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Recommended Citation

Hudson, J. Robert. "Laplace Rising: The Story of How a Tiny Community in Southern Louisiana Will Save the Largest Delta in North America." *Sustainable Development Law & Policy* 14, no. 1 (2014): 23-33, 67-68.

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LAPLACE RISING: THE STORY OF HOW A TINY COMMUNITY IN SOUTHERN LOUISIANA WILL SAVE THE LARGEST DELTA IN NORTH AMERICA

By J. Robert Hudson*

I. INTRODUCTION

Laissez les bon temps rouler, they said. It was supposed to be an easy one: Category 2, at worst.¹ Before Hurricane Isaac made landfall at the mouth of the Mississippi River on August 29, 2012, the people of Laplace, Louisiana, made preparations as they always have: duct-taped windows, filled sand bags, stocked up on bottled water and whiskey. The forecast looked decent; nothing compared to the menace of Katrina, Rita, or Gustav.² The generations-old tradition of hurricane parties commenced without question. It then could only come as a shock when the streets of this city of thirty thousand people were suddenly deluged in water levels higher than those ever experienced before: higher than Hurricane Katrina.³ In the days leading up to Hurricane Isaac's landfall, the citizens of Laplace had little, if any, warning of the devastation that would ensue.⁴ There was no precedent—just brown lines left across dining room walls after Lake Pontchartrain receded.

Following the horror and multi-billion dollar onslaught of the 2005 hurricane season, the United States Army Corps of Engineers (“Corps” or “USACE”) was drowning under the weight of its failed levee system in New Orleans.⁵ Scenes of degenerates raiding electronics stores and refugees sleeping on highway overpasses were staples of every major news broadcast from New York to Shanghai.⁶ Some looters even saw the crimes as “an opportunity to get back at society.”⁷ Many citizens, as Oliver Houck writes, just wanted the government to “get them off their fucking roofs!”⁸

How had a governmental body failed so tremendously to protect a city as important as New Orleans? How had a levee system designed by the greatest engineers in the country simply failed? The answer was simple: in addition to its shoddy construction and negligible maintenance, the system was designed to withstand a maximum Category 3 hurricane, but circumstances had changed.⁹ The natural wetland barriers of the Breton Sound and the Barataria Basin that the city once enjoyed have degenerated at an alarming pace.¹⁰ In their absence, massive hurricanes like Katrina are able to maintain their strength and their storm surges all the way to the doorsteps of the French Quarter.¹¹

In response, the Corps spent \$15 billion to upgrade and reinforce the levee and water control systems of New Orleans.¹² Bigger walls were built around the sinking bowl. The amount spent on the projects paled in comparison to the \$120 billion in damage that Rita and Katrina had inflicted primarily upon America's most unique city.¹³ Politicians, citizens, and governors

all vowed *never again*.¹⁴ Accordingly, when Hurricane Isaac passed over the city like a creeping monster in late August of 2012, New Orleans remained dry.¹⁵ Thirty miles west, the citizens of Laplace bundled possessions and pets into small boats as Isaac's waves devoured their homes.

For hundreds of years, the Mississippi River and the wetlands have, economically speaking, been a figurative printing press for Louisiana and the United States as a whole. However, in the past 25 years, Louisiana's coast has lost an average of roughly seventeen square miles of land per year, or the equivalent of a football field of land every hour.¹⁶ More important than the substantial economic benefits that the wetlands bestow upon Louisiana (*e.g.*, seafood, energy, recreation, shipping and tourism) is the vast physical barrier that they once played between ferocious Atlantic hurricanes and coastal communities.¹⁷ The wetlands reduce hurricane surge waters by one foot for every mile.¹⁸ With the wetlands diminishing at incredible rates and global climate change instigating more powerful storms and higher sea levels, communities like Laplace, Louisiana, are facing unprecedented devastation.¹⁹

During Hurricane Isaac, characterized as Category 1 by the National Oceanic and Atmospheric Administration (“NOAA”), Laplace was victim to flood waters higher than it had ever experienced before—higher than even those brought on by Hurricane Katrina.²⁰ The difference in the seven years between Isaac and Katrina were 120 square miles of lost wetland barriers and a \$15 billion Corps effort to revamp and improve the water control structures of New Orleans just miles away.²¹ Essentially, Laplace fell victim to the decimation of its natural protective basins and floodwaters diverted from New Orleans as a result of the city's post-Katrina flood control improvements. These two avoidable disasters were the cause of the worst flooding in the recorded history of the city of Laplace.²²

