									
Priority List 10										
Iydrologic Restoration & Vegetative Planting in the	BARA	STJAM	0	08-Oct-2001 A	01-Nov-2017 *	31-Mar-2018 *	\$7,886,704	\$5,220,448	66.2	\$4,673,299 \$2,409,224
Lac des Allemands Swamp	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 nittee's recommendation	2015, the Project Ma lowed by the 95% des 015 meeting. On Janua ation to approve the B I project construction.	ign meeting on Octo ary 22, 2016, the CV A 34-2 project for P	ber 28, 2015. The D VPPRA Task Force hase II funding. A	BA 34-2 new	\$2, <b>4</b> 07,224
Lake Borgne Shoreline	PONT	STBER	165	02-Oct-2001 A	01-Aug-2007 A	12-Apr-2010 A	\$27,479,959	\$27,225,612	99.1	\$20,439,994
Totection	Status:	Construction	grant has expi	ired and final Phase	l activities in the pro	ocess of being closed-o	out.			\$20,308,195
	Total Priority List	10	165				\$35,366,663	\$32,446,060	91.7	\$25,113,293 \$22,717,420
1 Construct 1 Construct	s) aring Agreements E ction Started ction Completed s) Deferred/Deautho									

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

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		5		<ul> <li>I</li> </ul>	** SCHEDULES	****	******		***	Actual
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	STIMATES **** Funded	%	Obligations/ 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	\$2,339,887	85.4	\$1,868,289
St. Philip	Status:	This project v	was completed	in 2006. Monitoring	g is ongoing and no	maintenance has been	conducted.			\$1,917,628
East Sabine Lake Hydrologic Restoration	CA/SB	CAMER	225	17-Jul-2001 A	01-Dec-2004 A	11-Aug-2009 A	\$6,049,990	\$5,006,506	82.8	\$4,854,505 \$4,788,001
	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 eart Sabine Lake s adding 50,000 components i heavy damag breakwater no	er control stru ic Modeling S " and the "Pha roject model 1 ight Prong Bl le effect in rec d from the pro cted: 1) Pines ar feet of rock SE Section 16 then terraces v shoreline com 0 linear feet o n October 200 e caused by H ear Willow Ba trict No. 7 rep	actures at Right Prong tudy Phase II: Calibra use III Determination uns that included mo- ack Bayous were com lucing project area sal ject. The first portior Ridge Bayou weir, 2) breakwater, with 50-1 . Project The propose vere added using vege lucted by the State So f terraces, constructin 06 based on hydrodyn urricane Rita. Four 50 uyou. 50,000 linear fee laced the Section 16 f	g, Greens, Three and attion and Verification of Boundary Condition deling of fixed crest inpleted. Hydrodynam limities. Therefore P in of Construction Uf Bridge Bayou culv foot wide gaps, at the d 11 miles (58,100 li- etative planting func- bil and Water Conse g 4, 50-foot-wide gi- amic modeling resul D-foot wide gaps we et of additional earth	July 17, 2001. FTN cc Willow Bayous. The on Report," "Historica tions for Evaluating Ph weirs with boat bays nic modeling results p hase 2 of the project th nit 1 was completed in erts, 3) 171,000 linear ee eastern Sabine Lake linear feet) of planned ls because of an unsuc rvation District and th aps in the rock breakw lts. The Pines Bayou we re also installed in Au hen terraces were cons The project will be in	"East Sabine Lake H 1 Data Review Mode roject Alternatives" v (10 feet wide by 4 fe predicted that the pro hat involved structur of October 2006. The feet of earthen terrate shoreline beginning Sabine Lake shoreli ccessful 7,500 linear te NRCS. The CWPF vater, and deleting Co weir was rehabilitate ugust 2007, in the 3,0 structed in January 20	lydrologic Restorat ling Phase III Data were completed Oct bet deep) at Willow, posed structures wo es on the above bay following project for ces in the Greens L gat Willow Bayou, ne plantings were r foot test planting al PRA Task Force apponstruction Unit 2 d in August 2007 d 000 foot-long rock 008. The Cameron	ion and ober 5, Three, puld vous eatures ake area, and, 5) a emoved ong the proved ue to Parish	ф <b>т,700,001</b>

CEMVN-PM-W				,		AND RESTOR. T. OF THE INT				24-Apr-2018 Page 66
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********** Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Grand-White Lake Landbridge Restoration	MERM Status:	CAMER Grand-White	213 Lakes Land B	24-Jul-2001 A ridge Restoration	10-Jul-2003 A	01-Oct-2004 A	\$8,584,334	\$4,815,660	56.1	\$3,944,823 \$3,890,628
		Agreement w Project spons and NEPA pr state Coastal Certification Determination	neering and des as executed on ors received Pr oject construct Zone Consiste (October 28, 2 n (December 2	July 24, 2001. LDNN hase II construction ff ion requirements hav ncy Determination (S 002), 4) the Environr 002), and 6) the Corp	R certified landrigh unding approval fro ve been completed; beptember 19, 2002 nental Assessment	Force on January 10, 2 ts completion on Deco om the CWPPRA Tasl 1.) the NRCS Overgra ), 3) the LA Departme (November 19, 2002), mit (December 2002).	ember 12, 2001. k Force on August 7, azing Determination ent of Environmental (, 5) the Corps' CWP	2002. All of the C (August 30, 2002), Quality Water Qua PRA Section 303(c	CWPPRA , 2) LA ality e)	
		The project co to Proceed wa	as issued on Ju	ntract for Constructio ly 10, 2003, and cons	struction for that ph	ke rock shoreline stab ase was completed in leted in October 2004	October 2003. Cons	struction Unit 2 (C	ollicon	
		shoreline rock the rock and t erosion. The planted giant cutgrass vege	c dike and mar he shoreline w Collicon Lake cutgrass veget	sh creation is perforn ith spoil from access lake-ward terrace top ation has eroded and	ning well. The rock channel dredging. ps have eroded appr a cut bank remains	and April 2005 indica t has not subsided and Construction Unit 2 t roximately 66% since Most of the inner sh planted vegetation or	a small strip of wetl erraces have experie project construction oreward terraces are	and was created be nced post construct . Most of the lake- holding up well wa	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 now	16-Dec-2009 A v in the Operation and	\$36,734,873 Maintenance Phase	\$35,280,966	96.0	\$34,369,444 \$34,385,720

PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********** Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations Expenditure	
Ferrebonne 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	\$2,714,585	
Protection Demo COMPLETE	Status:	This demonst	ration project i	s in its last year. We	e will start the close	out process soon.				\$2,713,629	
	Total Priority List	10	1,309				\$56,856,018	\$50,190,113	88.3	\$47,751,645 \$47,695,605	
	ruction Completed et(s) Deferred/Deautho	orized									
FIIOIITY LIST IV		CAMER	256	27-Sep-2001 A	01-Nov-2017 *	15-Feb-2018 *	\$34,330,522	\$33,337,316	97.1	\$28,921,618	
Rockefeller Refuge Gulf	MERM	CAMER									
Rockefeller Refuge Gulf Shoreline Stabilization	MERM Status:	A 30% Desig	n Review meet	-	ay 15, 2014, and the	95% Design Meeting		ember 30, 2014. NI	MFS	\$1,913,42	
		A 30% Desig	n Review meet	ing will occur on Ma	ay 15, 2014, and the	95% Design Meeting		ember 30, 2014. NI \$33,337,316	MFS 97.1		

CEMVN-PM-W	COA	ASTAL WE		PLANNING, P tatus Summary						24-Apr-2018 Page 68
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********** Const End	******* E Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
GIWW Bank Restoration of Critical Areas in Terrebonne	TERRE Status:		64 ned land rights in December 1	16-May-2001 A s to NRCS in April 20 2012.	02-May-2013 A 012. Project re-surve	01-Feb-2014 A eyed to verify design v	\$13,022,246 was still current. Pro	\$11,259,436	86.5	\$9,379,148 \$9,353,959
<ol> <li>Project(s</li> <li>Cost Sha</li> <li>Construct</li> <li>Construct</li> </ol>	Fotal Priority List ) ring Agreements E tion Started tion Completed ) Deferred/Deauth		64				\$13,022,246	\$11,259,436	86.5	\$9,379,148 \$9,353,959
<ul><li>7 Constru</li><li>7 Constru</li></ul>	(s) aring Agreemen ction Started ction Completed (s) Deferred/Dea	1	10,685				\$144,275,514	\$131,932,990	91.4	\$115,865,770 \$86,380,471

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

CEMVN-PM-W				PLANNING, PI Lead Agency: F				CY (EPA)		24-Apr-2018 Page 69 Actual
					* SCHEDULES	****		STIMATES ****	****	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 Maurepas Swamp	PONT	STJON	5,438	04-Apr-2002 A			\$6,554,124	\$6,554,124	100.0	\$6,554,124 \$6,554,124
TRANSFER	Status:	the project fro funds cease as	om CWPPRA	has been further delay , to CPRA in the near request is made, and E , so it is not possible f	future. However, C PA and CPRA still	WPPRA SOP require have some necessary	s that all project exp expenditures that wi	enditures of CWP	PRA	\$0, <i>33</i> 4,124
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 recommen uests will be made.	nded, at the Decemb	er 2012 Technical Co	ommittee Meeting.	Sponsors will deter	rmine	\$2,298,822
Tota	l 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	\$15,938,478	97.9	\$15,802,053
the Barataria Basin Landbridge	Status:	This project w	vas completed	l in 2010. Monitoring	activities are ongoin	ng.				\$15,793,693

CEMVN-PM-W				PLANNING, P ry Report - Lead						24-Apr-2018 Page 70
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********** Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
South Grand Chenier Hydrologic Restoration	MERM Status:	CAMER	414	03-Apr-2002 A	01-Jun-2015 A	01-Jun-2019	\$22,623,346	\$22,282,940	98.5	\$21,047,491 \$2,328,495
		NRCS in M implementa 2004. Desig Landrights r and 95% De Phase II cor constructior remove the 2012. Landri	arch 2017, but tion meeting au n surveying wa neetings were esign Review n astruction fund a funds were re freshwater intr ights were find	approved constructio the bid was unsucces and field trip was held of as completed Septemb held between project s meetings were held on ing on January 20, 20 turned to the CWPPR oduction feature and co alized in 2012 and cor 015. Permit modificat	sful. The plan is to on March 13, 2002. er 2007. A wave an sponsors and the ma August 6, 2009, and 10. Due to lack of la A Program at the Ja hange the name to " struction approval v	re-advertise for bids in The hydrodynamic malysis model and geot jor landowners in 2000 November 3, 2009, malights from two of nuary 19, 2012, Task South Grand Chenier vas again received in the	n November or Dece odeling report was c echnical investigatio )2, 2003, and 2006. I respectively. The Ta the seven major land Force meeting. A pr Marsh Creation", w January 2014. Revis	ember 2017. An ompleted in Septen ons were completed Preliminary design sk Force approved i lowners, project oject scope change as approved in Dec ed Plans and specif	aber in 2008. (30%) nitial to ember ications	
West Lake Boudreaux	TERRE	TERRE	277	03-Apr-2002 A	24-Jul-2007 A	04-Apr-2011 A	\$19,449,961	\$17,708,668	91.0	\$16,013,195
Shoreline Protection& Marsh Creation	Status:			npleted on this projector o be in good working		xception of some dam	nage to several signs			\$16,015,039
	Total Priority List	11	1,296				\$58,359,460	\$55,930,086	95.8	\$52,862,738 \$34,137,227
3 Cons	ect(s) Sharing Agreements F struction Started struction Completed	Executed								

