

# RESTORE ACT Direct Component Multiyear Plan Narrative

## Department of the Treasury

OMB Approval No. 1505-0250

**Directions: Use this form for the Initial Multiyear Plan and any subsequent amendments to an accepted Multiyear Plan. For amendments, include only new and/or materially modified activities.**

Multiyear Plan Version (Initial or Amendment Number):	Amendment 002
Date of Initial Multiyear Plan Acceptance:	04/10/2015
Date of Last Multiyear Plan Revision Acceptance:	06/02/2017

Eligible Applicant Name:	Plaquemines Parish Government
Name and Contact Information of the Person to be contacted (POC) on matters concerning this Multiyear Implementation Plan:	
POC Name:	Amos Cormier
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### NARRATIVE DESCRIPTION:

1. A description of each activity, including the need, purpose, objective(s), milestones and location. Include map showing the location of each activity.

#### 1. Bayou Eau Noire Ridge Restoration and Marsh Creation (CPRA MP ID: 002.RC.102):

- **Need:** Lower Plaquemines Parish is the area of highest frequency of exposure to tropical storms in the Northern Gulf of Mexico. The project is needed to re-establish the historic ridge in an area that is experiencing rapidly degrading and loss of coastal marsh. Historically part of the landscape in coastal Louisiana, ridges help shape the estuary, providing critical habitat, protecting marshes from tidal exchange and saltwater intrusion, and providing an important line of defense for storm surges. Ridges provide important avian habitat to winterers, Neo-tropical migrants, and permanent residents such as the great horned owl. Restoring and maintaining ridges and marshes provides opportunity for development of ecotourism and helps protect the habitat, infrastructure and communities inland by reducing storm surge.

- **Purpose:** The purpose of this proposed project is for the planning, engineering, design, and gathering of Best Available Science information to implement the "multiple lines of defense" strategy of hurricane protection by creating an elevated vegetative ridge that complements the current levee system. The vegetated ridge will offer enhanced flood protection benefits via wave attenuation, while creating a sustainable habitat for wildlife. Marsh habitat will be restored in open water areas where it has been lost due to subsidence, canal construction, and the impacts of tropical storms.

- **Objective:** To develop a plan to create 400 acres of marsh and nourish 100 acres of marsh to create new wetland habitat, restore degraded marsh, and reduce wave erosion and restore 28,050 linear feet (136 acres) of historic maritime ridge, to restore natural hydrology, restore wetland and upland habitat, and provide wave and storm surge attenuation.

- **Funds Requested:** An additional \$2,454,150 is being requested for the 2<sup>nd</sup> phase of this project to finalize survey and geotechnical analysis and complete the engineering and design (\$2,054,150.13 Final E&D; \$400,000 Geotechnical & Survey). The total estimated planning, engineering, permitting, and design costs to get this project to construction is \$2,804,150.13 (\$750,000 was previously awarded) based on a preliminary estimate of construction cost of \$48,347,000.00.

- **High Level Milestones:** Preliminary field investigation (spot geotechnical data and LIDAR survey), Engineering and Design, gathering of Best Available Science information, and completion of environmental permitting activities.

- **Measures of Success:** Preliminary engineering, design, permitting and gathering of Best Available Science information milestones, and completion of survey, geotechnical, engineering and design to ready project for construction.

## **2. Bay Adams Headland Restoration and Marsh Creation (CPRA MP ID: 002.RC.101):**

- **Need:** The project is contained in the 2017 Coastal Master Plan as 002.RC.101 and is needed to re-establish the historic headland ridges in an area that is experiencing rapidly degrading and loss of coastal marsh. Historically part of the landscape in coastal Louisiana, headland ridges help shape the estuary, providing critical habitat, protecting marshes from tidal exchange and saltwater intrusion, and providing an important line of defense for storm surges. Ridges provide important avian habitat to winterers, Neo-tropical migrants, and permanent residents such as the great horned owl. Restoring and maintaining ridges and marshes provides opportunity for development of ecotourism and helps protect the habitat, infrastructure and communities inland by reducing storm surge.
- **Purpose:** The purpose of this proposed project is to initiate the planning, engineering, design, and gathering of Best Available Science information that support the coastal restoration objectives of the State of Louisiana to re-establish vegetative headland ridges within the vicinity of the historic Bay Adams Headlands and to re-establish adjacent marshes in the project area using Mississippi River sediment. Native intertidal marsh and ridge vegetation would be planted after construction to help stabilize the rebuilt ridge and marsh habitat.
- **Objective:** The Adams Bay Headland restoration project will create approximately 35,000 feet of elevated barrier headland ridges; nourish approximately 2,000 acres of wetlands to the headland north of Adams Bay; and it will create approximately 500 acres of new marsh. This project will provide surge protection, wave attenuation and a secondary line of defense to the areas to the north and northeast of the project. This project will complement and extend the proposed Barataria Bay Rim project by restoring vegetative headland ridges, forested ridge habitat and native marsh.
- **Funds Requested:** The funds that are being requested for this project from the Direct Component are \$4,372,250.00, which is the estimated total planning, permitting, design and engineering cost to get the project to construction. The estimated construction costs are \$57,859,000 - based on the 2017 Parish and CPRA Master Plan. This project will be done in phases as Plaquemines Parish Direct Component money becomes available. The first phase of the project will require funds of \$1,222,250.00 (\$1,157,250 E&D (25%); \$15K BAS; \$50K permit), the total estimated costs to initiate the necessary planning, environmental permitting activities, engineering and design to support the environmental permitting activities, and best available science information to support the environmental permitting activities for this project. The next phases of this project (i.e. Survey, Geotechnical and completion of design) will be completed as the Parish's Direct Component allocation allows.
- **High Level Milestones:** Preliminary field investigation (spot geotechnical data and LIDAR survey), Engineering and Design, gathering of Best Available Science information, and completion of environmental permitting activities.
- **Measures of Success:** Phase 1 - Completion of engineering and design to support environmental permit(s) and gathering of Best Available Science information milestones; Phase 2 – completion of survey and geotechnical data; and Phase 3 – completion of engineering and design to ready project for construction.