Accordingly, this article proposes separate class action lawsuits and a litigation strategy for the affected members of the Laplace community (“Class”) against the Corps and the

*J.D. Candidate 2014, George Washington University Law School. Mr. Hudson is immensely thankful for the mentorship of Dr. William Platt and the majesty of Southern Louisiana. Justice Holmes once stated, “[I]t is required of a man that he should share the passion and action of his time at peril of being judged not to have lived.” Oliver Wendell Holmes, *Memorial Day (May 30, 1884)*, in *THE OCCASIONAL SPEECHES OF JUSTICE OLIVER WENDELL HOLMES 4, 6-7* (Mark DeWolfe Howe ed., 1962). The words of this article are not only the author's but also the passion and thoughts of an entire people.

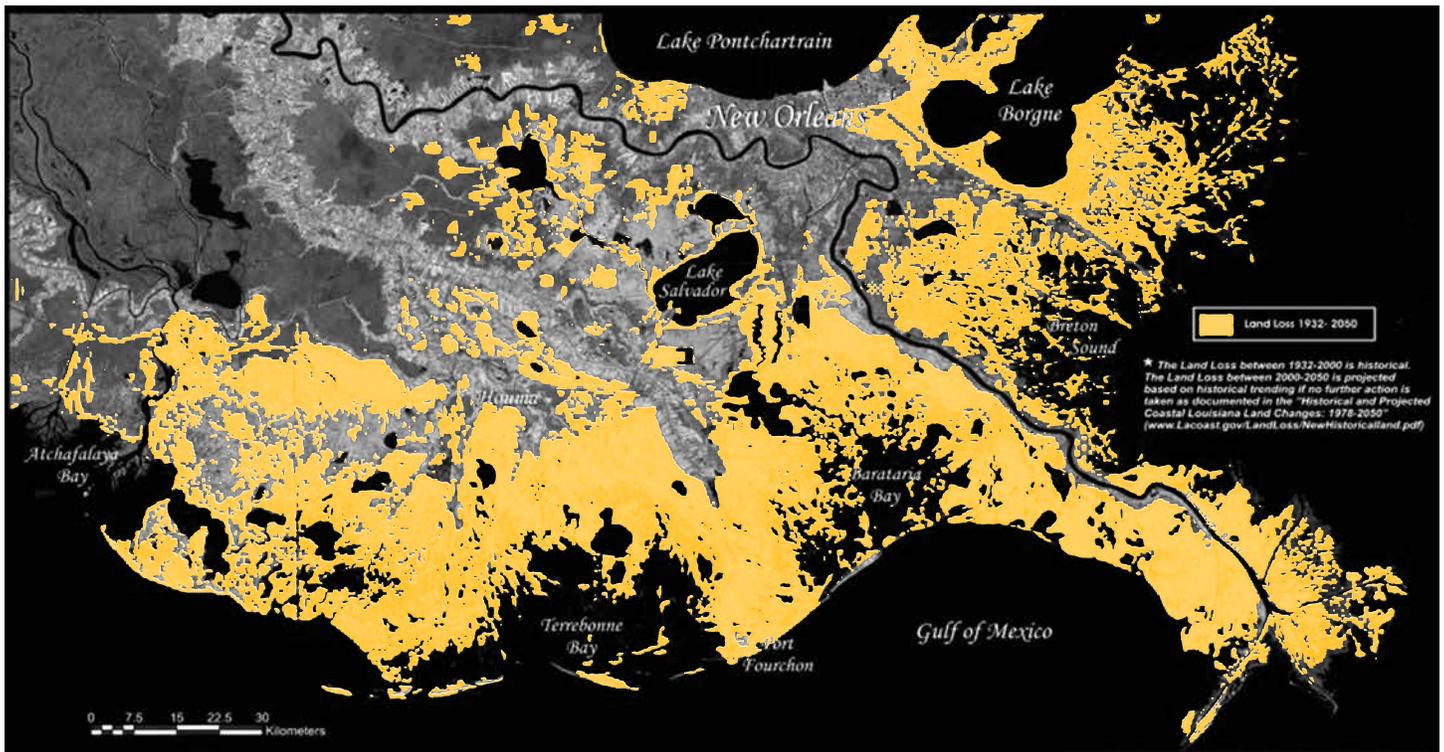


Figure 1. Wetland Loss in Southern Louisiana. Source: U.S. GEOLOGICAL SURVEY, *DEPICTING COASTAL LOUISIANA LAND LOSS 2* (2005), available at <http://www.nwrc.usgs.gov/factshts/2005-3101.pdf> (areas colored in yellow are projected land losses by the year 2050).

