



# MID-BARATARIA SEDIMENT DIVERSION

## Frequently Asked Questions

### History

#### 1. Why is there so much land loss in coastal Louisiana?

Louisiana continues to experience coastal land loss, triggered by both human and natural forces. Levees and flood control structures on the Mississippi River have successfully provided flood control and economic benefits; however, these forms of river management have also channeled the Mississippi River and its tributaries into the Gulf of Mexico, depriving the broader coastal ecosystem of the fresh water and nutrient-rich sediment it needs to survive. Dredging canals for oil and gas exploration and pipelines provided our nation with critical energy supplies, but these activities also took a toll on the landscape, weakening marshes and allowing salt water to invade deeper into coastal basins. Sea level rise, land subsidence, severe storms, and invasive species add further stress.

#### 2. How long has this been going on?

We know we've lost at least 1,900 square miles of land since the 1930's and we know we are going to lose more. In fact, our latest predictions show that if we do nothing, we stand to lose in the range of 1,800 to 4,200 additional square miles of land over the next 50 years.

### Purpose

#### 3. What is the purpose of the project?

The Mid-Barataria Sediment Diversion (MBSD) project was identified in Louisiana's 2012 Master Plan for a Sustainable Coast (Master Plan) as a critical project for restoring and rebuilding coastal Louisiana.

The project's purpose is to divert sediment-laden water from the Mississippi River to mid-Barataria Basin. By re-establishing a connection between the Mississippi River and the Basin, the project will mimic historic deltaic sediment deposition to build, maintain, and sustain critical coastal lands.

#### 4. Why is this project necessary?

As we said above, we know we've lost at least 1,900 square miles of land since the 1930's and we the latest projections show we stand to lose in the range of 1,800 to 4,200 additional square miles of land. The impacts of coastal land loss threaten Louisiana's economy, commerce, infrastructure, and culture. Furthermore, the collapse of coastal Louisiana would negatively impact the entire country – we provide protection for infrastructure that supplies 90% of the nation's outer continental oil and gas, 20% of the nation's annual waterborne commerce, 26% (by weight) of the continental U.S. commercial fisheries landings, winter habitat for five million migratory waterfowl.

To address the root of the problem, it is important to “reconnect the river” and restore the natural processes that initially built the delta. Controlled sediment diversions offer a unique opportunity to strategically reestablish hydrologic flows, carry land-building sediments, nourish marshes, and sustain land. When utilized along with marsh creation and the full suite of protection and restoration projects, this integrated systems approach can combat the grave land loss that threatens the coast

#### **5. Why not just spend the time, money, and resources on dredging?**

As outlined in the Coastal Master Plan, CPRA believes we need a holistic approach to coastal restoration and protection. In fact, since 2008, CPRA has dredged nearly 30 million cubic yards from the Mississippi River borrow sites. This work has created, restored, and nourished nearly 4,000 acres of marsh, island, and ridge habitat utilizing riverine sediment. Additionally, over the next 15 years, CPRA plans to dredge as much as 55-65 million cubic yards.

While dredging provides critically needed short-term benefits, it doesn't solve our fundamental issue of implementing projects that provide a sustainable and continuous source of new sediment. However, our latest research shows that when implemented together, marsh creation and sediment diversion projects perform better together and for a longer period than they do as individual projects.

### **Construction & Operations**

#### **6. Where will it be located?**

The Diversion structure will be located in Plaquemines Parish, LA, along the west bank of the Mississippi River, just north of the town of Ironton and south of the Phillips 66 Alliance Refinery.

#### **7. How does a sediment diversion work? What does it look like?**

Diversions harness the power of the Mississippi River for long-term, sustainable sediment, water, and nutrient delivery to the surrounding wetlands.

The main elements of the diversion complex are the diversion structure and the conveyance channel. The diversion intake structure, located on the banks of the Mississippi River, replaces a section of the earthen levee system with gated structures to transport sediment. The conveyance channel is used for transporting the sediment from the river to the Barataria basin.

#### **8. When will it be built and begin operations?**

The current schedule has the project design completed and permitted in 2020. Construction would start then and is expected to take between two and four years.

#### **9. How will it be operated? Will it operate at full capacity all the time?**

An Operations and Maintenance Plan will be developed for the MBSD prior to construction. Public and stakeholder input are currently being solicited and this feedback will help inform

the Operations Plan. While the diversion complex is being designed to divert up to 75,000 cubic feet per second (cfs) of sediment-laden water, it would only be operated at certain times and the amount of water being diverted will vary depending on Mississippi River flow in order to maximize the amount of sediment that would be diverted. The MBSD diversion complex will be closed during extreme weather events and hurricanes.

**10. Will the Mid-Barataria Sediment Diversion have an adaptive management plan?**

Yes. An Adaptive Management Plan will be developed to maximize sediment transport from the Mississippi River to the Basin to build, sustain, and maintain land. This Plan will help reduce uncertainty over time and adjust for the ever-changing environment to ensure the project meets its intended goals and mitigates the potential consequences outlined in the “impact” section below.

This Plan would monitor the diversion intake structure and outfall area and allow for variable flow rates to respond to seasonal, sediment, and Basin conditions in order to maximize the benefits of sediment transport for restoration. Monitoring stations will be placed in the Mississippi River near the intake structure and in the Basin at the channel outfall as well as other areas that are yet to be determined.