2 Construction Completed

0 Project(s) Deferred/Deauthorized

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

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PROJECT	BASIN	PARISH	ACRES	**************************************	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Little Lake Shoreline Protection/Dedicated	BARA	LAFOU	713	06-Aug-2002 A	04-Aug-2005 A	30-Mar-2007 A	\$29,516,673	\$23,269,717	78.8	\$21,962,469 \$21,916,174
Dredging near Round Lake	Status:	hd settled. A	survey will b		ber 7 to help determ	the northern section of ine the extent of settle				921,910,17 <del>4</del>
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	\$40,136,442	98.6	\$37,628,936 \$37,572,199
Shoreline Restoration	Status:	dune planting platform app to determine	gs observed. ear to be reguineed for mech	The marsh creation are larly flooded by tides	ea and associated co and has about 50% wide tidal exchange	ars largely intact and ntainment dikes were to 60% vegetative cov . Based on observed s	also inspected. Maj ver. Marsh fill conta	or portions of the n inment dikes were i	narsh nspected	<i>40.3012,000</i>
Pelican Island and Pass	BARA	PLAQ	334	06-Aug-2002 A	25-Mar-2006 A	28-Nov-2012 A	\$71,170,649	\$70,320,972	98.8	\$69,394,725
La Mer to Chaland Pass BBI	Status:		,	nstruction Start - 15 N letion - 14 Dec 2012(		ngs - Fall 2012/Sprin	g 2013(S)			\$69,310,869
	Total Priority List	11	1,310				\$141,398,046	\$133,727,132	94.6	\$128,986,129 \$128,799,242
3 Projec	ct(s)									

3 Project(s)

3 Cost Sharing Agreements Executed

3 Construction Started

3 Construction Completed

0 Project(s) Deferred/Deauthorized

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: (NRCS)

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	**************************************							Actual Obligations/		
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Barataria Basin Landbridge Shoreline	BARA	JEFF	256	09-May-2002 A	27-Apr-2005 A	26-Apr-2006 A	\$17,709,217	\$13,187,580	74.5	\$7,034,240 \$6,580,050
Protection, Ph 4	Status:	Construction	Unit #6 was c	completed on April 26	5, 2006.					\$0,200,020
Coastwide Nutria Control	COAST	COAST	14,963	26-Feb-2002 A	20-Nov-2002 A	15-Jul-2003 A	\$68,040,614	\$40,612,225	59.7	\$27,101,352
Program	Status:		ve been colled			ere collected. Over th estimate of coastwide		•		\$27,023,450
Grand Lake Shoreline Protection	MERM	CAMER	45	20-Sep-2011 A	01-Dec-2016 A	07-Jul-2017 A	\$10,055,616	\$7,075,050	70.4	\$6,787,548 \$4,618,519
	Status:	Construction	completed 7/7	7/2017.						φ <del>4</del> ,010,517
Raccoon Island Shoreline Protection/Marsh Creation	TERRE	TERRE	71	23-Apr-2002 A	13-Dec-2005 A	27-Apr-2013 A	\$23,163,392	\$22,497,353	97.1	\$18,606,942
	Status:			n on 12/12/2005 1 on 9/16/2007						\$18,140,755
				n on 9/27/2012 1 on 4/23/2103						
Tot	al Priority List	11	15,335				\$118,968,839	\$83,372,208	70.1	\$59,530,082 \$56,362,774

4 Project(s)

4 Cost Sharing Agreements Executed

4 Construction Started

4 Construction Completed

CEMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT										24-Apr-2018
			Project Stat	tus Summary	Report - Lead A	gency: (NRC	S)			Page 73
PROJECT	************************************									
TROJECT	DASIN	TARISTI	ACKLD	CSA	Collst Start	Collist Elid	Appioved	Tunaca	70	Expenditures
10 Construct 9 Construct	s) aring Agreement ction Started ction Completed s) Deferred/Dear		23,574				\$327,579,291	\$281,882,372	86.1	\$250,231,896 \$228,152,191

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W	VN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: (NRCS)										
				******	********* SCHEDULES ************************************						
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Obligations/ Expenditures	
Lead Agency: NRCS	,										
Priority List 11.1											
Holly Beach Sand	CA/SB	CALCA	330	09-May-2002 A	01-Aug-2002 A	31-Mar-2003 A	\$14,130,233	\$14,130,233	100.0	\$13,998,261 \$13,998,261	
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.										
To	otal Priority List	11.1	330				\$14,130,233	\$14,130,233	100.0	\$13,998,261 \$13,998,261	

1 Project(s)

1 Cost Sharing Agreements Executed

1 Construction Started

1 Construction Completed

CEMVN-PM-W	EMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: (NRCS)										
PROJECT	BASIN	PARISH	************************************								
1 Constr 1 Constr	t(s) haring Agreement uction Started uction Completed t(s) Deferred/Dea		330				\$14,130,233	\$14,130,233	100.0	\$13,998,261 \$13,998,261	

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	****	****** E	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 DEAUTHORIZED	TERRE	STMRY					\$1,736,137	\$1,736,137	100.0	\$1,736,137
DEAUTHORIZED	Status:	The TE-49 A	voca Diversio	on 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
DEAUTHORIZED	Status:	project work geotechnical fall 2003. A p	plan for Phas porings was r reliminary de	e I was submitted to the equested in June 2003 esign report was comp	he P&E Subcommitt 3 and received in Au oleted in December 2	003. A kickoff meetin ee in October 2003. R gust 2003. Surveys an 003. A 30% design re tion approval from the	ight of Entry to per d geotechnical bori view was held in A	form surveys and ngs were collected ugust 2004. A 95%	during design	\$1,089,193
Mississippi River	DELTA	PLAQ					\$354,791	\$354,791	100.0	\$354,791
Sediment Trap DEAUTHORIZED	Status:		plan is under			ugust 2002. A kickoff 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	\$10,573,573	73.1	\$10,475,665
Shoreline Protection	Status:		-	ess of setting up the 2 4 timeframe with repo	-	ection trip for the ME	-22 project; it is ten	tatively set to occu	Ir in the	\$10,474,289

CEMVN-PM-W	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		STIMATES ****		Actual Obligations/	
	Fotal Priority List	12	844	CSA	Const Start	Collst End	Approved \$17,647,101	Funded \$13,753,693	% 77.9	Expenditures \$13,655,785 \$13,654,409	
<ol> <li>Construct</li> <li>Construct</li> <li>Project(st</li> </ol>	) ring Agreements H rtion Started rtion Completed ) Deferred/Deauth										
Priority List 12 Bayou Dupont Sediment	BARA	PLAQ	326	21-Mar-2004 A	04-Feb-2009 A	03-Jun-2010 A	\$27,702,941	\$27,179,025	98.1	\$23,419,572	
Delivery System	Status:	Additional po activities.	ost-primary co	onstruction activities v	vill not be pursued.	Sponsors will be proc	ceeding with constru	ction grant close-ou	t	\$23,412,939	
]	Fotal Priority List	12	326				\$27,702,941	\$27,179,025	98.1	\$23,419,572 \$23,412,939	
1 Construc 1 Construc	ring Agreements H										

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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Project Status Summary Report - Lead Agency: (NRCS)										
PROJECT	BASIN	PARISH	************************************							Actual Obligations/ Expenditures
Freshwater Floating Marsh Creation Demo COMPLETE	COAST	COAST	0	12-Jun-2003 A	01-Jul-2004 A	01-Jun-2006 A	\$1,068,602	\$1,068,602	100.0	\$1,068,602 \$1,068,602
COMPLETE	Status:	the end of 20 structures and	008 (the third g d are beginning	rowing season in the to interweave with p	the floating structure structures, and the be	lace since Spring 2006, and are functioning as designed. By bating structures has spread significantly from their mother ures, and the belowground plant material was generating an to establish the foundation of a sustainable organic marsh mat.				
		storms well v structures per	with less than 5	% of the structures d ely well in the areas	amaged or lost. In t	erall the project structu his project, the P. hen reases in water salinit	nitomon plants estab	lished in the floati	ng	

Total Priority Lis	t 12	0		\$1,068,602	\$1,068,602	100.0	\$1,068,602 \$1,068,602
1 Project(s)							
1 Cost Sharing Agreement	s Executed						
1 Construction Started							
1 Construction Completed							

CEMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: (NRCS)										24-Apr-2018 Page 79
PROJECT	BASIN	PARISH	ACRES	•	*** SCHEDULES * Const Start			STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
3 Const	Sharing Agreement truction Started		1,170				\$46,418,643	\$42,001,319	90.5	\$38,143,958 \$38,135,950
	truction Completed ct(s) Deferred/Dea									

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			STIMATES ****	****	Actual Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures	
Lead Agency: COE, CO	ORPS OF	ENGINEE	RS								
Priority List 13											
Shoreline Protection	COAST	COAST	0	24-Mar-2005 A	01-Nov-2005 A	29-Aug-2006 A	\$707,839	\$707,839	100.0	\$707,839	
Foundation Improvements Demo COMPLETE	Status:	DEMO Final 16 Jan 2014.	Report was co	ompleted and present	ation on project & c	opies of report were pi	rovided at the CWP	PRA Task Force M	leeting on	\$707,839	
Spanish Pass Diversion DEAUTHORIZED	DELTA	PLAQ					\$310,152	\$310,152	100.0	\$310,152	
DEAUMORIZED	Status:	The MR-14 S	Spanish Pass D	Diversion project was	deauthorized per CV	WPPRA Task Force de	ecision on 4 June 20	13.		\$310,152	
Total	Priority List	13	0				\$1,017,991	\$1,017,991	100.0	\$1,017,991 \$1,017,991	
<ol> <li>Project(s)</li> <li>Cost Sharing A</li> <li>Construction S</li> <li>Construction C</li> <li>Project(s) Def</li> </ol>	Started Completed										
Priority List 13											
Whiskey Island Back	TERRE	TERRE	272	29-Sep-2004 A	11-Feb-2009 A	18-Jun-2010 A	\$30,414,086	\$30,165,239	99.2	\$24,917,387	
Barrier Marsh Creation	Status:	After further	assessment of	project vegetation, sp	ponsors intend to pu	rsue an additional vege	etation planting even	nt.		\$24,908,848	