Louisiana Department of Natural Resources (“LDNR”). A judicial mandate that the State, the LDNR, and the Corps take immediate action to restore and protect the wetland barriers of Southern Louisiana could effectuate the crucial action necessary to prevent the disasters of Katrina and Isaac from occurring once more. The Class will first assert a public-trust doctrine claim against the LDNR for: (1) failing to protect the natural resources of the Louisiana wetlands from decimation by diverting their fresh water sources and not using available Mississippi River diversionary structures; and (2) failing to meaningfully regulate the canalization of coastal Louisiana.

Furthermore, a second suit should be brought against the USACE: (1) contributing to the mass flooding in Laplace, Louisiana, during Hurricane Isaac, as the flood protection mechanisms surrounding the New Orleans area diverted water in to the communities of the southwest banks of Lake Pontchartrain, in violation of the Federal Tort Claims Act, and (2) failing to maintain the integrity of the Louisiana wetlands (described above) as required by federal public-trust doctrine. Had these issues been addressed prior to Hurricane Isaac, the flooding experienced in Laplace would not have occurred.

Finally, the Louisiana public-trust doctrine should be permanently amended to include the State’s wetlands. The success of the suit will force the Louisiana Department of Natural Resources and the Corps to revive coastal wetlands, and amend the water control structures of New Orleans so they do not flood the outlying communities of Lake Pontchartrain during hurricanes.

In advancing this proposal, Part II will provide information pertinent to understanding the geographic and social history of

the Louisiana delta region by reviewing the impetus behind the Corps’s involvement in the region’s current environmental situation and the dire need for immediate action, as well as modern efforts at coastal restoration. Part III will describe the Class’s reliance upon the history of the public-trust doctrine to further its claims; namely, the State and Corps’s failure to maintain the wetlands under the obligations encompassed in the public-trust doctrine, as well as those claims to be brought under the Federal Tort Claims Act against the Corps. Part IV concludes this article.

II. WHERE WE ARE, HOW WE GOT HERE, AND WHY IT MATTERS

A. *Bienvenue en Louisiane*

It was May of 2008 when I first crossed the I-10 bridges over lukewarm expanses of Lake Pontchartrain, en-route to a hazy cobalt sketch of New Orleans clambering towards the sky out of what seemed like endless ocean. I was on the phone with my sister in Dallas.

“So what does it look like?”

“Dead Swamp Cypress in every direction. It’s like a graveyard for Earth.”

As I would later learn, the massive Bald Cypress forests around New Orleans were once part of the greater deltaic wetlands that had protected the city for hundreds of years.²³ However, saltwater intrusion caused by urban development, dredging, and the creation of navigation channels has increased the salinity of the Pontchartrain lakeshore past the habitable zone of the iconic trees.²⁴ The effect: miles of stone-grey trunks standing in contrast to the vibrancy of the city that killed them.²⁵

Contrary to its swift demise, the Louisiana delta region was built over a several-million-year period and is now the seventh largest delta on the planet.²⁶ As with any deltaic region, ceaseless streams of sediment from continental North America tumble down the swift waters of the Mississippi River and are deposited where the mouth meets the Gulf of Mexico or, colloquially, “the Bath tub.”²⁷ Essentially, after millions of years and unfathomable tons of sediment, the region known as Southern Louisiana was built from the compaction of these deposits.²⁸

Although the loss of land in Louisiana is a “spanking new phenomenon” in geologic terms, it can hardly be considered news by any stretch of the human conscience.²⁹ Coastal erosion in the state has been documented from at least the 1930s.³⁰ The question then arises: *how could a state so inherently dependent upon its wetlands not act to prevent the environmental train wreck that Louisiana faces today?* As

Oliver Houck suggests, Louisiana’s relationship with its wetland resource “is similar to that of any organism with too much of a resource to bother about.”³¹ Simply put, most people never thought the wetlands would *actually* disappear.

