

# Coastal Protection and Restoration Authority



# **Lafourche Parish Coastal Projects**

# PROJECTS IN CONSTRUCTION

# HSDRRS Mitigation - WBV (BA-0109)

HSDRRS - Estimated Cost \$126,000,000

This suite of projects provides mitigation for USACE impacts during construction of the West Bank and Vicinity (WBV) Hurricane Storm Damage Risk Reduction System (HSDRRS), and involves the restoration of approximately 1,540 acres of Bottomland Hardwood, Marsh, and Swamp in the Barataria Basin.

# Morganza to the Gulf (TE-0064)

STATE - Estimated Cost \$177,003,835

This project is designed to provide 100-year protection levels along the federally authorized Morganza to the Gulf alignment in Terrebonne and parts of Lafourche parishes. The project consists of the construction of earthen levees and t-walls, navigation structures, water control structures, and floodgates.

# **Cut-Off/Pointe Aux Chene Levee** (TE-0078)

CDBG - Estimated Cost \$10,249,101

This project consists of elevating approximately 8.5 miles of levee along two sections of earthen levee along the Morganza to the Gulf alignment (Reaches K and L) between Cut Off and Pointe-Aux-Chenes in Lafourche Parish.

# PROJECTS IN ENGINEERING AND DESIGN

### **East Leeville Marsh Creation and Nourishment** (BA-0194)

CWPPRA - Estimated Cost \$35,066,972

The project goal is to create approximately 358 acres and nourish 124 acres of saline marsh east of Leeville in Lafourche Parish using sediment dredged from Caminada Bay.

# Sediment Diversion Implementation and Program Management (LA-0276)\_

NFWF - Estimated Cost TBD

This project will include all work involved in the development of the NFWF Diversion Management program. Program management will be performed by CPRA personnel and contracted support staff and includes the development of full engineering and design scopes for both the Mid-Barataria (BA-0153) and Mid-Breton (BS-0030) diversions.

### North Catfish Lake Marsh Creation (TE-0112)

CWPPRA - Estimated Cost \$31,635,887

The project involves the creation of approximately 415 acres and nourishment of 251 acres on the northern shoreline of Catfish Lake in Lafourche Parish using sediment dredged from Catfish Lake.

# West Fourchon Marsh Creation & Nourishment (TE-0134)

CWPPRA - Estimated Cost \$30,655,764

This project involves the creation of 302 acres and nourishment of 312 acres of marsh between Bayou Lafourche and Timbalier Bay in Lafourche Parish using sediment dredged from the Gulf of Mexico.

# **Hollywood Canal Closure Structure** (TE-0147)

**GOMESA - Estimated Cost TBD** 

No Data in GeoDB

# PROJECTS IN PLANNING

# NRDA BA PLAN PHASE I (BA-0205)

NRDA - Estimated Total Cost \$1,000,000

This project involved the development of a strategic plan for comprehensive restoration of the Barataria Basin utilizing NRDA funds from the Deepwater Horizon settlement.

# <u>Upper Barataria Basin Flood Management (BA-0211)</u>

HSDRRS - Estimated Total Cost \$3,000,000

The Barataria Basin Flood Risk Management Study will investigate alternatives to address flood risk from tidal surges, coastal storms and heavy rainfall in the area between Bayou Lafourche and the Mississippi River System. The study will evaluate a range structural and non-structural approaches to regulate upper basin stages and storage capabilities. Possible solutions include a combination of small scale levees and floodwalls, conveyance channels, flood gates, tidal exchange structures, flood walls, and pumping stations.

#### **Golden Meadow Marsh Creation** (TE-0140)

STATE - Estimated Total Cost \$112,000

This project involved a preliminary feasibility analysis of a proposed marsh creation project in Golden Triangle (subsequently authorized as PO-0163).

### PROJECTS IN HEADED TO BID

### Caminada Headlands Back Barrier Marsh Creation (BA-0171)

CWPPRA - Total Cost \$32,284,094

This project will create and nourish 385 acres of back barrier intertidal marsh behind 3.5 miles of Caminada Headland in Lafourche Parish using material dredged from the Gulf of Mexico. This project will work synergistically with existing Caminada Headland dune and back barrier marsh projects (BA-0045 and BA-0143), expanding the restored back barrier marsh platform and improving the longevity of the barrier shoreline.

