

# The New Orleans Index at Five

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## Reviewing Key Reforms After Hurricane Katrina

### TO THE HEART OF THE MATTER: COASTAL RESTORATION AND THE FUTURE OF NEW ORLEANS

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Everyone's eyes were on the Gulf. TV newscasts showed the billowing clouds moving closer to the coast. The questions were always the same. How bad would it be? Would the marshes and barrier islands survive? Would the cultures, communities, and economies that depend on the vast estuarine complex built by the Mississippi River survive? And what about New Orleans? Why weren't we more prepared? Who was to blame?

It was eerily familiar, like echoes from Hurricanes Katrina, Rita, Gustav, and Ike. But this was no hurricane. Five years after Hurricane Katrina roared ashore (and on the eve of a new storm season) the Deepwater Horizon rig was hemorrhaging oil into the Gulf of Mexico. Winds and currents threatened to bring a black tide to the beaches, barrier islands, and wetlands of the eastern and central Gulf of Mexico devastating the fishing and tourist economies of Florida, Alabama, Mississippi, and Louisiana. BP's controversial use of toxic chemical dispersants to dissipate the oil did seem to reduce the amount of oil on the surface but as a result put oil and dispersants into the entire water column of the Gulf, adding an unprecedented third dimension to the catastrophe—the impacts of which will probably never be fully understood.

All of this was compounded by the fact that most people don't really know much about oil or oil spills—and BP and the federal government didn't really seem to either. The state of Louisiana had also long been complacent to the point of complicity about the risks of oil and gas development. At least, however, it had filed suit against the federal Minerals Management Service in 2006 to block an offshore lease sale, arguing that Hurricane Katrina underscored the vulnerability of its coast and the risks that offshore development posed.<sup>2</sup> That suit was settled but not before a federal court judge opined that if the matter had gone to trial there was a strong likelihood that MMS would be found to have “arbitrarily and capriciously” ignored the risks posed to Louisiana's coast.

In New Orleans and Southeast Louisiana the reaction to the spill has been sorrow, anger, frustration, and a deep anxiety born of exhaustion and the abiding sense that they hadn't been told the whole truth about the risks of offshore drilling. But there was more to the reaction than that; there was also a prideful solidarity about knitting communities closer and celebrating the things that link the city to the coast. Eating local seafood became an act of communion, a duty owed to those men, women, and communities whose livelihoods were threatened by the spill. Musicians and students signed up for hazardous material training so they could volunteer to rescue birds and lay oil containment booms—only to yield

“We can live in fear or  
act out of hope”  
– John Hiatt<sup>1</sup>

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to out of work fishermen who needed a day's pay. People signed up for volunteer duties and talked to their neighbors about shaving their heads so the hair could be stuffed into nylon tubes for absorbing oil. The list goes on. And so it has been with the broader recovery of New Orleans where so much has turned on the interplay between fear and hope.

### **History: A City Defined by its Relationship with Water**

No where are the sculpting power of hope and fear on the history and development of New Orleans clearer than in the case of the city's relationship with the rivers, wetlands, and estuaries that surround it and the city's vulnerability to water driven risk. The city has always had a troubled relationship with its watery environs. On the one hand the proximity to the Mississippi River and the Gulf made the city's founding and its rise to prominence possible. But the risk of flooding from the river, torrential rains, and the Gulf made it a hard bargain with nature from the beginning.

Water also shaped the distinctive culture of the city and the region. The port of New Orleans made the city one of the great points of entry for immigrants coming to America from around the world, adding a cosmopolitan flavor to the city known in only a handful of other American places and none in the South until recently. In stark contrast to the metropolis of New Orleans, the meandering bayous, bays, lakes, swamps, and marshes of the surrounding delta gave isolating refuge to Native Americans, expatriate Acadians (today's Cajuns), runaway slaves, Vietnamese and others, forging a network of landscape-oriented cultures that remains to this day, at least for now.