Notably, the region is home to 37% of the nation’s estuarine habitats and accounts for the largest commercial fishing economy in the continental United States.³² Prior to the 2005 hurricane season, Louisiana was the source of one third of the United States’ seafood, and 20% of all U.S. energy passed through the ports of New Orleans and Baton Rouge.³³ It is only obvious that the economy of Louisiana is inexorably and vitally linked to the health of the Mississippi River and its wetlands. However, to truly understand the positive impact that Louisiana’s waterways have had on its cultural and economic development, one must know the tempestuous, untamable nature of the Mississippi River.

1. THE GREAT FLOOD OF 1927

In the spring of 1927, the residents of Arkansas, Illinois, Kentucky, Mississippi, Missouri, Tennessee, and Louisiana saw between six and eleven inches of rain poured upon the Mississippi River, and its banks swelled to unimaginable widths, creating unprecedented and catastrophic flood damage across incredible swaths of the country.³⁴

Estimates of the Great Flood of 1927 (“Great Flood”) suggest that twenty-seven thousand square miles of land were inundated, “ruining crops, damaging or destroying 137,000 buildings, causing 700,000 people to be displaced from their homes, and killing 250 individuals across the seven impacted states.”³⁵ By July 1st, the Mississippi River had swelled to a

width of 70 miles and covered an area of land equal to the size of Massachusetts, Connecticut, New Hampshire and Vermont combined.³⁶ In today’s terms, a flood equal to that of the Great Flood would come with an economic damage bill of over \$160

billion—besting even Hurricane Katrina.³⁷

When confronted with these numbers, it can come as no surprise that there was a significant and fundamental change to the way in which Americans viewed the Mississippi River, in addition to an equally significant shift in the political climate.³⁸ Indeed, the event was so scarring and impactful that the passage of the Flood Control Act of 1928 became of the utmost national importance, and the successful handling of flood relief efforts by Herbert Hoover all but guaranteed him the office of the thirty-first president.³⁹

Given the economic necessity of the river and its use as a waterway for shipping, the Flood Control Act of 1928 took a very human-centered

perspective on co-existence with nature by placing the planning and containment of the Mississippi River within the hands of the federal government.⁴⁰ USACE was tasked with controlling and mitigating the flow of the fourth-longest river in the entire world.⁴¹ Little, if any, respect to the natural flow of the river was granted after this point. Like a prized stallion, the Mississippi had to be broken.

2. USACE AND THE DISAPPEARING STATE

Under the new authority of the Flood Control Act of 1928,⁴² the Corps set out immediately to design and construct an extensive network of dams, levees and water control structures in order to prevent another flood on the scale of the Great Flood. In furtherance of its divine destiny to control the mighty Mississippi, the Corps constructed an enormous 2,203 miles of levees⁴³ running like twin ribbons along the banks of the river.⁴⁴ Over thousands of years, rivers naturally change their course, swinging back and forth across a landscape, giving them an aerial visage of a snake. However, as one might guess, the construction of levees prevents this most basic function by blocking any natural movement in the river.⁴⁵

Each major basin of the Louisiana delta was once the mouth of the Mississippi River.⁴⁶ Indeed, over millions of years the river shifted back and forth between these massive wetlands, depositing the silt and sediment that eventually built the area known as Southern Louisiana.⁴⁷ Since 2600 B.C.E., the Mississippi River has altered its major course four times.⁴⁸ At the founding of New Orleans in 1718 by the French settlers Pierre Le Moyne d’Iberville and Jean-Baptiste Le Moyne de Bienville, the mouth of the Mississippi was located near the fated city, and its major

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distributary⁴⁹ flowed in to the Atchafalaya Basin.⁵⁰ However, nearly 300 years later, the river has, inevitably, shown a desire to shift primarily down this distributary, the Atchafalaya River, into the Atchafalaya Basin.⁵¹ The consequences of this shift away from New Orleans were not lost upon the politicians who controlled the purse strings of the Corps.⁵² Understanding the strategic economic importance of deep water for the Port of New Orleans, the Corps ensured that the Mississippi River would forever flow directly to the city via this network of levees.

In addition to the levees, the Corps constructed a series of dams along the length of the river that reduced the overall output of sediment from over 1.5 million tons a day in 1951 to a little less than 500,000 tons per day.⁵³ The damming of the Missouri River alone reduced contributions to the Mississippi River by 70-80%.⁵⁴ The multitudinous dams on the river essentially blocked the transport of vital sediment to the Louisiana wetlands. Without these sediments, the wetlands began to shrink and simply disappeared.