## **3. East Bank Land Bridge Marsh Creation Project (CPRA MP ID: 001.MC.104)**

- **Need:** The project is contained in the 2017 Coastal Master Plan as 001.MC.104 and is needed to create approximately 2,300 acres of marsh in Plaquemines Parish between Grand Lake and Lake Leary. Historically part of the landscape in coastal Louisiana, headland ridges help shape the estuary, providing critical habitat, protecting marshes from tidal exchange and saltwater intrusion, and providing an important line of defense for storm surges. Ridges provide important avian habitat to winterers, Neo-tropical migrants, and permanent residents such as the great horned owl. Restoring and maintaining ridges and marshes provides opportunity for development of ecotourism and helps protect the habitat, infrastructure and communities inland by reducing storm surge.
- **Purpose:** The purpose of this proposed project is to enter into a cooperative endeavor with neighboring St. Bernard Parish to initiate the planning, engineering, design, and gathering of Best Available Science information that support the coastal restoration objectives of the State of Louisiana to re-establish vegetative headland ridges within the vicinity Grand Lake and Lake Leary in the eastern marsh area of Plaquemines and St. Bernard Parish's and to re-establish adjacent marshes in the project area using Mississippi River sediment. This project along with four other CWPPRA projects which extend from the Phoenix area on the east bank of Plaquemines Parish (Phoenix Marsh and Ridge Restoration, Breton Land Bridge Marsh Creation (West) River aux Chenes to Grand Lake, Mid Breton Land Bridge Marsh Creation and Terracing, and Grand Lake West Marsh Creation and Terracing) to Lake Leary are needed to create a continuous land bridge from Phoenix in Plaquemines Parish to Delacroix in St. Bernard Parish. Native intertidal marsh and ridge vegetation would be planted after construction to help stabilize the rebuilt ridge and marsh habitat.
- **Objective:** The East Bank Land Bridge project along with the four CWPPRA projects will create approximately a combined 3,973 acres of marsh between Phoenix in Plaquemines Parish and Delacroix in St. Bernard Parish. This project will provide surge protection, wave attenuation and a secondary line of defense to the areas to the north and northeast of the project. This project will complement many of the other projects proposed in the area between the Mississippi River and the now closed Mississippi River Gulf Outlet north of Black Bay and Breton Sound by restoring vegetative headland ridges, forested ridge habitat and native marsh.

- **Funds Requested:** The funds that are being requested for this project from the Direct Component are \$500,000.00, which would complement the amount committed by St. Bernard Parish for the planning, permitting and land acquisition needed for the project. The estimated construction costs are \$154,200,000 - based on the 2017 Parish and CPRA Master Plan. This project will be done in phases as Plaquemines Parish Direct Component money becomes available and other funding sources are identified.

- **High Level Milestones:** Preliminary field investigation (spot geotechnical data and LIDAR survey), Planning, and land rights assessment, gathering of Best Available Science information, and completion of environmental permitting activities.

- **Measures of Success:** Phase 1 – Completion of all planning aspects and all land acquisitions needed for the project to be permitted and designed.

#### **4. Grand Bayou Ridge Restoration (CPRA MP ID: 002.RC.103):**

- **Need:** The project is contained in the 2017 Coastal Master Plan as 002.RC.103 and is needed to re-establish the historic ridge in an area that is experiencing rapidly degrading and loss of coastal marsh. Historically part of the landscape in coastal Louisiana, ridges help shape the estuary, providing critical habitat, protecting marshes from tidal exchange and saltwater intrusion, and providing an important line of defense for storm surges. Ridges provide important avian habitat to winterers, Neo-tropical migrants, and permanent residents such as the great horned owl. Restoring and maintaining ridges and marshes provides opportunity for development of ecotourism and helps protect the habitat, infrastructure and communities inland by reducing storm surge.

- **Purpose:** The purpose of this proposed project is for the planning, engineering, design, and gathering of Best Available Science information that support the coastal restoration objectives of the State of Louisiana to re-establish vegetative ridges within the vicinity of the historic Grand Bayou ridge and to re-establish adjacent marshes in the project area using Mississippi River sediment. Native intertidal marsh and ridge vegetation would be planted after construction to help stabilize the rebuilt ridge and marsh habitat.

- **Objective:** To develop a plan to create and nourish saline marsh and associated edge habitat for aquatic species and to establish Grand Bayou vegetative ridges to reduce surge effects and wave setup and restore forested ridge habitat. This includes restoring approximately 48,100 feet of historic ridge to an elevation of 5 feet NAVD88 to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation along Grand Bayou. The project will also create and nourish approximately 360 acres of wetlands to reduce surge effects and wave setup and restore forested ridge habitat.

- **Funds Requested:** The funds that are being requested for this project from the Direct Component are \$740,000 (\$185,000 E&D (25%); \$15K BAS; \$50K permit) to initiate the planning phase of engineering and design, environmental permitting activities, and Best Available Science documentation. The funds will be requested in two phases as the Plaquemines Parish Direct Component allocation allows. The total estimated engineering and design, as well as construction costs are based on the 2017 CPRA Master Plan. It is estimated that engineering and design will cost \$740,000 while construction costs are estimated to be \$10,300,000.

- **High Level Milestones:** Preliminary field investigation (geotechnical spot data and LIDAR survey), Engineering and Design to support environmental permitting activities, gathering of Best Available Science information; and completion of engineering and design.