The fate and fortunes of New Orleans and the communities around it are tied to the coast. It always has been, and it most emphatically will be in the future. This aspect of direct and immediate dependence on an ecosystem sets New Orleans apart from most other places where the connections are less clear if recognized at all. The vulnerability of New Orleans to storms and rising seas has been growing for over 100 years as the buffering coast began to erode. Because the causes of that coastal collapse are mostly traceable to economic activity, it was easy—indeed it was policy—to discount the growing risks and to blindly hope that somehow things wouldn't get bad and that if they did someone would fix them. <sup>3</sup> In fact, it became state and federal practice to fear the social and political costs of confronting the threats of an imploding coast more than the actual risk of coastal collapse. The foolishness of that approach was laid bare by the series of hurricanes beginning with Katrina and by the ongoing oil disaster. The lesson that we need a new approach to how we live with nature and risk has been cruelly taught and taught again. To better understand what it means to live with nature and risk requires a step back in time. Coastal Louisiana is not so much a place as it is a process. It is the result of roughly 7,500 years of work by rivers, mostly the Mississippi, bringing freshwater, sediments and nutrients to the shallow water shelf at the southern end of the North American continent. In time a nearly 7,000 square mile (4.5 million acres) system of swamps, marshes, and estuaries was built between the uplands of the Pleistocene Terrace and the Gulf of Mexico.<sup>4</sup> It was continually being shaped by the natural forces of rivers, the Gulf, soil subsidence, and erosion. It never stayed the same but was in functional equilibrium when Europeans colonized the delta in the early 18th century.

New Orleans' location was strategically chosen based on its proximity to the Gulf of Mexico and the Mississippi River (the mouth of the River was difficult to navigate at that time). Combine that with its modest but vital elevation (it was not below sea level then and much of it isn't today) and distance from the Gulf, and New Orleans, as geographer Peirce Lewis has called it, rose as an "impossible but inevitable city."<sup>5</sup>

In settling the area, the Europeans—first the French, then the Spanish, followed by the English and the Americans—brought with them concepts and techniques the coast had never seen. They were claiming property, building empires, and subduing a wilderness. The first levees on the Mississippi River were erected or raised when the French (hence the term “levee”) established the settlement of New Orleans. New Orleans was never intended to be a mere outpost but rather a metropolis. The ensuing expansion of its flood protections and the settlement and leveeing of the banks of the Mississippi and its distributary channels followed in short order. The walling off of the river from its flood plain had begun.

The first half of the 20th century ushered in an unprecedented level of state, federal, and private actions that sent the coast into a steep decline. Navigational improvements such as the Gulf Intracoastal Waterway, oil and gas exploration and production, and the federalization of flood protection on the Mississippi River that followed the great flood of 1927 radically altered the hydrology of the coast. By the 1930s the coastal wetlands had shrunk to 3.2 million acres.<sup>6</sup> Today less than 2 million acres remain.

This is the coast New Orleans finds itself in today as it tries to recover and create a viable future for itself. Increasingly, it is clear that any prospects the city has to recover and prosper are tied to reestablishing some semblance of sustainability to its surrounding landscape. This is not a challenge covered by old school urban renewal, new urbanism, smart growth, or any other planning approach of the moment. The future of New Orleans is dependent upon nothing less than a mutual survival pact with nature—starting with the wetland ecosystem of coastal Louisiana. Five years after Katrina it is fair to ask if that is happening. The best—and most optimistic—answer to that question is “maybe.” A strong foundation is being laid but it is too early to know what will be built upon it.

### **Katrina and its Aftermath: A Moment of Uncertainty, a Moment of Possibility**

Recovery from something like Hurricane Katrina is no simple matter. Unlike most natural disasters that hit and leave fairly quickly and affect—however gravely—hundreds or even thousands of people, Hurricane Katrina hit, destroyed, and stayed. Hundreds of thousands of people were displaced, and even homes and business that were high and dry had no utilities for months. There were no schools, hospitals, or grocery stores to come back to. Without people to serve how could they reopen? Without basic services, how could people return? The fabric of the city was ripped apart. In such a situation the issue isn't so much recovery but rebirth.