EMVN-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	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	13	272				\$30,414,086	\$30,165,239	99.2	\$24,917,387 \$24,908,848
1 Construct 1 Construct	s) aring Agreements E ction Started ction Completed s) Deferred/Deauth									
Priority List 13										
Goose Point/Point Platte Marsh Creation	PONT	STTAM	436	14-May-2004 A	02-Apr-2008 A	12-Feb-2009 A	\$14,558,123	\$14,455,274	99.3	\$14,072,136 \$14,049,471
	Status:	This project v	was completed	in 2009 and is in the	monitoring and O&	M phase.				\$14,049,47
1	Total Priority List	13	436				\$14,558,123	\$14,455,274	99.3	\$14,072,13 \$14,049,47
1 Construct 1 Construct	s) aring Agreements E ction Started ction Completed s) Deferred/Deauth									
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 sh. Project Team cu			a test	\$1,855,824

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CEMVN-PM-W	W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: (NRCS)										
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES * Const Start	********* Const End	******** ES Approved	TIMATES ***** Funded	**** %	Actual Obligations/ Expenditures	
	Total Priority List	13					\$1,855,824	\$1,855,824	100.0	\$1,855,824 \$1,855,824	
1 0 0	Project(s) Cost Sharing Agreements Ex Construction Started Construction Completed Project(s) Deferred/Deautho										
Total			708				\$47,846,025	\$47,494,329	99.3	\$41,863,338 \$41,832,134	
4 3 3	Project(s) Cost Sharing Agreement 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				PLANNING, PI ry Report - Lead						24-Apr-2018 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 2012	g to construct the proje 2 meeting.	ect using state-only f	funds. Final CWPPR.	A deauthorization wa	as approved by the	Task	\$2,935,025
Tot	al Priority List	14					\$2,935,025	\$2,935,025	100.0	\$2,935,025 \$2,935,025
0 Constructio 0 Constructio										
Priority List 14										
East Marsh Island Marsh	TECHE	IBERI	169	04-Oct-2006 A	15-Feb-2010 A	22-Jul-2011 A	\$17,765,813	\$17,307,114	97.4	\$17,026,915
Creation	Status:	Construction	of marsh creat	tion has been complete	ed. Vegetative Plan	ntings began March 24	011, expected to be o	completed by July 2	2011.	\$17,005,388
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	\$17,127,097
Shoreline Protection & Marsh Creation	Status:	Project was c	ompleted on J	une 6, 2012.						\$17,093,145
White Ditch Resurrection	BRET	PLAQ		11-Aug-2005 A			\$1,020,420	\$1,020,420	100.0	\$1,020,420
and Outfall Management DEAUTHORIZED	Status:	Project team	has agreed to 1	move to deauthorization	on due to issues reg	arding location & ope	eration of siphon.			\$1,020,420

CEMVN-PM-W	COAS			,	ROTECTION A Report - Lead A					24-Apr-2018 Page 84
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES * Const Start	********* Const End	******** ES Approved	TIMATES ***** Funded	**** %	Actual Obligations/ Expenditures
3 C 2 C 2 C	Total Priority List Project(s) Cost Sharing Agreements Ex Construction Started Construction Completed Project(s) Deferred/Deauthor		275				\$40,425,806	\$38,180,657	94.4	\$35,174,432 \$35,118,954
4 0 2 0 2 0	Project(s) Cost Sharing Agreements Construction Started Construction Completed Project(s) Deferred/Deaut		275				\$43,360,831	\$41,115,682	94.8	\$38,109,457 \$38,053,978

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W						AND RESTORA NTAL PROTEC		CY (EPA)		24-Apr-2018 Page 85 Actual
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Obligations/ Expenditures
Lead Agency: EPA, F	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	ct 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			\$611,222	\$611,222	100.0	\$611,222 \$611,222
INACTIVE	Status:			sted, but not recomme uests will be made.	ended, at the Decem	ber 2012 Technical Co	ommittee Meeting.	Sponsors will deter	mine	
Tot	al Priority List	15	938				\$620,732	\$620,732	100.0	\$620,732 \$620,732
0 Constructio 0 Constructio										
Priority List 15										
Lake Hermitage Marsh	BARA	PLAQ	447	28-Mar-2006 A	24-Feb-2012 A	19-May-2015 A	\$24,092,500	\$23,640,564	98.1	\$34,544,179
Creation	Status:	This project v	was completed	in 2015 and monitor	ing activities are on	going.				\$34,514,659

CEMVN-PM-W						AND RESTOR. T. OF THE INT				24-Apr-2018 Page 86
PROJECT	BASIN	PARISH	ACRES	********* CSA	* SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	15	447				\$24,092,500	\$23,640,564	98.1	\$34,544,179 \$34,514,659
1 Construct 1 Construct	s) aring Agreements E ction Started ction Completed s) 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:			s has been unsuccess cal Committee that tl		eight landowners. The odeauthorization.	erefore, the NMFS a	and OCPR will be		\$779,422
	Fotal Priority List	15					\$779,422	\$779,422	100.0	\$779,422 \$779,422
	s) aring Agreements E	Executed								

0 Construction Started

0 Construction Completed

CEMVN-PM-W	N-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			
Total			1,385				\$25,492,653	\$25,040,717	98.2	\$35,944,333 \$35,914,812			
1 Constru 1 Constru	(s) naring Agreement action Started action Completed (s) Deferred/Dea	l											

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				24-Apr-2018 Page 88
				*******	** SCHEDULES	****	******* ES	TIMATES ***	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: C	OE, CORPS OF	ENGINEE	RS							
Priority List	16									
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 j	a Cost Share A project Fact Sh	Agreement with CPR. eet and map was app	A, a Phase 1 work p roved by the New C	internal project delive dan will be developed Drleans District for plac RA until a Cost Share	and a kickoff meetin cement on the LaCoa	ng/site visit schedu ast website. At thi	uled. In	\$10,657
	Total Priority List	16	888				\$10,657	\$10,657	100.0	\$10,657 \$10,657
0 Cons 0 Cons	ect(s) Sharing Agreements E struction Started struction Completed ect(s) Deferred/Deauth									
Priority List	16									
Enhancement of Barrier	COAST	COAST	0	27-Jul-2007 A	14-Jun-2010 A	31-Dec-2010 A	\$591,998	\$591,998	100.0	\$591,998
Island Vegetation Demo	Status:	A draft final	report was rece	ived and reviewed, w	vith minimal comme	ents. Subsequently, a f	inal report was com	pleted.		\$591,998

CEMVN-PM-W				PLANNING, P - Lead Agency: 1				CY (EPA)		24-Apr-2018 Page 89
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********** Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	16	0				\$591,998	\$591,998	100.0	\$591,998 \$591,998
1 Constru 1 Constru	s) aring Agreements E ction Started ction Completed s) Deferred/Deautho									
Priority List 16										
Madison Bay Marsh Creation and Terracing INACTIVE	TERRE Status:	TERRE NMFS intend	334 Is to seek Pha	31-May-2007 A se 2 authorization in I	01-Dec-2015 * December 2014.	01-Jul-2017 *	\$1,731,039	\$1,731,039	100.0	\$1,731,039 \$1,731,039
West Belle Pass Barrier Headland Restoration	TERRE	LAFOU	305	31-May-2007 A	09-Sep-2011 A	04-Jun-2013 A	\$42,250,417	\$42,043,858	99.5	\$25,848,003 \$25,802,143
Project	Status:	Readjusted d	escription and	l changed construction	n completion date ba	sed on plantings date	to fit with O&M pla	an.		
	Total Priority List	16	639				\$43,981,456	\$43,774,897	99.5	\$27,579,043 \$27,533,183
1 Constru-	s) aring Agreements E ction Started ction Completed	xecuted								

0 Project(s) Deferred/Deauthorized

CEMVN-PM-W	Project Status Summary Report - Lead Agency: (NRCS)										
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** Ex Approved	STIMATES **** Funded	C C		
Alligator Bend Marsh Restoration and Shoreline Pro-117ction (Inactive)	PONT Status:		181 een placed on struction fund	11-Jun-2008 A Inactive list until CW ing.	PPRA is reauthorize	ed, receives further fu	\$1,364,230	\$1,364,230 ogram is found that	100.0 : can	\$1,364,230 \$1,364,230	
<ol> <li>Project(s</li> <li>Cost Sha</li> <li>Construct</li> <li>Construct</li> </ol>	ring Agreements E		181				\$1,364,230	\$1,364,230	100.0	\$1,364,230 \$1,364,230	
<ul><li>2 Constru</li><li>2 Constru</li></ul>	s) aring Agreement ction Started ction Completed s) Deferred/Dea	1	1,708				\$45,948,342	\$45,741,783	99.6	\$29,545,928 \$29,500,068	

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

CEMVN-PM-W				PLANNING, PI Lead Agency: F				CY (EPA)		24-Apr-2018 Page 91
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** Es Approved	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 Ma	aster Plan consisten	cy. Project deauthor	ization process to be	initiated pending d	irection	\$502,592
1	Fotal Priority List	17					\$502,592	\$502,592	100.0	\$502,592 \$502,592
0 Construct 0 Construct	ring Agreements H									
South Lake Lery	BRET	MULTI	409	19-Feb-2008 A	31-Jul-2015 A	01-Jun-2018	\$32,663,173	\$32,295,816	98.9	\$31,587,910
Shoreline and Marsh Restoration	Status:	All earth wor planted with associated wi address the en	k associated w bullwhip (inter th LRE 1 and	vith the Lake Rim Emb rtidal) and bermuda ar 6. Currently CPRA/F arsh creation has been	oankments (LRE) o nd brown top millet WS/NRCS are eval	r Shoreline Restorati (crown). There are s uating if/what additio	on has been complete some concerns with the onal work will be nee	ed. All LRE have be ne amount of erosio ded on those reache	een m es to	\$31,387,910 \$25,972,638

CEMVN-PM-W						AND RESTOR. Γ. OF THE INT				24-Apr-2018 Page 92
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	\$31,587,910 \$25,972,638
1 Const 0 Const 0 Projec	Sharing Agreements E ruction Started ruction Completed et(s) Deferred/Deauth									
Priority List 1 Bayou Dupont Ridge	/ BARA	JEFF	186	17-Jul-2008 A	21-Apr-2014 A	30-Jun-2015 A	\$38,985,192	\$38,229,940	98.1	\$36,675,330
Creation & Marsh Restoration	Status:	Major constr	uction activities		marsh platform and 1	idge have been const				\$35,496,472
Bio-Engineered Oyster Reef DEMO	MERM	MULTI	0		02-Aug-2011 A	17-Feb-2012 A	\$2,244,785	\$2,244,785	100.0	\$2,073,557 \$2,065,062
	Status:	Oyster and el	evation survey	s are complete and a	final report are in pr	ocess.				
	Total Priority List	17	186				\$41,229,977	\$40,474,725	98.2	\$38,748,887 \$37,561,533
2 Const	et(s) Sharing Agreements E ruction Started	Executed								