**11. Is there really enough sediment in the river to build and sustain land at this location?**

Yes, the project proposes to divert suspended sediment generated from the local sand bar as well as sediment carried in the river’s flow. The majority of sediment diverted into the Basin will be sediment that is suspended in the Mississippi River water.

The latest estimates show that, on average, the sediment diversion will deliver between 2-3 million cubic yards of sediment a year. To put that in perspective, that’s 20-30 million cubic yards every ten years or 100 – 150 million cubic yards over the next 50 years. How much sediment is that? A dump truck holds 12 cubic yards of sediment. So one million cubic yards is equivalent to 83,333 dump trucks. It takes 192,901 dump trucks to fill up one Louisiana Superdome. By 2070, we’ll have enough sediment to fill 22 - 32 Louisiana Superdomes!

**12. Are there examples of other successful diversions projects?**

While the Mississippi River Delta is largely subsiding and eroding today, at the mouth of the Atchafalaya River, we have an active delta that is creating new land. The Wax Lake Outlet was constructed by the U.S. Army Corps of Engineers in 1942 to reduce the risk of flooding in Morgan City and surrounding areas. The project consists of a 14-mile, manmade channel that creates a straighter, more efficient path between the Atchafalaya River and the Gulf of Mexico. The Wax Lake Delta, which was formed where the channel meets the gulf, has been growing steadily for the past 40 years. This delta has become a vibrant ecosystem, playing host to a wonderful diversity of plants and animals.

**13. Will diversions harm fisheries?**

The latest scientific analysis supports the claim that sediment diversions have the opportunity to support the health of fisheries because they may allow the ecosystem to reset to a more sustainable baseline. In any case, the future without action will drastically hurt the Gulf fisheries and the many of the Louisiana residents that depend on them.

#### **14. How will diversions impact wetland vegetation?**

Diversions will have some impacts on vegetation, particularly on the distribution of some plant species. However, if we don't introduce sediment-rich freshwater into the wetlands they will degrade to open water. Therefore, the benefits of diversions outweigh any potential impacts on vegetation. Additionally, steps are being taken to maximize the amount of sediment and minimize the amount of water taken from the river.

#### **15. What are the economic impacts of implementing and operating diversions?**

It's hard to fully predict the economic impacts of diversions. However, it is clear the economic health of much of the United States depends on sustaining the navigation, flood control, energy production, and seafood production functions of Mississippi River Delta. Without an aggressive restoration program, the economic activity of the coast, worth hundreds of billions of dollars, cannot be maintained.

### **Process**

#### **16. What is the National Environmental Protection Act (NEPA) and what is an Environmental Impact Statement (EIS)?**

The National Environmental Policy Act (NEPA) requires federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions.

An EIS is a detailed analysis that serves to ensure that the policies and goals defined in NEPA are infused into the ongoing programs and actions of the federal agency involved in the project.

The public, other federal agencies, and outside parties may provide input into the preparation of an EIS and then comment on the draft EIS when it is completed. The EIS will provide a discussion of significant environmental impacts and reasonable alternatives (including a No Action alternative) which would avoid or minimize adverse impacts or enhance the quality of the human environment.

#### **17. Besides the EIS, are there other official steps are required to implement and construct the Mid-Barataria Sediment Diversion?**

Yes. The MBSD will be designed and constructed to high standards with oversight from the Army Corps of Engineers to ensure a safe and dependable facility. Before construction ever takes place, there are several permits/requests that CPRA must obtain:

- **Coastal Use Permit** - authorization to execute a project in Louisiana's Coastal Zone that is in compliance with the guidelines of the Louisiana Coastal Resources Program
- **404/10 Permit** - authorization for the construction of any structure in or over any navigable water and the discharge of fill material into the wetlands
- **408 Request** - authorization for the alteration of a USACE civil works project if the Secretary determines the activity will not be injurious to public interest and will not impair the usefulness of the project

**18. What does the schedule look like for the Environmental Coordination phase of this design process? What comes next?**

Environmental coordination with agencies and stakeholders will extend throughout the design phase. Environmental activities will include documentation of existing and future conditions with and without the proposed actions. The environmental evaluation will include anticipated beneficial and adverse effects. In compliance with NEPA, an EIS will be prepared in cooperation with the U.S. Army Corps of Engineers as the lead federal agency. It is anticipated the Draft EIS will be available for public review sometime in 2018.

**19. How can the public engage in the process?**

The public will have the opportunity to attend and provide comments at a NEPA Public Scoping Meeting (anticipated Summer 2017) and review the Draft EIS (anticipated sometime in 2018).

In addition to the formal required engagement in the permitting process, CPRA is committed to providing numerous opportunities for public engagement:

- Visit with CPRA Staff Members during our recurring visits to coastal Louisiana. For a schedule of upcoming visits, please visit <http://coastal.la.gov/calendar/>
- Attend a CPRA Board Meeting to engage with CPRA leadership (schedule can be found at [coastal.la.gov/calendar](http://coastal.la.gov/calendar))
- Visit [coastal.la.gov](http://coastal.la.gov) to learn more about this project and other coastal restoration efforts
- Email us at [outreach@la.gov](mailto:outreach@la.gov) to request a meeting
- Follow CPRA on [Social Media](#) for relevant updates