It is no secret that New Orleans had a well deserved reputation for civic indifference. It was an easy place to live well without much effort. No city in America was more loved by its residents and none was more neglected. Sure, people had hopes that things would improve, but they weren't well formed hopes, and they did not galvanize the community. They tended to be quick fix ideas such as casinos, race tracks, and amusement parks. These may be fine ideas but are largely rooted in enticing more visitors to come and spend rather than building an educated, well-paid workforce. New Orleans was a city in love with itself but with almost no sense of its future. Its deep traditions made for an oddly cohesive and resilient city but one that feared change. If there was one thing Katrina delivered in spades it was change.

New Orleans in the fall of 2005 and spring of 2006 was a city facing its own mortality. History is littered with “used to be” places and many observers pointedly suggested that New Orleans be placed on that list.<sup>7</sup> After all what was the point of rebuilding a wrecked

city in a collapsing coast in an era of warming climates and rising seas? Actually this remains a fair question, and its answer lies in both the city's past and the young but growing realization that the city can rebound and prosper if it fundamentally changes the nature of its relationship with water.

For all of its problems, the reasons for rebuilding New Orleans are largely the same as the reasons it was founded. It still occupies a strategically and commercially important location. While it has lost some of its stature as a port, it is still the place that shallow draft navigation from the nation's heartland meets ocean-going deep draft vessels. Perhaps most importantly, the city is not fatally vulnerable to storms and flooding. It was not the city's proximity to the Gulf that left it inundated, it was a poorly designed, built, and maintained set of flood walls, pumps, canals, and levees that turned a bad storm into a catastrophe. If the city gets smart about how it manages and lives with water it can sharply reduce its level of risk while enhancing the value of its abundant water resources—a luxury few American cities have today. To change that relationship, the city will need to frame a vision of its future that is based on well-informed hopes and an honest assessment of the things it should fear—like rising seas and a collapsing coast.

There is evidence that is happening. Wetlands restoration and accommodating sea level rise are now broadly recognized as essential components of flood protection and the sustainability of the region.<sup>8</sup> The state has recognized the need for smarter land use choices and has adopted a state wide building code. Thanks to relentless civic and environmental activism, the Mississippi River-Gulf Outlet, a fifty year old monument to wishful economic development and disdain for the environment has been deauthorized.<sup>9</sup> And the Army Corps of Engineers has shifted from providing a levee system with a high protection target (against 1-in-300 year events) with a low confidence level to a lower level of protection (1-in-100 year events) with a higher confidence factor.<sup>10</sup> That may not sound like an improvement but it is at least based on a more honest sense of the city's safety.

In March 2010 the White House released a “roadmap” to guide the federal efforts to successfully restore the ecosystems of coastal Louisiana and coastal Mississippi. This was the first comprehensive policy commitment ever to come from Washington concerning the restoration of coastal Louisiana. When the Deepwater Horizon blew out, blew up, and sank, it was anything but clear whether there was anything left of that roadmap or if anyone was really looking beyond the spill to the fate and future of the coast. Initially, the spill's unique nature fueled broad skepticism that this was any big deal. After all, where was the oil on the beaches, and doesn't oil naturally seep in the Gulf?<sup>11</sup> And wasn't the Gulf awfully big compared to the amount of oil gushing from the well?<sup>12</sup>

But then the oil came in—closing fisheries; killing birds, shell and finfish, endangered turtles, and whales and dolphin; and covering marshes, reefs, and barrier shorelines. Thousands of fishers, workers, and business owners were thrown out of work. Suddenly the importance of the marshes, islands, and estuaries came into focus in a way that volumes of studies could not convey. The federal roadmap now had a context for action and driving urgency supplied by the duty of BP under the Oil Pollution Act to assess the natural resource damage it has caused and restore or compensate for lost natural function.

This point was driven home by President Obama in his Oval Office address on June 15 in which he not only committed to undoing the damage done by the spill but also committed to reverse the chronic decline the of the entire Gulf Coast. Perhaps most importantly the president appointed Ray Mabus, the Secretary of the Navy and a former governor of Mississippi, to lead the effort. For the first time, the viability of this coast was more than

just one of the dozens of the unreconciled federal interests in the region—it was a White House priority and it was someone’s job to find a way to make it work.

