



REFORM FOR LOUISIANA'S **FUTURE**

THE COASTAL CHALLENGE: DEVELOPING A COMPREHENSIVE APPROACH THROUGH COOPERATION AND LONG-TERM VISION

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Funding for this research is provided by Greater New Orleans, Inc.



I. Challenges: Land loss, Climate Change and Siloed Governance

“Between 1932 and 2010, Louisiana’s coast lost more than 1800 square miles of land. Between 2004-2008, more than 300 square miles of marshland were lost to Hurricanes Katrina, Rita, Gustav and Ike.” These losses cited by the State’s Coastal Master Plan, are the result of the effects of climate change, sea level rise, subsidence, hurricanes, storm surges, disconnection of the Mississippi River from coastal marshes and human impacts.¹ The magnitude of the problem and its effects are tremendous, and its causes are complex. Louisiana has grappled with land loss since its inception, and as populations grow, economies evolve, and the environment continues to change at an increasingly rapid pace, the problem looms larger than ever.

Coastal land loss is being exacerbated by environmental changes in Louisiana and in coastal regions across the globe. At the very least, we know that without action, damage from flooding will increase dramatically – an estimated tenfold by 2067. Land loss and increased flood risk has left thousands of coastal residents trapped in situations where their risk is rising dramatically while the value of their homes, their savings, and their safety nets are disappearing.

As the impacts of these changes become clearer and the rate at which they are occurring accelerates - the problems our coast faces are only going to become more complex. However, as Louisianans well know, every disaster also brings forced opportunity. It is up to us to face our challenges with courage, optimism, and a willingness to innovate and cooperate for the sake of the changes we need to make in order to realize the opportunities inherent in the coastal crisis and essential to Louisiana’s future.

Efforts to rebuild land and protect existing assets are absolutely essential. Louisiana can be proud to have led the nation in developing the capacity to implement such measures and must continue. However, the scope of the coastal crisis exceeds the reach of these endeavors, impacting people, cultures and economies in a broad range of ways, small and large. Thus, our approach to the coastal crisis must also be comprehensive – in scale, in focus, for the near-term, the long-term and everything in between. The framework and leadership for this comprehensive approach begins at the state level. State agencies and leadership must shift gears to a collaborative model that brings every resource to bear and leverages all efforts to address the coastal challenge in a comprehensive manner that solves problems and creates opportunities.

Louisiana’s coastal communities are doing remarkable work to survive and thrive amidst difficult and changing environmental conditions. Programs such as LA SAFE have helped locals establish priorities for improving transportation systems and mobility, building environmentally appropriate housing, implementing green infrastructure and improving water management practices, diversifying their economies, protecting natural assets and preserving cultural identities. Innovative buy-out programs are helping residents suffering repetitive flood loss move to higher ground. Through planning and courageous leadership, communities are developing strategies to increase their resilience and create the next generation of opportunities.

All of this good work at the state and local levels constitutes very important steps towards long-term resilience – but more is needed. Louisiana needs a shared, long-term vision that addresses the full range of known and anticipated impacts associated with the coastal crisis, supported by coordination at every scale.

II. Why the Problem is Worth Solving

In addition to valuable natural resources, habitats, infrastructure and cultures, the coast is home to more than two million people. As the environment changes, as land literally disappears and flood risk continues to

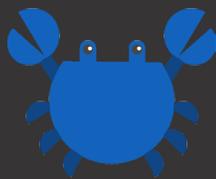
1 Louisiana’s Comprehensive Master Plan for a Sustainable Coast (2017)

increase, many of those people are seeking higher ground. Many of those who are left have limited resources and few choices.

Solving the coastal crisis is essential to Louisiana's economic future. Louisiana's coast plays a critical role not only in the state and regional economy, but nationally as well. A 2015 report by Louisiana State University and The RAND Corporation estimated that land loss directly affects the economy with the estimated total activity at risk ranging from \$5.8 to \$7.4 billion in output. According to the U.S. Energy Information Administration, three of the nation's 10 largest refineries by operable capacity are located in Louisiana, capable of producing 1,476,550 barrels per calendar day.²

According to the Bureau of Transportation Statistics, south Louisiana is home to the largest port in the country when measured by tonnage (Port of South Louisiana), and home to five of the top fifteen largest ports when measured by tonnage. In fact, in 2017 these five ports accounted for 23% of total tonnage that passed through all U.S. Ports. And while total tonnage at U.S. Ports has declined 7% over the past decade, tonnage at these five ports has increased by 15%.³ Additionally, the maritime sector is largely dependent on a viable coast.