3. CANALIZATION OF COASTAL LOUISIANA

Dr. William Platt and I were sitting in his office staring stoically upon the bands of a swirling giant in the Gulf. It was August 30, 2008 in Baton Rouge, and mere hours before Hurricane Gustav was to make landfall. I got up to pace the room because it is unnerving to stare at a bullet you cannot stop.

“Dr. Bill, this roadmap on the wall, where is this?”
“That’s not a roadmap. That’s the bayou, kiddo.”

Here in the swamps of Louisiana, they’ve experienced death by a thousand cuts.⁵⁵ Any aerial image of the Louisiana wetlands

will provide a shocking example of the many-thousand canals that have been dredged primarily to facilitate transportation for oil and gas sites.⁵⁶ The canals intersect and weave mindlessly like the streets of an old European capital, like the ravines of a brain without any of the functioning. Today, these cuts disrupt hydrological flow and have the effect of eliminating all biological cohesiveness in a very delicately balanced environment.⁵⁷

The direct impacts of canal cutting are an immediate loss of land to dredging, tidal circulation disruption, and bank erosion as a result of the constant wake from boats that use the canals.⁵⁸ However, it is the indirect effects that are far more sinister. Research now shows that the cutting of a canal allows for saltwater intrusion into the heart of the bayou.⁵⁹ As saltwater intrudes upon the open canals, the salinity of the surrounding brackish water increases to an uninhabitable point; grasses die and the entire process is aggravated.⁶⁰

4. CASE STUDY: “MR. (NO) GO”

A disastrous example of canalization in coastal Louisiana was the development of the Mississippi River Gulf Outlet (“MRGO”), or “Mr. Go.” Constructed by the Corps and opened in 1968, MRGO was a massive canal capable of streamlining freight shipments into the Port of New Orleans, rather than through the winding Mississippi River.⁶¹ The intent of the canal was the expedited movement of all shipping traffic through a straight-shot canal connecting the Gulf of Mexico and the inner harbor of New Orleans.⁶² Unfortunately, the Corps had not anticipated the intrusion of saltwater into their newest crowning achievement.⁶³ Although MRGO was originally dredged at approximately 600 feet, the introduction of salt water into the



Figure 2. Canals in Southern Louisiana. Source: J.M. Allen, *Louisiana’s Lost Wetlands* (May 2011), <http://www.atlantisbolivia.org/canalslouisiana1.htm>.

brackish water canal eroded the vegetation that held the canal together.⁶⁴ As a result, MRGO widened to nearly 2,000 feet and became shallower, necessitating hugely expensive re-dredging efforts at the cost of about \$20,000 per passing ship.⁶⁵ If the expense of maintaining MRGO was not enough, the fiasco of Hurricane Katrina truly sealed its fate. As Hurricane Katrina approached New Orleans, MRGO acted as a direct pipeline for surge and floodwaters to funnel leisurely into the inner harbor of the city.⁶⁶ After the tremendous disaster of Katrina, MRGO was officially closed by the Corps, citing a \$130 million price tag for its repair.⁶⁷

With disastrous projects such as MRGO surviving until the mid-2000s—even against the opposition of thousands screaming like banshees over its negative environmental impact⁶⁸—one would assume that Louisianans have chosen instant gratification from commerce over long-term sustainability in the region. However, the efforts to restore coastal Louisiana are massing, albeit at a slow pace.

5. MODERN EFFORTS AT COASTAL RESTORATION IN LOUISIANA

I once spent a steaming summer weekend at the south end of Bayou Petit Caillou, near Cocodrie, Louisiana. It was the kind of hot that Southern writers hate to describe. Up to my shins in swamp mud, shoving plugs of marsh grass into the roiling puddles. Two years later, as I drove through the back half of Hurricane Isaac on my way from Houston to Baton Rouge, the wind slapped sprigs of a familiar grass against my windshield wipers. I could not help but think, “*Did I plant you?*”