For its part, the state of Louisiana’s relationship to the coast was transformed by Hurricanes Katrina, Rita, Gustav, and Ike. The drowning of New Orleans (and dozens of other communities that never caught the nation’s attention) and the loss of 217 square miles of coastal land in the span of a month in 2005 as a result of Katrina and Rita was a revelation. After years of plans, pronouncements, and ribbon cuttings, it was clear that whatever Louisiana was doing to preserve and restore its coast was failing. Indeed it was apparent that balanced against the state’s desire to spur economic development, not offend powerful interests, and avoid hard budget choices, saving the coast had never really been a serious priority. It was not that the state was overtly cynical (though at times it came awfully close) about its commitment to the coast, but it was more a matter of it being so much easier to speak platitudes about the environment and to put off the hard work of stewardship until later. Katrina forced a day of reckoning.

In the space of six months Louisiana fundamentally revamped its entire approach to dealing with the coast. In a dicey but essential move, storm protection, wetland conservation, and coastal restoration were integrated into a single state authority, the Coastal Protection and Restoration Authority. By the middle of 2007 the state had developed a master plan that took a more honest and urgent look at the coast and state’s future.<sup>13</sup> And in 2006, the state took what many had thought was an unimaginable step, filing suit against the federal Minerals Management Service to block a lease sale on the grounds that a fresh look at the environmental impacts of offshore oil and gas development was necessary after the savage impacts of Hurricanes Katrina and Rita.

In retrospect, the disdainful response of MMS and the petroleum industry to the state’s demand was a chilling portent of the profoundly dysfunctional approach to safety and environmental risk management that became clear after the Deepwater Horizon went down. Though settled, the suit revealed much of MMS’s dysfunction, shifting the political landscape enough to allow the federal government to begin sharing the revenues it received from outer continental shelf oil energy development with states like Louisiana that served as its support base. By law Louisiana dedicated all its share of those OCS revenues to coastal protection and restoration.<sup>14</sup>

None of the steps taken by Louisiana so far are enough to save the coast, and there have been unsettling signs that when push comes to shove the state will settle for living behind levees instead of doing what’s necessary to strike a sustainable balance between environmental stewardship, economic development, and storm protection. In fairness, however, the state has at least put itself in the position where it can make those choices if it can summon the will.

Even New Orleans, which has always viewed itself as being apart from the coast, has come to see that it is part of the coast. The recently completed Master Plan for the City is predicated in substantial part on a new relationship with water, one that includes recognizing the importance of restoring the coast to the future of the city. That point was reemphasized in Mayor Mitch Landrieu’s inaugural address on May 3, 2010 in which he stated that, “...we have a responsibility to not only shield and clean up our shoreline (referring to the oil spill), but to restore our coast once and for all”.<sup>15</sup>

Much more will be needed however. The real proof will come when the hard choices are made about which communities will get higher levels of protection—and when. It will

come when the decisions are made whether to fully commit to conserving and enhancing Louisiana's coastal wetland landscape. It will come when land use planning is made a priority with the force of law. It will come when decisions are made about how to mitigate the impacts of the oil spill and about avoiding such catastrophes in the future. And it will come when the state and the nation decide to develop and implement effective strategies for contending with climate change and rising seas.

None of this will be easy, but as the oil disaster serves to remind us, there is no sustainability in standing pat. The question remains: Are we as a people willing to make the laws, policies, investments, and commitments necessary to give ourselves a shot at a vibrant and sustainable future? Five years after Katrina there are hopeful signs in New Orleans and coastal Louisiana that we are finally on the verge of the kinds of commitments and actions that will be necessary.

### **Will they be enough or in time to matter?**

We honestly do not, and cannot, know yet. But the same can also be said for most other cities, which are—whether they admit it or not—facing their own versions of a sustainability crisis. The fact that there are deep uncertainties is not itself a cause for pessimism. Uncertainty is not destiny. But it is, at least in the case of New Orleans on the surrounding coast, a measure of opportunity to shape destiny. Prior to Katrina the future of New Orleans and the coast were far more certain—they were decidedly unsustainable. Today they are not. Whatever the outcome, this is the place where the hardest lessons about stewardship and survival are being taught. If we as a people can learn and apply these lessons in sustainability our best days can still be in front of us, but our frayed oil soaked coast and a new hurricane season are powerful reminders that time is limited to perform the alchemy necessary to move from fear to hope.

