

RECONNECTING THE RIVER

A LOOK INTO THE CHALLENGES FACING COASTAL LOUISIANA
AND A BOLD PROPOSAL TO SAVE IT

MID-BARATARIA SEDIMENT DIVERSION
EXECUTIVE SUMMARY



Background

For decades, scientists and engineers across our state and worldwide have studied Louisiana's unique coastline, working to address the catastrophic land loss crisis we are facing. Following Hurricane Katrina in 2005, the Louisiana Coastal Protection and Restoration Authority (CPRA) was established to lead our state's charge in coastal protection and restoration – embodying a consolidated, innovative, and science-based effort to save our wetlands and better protect our residents. Since that time, the agency has worked diligently to study, analyze, and design the Mid-Barataria Sediment Diversion, a first-of-its-kind restoration project designed to do what no other project can – harness the power of the Mississippi River to re-establish the land building processes that built coastal Louisiana in the first place.

This document details the history of Louisiana's land loss crisis and imminent need for sediment diversions.

This isn't a technical document full of engineering jargon, but rather a story of Louisiana's coast...and a plea to help us save it.

History

LOUISIANA'S LOSING BATTLE WITH THE GULF OF MEXICO

In 1927, states along the Mississippi River experienced the most catastrophic flood in modern history – which resulted in 145 levee breaks, 27,000 square miles flooded, thousands of homes destroyed, and hundreds of lives lost. This devastating flood prompted significant changes in how we control the Mississippi River and protect our communities. Through the Flood Control Act of 1928, the U.S. Army Corps of Engineers was given the responsibility to construct flood control projects, like levees and spillways, to prevent this level of disastrous flooding from occurring again.

Our levee system is incredibly important; it provides flood protection to our communities and allows industry along the Lower Mississippi River to continue to thrive. This area is traveled by over 11,000 vessels annually that transport nearly 500 million tons of cargo, including 60% of the nation's grain, and has played a major role in sustaining the U.S. economy for hundreds of years. The Mississippi River Delta is the site of ecological and natural assets valued at well over \$5 trillion. And most importantly, it is home to invaluable memories and experiences of generations.

What's the Problem?

THERE IS NO SINGLE ISSUE. OUR COASTAL SYSTEM IS COMPLEX. WE MUST TAKE BOLD AND INNOVATIVE ACTION IF WE'RE GOING TO HAVE A FIGHTING CHANCE AT HAVING A SUSTAINABLE COAST AND FUNCTIONING ESTUARY.

The unintended consequences of building our current levee system, along with a myriad of other natural and manmade factors, have placed coastal Louisiana at risk of being swallowed into the Gulf of Mexico. The levee system keeps the Mississippi River restricted and prevents the river from depositing much needed sediment – the silts and clays carried by the river – and nutrients into our basins. As a result of restricting the river, the Barataria Basin has lost more than 400 square miles of marsh since the 1930s.

In 2010, the *Deepwater Horizon* explosion, the biggest oil spill in U.S. history, dumped more than 200 million gallons of crude oil into the Gulf of Mexico, which eventually covered over 400 miles of Louisiana's coastline in a thick layer of oil. The heaviest oiling occurred in Barataria Basin, which caused an incredible shock to the system and doubled or tripled the rate of land loss in the Basin.

All of this land loss leaves us more vulnerable to future storm events. In 2020, Louisiana had five named storms pummel our coast, and many predict that storms will only intensify in frequency and strength in the future. Now is our time to act boldly.

What Can We Do?

WHAT WE CANNOT DO IS WAIT.

Continued loss of coastal wetlands has led to instability in our estuaries. If we do nothing, we're facing a total collapse. The wildlife, fisheries, and industries that rely on functional estuaries are facing serious challenges today due to rapid loss of wetland habitats, large, unpredictable swings in estuarine salinities, continued subsidence, and increasing sea level rise.

To date, the state of Louisiana has implemented project after project to rebuild or enhance our marshes, build up barrier islands, and combat saltwater intrusion. We have no intention of letting up on these efforts and are committed to building projects that protect communities, keep industries working, and maintain our "Sportsman's Paradise".