2 Construction Completed

### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

Project Status Summary Report - Lead Agency: (NRCS)

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			1 lojeet St		** SCHEDULES	****		TIMATES ***	****	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 inc	cluded with the PO-75	5 Pilot Study. Proje	ct was awarded on Jan	uary 7, 2013.			\$665,762
West Pointe a la Hache Marsh Creation	BARA	PLAQ		24-Jan-2008 A			\$580,827	\$580,827	100.0	\$580,827
DEAUTHORIZED	Status:	47 footprint a	and cover most		d to be built under th	mental funding and wa nis project. Therefore, rogram.	•			\$580,827

Total Priority List 17

0

\$1,551,553 \$1,551,553

\$1,464,529 \$1,464,529

100.0

2 Project(s)

2 Cost Sharing Agreements Executed

1 Construction Started

1 Construction Completed

CEMVN-PM-W	COA	STAL WE	ETLANDS P	LANNING,	PROTECTION A	AND RESTOR	ATION ACT			24-Apr-2018
			Project Sta	tus Summary	Report - Lead A	gency: (NRC	S)			Page 94
				******	*** SCHEDULES '	*****	******* ES	STIMATES ****	****	Actual Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
4 Constr 3 Constr	t(s) haring Agreement uction Started uction Completed t(s) Deferred/Dea	1	595				\$75,947,295	\$74,824,686	98.5	\$72,303,918 \$65,501,293

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)										24-Apr-2018 Page 95 Actual			
PROJECT	BASIN	PARISH	ACRES	********* CSA	* SCHEDULES Const Start	********** Const End	******* ES Approved	TIMATES **** Funded	**** %	Obligations/ Expenditures			
Lead Agency: EPA,	NATIONAL	MARINE	FISHERIES	SERVICE									
Priority List 18													
Bertrandville Siphon DEAUTHORIZED	BRET	PLAQ		15-Jun-2011 A			\$521,984	\$521,984	100.0	\$521,984			
	Status:	Project delays	s due to conside	rations of State Mas	ter Plan consistency	and pursuit of lando	wner support.			\$521,984			
T	otal Priority List	18					\$521,984	\$521,984	100.0	\$521,984 \$521,984			
<ol> <li>Construct</li> <li>Construct</li> </ol>	ing Agreements I												
Priority List 18													
Grand Liard Marsh and	BARA	PLAQ	370		01-Jul-2014 A	01-Oct-2015 A	\$42,579,616	\$42,210,113	99.1	\$39,616,447			
Ridge Restoration	Status:	notice to proc began on July was completed completed co containment of	e bid opening was on February 6, 2014 and the construction contract was awarded to Weeks Marine, Inc. on March 18, 2014. The tice to proceed was issued on March 24, 2014 and the pre-construction meeting was held on April 3, 2014. Access channel dredging gan on July 22, 2014 and ended on August 26, 2015. Earthen ridge and containment dike construction began on August 27, 2014 and is complete on March 24, 2015. Marsh creation began on March 18, 2015 and was complete on July 31, 2015. Weeks Marine, Inc. mpleted construction on September 16, 2015. Final quantities constructed were: 450 acres of marsh platform; 28,855 linear feet of ntainment dikes; 45,152 square feet of steel sheet piling; and 15,484 linear feet of earthen ridge. Portions of the marsh are expected to planted with vegetation in the fall of 2018. The constructed ridge will be planted with woody vegetation in the future.							\$33,493,994			

CEMVN-PM-W				PLANNING, P y Report - Leac						24-Apr-2018 Page 96 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Obligations/ Expenditures
Tot	al Priority List	18	370				\$42,579,616	\$42,210,113	99.1	\$39,616,447 \$33,493,994
1 Constructio 1 Constructio	ng Agreements H nn Started on Completed Deferred/Deauth									
Cameron-Creole Freshwater Introduction	CA/SB Status:	information r		04-May-2009 A e for the vegetative co structural components er 2018					94.3	\$1,944,088 \$1,881,222
Central Terrebonne Freshwater Enhancement TRANSFER	TERRE Status:	TERRE Project featur	233 res are being ir	04-May-2009 A acorporated into the F	01-Sep-2017 * Restore Act Project: 1	01-Jul-2018 Bayou Dularge Ridge	\$2,326,289 e, Marsh, and Hydrol	\$2,326,289 ogic Restoration.	100.0	\$1,315,593 \$1,315,593

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# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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		Project Status Summary Report - Lead Agency: (NRCS) ***********************************									
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Obligations/ Expenditures	
Non-Rock Alternatives to Shoreline Protection	COAST	COAST	0	04-May-2009 A	05-Mar-2015 A	24-Apr-2017 *	\$6,472,800	\$6,472,800	100.0	\$6,010,618	
Demo	Status:	Projected Tin	nelines							\$5,334,271	
		Project was a	dvertised on N	Nov. 15, 2011							
		Site VisitsNo	v. 16 & 17, 20	)11							
		Proposals Du	e on RFPMar.	. 15, 2012)							
		< Phase I > Review of Pr	oposalsMay 1	4, 2012)							
		Interview Pro	ocessJune 28, 2	2012)							
		< Phase 2 > Notice of Sel	ection (for Ph	ase 2 design) (July 13	3, 2012)						
		Draft Design	Schedule from	n NRCS(Aug. 3, 201	2)						
		Phase 2 Cont	ract Award (A	ug. 13, 2012)							
		Final Design	Schedule from	n NRCS(Aug. 17, 20	012)						
		Begin Survey (Sep. 19, 201		P&S for advertiseme	ent						
		Final Product	Selection and	l Develop Phase III I	Budget(Nov. 26, 201	2)					
		Submit Budg	et Increase Re	equest to Technical C	ommittee (TC)(Nov.	27, 2012)					
		Request Task	Force Approv	al and BudgetJanuar	ry 17, 2013						
		< Phase 3 > Notice of Sel	ection (for Ph	ase III)(Jan. 25, 2013	3)						
		Advertise NR	CS Dredging	Contract(Mar. 18, 20	013)						
		Finalize NRC	CS Plans & Sp	ecifications(May 25,	2013)						
		Dhasa 2 Cont	ne at Arroad (A	Apr. 27, 2012)					Da	aa 07	

CEMVN-PM-W	COA	ASTAL WE				AND RESTORA Agency: (NRCS				24-Apr-2018 Page 98
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********** Const End	******* ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
		NTP on NRC	S Dredging Contra	act(May 31, 201	3)					
		Construction	of Shoreline Prote	ction Systems(J	an. 22, 2014)					
		Construction	Report(Feb. 21, 20	)14)						
		Monitoring F	Period(Jan. 23, 2017	7)						
		Completion I	Report and Project	Closeout(Apr. 2	4, 2017)					
	Total Priority List	18	451				\$11,560,590	\$11,403,692	98.6	\$9,270,299 \$8,531,086
	ct(s) Sharing Agreements E ruction Started	Executed								

0 Construction Completed

CEMVN-PM-W	COA	STAL WE		,	PROTECTION A Report - Lead A				24-Apr-2018 Page 99
PROJECT	BASIN	PARISH	ACRES	-	*** SCHEDULES * Const Start		STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	oject(s)		821			\$54,662,190	\$54,135,789	99.0	\$49,408,730 \$42,547,064
3 Co. 1 Co.	st Sharing Agreements nstruction Started nstruction Completed oject(s) Deferred/Deau								

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 (FWS)									
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** Ex Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
Lead Agency: FWS,	FISH & WI	LDLIFE SH	ERVICE								
Priority List 19											
Lost Lake Marsh Creation	TERRE	TERRE	452	22-Apr-2010 A	25-Jan-2017 A	26-Aug-2018	\$35,125,857	\$31,531,382	89.8	\$2,220,640	
and Hydrologic Restoration	Status:			der construction. Con ructure replacement is		under construction a	nd dredging is expect	ted to begin in Aug	ust	\$3,372,307	
То	tal Priority List	19	452				\$35,125,857	\$31,531,382	89.8	\$2,220,640 \$3,372,307	
1 Constructio 0 Constructio											
Priority List 19											
Chenier Ronquille Barrier	BARA	PLAQ		18-Aug-2010 A			\$987,476	\$987,476	100.0	\$987,476	
Island Restoration DEAUTHORIZED	Status:	Project was		a CWPPRA project	as it was successful	ly included as a Phas	e III Early Restoration	on Project for the D	eepwater	\$987,476	

S: Project was deauth Horizon Oil Spill.

CEMVN-PM-W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT 2 Project Status Summary Report - Lead Agency: DEPT. OF COMMERCE (NMFS)										
				********	** SCHEDULES	******* ESTIMATES *******			Actual Obligations/	
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Tota	al Priority List	19					\$987,476	\$987,476	100.0	\$987,476 \$987,476
<ol> <li>Construction</li> <li>Construction</li> </ol>										
Freshwater Bayou Marsh	MERM	VERMI	279	01-Apr-2010 A	01-Jul-2018	01-Aug-2019	\$2,425,997	\$2,425,997	100.0	\$2,154,905
Creation						-	. , ,	$\psi_2, +23, 777$	100.0	\$1,488,772
	Status:	Milestones sh Scheduled Da 30% Review 95% Review Contracting Construction S	tes: May 20 August April 201	16 2016 7	l Sponsor does not	have access to change	the information.			
LaBranche East Marsh Creation	PONT Status:	STCHA Revised Scheo	715 duled Dates: 3	01-Apr-2010 A 30% Review Nov 201	01-Sep-2018 7; 95% Review Ap	01-Sep-2019 oril 2018; Contracting	\$2,571,273 April 2019; Construc	\$2,571,273 tion Start Septemb	100.0 per 2019	\$2,307,361 \$2,293,515

CEMVN-PM-W	COAS				ROTECTION A Report - Lead A					24-Apr-2018 Page 102
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES * Const Start	******** Const End	******** ES Approved	TIMATES ***** Funded	**** %	Actual Obligations/ Expenditures
2 0 0	Total Priority List Project(s) Cost Sharing Agreements Exec Construction Started Construction Completed Project(s) Deferred/Deauthoriz		994				\$4,997,270	\$4,997,270	100.0	\$4,462,266 \$3,782,287
4 1 0	Project(s) Cost Sharing Agreements H Construction Started Construction Completed Project(s) Deferred/Deauth		1,446				\$41,110,603	\$37,516,128	91.3	\$7,670,383 \$8,142,070