Fisheries Economics of Louisiana



More blue crab (**41 million lbs.**) was caught in Louisiana than any other state, earning more than

\$58M

Louisiana accounted for of U.S. shellfish landings **14%**



\$2.4M

Recreational fishing trips in Louisiana in 2018, the 7th highest in the country

\$370M

Landing revenue in Louisiana for 2018

1 Billion Pounds

Landing output weight in Louisiana for 2018

Source: National Oceanic and Atmospheric Administration, Fisheries Economics of the United States 2015

² U.S. Energy Information Administration, Top U.S. Refineries Operable Capacity (January 1, 2018)

³ U.S. Department of Transportation, Bureau of Transportation Statistics, Tonnage of Top 50 U.S. Water Ports (2017)

A silver lining of the coastal crisis is that it presents a tremendous opportunity to grow the water management sector in a way that serves our needs for coastal protection and restoration, as well as our statewide needs for better water management amidst growing flood risk and drought, and can be exported to other markets facing similar challenges.

These are the challenges that will define the next era of our planet. They are not just of local or national importance – they are global in nature. If Louisiana wants to remain relevant and protect its singular assets, we must be part of a global dialogue and exchange of information. We have a rich opportunity in the coast that is our particular laboratory to employ the best of what is known about mitigation and adaptation as well as to create and deploy new solutions that will advance the state of the field globally. Done well, development of this sector can lead the way toward an exciting prosperous future for Louisiana.

Are the problems facing Louisiana’s coast daunting? Yes, indeed. Are they insurmountable? Absolutely not. The people, leaders and institutions of Louisiana must summon their native courage and embrace the changes required of us if we want to survive and thrive amidst this changing environment. We need our leaders at every scale to step up in new ways. Drawing fully upon the talent, passion, expertise and leadership already at work in Louisiana, a vibrant future is well within reach.

III. Exploring Solutions

Addressing the coastal challenge will require unprecedented cooperation and coordination of a comprehensive approach. Louisiana’s Coastal Master Plan is a critical step in the right direction, but it alone cannot solve the problems of coastal land loss. In addition to restoring land and protecting assets, we also have to manage population movement, economic shifts, evolving policy needs, and development of resilient infrastructure and affordable housing so that we don’t further exacerbate conditions of poverty, isolation, health disparities, inadequate infrastructure or economic decline among coastal communities.

If we want to build true resilience that meets the range of needs, we make the following recommendations:

Governance Structure. First and foremost, create the governance structure that will work to drive the changes Louisiana needs. The existing system will reproduce existing conditions. The governance we need will be proactive; people-focused; **science-driven**; nimble; cooperative; capable of forging innovative partnerships across sectors, jurisdictions, and party lines; and guided by a shared understanding of the full scope of the coastal challenge and a shared vision for the future of Louisiana.

A critical shift that will underpin a successful approach to the coastal challenge is one that transcends our state of perpetual recovery in order to achieve a state of proactive preparedness and resilience.

Recognizing the need for interagency cooperation and coordination, Governor John Bel Edwards, and Governor Bobby Jindal before him, issued Executive Orders directing state agencies to administer their activities in accordance with the Coastal Master Plan. These actions promoted the plan’s science-based projects and supported the state’s best chance of preventing additional land loss. While these are important and significant actions taken by our state’s leadership, we must ensure departments and agencies operate consistently with the Coastal Master Plan’s recommendations.

Protect and Leverage Funding. Coastal Protection funds and plans must be leveraged and protected for the long term. The contributions to the Coastal Trust Fund that are very important to the program are those recurring funds from mineral revenues defined in state laws (\$15M-36M in recent years). This figure remains unchanged since the 1990’s. The Coastal Master Plan costs approximately \$750 million annually. The state

needs to narrow this funding gap; it needs to have skin in the game if it wants others to invest also.

In 2006, the Gulf of Mexico Energy and Security Act (GOMESA) established a program creating a dedicated funding stream for coastal restoration and risk reduction activities for the four Gulf States that permit outer continental shelf exploration. GOMESA revenues that are counted as state-only dollars once they reach the Coastal Trust Fund, and one-time monies such as surplus dollars, can be used as a match for federal projects and programs or to cover operating funds. An alternative is to set them aside for needs like adaptive management, state monitoring and maintenance obligations, or federal projects that were welcomed but unanticipated that require state work on the front end (e.g. the recent announcement of West Shore Lake Pontchartrain which requires advance state work and then a 35% state match to the U.S. Army Corps of Engineers).