In the 1990s, several Louisiana commissions and offices of the state released a cooperative plan gloriously labeled “Coast 2050.”⁶⁹ The massive report, hailed as a beacon of light for the blighted state, was a highly generalized report on how the state of Louisiana, hilariously, needed saving.⁷⁰ The report echoed what scientists and researchers had been postulating and publishing for years. Plus, the bureaucratic structure of the Coast 2050 plan led to inherent issues regarding effectiveness and response time.⁷¹ Although the plan was established almost 20 years ago, the efforts have proven to do very little to save coastal Louisiana from ultimate destruction.⁷² The lack of effectiveness with regard to the Coast 2050 plan can be overwhelmingly attributed to the intentional underutilization of the Mississippi River diversion structures at Caernarvon, Davis Pond, Bonnet Carré and Morganza.⁷³

6. BITING THE FEEDING HAND: THE DIVERSIONS AND THEIR BASINS

The story of diversionary structures built along the Mississippi River in Southern Louisiana includes a lot of gilded lip service deep-fried in some ivory tower nonsense about restoring and saving over a million acres of precious wetlands.⁷⁴ Much to everyone’s shock, I am sure, these lofty ideals and restoration promises have been about as effective as an Alcoholics Anonymous© (“AA”) meeting on Bourbon Street. And, frankly, in the case of the Caernarvon Diversion Structure, the AA group leader was found blackout-wasted in Pat O’Brien’s® at two o’clock on a Tuesday afternoon.

The old dogs of the diversionary structures are the Bonnet Carré and the Morganza spillways.⁷⁵ Opened in 1931 as a response to the Great Flood of 1927, the Bonnet Carré is a 350-bay spillway that allows for significant diversions of Mississippi River water into Lake Pontchartrain and the surrounding wetland basin during times of exceptionally high water.⁷⁶ As a reminder, the wetlands of the Pontchartrain Basin are integral defenses against storm surges for the communities (e.g., Laplace) outside of the high-walled Crescent City.

In its riveting eighty-decade existence, the Bonnet Carré spillway has been opened a grand total of ten times at an average 87% capacity.⁷⁷ In addition to the infrequent openings of the spillway which “ha[ve] an immediate, *short-term*, freshening

effect,” the Corps proudly boasts that the spillway’s structure unintentionally leaks around 10,000 cubic feet of water per second once or twice per year,⁷⁸ compared to the 250,000 cubic feet capability of an opening.⁷⁹ Ignoring the blatant fact that the Bonnet Carré is only opened when New Orleans is threatened by river flooding and *not* for the express purpose of wetland restoration, as evidenced by the historical record,⁸⁰ the Corps is essentially tossing a pirogue at the Titanic and calling it a rescue mission. Numbers do not lie, and since 1900 the wetlands of the Pontchartrain Basin have been reduced by 50% due to the lack of sediment deposits from freshwater—a monstrous issue that could have been solved via the Bonnet Carré spillway.⁸¹

The narrative of the Morganza Spillway, which feeds freshwater to the wetlands of the vitally important Atchafalaya Basin, is even more lackluster than the Bonnet Carré. Opened in 1954, the Morganza spillway has been utilized exactly two times: once in 1973, opening 42 of 125 bays,⁸² and again in 2011 when a mere 17 were opened.⁸³ However, due to the existence of the Atchafalaya River and the small amounts of sediment that are

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consistently fed to the basin naturally, the Atchafalaya Basin maintains the distinct honor of being the only moderately stable wetland basin in the entire state.⁸⁴

Differing from the original flood control intent of the Bonnet Carré and Morganza, the Caernarvon and Davis Pond diversion structures were constructed for the *express purpose* of restoring wetlands and regulating salinity in the Breton Sound and Barataria Basins, respectively.⁸⁵ At a cost of \$26 million, the Caernarvon began operating in 1991 and was expected to restore sixteen thousand acres of coastal wetlands.⁸⁶ Someone must have enjoyed one too many Hand Grenades[®]⁸⁷ while devising this plan, because not only has there been significant continued wetland loss in the Breton Sound Basin following the opening of the Caernarvon, data shows that the losses are *increasing*.⁸⁸ Even in the areas close to the Caernarvon Diversion, where the impact of sediment deposition would be the greatest, the vegetation level is lower than when the diversion opened in 1991.⁸⁹