But what we haven't done yet is directly address the root cause of our problem: lack of nutrient delivery from the river to the basin.

We are in a race against time. Our land loss crisis and the many trickle-down effects will intensify without bold and innovative restoration efforts. Without implementing a sustainable solution to combat land loss, the people, communities, industries, fisheries and, wildlife that rely on our coast will no longer be able to do so... and we are simply unwilling to let that happen.

Reconnect the River

IT'S TIME TO RETURN TO OUR ROOTS.

After decades of studies and input from leading scientists, engineers, and coastal residents, the state of Louisiana has determined that large-scale sediment diversions provide the best chance at restoring, building, protecting, and sustaining our wetlands in order to preserve our communities, culture, species, and industries for generations to come.

A sediment diversion is a structure composed of a channel that is built into our levee system and controlled by gates to allow for regulated flows of water and sediment from the river back into sediment deprived basins. This concept centers around harnessing nature through engineering and mimicking the natural land building

processes that originally built the basins. Further, sediment diversions have the capability to deliver consistent and large quantities of sediment and nutrients into our wetlands that would not only build new land, but also lengthen the lifespan of many neighboring restoration and protection projects.

The Mid-Barataria Sediment Diversion

As previously mentioned, the Barataria Basin has been identified as a critical area of focus for restoration efforts – the area currently faces some of the highest rates of land loss in the world and was the area most heavily impacted by the *Deepwater Horizon* oil spill. Addressing a problem of this magnitude requires an effort of equal scale. The Mid-Barataria Sediment Diversion project represents one of the largest and most innovative coastal restoration efforts ever undertaken in the history of the U.S.

The benefits of the project are extensive. The project has the capability to build and sustain thousands of acres of land that would provide increased storm surge protection to our vulnerable communities, provide necessary habitats to sustain a productive estuary for fish, wildlife, and industry, and bring billions in economic benefit to the surrounding parishes.

A project of this scale and complexity requires a robust planning, permitting, and implementation effort grounded in science and engineering. CPRA is engaged in a comprehensive, science-based review of how the Mid-Barataria Sediment Diversion may change the environment around it. This includes developing a deep understanding and evaluation of both the benefits and the impacts to communities, species, and industries that may experience change as a result of constructing and operating the project. Further, the process evaluates what might happen if the project is never built.

Operating a sediment diversion will bring change to our environment, but the environment is already changing and will continue in a downward path if we take no action. We've heard from hundreds of residents, fishermen, pilots, and recreational sportsmen about the changes they've witnessed in their lifetime. Resources have changed drastically and, in some cases, are depleted or no longer accessible in areas they were once plentiful. Land that these people once stood on has disappeared before their eyes. It's a daunting and frightening reality for many, and some of the short-term resource impacts caused by the proposed sediment diversion may be necessary to achieve the long-term benefits of a comprehensive and sustainable solution.

A Unified Approach to Restoration

Coordinating agencies, as well as the general public, have had a seat at the table from the very beginning. CPRA's goal has always been to consider all perspectives, from federal partners to coastal residents, and everyone in between, to build the best project for our state.

As a part of the *Deepwater Horizon* oil spill settlement, Louisiana was allocated a significant amount of funding to restore our coastal and nearshore habitats. The Louisiana Trustee Implementation Group (LA TIG), the collection of federal and State agencies responsible for implementing that restoration objective, works to use these dollars in a way that is innovative, cost-effective, and, most importantly, produces the maximum benefit for our coastal system while minimizing impacts to the extent possible.

This federal/state working relationship is an important one – the LA TIG has played an essential role in objectively evaluating the project's benefits and impacts. Based on their evaluation, the LA TIG, in its Draft Restoration Plan, is recommending using *Deepwater Horizon* natural resource damages settlement dollars to build the Mid-Barataria Sediment Diversion.