#### **Levee Improvements for Gheens Community** (BA-0218)

GOMESA - Total Cost TBD

No Data in GeoDB

# Storm Surge Risk Reduction for Reach E-North- Elevation to +14.5 Ft (BA-0231)

GOMESA - Total Cost TBD

No Data in GeoDB

### **Des Allemands FDA Pump Station Rehabilitation** (BA-0232)

GOMESA - Total Cost TBD

No Data in GeoDB

### **Pointe-Aux-Chene WMA Enhancement** (TE-0146)

NRDA - Total Cost \$5,000,000

The project is proposing to develop four recreational enhancements within the Pointe aux Chenes Wildlife Management Area. These enhancements include pirogue pullovers, pirogue launch, fishing piers, and Island Road boat launch renovation.

### 40 Arpent Canal Levee - Lockport Co. Canal to Butch Hill Station (TE-0148)

GOMESA - Total Cost TBD

No Data in GeoDB

#### **Bayou L'eau Bleu Structure** (TE-0149)

GOMESA - Total Cost TBD

No Data in GeoDB

#### **Reach L** (TE-0150)

GOMESA - Total Cost TBD

No Data in GeoDB

### **Grand Bayou Floodgate** (TE-0151)

GOMESA - Total Cost TBD

No Data in GeoDB

# **Storm Surge Risk Reduction for US-90 at Bayou Folse** (TE-0152)

GOMESA - Total Cost TBD

No Data in GeoDB

# COMPLETED PROJECTS

# Projects Completed in 2018

# <u>Hydrologic Restoration and Vegetative Planting in the Des Allemands Swamp (BA-0034-2)</u>

CWPPRA - Total Cost \$6,470,448 / State Dollars \$607,706

The goal of this project is to re-establish historic hydrologic durations which will help maintain swamp elevation, improve swamp water quality, and increase productivity and regrowth of trees. Project features include spoil bank gapping, culvert installation, breaching of internal impediments, re-establishment of natural channels, and site-specific vegetative plantings.

### Kraemer Bayou Boeuf Levee Lift (BA-0169)

STATE - Total Cost \$1,200,000 / State Dollars \$1,000,000

This project will improve and raise approximately 33,000 feet of ring levees surrounding the Kraemer Community, a forced drainage area. The levees were not sufficient during Hurrican Isaac and overtopped.

# Projects Completed in 2017

# **Barataria Basin Landbridge Shoreline Protection, Phase 3** (BA-0027-C)

CWPPRA - Total Cost \$26,351,988 / State Dollars \$3,765,298

The aim of this project is to reduce or eliminate shoreline erosion for about 22,800 feet along west bank of Bayou Perot and the north shore of Little Lake through construction of rock dike shoreline protection.

#### **Larose to Golden Meadow - Larose Sheetpile** (TE-0065-SP)

STATE - Total Cost \$5,205,702 / State Dollars \$2,856,600

This project involves the construction of approximately 2400 feet of sheet pile to an elevation of +13 feet along the GIWW at Larose to increase the level of hurricane protection for the adjacent area.

# Projects Completed in 2016

### **Caminada Headland Beach and Dune Restoration Incr2** (BA-0143)

NFWF - Total Cost \$147,063,587

This project will restore and protect beach and dune habitat across the Caminada Headland through the direct placement of approximately 5.4 million cubic yards of sandy material from Ship Shoal (an offshore borrow source). The project footprint begins near Bayou Mareau and extends approximately 9 miles east towards Caminada Pass. A total of 489 acres of beach and dune habitat will be restored.

### **Breach Management Plan** (BA-0170)

STATE - Total Cost \$471,340 / State Dollars \$471,340

This project will provide CPRA's Engineering Division and Project Management Division with a system-wide program for handling breaching that occurs within the barrier island and headland system of the Louisiana coastline. The project will extend eastward from Raccoon Island to Scofield Island within the Terrebonne and Barataria Basins. The project will include development of identification, classification, and prioritization methodologies with recommendations for breach prevention and response measures. The project goals are to reverse landloss, increase sustainability of restoration projects, reduce operations and maintenance costs, and improve ecosystems.

# <u>CIAP Performance Evaluation - Caminada Moreau Subsidence Study (LA-0012-6)</u>

CIAP - Total Cost \$432,793 / State Dollars \$432,793

Research to be conducted on the Caminada Headland in order to quantify the amount of consolidation in the substrate underlying barrier islands resulting from placement of sand for island restoration.