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				24-Apr-2018 Page 103
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Lead Agency: FW	S, FISH & WI	LDLIFE SE	RVICE							
Priority List 20										
Bayou Bonfouca Marsh Creation	PONT	STTAM	478	14-Mar-2011 A	05-Sep-2016 A	20-Jan-2018 *	\$28,253,969	\$27,648,895	97.9	\$2,315,436 \$4,105,450
Creation	Status:			d 3 are completed. M w area just outside of	<b>U</b> 1	eletion. Starting to pu	imp into MC 4. The	re has been a numb	er of	\$4,105,459
Cameron-Creole	CA/SB	CAMER	476	24-Oct-2011 A	01-Sep-2017 *	01-Dec-2018	\$28,707,688	\$28,122,302	98.0	\$1,386,232
Watershed Grand Bayou Marsh Creation	Status:	Notice to Pro	ceed to Const	ruction was issued or	n September 13, 201	7.				\$1,502,124
Terrebonne Bay Marsh Creation-Nourishment	TERRE	TERRE					\$2,901,750	\$2,901,750	100.0	\$790,023 \$801,388
DEAUTHORIZED	Status:	This project l	nas been put o	n hold and no work is	s currently being do	ne on the project.				φυσ1,500
	Total Priority List	20	954				\$59,863,407	\$58,672,947	98.0	\$4,491,691 \$6,408,971

3 Project(s)

2 Cost Sharing Agreements Executed

1 Construction Started

0 Construction Completed

1 Project(s) Deferred/Deauthorized

Priority List 20

CEM	IVN	-PM	-W
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#### COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

24-Apr-2018 Page 104

			Project S	tatus Summary I	Report - Lead	Agency: (NRCS	(2			Page 104
PROJECT	BASIN	PARISH	ACRES	********** CSA	•			STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Coastwide Vegetative	COAST	COAST	779	20-Sep-2011 A	27-Jul-2012 A	01-Jun-2013 *	\$12,689,725	\$12,146,468	95.7	\$9,832,155
Planting	Status:	completed; S	abine Unit Or	ebonne Par), partially ae, under construction out for bid in October	; The Jaws Part 2, u					\$4,212,638
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	\$2,026,363 \$1,232,961
	Status:	Scheduled D 30% Review 95% Review Contracting	ates: May 20	2016 17	i Sponsor does not r	lave access to change	the information.			
	Total Priority List	20	1,053				\$15,050,334	\$14,507,077	96.4	\$11,858,518 \$5,445,598

2 Project(s)

2 Cost Sharing Agreements Executed

1 Construction Started

0 Construction Completed

CEMVN-PM-W	COA	STAL WE		,	PROTECTION A				24-Apr-2018 Page 105
PROJECT	BASIN	PARISH	ACRES	-	7 Report - Lead A **** SCHEDULES * Const Start		STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
2 Const 0 Const	Sharing Agreement ruction Started ruction Completed	l	2,007			\$74,913,741	\$73,180,024	97.7	\$16,350,209 \$11,854,569
1 Projec	ct(s) Deferred/Dea	uthorized							

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 (FWS)									
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures	
Lead Agency: FWS,	FISH & WI	LDLIFE SE	RVICE								
Priority List 21											
Turtle Bay Marsh Creation	BARA	JEFF	432	10-May-2012 A	01-Oct-2018	01-Oct-2019	\$33,664,671	\$32,607,095	96.9	\$1,349,122	
	Status:	This project v	was approved	for Phase 2 funding in	n January 2017. It is	s expected to be adve	rtised for bids in Jan	uary 2018.		\$1,649,911	
То	tal Priority List	21	432				\$33,664,671	\$32,607,095	96.9	\$1,349,122 \$1,649,911	
0 Constructio 0 Constructio	ng Agreements F on Started on Completed Deferred/Deauth										
Priority List 21											
Coles Bayou Marsh	TECHE	VERMI	340		01-Apr-2018*	31-Mar-2019	\$25,635,641	\$24,169,491	94.3	\$21,472,843	
Restoration	Status:	Project is on	course for a p	hase 2 (construction)	request in Decembe	r 2015.				\$2,329,699	
Oyster Bayou Marsh Restoration	CA/SB	CAMER	433	05-Feb-2013 A	01-Oct-2016 A	15-Oct-2016 *	\$31,236,742	\$30,722,420	98.4	\$27,028,778	
RESIOIALIOII	Status:									\$12,969,153	

CEMVN-PM-W						AND RESTOR PT. OF COMME				24-Apr-2018 Page 107
PROJECT	BASIN	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	21	773				\$56,872,383	\$54,891,911	96.5	\$48,501,621 \$15,298,852
1 Constru 0 Constru	(s) naring Agreements E action Started action Completed (s) Deferred/Deautho									
Priority List 21										
LaBranche Central Marsh	PONT	STCHA	731	01-Jun-2012 A	01-Sep-2018	01-Sep-2020	\$3,885,298	\$3,885,298	100.0	\$3,644,234
Creation	Status:	Revised Sche	eduled Dates:	30% Review Jan 2018	8; 95% Review July	2018; Contracting A	pril 2019; Constructi	on Start September	2019	\$1,657,209
	Total Priority List	21	731				\$3,885,298	\$3,885,298	100.0	\$3,644,234 \$1,657,209
0 Constru	(s) naring Agreements E action Started	Executed								

0 Construction Completed

CEMVN-PM-W	COA	STAL WE		,	PROTECTION A				24-Apr-2018 Page 108
PROJECT	BASIN	PARISH	ACRES	-	Report - Lead A **** SCHEDULES * Const Start		STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
1 Constr 0 Constr	t(s) haring Agreement uction Started uction Completed t(s) Deferred/Dea	l	1,936			\$94,422,352	\$91,384,304	96.8	\$53,494,977 \$18,605,972

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)		24-Apr-2018 Page 109 Actual
				********	SCHEDULLS			STIMATES ****		Obligations/
PROJECT	BASIN	PARISH	ACRES	CSA	Const Start	Const End	Approved	Funded	%	Expenditures
Lead Agency: EPA, F	ISH & WIL	LDLIFE SE	RVICE							
Priority List 22										
Bayou Dupont Sediment Delivery-Marsh Creation 3	BARA	PLAQ	118	23-Aug-2013 A	07-Dec-2015 A	29-Jun-2017 A	\$18,119,679	\$17,638,184	97.3	\$15,735,052
Denvery-marsh Creation 5	Status:	Phase 2 was	approved at th	e May 14, 2015 Task	Force meeting base	d on a reduced scope	to fit available CWP	PRA funding.		\$11,273,878
		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	\$15,735,052 \$11,273,878
1 Construction	n Completed									
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	\$1,449,121 \$1,378,226
0	Status	Dhasa II Eur	J:		-h	Committee Meeting				$\psi_{1,570,220}$

Status: Phase II Funding will be requested at the December 2017 Technical Committee Meeting.

CEMVN-PM-W				,		AND RESTOR T. OF THE INT				24-Apr-2013 Page 110 Actual
PROJECT	BASIN	PARISH	ACRES	******** CSA	*** SCHEDULES Const Start	********** Const End	******** ES Approved	STIMATES **** Funded	**** %	Obligations/ Expenditures
	Total Priority List	22	314				\$2,308,599	\$2,308,599	100.0	\$1,449,121 \$1,378,226
0 Constr 0 Constr	et(s) Sharing Agreements E ruction Started ruction Completed et(s) Deferred/Deautho									
Priority List 2	2									
Cameron Meadows Marsh Creation	n CA/SB Status:	CAMER	326		21-May-2019	24-Aug-2020	\$38,499,572	\$37,503,664	97.4	\$32,350,893 \$2,759,543
	Total Priority List	22	326				\$38,499,572	\$37,503,664	97.4	\$32,350,893 \$2,759,543
0 Constr 0 Constr	et(s) Sharing Agreements E ruction Started ruction Completed et(s) Deferred/Deautho									
Priority List 2	2									
North Catfish Lake Marsh Creation	TERRE	LAFOU	401	11-Oct-2013 A		01-Sep-2021	\$3,216,194	\$3,216,194	100.0	\$2,597,839 \$693,387
	Status:				gineering Services to	o complete the data co	ollection and design of	of the project. Plan	to have	\$0,0,00

CEMVN-PM-W	COASTA				ROTECTION A Report - Lead Ag					24-Apr-2018 Page 111
PROJECT	BASIN PA	ARISH	ACRES	********* CSA	** SCHEDULES ** Const Start	******** Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
1 0 0	Total Priority List 22 Project(s) Cost Sharing Agreements Execute Construction Started Construction Completed Project(s) Deferred/Deauthorized		401				\$3,216,194	\$3,216,194	100.0	\$2,597,839 \$693,387
3 1 1	Project(s) Cost Sharing Agreements Exe Construction Started Construction Completed Project(s) Deferred/Deauthori		1,159				\$62,144,044	\$60,666,641	97.6	\$52,132,905 \$16,105,035

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W	W COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT Project Status Summary Report - Lead Agency: ENVIRONMENTAL PROTECTION AGENCY (EPA)				24-Apr-2018 Page 112					
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Lead Agency: EPA,	FISH & WIL	DLIFE SE	RVICE							
Priority List 23										
Caminada Headlands Back Barrier Marsh	BARA	LAFOU	165				\$33,523,561	\$32,081,864	95.7	\$3,019,442
Creation	Status:									\$577,645
T	otal Priority List	23	165				\$33,523,561	\$32,081,864	95.7	\$3,019,442 \$577,645
0 Construct 0 Construct	ring Agreements E tion Started tion Completed ) Deferred/Deauth									
Priority List 23										
Bayou Grande Cheniere	BARA	PLAQ	237	23-Jan-2015 A			\$2,742,302	\$2,742,302	100.0	\$841,741
Marsh & Ridge Restoration	Status:	Phase II appr	oval will be re	quested at the Decem	ber 2017 Technical	Committee Meeting.				\$943,131
Т	otal Priority List	23	237				\$2,742,302	\$2,742,302	100.0	\$841,741 \$943,131
<ol> <li>Project(s)</li> <li>Cost Share</li> <li>Construct</li> </ol>	ring Agreements E	Executed								

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	PARISH	ACRES	******** CSA	** SCHEDULES Const Start	********* Const End	******** Es Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Priority List 23	DASIN	TAKISH	ACKES	CBA	Const Start	Collst Elid	Approved	Tunded	70	Expenditures
Island Road Marsh Creation & Nourishment	TERRE Status:	TERRE	312	01-Jul-2014 *			\$3,721,447	\$3,721,447	100.0	\$3,407,605 \$1,229,660
Tota	al Priority List	23	312				\$3,721,447	\$3,721,447	100.0	\$3,407,605 \$1,229,660
0 Construction 0 Project(s) D Priority List 23	-	orized								
South Grand Chenier	MERM	CAMER	393	30-Jun-2015 *	30-Nov-2017*	30-Nov-2018	\$2,653,242	\$2,653,242	100.0	\$1,810,971
Marsh Creation – Baker Tract	Status:	Project desig	n is on hold du	e to difficulty in obta	aining landrights.					\$555,903
Tota	al Priority List	23	393				\$2,653,242	\$2,653,242	100.0	\$1,810,971 \$555,903
1 Project(s) 0 Cost Sharin 0 Construction	n Started	Executed								