Draft Environmental Impact Statement and Draft Restoration Plan

WE'VE REACHED A CRITICAL POINT IN LOUISIANA'S HISTORY: DO WE MOVE FORWARD WITH AN INNOVATIVE PROJECT THAT WILL CAUSE SHORT-TERM IMPACTS AND LONG-TERM BENEFITS? OR DO WE START PLANNING FOR A RETREAT FROM A WAY OF LIFE WE CAN'T IMAGINE LOSING?

The U.S. Army Corps Engineers (USACE), the lead agency for the project's environmental review process has issued a Draft Environmental Impact Statement (DEIS) for the Mid-Barataria Sediment Diversion under the National Environmental Policy Act (NEPA). The information provided in the document is objective and complete, making it relatively lengthy.

The DEIS provides critical information that informs the Draft Restoration Plan, which is the LA TIG's proposal for funding the project.

Together, the DEIS and Draft Restoration Plan provide a thorough analysis of the benefits and impacts that building and operating the Mid-Barataria Sediment Diversion may have on the surrounding environment.

It is important to view these documents through a holistic lens, something that may not be easy to do when facing real changes to our coast. At the forefront of all this decision making is the alternative – what if we do nothing? Our estuary is already broken, land loss will continue to increase, extreme challenges and uncertainty for our coastal industries will worsen, and our communities will be more vulnerable than ever when faced with the next, inevitable storm.

We acknowledge that some of the changes evaluated in the DEIS and Draft Restoration Plan are substantial. Communities, residents, and industries will need support to face the uncertain future, with or without the project. Communities near the project site can expect higher water levels during flood season, and CPRA plans to work with communities on initiatives to raise infrastructure and homes, and to increase access.

The brown shrimp and oyster industries will likely see changes as salinities decrease during project operations, and areas that support these species are likely to shift to lower parts of the basin. This may present challenges to an already strained seafood industry. CPRA is committed to addressing these challenges as best we can, including funding programs to create and enhance oyster growing areas and growing techniques, upgrading vessel refrigeration and equipment, assisting with small business operations, and funding marketing programs to support buying local, Louisiana seafood. These measures were suggested by stakeholders who know these industries and communities best, keeping their resilient nature and self-determination of true Louisianans at the forefront.

We will also likely see increases in available habitat for species that rely on lower salinity wetlands but recognize that those lower salinities will negatively impact dolphin populations. CPRA has worked extensively with the National Oceanic and Atmospheric Administration (NOAA) to develop a robust monitoring program, active today, to better understand those impacts and work to

address them, as well as funding efforts that will increase resources to respond to stranded dolphins and reduce other activities that negatively impact the basin's dolphin population.

The DEIS includes a proposed mitigation, monitoring, and adaptive management plan available for public review that details these and other mitigation and stewardship strategies as well as ways in which the project can be adaptively managed to achieve a successful project and to minimize impacts. The mitigation and stewardship measures included in the plan are informed by extensive outreach and engagement with community members, the seafood industry, science and academic communities, residents, navigation representatives, and other stakeholders.

We strongly encourage everyone to review the DEIS and Draft Restoration Plan, ask questions, and have a conversation with us – as this moment defines the future of our culture, our communities, and our coast.

Why?

BECAUSE WE WANT TO STAY HERE.

Coastal restoration is about maintaining the culture, stories, roots, and livelihoods in a place unlike anywhere else in the world. Our challenges are complex and different than so many others: they cross political lines, principles, and ideologies. Regardless of background, affiliation, occupation, or belief system, we all agree something must be done to save our coast.

The science is clear-- sediment diversions provide the best chance at restoring, building, and protecting sustainable wetlands and creating a more functional ecosystem that will preserve communities, culture, species, and industries for generations to come.



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Louisiana Coastal Protection and Restoration Authority is the single state entity with authority to develop, articulate, implement, and enforce a comprehensive coastal Master Plan of unified vision, to reduce tropical storm surge flood impact, to restore our bountiful natural resources, to build land to protect our nation's critical energy infrastructure, and to secure Louisiana's coast now and for future generations.