# Projects Completed in 2015

# CIAP Performance Evaluation Borrow Area Management and Monitoring (LA-0012-7)

CIAP - Total Cost \$813,512 / State Dollars \$813,512

Borrow Area Monitoring and Management (BAMM) was initiated to understand the evolution of borrow pits for restoration projects (inshore, nearshore, and offshore) over time, with a particular focus on the infilling (rates and types of sediment) and gradient of the pit-slopes as well as potential dredge impacts. The study involves the collection of geophysical, geotechnical and water quality data from several borrow areas to understand not only the above objectives but also the hypoxic conditions vis-à-vis depth of cut of borrow area.

# Projects Completed in 2014

### **Caminada Headland Beach and Dune Restoration** (BA-0045)

CIAP - Total Cost \$70,679,580 / State Dollars \$30,000,000

This project will restore and protect beach and dune habitat across the Caminada Headland through the direct placement of approximately 3.3 million cubic yards of sandy material from Ship Shoal (an offshore borrow source). The project footprint begins at Belle Pass and extends approximately 6 miles east towards Bayou Moreau. A total of 303 acres of beach and dune habitat will be restored.

#### **Larose to Golden Meadow - Flood Protection** (TE-0065)

STATE - Total Cost \$19,820,000 / State Dollars \$19,820,000

Levee modifications and improvements. Allocated \$15 million in '08 Surplus and \$4.82 million in '09 Surplus.

### **Valentine to Larose** (TE-0111)

STATE - Total Cost \$1,000,000 / State Dollars \$500,000

This project provides flood protection improvements to the current flood protection system under the local jurisdiction of the District and shall consist of engineering, design, survey, repair, rehabilitation and possible construction of approximately 2,000 linear feet of levee along Bayou Lafourche, from the town of Valentine to the town of Larose.

# Projects Completed in 2012

# **West Belle Pass Barrier Headland Restoration** (TE-0052)

CWPPRA - Total Cost \$34,219,212 / State Dollars \$5,913,314

This project reestablished the West Belle headland in Lafourche Parish by rebuilding approximately 9,300 linear feet (362 acres) of beach, dune, and back barrier marsh using 4.2 million cubic yards of sediment dredged from the Gulf of Mexico.

Lafourche Parish

# Projects Completed in 2010

# LA 1 Improvements - Fourchon to Leeville Bridge (BA-0055)

CIAP - Total Cost \$33,000,000 / State Dollars \$18,000,000

This project was located 60 miles south of New Orleans in lower Lafourche Parish between Leeville and Port Fourchon. It constructed a 5 mile long, two lane elevated highway (two, 12 ft lanes and two, 8 ft shoulders). The Phase IA project connects to the Phase IB and Phase IC projects (in Leeville) by relocating LA 1 on a new alignment.

# Raising of LA-1 at Golden Meadow Floodgate and Completion of Golden Meadow Lock Structure (TE-0135)

STATE - Total Cost \$18,000,000

This project funded the raising of LA-1 to the 100-year flood elevation and to complete the lock in Bayou Lafourche, both critical elements of the Larose to Golden Meadow Hurricane Protection System.

# Projects Completed in 2009

# Barataria Basin Landbridge Shoreline Protection, Phases 1 and 2 (BA-0027)

CWPPRA - Total Cost \$32,538,623 / State Dollars \$4,693,293

The objective of the project was to select a cost-effective erosion control technique to stop the erosion on the southwestern shoreline of Bayou Perot and the southeastern shoreline of Bayou Rigolettes. The length of protection is estimated to be approximately 71,000 feet.

# Projects Completed in 2007

### Little Lake Shoreline Protection/ Dedicated Dredging Near Round Lake (BA-0037)

CWPPRA - Total Cost \$44,931,412

This project is designed to protect area wetlands, which currently experience high rates of shoreline erosion. This project protects approximately 21,000 feet of Little Lake shoreline, create 488 acres of intertidal wetlands, and nourish an additional 532 acres of fragmented, subsiding marsh.

# **Grand Bayou Blue Site - Dedicated Dredging** (LA-0001-E)

STATE - Total Cost \$1,831,534 / State Dollars \$1,831,534

This project created approximately 38 acres of marsh near Catfish Lake using dredged material from Bayou Blue. The project was implemented through the coastwide State Dedicated Dredging Program.

