Coastal Protection and Restoration Authority

Our Coast:

- Coastal Zone is home to 2.56 million people, 57% of Louisiana's population
- Coastal Louisiana has 37% of all the coastal marsh in the continental U.S.
- Home to the nation's largest port by tonnage, and 5 of the top 15 U.S. ports
- Louisiana's working coast exports over $120 billion in annual goods and services
- Coastal parishes import $160 billion in goods and services annually
- Louisiana led the nation in waterborne commerce (2014)
- 60% of U.S. grain ships through the Ports of New Orleans and South Louisiana
- Port Fourchon services 90% of the oil and gas activity in the Gulf of Mexico
- Home to LOOP, the nation's only port capable of offloading deep draft tankers
- Henry Hub in Erath is nexus of 9 interstate and 4 intrastate natural gas pipelines
- Our coastal estuary system produces 21% of all commercial fisheries landings by weight in Lower 48 states
- Approximately 75% of all commercially harvested fish species in Louisiana use our wetlands for at least one stage of their life cycle

Investments of $630-$840 million/year support:

- 7,800 to 10,500 jobs annually
- $59,000 average annual wage ($18,000 higher than state average)
- $460 to $620 million in wages annually
- $590 to $785 million value added to state economy annually
- $1.1 to $1.5 billion in annual output

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TURNING OPEN WATER INTO LAND AND MARSH

Until recent decades, dense marsh made up a significant portion of Cameron Parish, acting as a buffer against storm surge and the resulting damage to lives, homes and businesses. But as the marsh suffered the thinning effects of saltwater intrusion, even heavily-populated areas north of the parish, like Lake Charles, have become increasingly vulnerable to the surging gulf waters pushed inland by tropical storms and hurricanes.

This project is taking sediment from three miles offshore and pipelining it to an area behind the Gulf Beach Highway. With the beach eroded away, that roadway was the only thing separating the Gulf of Mexico from the hundreds of square miles of marshland making up western Cameron Parish. In 2014 the state protected the roadway and wetlands by rebuilding 8.7 miles of beach and dune at a cost of $45.8 million, and now is engaged in rebuilding and nourishing the adjacent marsh that had been turning into open water.

The Cameron Parish beach had eroded right up to the only east-west highway in the parish

In 2014 the CPRA restored 8.7 miles of beach fronting the highway to protect the road and the delicate marsh environment behind it.

Oyster Bayou Marsh Restoration

REASON FOR THE PROJECT: Altered hydrology, drought stress, saltwater intrusion and hurricane induced wetland losses have caused the area to undergo interior marsh breakup. Recent impacts from Hurricane Rita in 2005 and Hurricane Ike in 2008 have resulted in the coalescence of Oyster Lake with interior water bodies increasing wave related erosion.

STRATEGY: The project encompasses four marsh creation areas totaling 740 acres, which includes a 135-acre expansion of the original footprint. The marsh is being created and nourished with sediment dredged approximately 3.2 miles offshore in the Gulf of Mexico and transported via pipeline to the project site. The sediment is held in place by over 5,000 linear feet of earthen containment dikes that were constructed as one of the first steps of the project. Tidal creeks and ponds were also constructed prior to placement of dredged material within the marsh creation areas to facilitate formation of these features post construction.

During the pumping-in of dredged sediment, marsh buggies help distribute the material from the discharge points throughout the marsh creation areas. The earthen containment dikes will be gapped within a few years to support estuarine fisheries access to achieve a functional marsh.

In addition to the construction of four marsh creation cells, twenty 450-foot-long terraces are being constructed in the northeast section of the project to further reduce wave erosion.

CROSSING THE ROAD: The project site is on the north side of LA 27, which parallels the beach in this part of the parish. That means the project team needed to design a way for the sediment pipeline to traverse the highway for several months during dredging, without blocking this important hurricane evacuation route. In May 2017, the Weeks Marine team implemented the resulting plan, cutting the highway open, installing a permanent casing pipe that can be used for sediment pipelines for this and future projects, and then restoring the highway to operational conditions. Due the importance of this transportation route, the team could only work on one side of the highway at a time, leaving the other side open to two-way traffic with the assistance of flaggers. Once project construction is complete, crews will repair any imperfections their equipment may have caused to the highway.

Project Start Date: December 2016

Anticipated Completion: December 2017

Estimated total budget: $31.2 million

Funding Program: CWPPRA

Federal Sponsor: NOAA's National Marine Fisheries Service

Local Sponsor: CPRA

Design Engineer: APTIM (formerly CB&I)

Project area: Approximately 800 acres

Acres of marsh created and nourished: 740

Net benefit after 20 years: over 430 acres