Finally, the Davis Pond diversion structure was completed in 2001 at a cost of \$120 million with the expectation of restoring thirty-three thousand acres and benefitting seven hundred seventy-seven thousand acres of wetlands in the Barataria Basin.⁹⁰ With a potential freshwater outflow of 10,650 cubic feet per second, the diversion structure has been underutilized at an average of less than half that capacity.⁹¹ At this rate of usage, the influx of freshwater is capable of merely maintaining the dwindling wetlands that are present in the Barataria Basin, but in its 12 years of operation, the *restoration* and wetland *creation* aspects have not come to fruition.⁹² One then might ask, *where are the 33,000 acres of restored wetlands?* USACE is currently discussing and formulating a plan to further open the Davis Pond structure in order to facilitate wetland growth.⁹³ Unfortunately, the initial report, due in November 2013 upon the signature of the Chief of Engineers, has not released.⁹⁴ After this momentous signing, the plan then has the distinct pleasure of going before Congress for approval.⁹⁵

However, recent successes with freshwater diversion include wetlands restored near Venice, Louisiana, at West Bay and, albeit unintentionally, in the Pontchartrain Basin as a result of the Bonnet Carré opening that occurred during the 2011 flooding.⁹⁶ Despite the success of the West Bay restoration, where ten acres were restored in 2011 alone, navigation industry lobbyists were able to secure an order to close the diversion in 2008 in order to facilitate anchorage in the area.⁹⁷ Fortunately, after a lengthy legal battle, proponents of the West Bay project won a reversal and a 10-year extension of operation in October of 2012.⁹⁸

Although the economic, cultural, and environmental importance of the Louisiana wetlands has now been recognized, this understanding is something of a recent phenomenon.⁹⁹ For hundreds of years, the wetlands and bayous of the state were looked upon as nothing more than a cesspool for disease and dangerous animals.¹⁰⁰ In fact, during the era of slavery, owners rarely, if ever, followed a runaway slave into the swamp, as they were likely to die anyway. In *Twelve Years a Slave*, Solomon Northrup recorded this reality when he escaped capture from his Louisiana master by fleeing into the Great Pacoudrie Swamp, evading water

moccasins and alligators.¹⁰¹ Moreover, the swamps of Southern Louisiana have been drained and reclaimed since the early 1700s by French settlers in an effort to increase their land holds and reduce mosquito breeding grounds.¹⁰² Recognizing the historical love-hate relationship between Louisianans and their swamps, it can only be expected that the protection of a malaria-infested, alligator breeding ground would take decades of evolution and a judicial cognizance of its function, which could only come at a glacial pace.

B. The Public-Trust Doctrine

This section will discuss how the wetlands of Southern Louisiana eventually came under the protection of the Louisiana public-trust doctrine and, further, how the federal public-trust doctrine emerged as an interpretation of ancient Roman law. As a matter of course, the Laplace community will be required to prove that the aforementioned wetland basins are lands protected under the public trusts of the State of Louisiana and the United States. In establishing this fact, the Class must first emphasize the history of the public-trust doctrine and how modern jurisprudence has included the Louisiana coastal wetlands within its bounds.

The first Western record of the public trust comes from the laws of Emperor Justinian of the Roman Empire, who ordered that the seas, rivers, air and seashores were the property of the people, could be owned by no single entity, and were held in the public trust.¹⁰³ Later records of the public trust have also been found in *Las Siete Partidas*, Spanish laws from the time of Alfonso the Wise.¹⁰⁴ The overarching intent of the public trust evolved under English common law to ensure the protection of the citizens' natural resources by the government so that present and future generations might also reap their benefits.¹⁰⁵

Borrowing from the English common law, the United States effectuated its own federal public-trust doctrine, which is mandated over each of the 50 states under the authority of the Supremacy Clause.¹⁰⁶ However, many states have expounded upon the original federal public-trust doctrine and tailored specific legislation to protect those geographic features particular to their borders.¹⁰⁷ Judicial interpretation of the public-trust doctrine more or less begins with the landmark case *Illinois Central Railroad Company v. State of Illinois*.¹⁰⁸

1. FEDERAL AND STATE INTERPRETATION OF THE DOCTRINE

In 1851, the City of Chicago granted the Illinois Central Railroad the rights to construct a north-south railroad along 3 million acres of Lake Michigan shoreline and, later, 1,000 acres of land submerged under Lake Michigan via the Lake Front Act of 1869 in exchange for the construction of a breakwater to protect the harbor of Chicago from siltation.¹⁰⁹ Siltation is the pollution of water by fine particulate terrestrial material, which can eventually make a harbor shallow and unusable.¹¹⁰ Following public opposition and an extensive legal battle, the Supreme Court of the United States ultimately invalidated the agreement finding that the right to lands held in the public trust cannot be sold, bought, or relinquished in any way.¹¹¹ The Court held that each state has an inalienable right and ownership of all

lands submerged below water and designated as navigable water within their state, noting a departure from the English “ebb and tide” rule.¹¹²