0 Construction Completed

CEMVN-PM-W	COA	STAL WE		,	PROTECTION A Report - Lead A				24-Apr-2018 Page 114
PROJECT	BASIN	PARISH	ACRES	-	*** SCHEDULES * Const Start		STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
0 Constr 0 Constr	t(s) haring Agreement uction Started uction Completed t(s) Deferred/Dear		1,107			\$42,640,552	\$41,198,855	96.6	\$9,079,758 \$3,306,340

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W						AND RESTOR		CY (EPA)		24-Apr-2018 Page 115
PROJECT	BASIN	PARISH	ACRES	********* CSA	** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	FISH & WIL						II III IIII			1
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	\$1,052,000
Creation	Status:	TF Approved	Phase 1 on 1/2	22/15.						\$318,368
		Grant awarde	ed to the CPRA	for Phase 1 on 7/22/	15.					
		MOA betwee	en EPA/USACI	E signed by Colonel I	Hansen on 9/25/15.					
		Phase 1 Kick	off meeting he	ld at USACE offices	on 10/20/15.					
Tot	al Priority List	24	344				\$3,176,569	\$3,176,569	100.0	\$1,052,000 \$318,368
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 \$602,797
Creation	Status:									φ002,1 <i>71</i>

CEMVN-PM-W					PROTECTION And Agency: DEP					24-Apr-2018 Page 116
PROJECT	BASIN	PARISH	ACRES	******** CSA	**** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
1	Fotal Priority List	24	167				\$1,942,143	\$1,942,143	100.0	\$156,912 \$602,797
0 Construc 0 Construc	ring Agreements E									
Priority List 24										
No Name Bayou Marsh Creation & Nourishment	CA/SB	CAMER	497				\$2,724,524	\$2,724,524	100.0	\$2,500,187
Creation & Nourishment	Status:	Approved for	Phase I Enginee	ering and Design	in January 2015					\$1,227,989
West Fourchon Marsh Creation & Marsh Nourishment	TERRE Status:	LAFOU	304				\$3,201,929	\$3,201,929	100.0	\$2,888,890 \$854,177
2 Project(s	Fotal Priority List	24	801				\$5,926,453	\$5,926,453	100.0	\$5,389,077 \$2,082,165

0 Cost Sharing Agreements Executed

0 Construction Started

0 Construction Completed

CEMVN-PM-W	EMVN-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		
0 Constr 0 Constr	t(s) haring Agreement ruction Started ruction Completed t(s) Deferred/Dea	l	1,312				\$11,045,165	\$11,045,165	100.0	\$6,597,989 \$3,003,330		

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W				,	PROTECTION			CY (EPA)		24-Apr-2018 Page 118
PROJECT	BASIN	PARISH	ACRES	******* CSA	*** SCHEDULES Const Start	********** Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Lead Agency: EPA,	NATIONAL	MARINE	FISHERIES	S SERVICE						
Priority List 25										
Caminada Headlands Back Barrier Marsh	BARA	LAFOU	207				\$3,034,310	\$3,034,310	100.0	\$0 \$531,356
Creation II	Status:									
Т	otal Priority List	25	207				\$3,034,310	\$3,034,310	100.0	\$0 \$531,356
0 Construct 0 Construct	ing Agreements F ion Started ion Completed Deferred/Deauth									
East Leeville Marsh	BARA	LAFOU	322				\$4,026,090	\$4,026,090	100.0	\$0
Creation and Nourishment	Status:									\$0
Frichie Marsh Creation	PONT	STTAM	290				\$3,033,294	\$3,033,294	100.0	\$0
and Terracing	Status:									\$0
Oyster Lake Marsh Creation and Nourishment	CA/SB	CAMER	438				\$3,608,939	\$3,608,939	100.0	\$0 \$0
Creation and Nourisinnent	Status:									\$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		
0 Constru	action Started action Completed (s) Deferred/Deautho	prized										
Barataria Bay Rim Marsh	BARA	JEFF	251	25-Jul-2017 A	01-Nov-2020	01-Nov-2021	\$2,693,708	\$2,693,708	100.0	\$2,012,834		
Creation	Status:									\$49		
	Total Priority List	25	251				\$2,693,708	\$2,693,708	100.0	\$2,012,834 \$49		
0 Constru 0 Constru	(s) haring Agreements E hotion Started hotion Completed (s) Deferred/Deauth											

CEMVN-PM-W	COA	STAL WE		,	PROTECTION A Report - Lead A				24-Apr-2018 Page 120
PROJECT	BASIN	PARISH	ACRES		*** SCHEDULES * Const Start		STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
0 Constr 0 Constr	(s) naring Agreement action Started action Completed (s) Deferred/Dea	l	1,508			\$18,611,855	\$18,611,855	100.0	\$2,012,834 \$531,405

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W					PROTECTION A					24-Apr-2018 Page 121
PROJECT	BASIN	PARISH	ACRES	******* CSA	*** SCHEDULES * Const Start	******** Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
Lead Agency: FWS, F							11			1
Priority List 26										
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	\$262,848 \$107
Tota	al Priority List	26	240				\$6,192,056	\$3,323,875	53.7	\$262,848 \$107
<ul> <li>2 Project(s)</li> <li>0 Cost Sharin</li> <li>0 Constructio</li> <li>0 Constructio</li> <li>0 Project(s) D</li> </ul>	n Started n Completed									
Priority List 26										
Bayou DeCade Ridge and Marsh Creation	TERRE Status:	TERRE	378				\$3,282,292	\$3,282,292	100.0	\$2,950,687 \$1,646

CEMVN-PM-W					PROTECTION And Agency: DEP					24-Apr-2018 Page 122
PROJECT	BASIN	PARISH	ACRES	******* CSA	*** SCHEDULES Const Start	********* Const End	******** ES Approved	TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	Total Priority List	26	378				\$3,282,292	\$3,282,292	100.0	\$2,950,687 \$1,646
0 Cons 0 Cons	ct(s) Sharing Agreements E truction Started truction Completed ct(s) Deferred/Deauth									
Priority List 2	26									
Bayou LaLoutre Ridge and Marsh Creation	PT/BR Status:	STBER	187				\$3,236,952	\$3,236,952	100.0	\$325,862 \$214
	Total Priority List	26	187				\$3,236,952	\$3,236,952	100.0	\$325,862 \$214
0 Cons	ct(s) Sharing Agreements E truction Started truction Completed	Executed								

CEMVN-PM-W	COA	ASTAL WE		,	PROTECTION A				24-Apr-2018 Page 123
PROJECT	BASIN	PARISH	ACRES	-	Report - Lead A *** SCHEDULES * Const Start		TIMATES **** Funded	**** %	Actual Obligations/ Expenditures
0 Constr 0 Constr	t(s) haring Agreement uction Started uction Completed t(s) Deferred/Dea	1	805			\$12,711,300	\$9,843,119	77.4	\$3,539,397 \$1,967

1. Expenditures based on Corps of Engineers financial data.

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

CEMVN-PM-W					PROTECTION And Agency: DEP					24-Apr-2018 Page 124
PROJECT	BASIN	PARISH	ACRES	******* CSA	**** SCHEDULES Const Start	********* Const End	******** E Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
	FISH & WII			CDIT	Const Sturt	Const Lind	nppioved	Tunded	70	Expenditures
Priority List 27										
Bayou Cane Marsh Creation	PONT	STTAM					\$3,239,930	\$3,239,930	100.0	\$0 \$0
creation	Status:									20
Mid Breton Landbridge	BRET	PLAQ					\$3,715,463	\$3,715,463	100.0	\$0
Marsh Creation and Terracing	Status:									\$0
Sabine Marsh Creation	CA/SB	CAMER					\$3,824,731	\$3,824,731	100.0	\$0
Cycles 6 & 7	Status:									\$0
To	otal Priority List	27					\$10,780,124	\$10,780,124	100.0	\$0 \$0
0 Constructi 0 Constructi	ng Agreements E on Started on Completed Deferred/Deautho									
Priority List 27										
Northeast Turtle Bay Marsh Creation and	BARA	JEFF					\$3,952,451	\$3,952,451	100.0	\$0
Critical Area Shoreline Protection	Status:									\$0

CEMVN-PM-W				,	PROTECTION A Agency: DEPT.			)		24-Apr-2018 Page 125
PROJECT	BASIN	PARISH	ACRES	******* CSA	*** SCHEDULES Const Start	********* Const End	******** ES Approved	STIMATES **** Funded	**** %	Actual Obligations/ Expenditures
0 0	Total Priority List Project(s) Cost Sharing Agreements Ex Construction Started	27 xecuted					\$3,952,451	\$3,952,451	100.0	\$0 \$0
	Construction Completed Project(s) Deferred/Deautho	rized					\$14,732,575	\$14,732,575	100.0	\$0 \$0
0 C 0 C 0 C	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

CELMN-PM-W

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

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Priority List:

Basin Total

9

1

3

3,792

Basin:

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

24-Apr-2018 Page 1

Expenditures To Date

\$9,038,044

\$1,717,883

\$10,755,927

			0		• •	•			
	No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Current Approved Estimate	Current Funded Estimate	
in: Atchafalaya									
Priority List: 2	2	3,792	2	2	2	0	\$9,458,771	\$9,458,771	