### **ENDNOTES**

1. John Hiatt, "Thing Called Love", May 29 1987. Bring the Family, A&M, B000002GHH
2. Blanco v Burton, 2006 LEXIS 56533
3. Percy Viosca, Jr., "Louisiana Wet Lands and Value of Their Wild Life and Fishery Resources", *Ecology* 9 (2) (1928): 216, 229.)
4. Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority, "Coast 2050: Toward a Sustainable Coastal Louisiana" , (1998). 22
5. Pierce F. Lewis, *New Orleans: The Making of an Urban Landscape* (Cambridge, Mass: Ballinger, 1976), 17, quoted in Craig E. Colten, *An Unnatural Metropolis: Wrestling New Orleans from Nature*, (Louisiana State University Press, 2006). 2.
6. Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority, "Coast 2050." 47 and 48.
7. Eg. the August 2007 issue of National Geographic magazine, the cover story of which was "New Orleans: Should it Rebuild?"

8. Coastal Protection & Restoration Authority, “Integrated Ecosystem Restoration and Hurricane Protection: Louisiana’s Comprehensive Master Plan for a Sustainable Coast” (2007).
9. The Mississippi River Gulf Outlet (MRGO) was a deep draft navigation channel that was cut through the wetlands southeast of New Orleans to provide a shorter route for deep draft ships to travel from the Gulf of Mexico to New Orleans. The project was authorized by Congress in 1956 completed in 1963. The project never delivered the anticipated economic benefits but did contribute significantly to the degradation of the wetlands and estuaries of the area and was found to be a contributing factor in the flooding of New Orleans and St Bernard Parish in Hurricane Katrina. The MRGO was deauthorized by Congress in 2007 after intense public demand in Public Law 110-114, Section 7013.
10. The hurricane protection system in place at the time Hurricane Katrina struck had been designed to withstand a “project hurricane” which was the language Congress used to describe the most extreme meteorological conditions that are reasonably characteristic of the area. In more modern parlance, the project hurricane translated into a what would now be called a fast moving Category 3 storm, or a one in 200 or 300 year event. See Government Accountability Office, *Army Corps of Engineers: Lake Pontchartrain and Vicinity Hurricane Protection Project*, September 28 2005 (GAO-05-1050CT). Following Hurricane Katrina, the Corps was charged with repairing and upgrading the reliability of the city’s hurricane defenses. The current system is intended to be more durable but is only being designed to protect against a 1 in 100 year level storm event. Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, Public Law 109-234, U.S. Statutes at Law 418 (2006).
11. Ibid.
12. Tim Webb, “BP Boss Admits Job on the Line Over Gulf Oil Spill” *The Guardian*, May 14, 2010, p1.
13. Coastal Protection & Restoration Authority, “Integrated Ecosystem Restoration and Hurricane Protection” (2007).
14. Louisiana Constitution, art 7, sec. 10.2(E).
15. Inauguration Speech of Mayor Mitch Landrieu, as published in *The Times-Picayune*, May 3, 2010.

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## About The New Orleans Index at Five

Over the past five years, the Greater New Orleans Community Data Center and the Brookings Institution Metropolitan Policy Program have tracked the recovery of New Orleans and the metro area through the regular publication of *The New Orleans Index*—indicators of the social and economic recovery of the New Orleans metro. The Index’s value as a regularly updated, one-stop shop of Katrina recovery indicators has made it the go-to resource for national and local media, decision-makers across all levels of government, researchers, and leaders in the private sector and nonprofit community.

This year, *The New Orleans Index at Five* aims to move past disaster recovery to assess the remaking of a great American city and examine the extent to which New Orleans is poised to bounce back from any shock better than before. This *Index* is intended to be the first of a series of reports that measure progress and prosperity in the greater New Orleans area with indicators and essays that change over time depending on new data availability, relevance, and the needs of the community.

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