These two funding sources are of dire importance so that the Coastal Protection and Restoration Authority (CPRA) can continue to be responsive to ongoing programs, such as the Coastal Wetland Planning Protection and Restoration Act (at an 85% federal to 15% state match), and also to augment the day to day operations and overhead of the CPRA. They must be protected, and also supported, so that the state can continue to be fluid in its operation.

Regarding the leveraging of funds, opportunities may exist to bond future revenues such as funding from the Resources and Ecosystems Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act) or Natural Resource Damage Assessment (NRDA) dollars. Other financing ideas (e.g. Outcome-based Performance Contracting) are being researched by various groups and may also be explored.

Understanding that it is never a good time to ask more of the state than it has to offer, we must weigh the fate of the future economy of our state if we do not invest in its this ongoing crisis. For businesses, communities, natural resource-driven products (shrimp, oysters, finfish) and tourism (recreational fisheries and eco-tourism, particularly) to thrive, we must demand that our coastal climate adaptation take a front seat in the minds of all our state leaders. We are positioned to be a leader in climate adaptation nationally. And capitalizing on the outsourcing of our knowledge in this arena should be accompanied by the state making this a priority, not only in words, but also in state funding.

The state as a whole should focus on managed retreat and receiving communities, supporting an equitable and culturally appropriate migration process that is fully informed by the expressed needs and desires of at-risk residents. Furthermore, it's essential to empower receiving communities to invest in resilient infrastructure, affordable housing and new opportunities while maintaining and creating new social and cultural connections among residents.

Accelerate efforts to build the water management sector into a “blue economy” of international renown.

There is great opportunity to continue to develop expertise and the market for water management as well as disaster recovery and resiliency. A number of firms specializing in engineering, surveying, geotechnical analysis, design and construction have developed in the decade following Hurricane Katrina and the Deepwater Horizon Oil Spill. As we continue to strategically address our local challenges, the region is gaining exportable expertise that will uniquely position it to compete for water management contracts nationally and globally. The result is the genesis of the Environmental Management industry, which describes the cluster of companies that provide products and services that help other companies and governments manage environmental challenges related to energy, waste and water, while creating jobs and revenue.

To ensure this industry's vitality over time and to maximize the various opportunities associated with its growth, a robust pipeline of trained workers, who are local, skilled, and knowledgeable of water opportunities, first and foremost, in and throughout the region, is required. Diverse education partners from K-12 to higher education have already begun to lead the way with demand driven curriculum and innovative programs contributing to the industry's growth.

Prioritize community-driven planning and policy. People first – at the end of the day, the object of all of this work is to enable Louisiana people to survive and thrive for generations to come. People should be at the forefront of all planning and decision making.

We have to change our thinking about development. The calculus used to make development decisions in the past simply no longer adds up. Responsible land use planning will direct growth away from high-risk areas, complement structural protections, and guide and leverage the impacts of engineering projects. Standards for low impact development and green infrastructure are essential for resilient coastal communities that spawn new opportunities.

State and local government must strengthen partnerships with the private and nonprofit sectors. Well-designed private sector partnerships can help accelerate development of the “blue economy” and new energy that is a critical part of Louisiana's future. Strategic partnerships with nonprofit organizations will add critical capacity for research, best practices and stakeholder alignment. Community-based organizations are also critical partners for authentic community outreach and growing grassroots support for coastal protection efforts.

Conclusion

Since Hurricane Katrina, each of Louisiana's 64 parishes has experienced flood-related disaster. Historically, such disasters have been tropical-storm-related, surge events. However, 2016 showed us that communities thought to be safe are now vulnerable to riverine and flash flooding. Louisiana should apply and adapt the lessons we continue to learn on the coast to the rest of the state to meet our statewide resilience, flood control and climate change mitigation and adaptation needs. All of these impacts are connected, as are we.

Coastal protection and restoration must be a shared, apolitical priority, statewide. Whether we live and work on the coast or not, we all have a lot to lose if restoration and protection efforts fall short – and much to gain if they are successful. Building statewide, nonpartisan support will require robust communication and education efforts at every scale along with well-coordinated bipartisan leadership from our state and local elected representatives.

Though we face some daunting challenges that require our urgent attention, solutions are within reach and new opportunities await us, so long as we choose to seize them. Addressing the coastal crisis at all scales, and across sectors and political divides is essential – and an opportunity for us to work together. We all have a role to play – businesses, residents, the public sector; local, parish, and state government; elected and civic leaders. When we each step up with a willingness to make difficult choices, take bold action and embrace transformative change, Louisiana will be successful in meeting and exceeding the coastal challenge.