0

2

1

1

\$1,717,883

\$11,176,653

\$1,717,883

\$11,176,653

0

2

1

3

Project Status Summary Report by Basin

# 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.	Current Approved Estimate	Current Funded Estimate	Expenditures To Date
asin: Barataria										
Priority List:	1	3	620	3	3	3	0	\$14,124,565	\$14,011,378	\$11,806,781
Priority List:	2	1	510	1	1	1	0	\$28,896,380	\$28,896,380	\$22,712,457
Priority List:	3	3	0	3	1	1	2	\$3,991,376	\$3,991,376	\$3,991,376
Priority List:	4	2	232	2	1	1	1	\$3,740,239	\$3,738,748	\$3,261,600
Priority List:	5	2	633	2	1	1	1	\$2,791,441	\$2,766,654	\$2,503,671
Priority List:	6	1	217	1	1	1	0	\$5,224,477	\$5,224,477	\$4,778,556
Priority List:	7	2	1,431	2	2	2	0	\$28,189,439	\$28,189,439	\$26,768,501
Priority List:	9	3	599	3	1	0	1	\$48,693,593	\$39,707,698	\$27,735,371
Priority List:	10	2	8,891	1	0	0	0	\$10,430,029	\$7,763,773	\$4,952,549
Priority List:	11	5	2,171	5	5	5	0	\$175,393,415	\$162,853,189	\$151,172,986
Priority List:	12	1	326	1	1	1	0	\$27,702,941	\$27,179,025	\$23,412,939
Priority List:	14	2	106	2	1	1	1	\$24,574,599	\$22,788,149	\$20,028,170
Priority List:	15	1	447	1	1	1	0	\$24,092,500	\$23,640,564	\$34,514,659
Priority List:	17	2	186	2	1	1	1	\$39,566,019	\$38,810,767	\$36,077,299
Priority List:	18	1	370	0	1	1	0	\$42,579,616	\$42,210,113	\$33,493,994
Priority List:	19	1		1	0	0	1	\$987,476	\$987,476	\$987,476
Priority List:	21	1	432	1	0	0	0	\$33,664,671	\$32,607,095	\$1,649,911
Priority List:	22	2	432	2	1	1	0	\$20,428,278	\$19,946,783	\$12,652,105
Priority List:	23	2	402	1	0	0	0	\$36,265,863	\$34,824,166	\$1,520,776
Priority List:	25	3	780	1	0	0	0	\$9,754,108	\$9,754,108	\$531,405
Priority List:	27	1		0	0	0	0	\$3,952,451	\$3,952,451	\$0
Basin To	tal	41	18,785	35	22	21	8	\$585,043,476	\$553,843,809	\$424,552,581

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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				Proj	ect Status Su	ummary Report	by Basin			Page 3
		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Current Approved Estimate	Current Funded Estimate	Expenditures To Date
Basin: Breton So	ound									
Priority List:	2	1	802	1	1	1	0	\$4,536,000	\$4,536,000	\$4,036,746
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	\$3,518,528	\$3,096,268
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	1	0	1	\$33,165,765	\$32,798,408	\$26,475,231
Priority List:	18	1		1	0	0	1	\$521,984	\$521,984	\$521,984
Priority List:	27	1		0	0	0	0	\$3,715,463	\$3,715,463	\$0
Basin To	tal	12	2,098	7	3	2	7	\$47,042,595	\$46,275,398	\$35,315,244

# 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.	Current Approved Estimate	Current Funded Estimate	Expenditures To Date
asin: Calcasie	u/Sabin	ie								
Priority List:	1	3	6,407	3	3	3	0	\$3,988,112	\$3,043,576	\$2,710,743
Priority List:	2	4	2,737	4	3	3	1	\$12,215,124	\$12,215,124	\$10,676,213
Priority List:	3	2	3,555	2	2	2	0	\$18,073,408	\$11,201,746	\$8,549,306
Priority List:	4	3	1,203	3	2	2	1	\$2,869,451	\$2,869,451	\$2,464,949
Priority List:	5	1	247	1	1	1	0	\$3,929,152	\$3,929,152	\$3,436,160
Priority List:	6	1	3,594	1	1	1	0	\$12,698,222	\$12,439,317	\$6,165,959
Priority List:	8	4	993	4	4	4	0	\$27,392,908	\$26,762,373	\$23,065,091
Priority List:	9	2	623	2	2	2	0	\$19,103,768	\$18,393,394	\$16,344,035
Priority List:	10	1	225	1	1	1	0	\$6,049,990	\$5,006,506	\$4,788,001
Priority List:	11.1	1	330	1	1	1	0	\$14,130,233	\$14,130,233	\$13,998,261
Priority List:	18	1	218	1	1	0	0	\$2,761,501	\$2,604,603	\$1,881,222
Priority List:	20	2	750	2	0	0	0	\$31,068,297	\$30,482,911	\$2,735,084
Priority List:	21	1	433	1	1	0	0	\$31,236,742	\$30,722,420	\$12,969,153
Priority List:	22	1	326	0	0	0	0	\$38,499,572	\$37,503,664	\$2,759,543
Priority List:	24	1	497	0	0	0	0	\$2,724,524	\$2,724,524	\$1,227,989
Priority List:	25	1	438	0	0	0	0	\$3,608,939	\$3,608,939	\$C
Priority List:	27	1		0	0	0	0	\$3,824,731	\$3,824,731	\$0
Basin Te	otal	30	22,576	26	22	20	2	\$234,174,674	\$221,462,663	\$113,771,709

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Current Approved Estimate	Current Funded Estimate	Expenditures To Date
Basin: Coastal	Basins									
Priority List:	Cons Plan	n 1		1	1	0	0	\$191,807	\$191,807	\$143,855
Priority List:	0.1	1		1	1	0	0	\$316,907,558	\$126,560,910	\$84,306,742
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	1	0	0	\$1,415,104	\$1,415,104	\$760,046
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	\$2,713,629
Priority List:	11	1	14,963	1	1	1	0	\$68,040,614	\$40,612,225	\$27,023,450
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	\$591,998	\$591,998	\$591,998
Priority List:	17	1	0	1	1	1	0	\$970,726	\$970,726	\$883,702
Priority List:	18	1	0	1	1	0	0	\$6,472,800	\$6,472,800	\$5,334,271
Priority List:	20	1	779	1	1	0	0	\$12,689,725	\$12,146,468	\$4,212,638
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	14	7	1	\$420,781,491	\$199,595,016	\$129,729,309

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Current Approved Estimate	Current Funded Estimate	Expenditures To Date
Basin: Miss. Riv	ver Del	ta								
Priority List:	1	1	9,831	1	1	1	0	\$50,863,503	\$50,863,503	\$43,901,866
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	\$5,030,013
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	\$611,222	\$611,222	\$611,222
Basin To	otal	10	13,471	6	4	4	5	\$60,813,148	\$60,813,148	\$52,123,552

# Project Status Summary Report by Basin

# 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.	Current Approved Estimate	Current Funded 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	\$6,059,651	\$3,557,681
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	\$5,546,185	\$2,693,002
Priority List:	7	1	442	1	1	1	0	\$2,390,984	\$2,390,984	\$2,336,079
Priority List:	8	1	378	1	1	1	0	\$1,574,926	\$1,574,926	\$1,193,481
Priority List:	9	2	296	2	1	1	1	\$7,646,218	\$6,636,465	\$6,486,425
Priority List:	10	2	469	2	1	1	0	\$42,914,856	\$38,152,976	\$5,804,049
Priority List:	11	2	459	2	2	1	0	\$32,678,962	\$29,357,990	\$6,947,014
Priority List:	12	1	844	1	1	1	0	\$14,466,981	\$10,573,573	\$10,474,289
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	\$2,065,062
Priority List:	19	1	279	1	0	0	0	\$2,425,997	\$2,425,997	\$1,488,772
Priority List:	23	1	393	0	0	0	0	\$2,653,242	\$2,653,242	\$555,903
Basin To	otal	19	6,799	16	13	10	4	\$126,182,786	\$109,829,592	\$45,649,108

# 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.	Current Approved Estimate	Current Funded Estimate	Expenditure To Date
sin: Pontchart	train									
Priority List:	1	2	1,753	2	2	2	0	\$5,398,108	\$5,398,108	\$5,158,25
Priority List:	2	2	2,320	2	2	2	0	\$3,894,225	\$3,894,225	\$3,354,75
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	\$2,341,76
Priority List:	8	2	134	2	1	1	1	\$2,493,439	\$2,493,439	\$2,169,86
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	\$27,479,959	\$27,225,612	\$20,308,19
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	\$14,455,274	\$14,049,47
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	\$2,293,51
Priority List:	20	1	478	1	1	0	0	\$28,253,969	\$27,648,895	\$4,105,45
Priority List:	21	1	731	1	0	0	0	\$3,885,298	\$3,885,298	\$1,657,20
Priority List:	24	2	511	1	0	0	0	\$5,118,712	\$5,118,712	\$921,10
Priority List:	25	1	290	0	0	0	0	\$3,033,294	\$3,033,294	5
Priority List:	26	1	214	0	0	0	0	\$2,389,308	\$2,389,308	\$10
Priority List:	27	1		0	0	0	0	\$3,239,930	\$3,239,930	S
Basin To	otal	27	14,416	20	11	10	7	\$116,149,510	\$115,187,240	\$67,604,2
sin: Lake Pon	t. & E	Breton								
Priority List:	26	1	187	0	0	0	0	\$3,236,952	\$3,236,952	\$2

# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

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				Proj	ect Status Si	ummary Report	by Basin		Project Status Summary Report by Basin											
		No. of Projects	Acres	CSA Executed	Under Const.	Completed	Projects Deauth.	Current Approved Estimate	Current Funded Estimate	Expenditures To Date										
Basin: Teche / V	/ermili	ion																		
Priority List:	1	1	65	1	1	1	0	\$2,047,479	\$2,047,479	\$2,011,627										
Priority List:	2	1	378	1	1	1	0	\$1,043,748	\$1,043,748	\$903,545										
Priority List:	3	1	2,223	1	1	1	0	\$10,093,909	\$10,037,989	\$9,306,438										
Priority List:	5	1	441	1	1	1	0	\$886,030	\$886,030	\$756,192										
Priority List:	6	4	2,567	4	4	4	0	\$10,347,331	\$10,347,331	\$8,945,682										
Priority List:	8	1	24	1	1	1	0	\$1,181,129	\$1,181,129	\$1,133,807										
Priority List:	9	3	686	1	1	1	0	\$5,428,731	\$3,868,918	\$3,735,732										
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	\$17,307,114	\$17,005,388										
Priority List:	21	1	340	0	0	0	0	\$25,635,641	\$24,169,491	\$2,329,699										
Basin To	otal	15	6,893	12	11	11	1	\$76,285,634	\$72,745,052	\$47,983,935										