### 2017 MASTER PLAN PROJECTS

# Restoration Projects: Year 1-10

# **East Snail Bay Shoreline Protection** (002.SP.102)

Shoreline protection through rock breakwaters designed to an elevation of 3.5 feet NAVD88 along approximately 7,300 feet of the northeastern shore of Snail Bay south of Little Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.

### **Bayou Perot Shoreline Protection** (002.SP.106)

Shoreline protection through rock breakwaters designed to an elevation of 3.5 feet NAVD88 along approximately 5,900 feet of the western shore of Bayou Perot to preserve shoreline integrity and reduce wetland degradation from wave erosion.

### Bayou Lafourche Diversion (03a.DI.01)

Diversion of the Mississippi River into Bayou Lafourche to increase freshwater flow down Bayou Lafourche with 1,000 cfs capacity (modeled with continuous operation at 1,000 cfs, independent of Mississippi River flow).

# Terrebone Bay Rim Marsh Creation Study (03a.MC.03p)

Planning, engineering, and design of marsh creation features to provide benefits to communities in Terrebonne Parish and the Morganza to the Gulf protection system.

# Restoration Projects: Year 11-30

# **Grand Bayou Hydrologic Restoration** (03a.HR.100)

Dredging of Margaret's Bayou and Grand Bayou in conjunction with the construction of a fixed crest structure at Grand Bayou and the installation of (5) 48-inch flap-gated culverts on the western bank of Grand Bayou.

# West Snail Bay Shoreline Protection (002.SP.103)

Shoreline protection through rock breakwaters designed to an elevation of 3.5 feet NAVD88 along approximately 16,600 feet of the western shoreline of Snail Bay south of Little Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.

### Belle Pass-Golden Meadow Marsh Creation (03a.MC.07)

Creation of approximately 23,200 acres of marsh from Belle Pass to Golden Meadow to create new wetland habitat and restore degraded marsh.

# Risk Reduction Projects: Year 1-30

# <u>**Lafourche - Lower Nonstructural Risk Reduction** (LAF.01N)</u>

Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 feet, elevating residential properties where 100-year flood depths are 3-14 feet, and acquiring residential properties where 100-year flood depths are greater than 14 feet.

### <u>Lafourche - Larose/Golden Meadow Nonstructural Risk Reduction (LAF.02N)</u>

Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 feet, elevating residential properties where 100-year flood depths are 3-14 feet, and acquiring residential properties where 100-year flood depths are greater than 14 feet.

#### **Lafourche - Raceland Nonstructural Risk Reduction (LAF.03N)**

Project includes floodproofing non-residential properties where 100-year flood depths are 1-3 feet, elevating residential properties where 100-year flood depths are 3-14 feet, and acquiring residential properties where 100-year flood depths are greater than 14 feet.

# <u>Upper Barataria Risk Reduction (002.HP.06)</u>

Construction of a levee to an elevation between 12.5 and 15 feet NAVD88 along Highway 90 between the West Bank and Larose. Project includes 204,300 feet of earthen levee, 8,200 feet of T-wall, (4) 10-foot sluice gates, (1) 250-foot barge gate, (2) 40-foot swing gates, and (8) pump stations with a total capacity of 6,837 cfs.

# Morganza to the Gulf (03a.HP.02b)

Construction of a levee to an elevation between 15 and 26.5 feet NAVD88 around Houma and Terrebonne Ridge communities from Larose to Humphreys Canal. Project features 471,500 feet of earthen levee, 39,600 feet of T-wall, (22) 6-foot sluice gates, (1) 30-foot stop log, (2) 20-foot stop logs, (13) 56-foot sector gates, (1) 250-foot sector gate, (1) 175-foot sector gate, (1) 125-foot sector gate, (1) 110-foot sector gate, (1) 30-foot sector gate, (1) 30-foot lock gate, (1) 30-foot roller gates, (1) 56-foot barge gate, (1) 30-foot barge gate, and (4) pump stations.

#### Larose to Golden Meadow (03a.HP.20)

Improvements to the existing Larose to Golden Meadow levee system, including raising to an elevation between 12 and 21 feet NAVD88. Project features approximately 249,900 feet of earthen levee and approximately 6,700 feet of T-wall.