# 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.	Current Approved Estimate	Current Funded Estimate	Expenditures To Date
asin: Terrebon	ne									
Priority List:	1	5	9	4	3	3	2	\$9,376,759	\$9,376,759	\$9,278,765
Priority List:	2	3	958	3	3	3	0	\$23,115,874	\$23,115,874	\$20,696,621
Priority List:	3	4	3,958	4	4	4	0	\$25,106,295	\$24,861,449	\$23,359,273
Priority List:	4	2	215	2	1	1	1	\$7,715,925	\$7,715,925	\$7,663,841
Priority List:	5	3	0	3	1	1	2	\$4,703,403	\$4,703,403	\$4,703,403
Priority List:	5.1	1		1	0	0	1	\$7,452,191	\$7,452,191	\$7,452,191
Priority List:	6	4	941	2	1	1	2	\$43,465,900	\$37,747,287	\$17,448,020
Priority List:	7	1	0	1	1	1	0	\$538,101	\$538,101	\$538,101
Priority List:	9	4	577	4	4	4	0	\$32,644,036	\$31,039,970	\$30,478,471
Priority List:	10	2	668	2	2	2	0	\$49,757,119	\$46,540,402	\$43,739,679
Priority List:	11	3	543	3	2	2	0	\$44,912,175	\$42,504,843	\$36,454,616
Priority List:	12	1		0	0	0	1	\$1,736,137	\$1,736,137	\$1,736,137
Priority List:	13	1	272	1	1	1	0	\$30,414,086	\$30,165,239	\$24,908,848
Priority List:	16	2	639	2	1	1	0	\$43,981,456	\$43,774,897	\$27,533,183
Priority List:	18	1	233	1	0	0	0	\$2,326,289	\$2,326,289	\$1,315,593
Priority List:	19	1	452	1	1	0	0	\$35,125,857	\$31,531,382	\$3,372,307
Priority List:	20	1		0	0	0	1	\$2,901,750	\$2,901,750	\$801,388
Priority List:	22	1	401	1	0	0	0	\$3,216,194	\$3,216,194	\$693,387
Priority List:	23	1	312	0	0	0	0	\$3,721,447	\$3,721,447	\$1,229,660
Priority List:	24	1	304	0	0	0	0	\$3,201,929	\$3,201,929	\$854,177
Priority List:	26	1	378	0	0	0	0	\$3,282,292	\$3,282,292	\$1,646
Basin To	otal	43	10,860	35	25	24	10	\$378,695,215	\$361,453,760	\$264,259,305
otal All Basins		218	115,645	174	127	1E	46	\$2,059,582,134	\$1,755,619,283	\$1,191,745,100

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CWPPRA Pri	ority List	Estimates
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			Туре	Total	Engineering	Real Estate	Construction	Monitoring	O & M	Contingency
Priority List	0	Total	Current Approved	191,807.00	191,807.00	0.00	0.00	0.00	0.00	0.00
			Current Funded	191,807.00	191,807.00	0.00	0.00	0.00	0.00	0.00
Priority List	0.1	Total	Current Approved	316,907,558.16	0.00	0.00	0.00	316,907,558.16	0.00	0.00
			Current Funded	126,560,909.62	0.00	0.00	0.00	126,560,909.62	0.00	0.00
Priority List	0.2	Total	Current Approved	1,500,000.00	0.00	0.00	0.00	1,500,000.00	0.00	0.00
			Current Funded	1,500,000.00	0.00	0.00	0.00	1,500,000.00	0.00	0.00
Priority List	0.3	Total	Current Approved	569,585.92	0.00	0.00	0.00	0.00	569,585.92	0.00
			Current Funded	569,585.92	0.00	0.00	0.00	0.00	569,585.92	0.00
Priority List	0.4	Total	Current Approved	1,415,104.00	1,415,104.00	0.00	0.00	0.00	0.00	0.00
			Current Funded	1,415,104.00	1,415,104.00	0.00	0.00	0.00	0.00	0.00
Priority List	1	Total	Current Approved	87,117,795.81	3,964,516.67	1,224,777.18	25,916,415.96	4,636,008.31	51,376,077.69	0.00
			Current Funded	86,060,072.81	3,964,516.67	1,224,777.18	25,916,415.96	4,636,008.31	50,318,354.69	0.00
Priority List	2	Total	Current Approved	89,219,773.52	6,085,079.25	680,028.71	53,018,618.04	7,798,197.88	21,637,849.64	0.00
			Current Funded	89,219,773.52	6,082,897.89	680,028.71	53,020,799.40	7,826,572.88	21,609,474.64	0.00
Priority List	3	Total	Current Approved	59,372,625.21	4,634,551.51	261,183.60	25,350,948.35	5,685,060.75	23,440,881.00	0.00
			Current Funded	52,200,197.21	4,634,551.51	261,183.60	25,350,948.35	4,583,542.75	17,369,971.00	0.00
Priority List	4	Total	Current Approved	14,488,697.23	1,874,591.96	224,438.57	10,233,178.28	626,747.95	1,529,740.47	0.00
			Current Funded	14,487,206.23	1,874,591.96	224,438.57	10,233,178.28	626,747.95	1,528,249.47	0.00

CWPPRA Priority List Estimates	
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			Туре	Total	Engineering	Real Estate	Construction	Monitoring	O & M	Contingency
Priority List	5	Total	Current Approved	23,812,794.18	4,661,382.22	162,120.25	8,916,757.54	1,715,555.79	8,356,978.38	0.00
			Current Funded	20,420,826.18	4,661,382.22	162,120.25	8,916,757.54	1,690,768.79	4,989,797.38	0.00
Priority List	5.1	Total	Current Approved	7,452,190.98	7,355,189.24	40,595.10	0.00	56,406.64	0.00	0.00
			Current Funded	7,452,190.98	7,355,189.24	40,595.10	0.00	56,406.64	0.00	0.00
Priority List	6	Total	Current Approved	79,175,114.64	7,110,489.51	811,137.60	41,887,983.70	5,553,800.83	20,816,729.00	2,994,974.00
			Current Funded	73,197,596.64	7,110,489.51	811,137.60	41,887,983.70	4,727,944.83	15,665,067.00	2,994,974.00
Priority List	7	Total	Current Approved	31,118,524.47	1,773,716.11	87,162.93	26,678,166.92	851,337.21	1,728,141.30	0.00
			Current Funded	31,118,524.47	1,773,716.11	87,162.93	26,678,166.92	851,337.21	1,728,141.30	0.00
Priority List	8	Total	Current Approved	32,698,879.02	2,198,384.18	893,328.98	22,973,151.76	2,201,090.85	4,432,923.25	0.00
			Current Funded	32,068,343.32	2,198,384.48	893,328.98	22,973,151.76	1,729,464.85	4,274,013.25	0.00
Priority List	9	Total	Current Approved	116,548,479.87	15,183,361.50	651,074.50	72,795,657.61	2,498,890.55	25,419,495.71	0.00
			Current Funded	102,678,579.16	15,183,361.50	651,074.50	72,795,657.61	1,650,023.55	12,398,462.00	0.00
Priority List	10	Total	Current Approved	144,275,514.16	16,981,251.90	868,278.54	95,924,367.90	3,802,086.82	21,192,718.00	5,506,811.00
			Current Funded	131,932,990.16	16,981,251.90	868,278.54	97,381,690.90	1,764,630.82	10,887,649.00	4,049,489.00
Priority List	11	Total	Current Approved	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
			Current Funded	281,882,372.02	25,169,315.95	3,003,687.99	192,391,605.35	3,684,113.73	54,007,630.00	3,626,019.00
Priority List	11.1	Total	Current Approved	14,130,232.86	531,498.25	13,142.53	12,964,592.08	281,000.00	340,000.00	0.00
			Current Funded	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
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			Туре	Total	Engineering	Real Estate	Construction	Monitoring	O & M	Contingency
Priority List	12	Total	Current Approved	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
			Current Funded	42,001,319.49	5,971,677.67	314,398.23	29,791,525.59	836,122.03	207,383.97	4,880,212.00
Priority List	13	Total	Current Approved	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
			Current Funded	47,494,328.61	6,082,859.83	220,861.64	40,136,177.18	377,959.96	676,470.00	0.00
Priority List	14	Total	Current Approved	43,360,831.33	7,080,766.40	116,545.28	29,464,511.65	369,974.00	6,329,034.00	0.00
			Current Funded	41,115,682.33	7,080,766.40	116,545.28	29,464,511.65	120,111.00	4,333,748.00	0.00
Priority List	15	Total	Current Approved	25,492,653.04	2,142,497.01	81,177.07	22,579,890.96	501,094.00	187,994.00	0.00
			Current Funded	25,040,717.04	2,142,497.01	81,177.07	22,579,890.96	213,606.00	23,546.00	0.00
Priority List	16	Total	Current Approved	45,948,341.62	6,768,490.45	127,174.79	29,051,273.75	134,541.00	2,798,525.63	7,068,336.00
			Current Funded	45,741,782.62	6,768,490.45	127,174.79	29,051,273.75	134,541.00	2,591,966.63	7,068,336.00
Priority List	17	Total	Current Approved	75,947,294.96	7,159,679.12	426,969.73	62,392,178.11	1,094,077.00	1,210,198.00	3,664,193.00
			Current Funded	74,824,685.96	7,159,679.12	426,969.73	66,056,371.11	509,813.00	671,853.00	0.00
Priority List	18	Total	Current Approved	54,662,189.84	8,617,679.76	1,960,984.13	36,631,747.49	1,075,023.29	1,748,347.00	4,628,408.17
			Current Funded	54,135,788.84	8,617,679.76	1,960,984.13	36,631,747.49	813,337.29	1,483,632.00	4,628,408.17
Priority List	19	Total	Current Approved	41,110,603.17	8,341,401.06	365,463.11	28,414,381.00	783,478.00	3,205,880.00	0.00
			Current Funded	37,516,128.17	8,341,401.06	365,463.11	28,414,381.00	195,993.00	198,890.00	0.00
Priority List	20	Total	Current Approved	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
			Current Funded	73,180,024.00	9,905,953.00	498,032.00	41,660,096.00	996,724.00	10,659,268.00	9,459,951.00

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

<b>CWPPRA</b> Priority Lis	t Estimates
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24-Apr-2018

			Туре	Total	Engineering	Real Estate	e Construction	Monitoring	0 & M	Contingency
Priority List	21	Total	Current Approved	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
			Current Funded	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	Current Approved	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
			Current Funded	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	Current Approved	42,640,552.0	0 12,052,507.00	1,820,962.00	21,084,125.00	1,048,168.00	2,609,607.00	4,025,183.00
			Current Funded	41,198,855.0	0 12,052,507.00	1,820,962.00	21,084,125.00	318,943.00	1,897,135.00	4,025,183.00
Priority List	24	Total	Current Approved	11,045,165.0	0 10,257,022.00	788,143.00	0.00	0.00	0.00	0.00
			Current Funded	11,045,165.0	0 10,257,022.00	788,143.00	0.00	0.00	0.00	0.00
Priority List	25	Total	Current Approved	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
			Current Funded	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	Current Approved	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
			Current Funded	9,843,119.0	0 8,586,644.00	582,946.00	142,583.00	216,836.00	278,464.00	35,646.00
Priority List	27	Total	Current Approved	14,732,575.0	0 14,241,919.00	490,656.00	0.00	0.00	0.00	0.00
			Current Funded	14,732,575.0	0 14,241,919.00	490,656.00	0.00	0.00	0.00	0.00
Grand Total		Currer	nt Approved 2,059	9,582,134.11	248,120,917.55	21,326,406.46	1,029,609,083.22	373,143,791.75	320,335,140.96	67,046,794.17
		Currei	nt Funded 1,755	5,619,283.16	248,118,735.49	21,326,406.46	1,037,813,753.58	168,089,150.21	221,426,931.25	58,844,306.17