The public-trust doctrine was interpreted again in 1988 by the Supreme Court in *Phillips Petroleum Company v. Mississippi*,¹¹³ where the Petitioner brought a claim of ownership against the State for 42 acres of land underlying a bayou and several streams. Although the doctrine had historically been interpreted to apply only to those *navigable* waters of the United States, the Court departed from this tradition in finding that “States have interests in lands beneath tidal waters which have nothing to do with navigation,” and, as such, wetlands, bayous, and streams incident to the Mississippi River fall within the public trust.¹¹⁴

In 1983, the National Audubon Society sued the Los Angeles Department of Water and Power to enjoin it from further draining and degrading Mono Lake, which the plaintiffs argued fell under the protection of the state public-trust doctrine.¹¹⁵ In finding that Mono Lake did fall under the protection of the public-trust doctrine, the Supreme Court of California held that:

The lake’s recession obviously diminishes its value as an economic, recreational, and scenic resource. . . . The declining shrimp hatch depresses a local shrimping industry. . . . Mono Lake has long been treasured as a unique scenic, recreational and scientific resource, but continued diversions threaten to turn it into a desert wasteland like the dry bed of Owens Lake.¹¹⁶

The decision in *National Audubon Society* was immensely important because the Court imposed a duty upon the State to place substantial consideration upon the economic vitality, natural health, and scenic importance of the lake before allocating water from its reserves.¹¹⁷ Similarly, in *Citizens for Responsible Wildlife Management v. State*, where 12 organizations sued the state of Washington challenging bans on certain trapping mechanisms for wildlife, the Court found that the legislation enacted was necessary under Washington’s obligation to protect the natural resources of the people, i.e., wildlife.¹¹⁸ The lack of such legislation could effectuate neglect on the part of the State with regard to their directives under the public-trust doctrine.¹¹⁹

2. LOUISIANA INTERPRETATION OF THE PUBLIC-TRUST DOCTRINE

Although the Louisiana public-trust doctrine has long included those waterways that are navigable by nature (e.g., rivers, lakes, inland bays), the inclusion of the State’s wetlands within the doctrine was, at best, murky until some clarity was provided from the 2004 decision in *Avenal v. Louisiana*.¹²⁰ Prior to that ruling, in 1984, environmental protection of the coastal wetlands garnered a slight victory in *Save Ourselves, Inc. v. Louisiana Environmental Control Commission*,¹²¹ when the Court found that the “Constitution imposes a duty of environmental protection on all state agencies and officials, establishes a standard of environmental protection, and mandates the legislature to enact laws to implement fully this policy.”¹²² However,

many scholars felt that the holding did not reach far enough in guaranteeing the protection of coastal wetlands, as the clever litigant could still maneuver the Court’s balancing test in favor of environmentally harmful actions.¹²³

3. GAME CHANGER: *AVENAL V. LOUISIANA*

In 1994, affected class members, including oyster fishermen and lease holders in the Breton Sound Basin, brought suit against the LDNR to recover for alleged unconstitutional takings of their fishing grounds and leaseholds.¹²⁴ As previously described in this article, the Caernarvon Diversion Structure was constructed in 1991 and activated for the purpose of introducing freshwater and sediment into the Breton Sound as a coastal restoration project.¹²⁵ However, the influx of freshwater altered the salinity of the oyster beds in small areas of the Breton Sound, negatively affecting the various businesses of the class members.¹²⁶ In its monumental holding, the Court found that the implementation of the Caernarvon Diversion structure for purposes of coastal restoration fit entirely within the scope of the State’s duties under the public-trust doctrine and, thus, did not amount to an unconstitutional taking.¹²⁷ The Court found that the natural resource at issue was Louisiana’s rapidly receding coastal wetlands and that the “risks involved are not just environmental, but involve the health, safety, and welfare” of southern Louisiana, which is threatened by hurricanes and a shrinking coastal barrier.¹²⁸

The problem before the people of Louisiana is clearer now than ever before. Our state is disappearing at a pace unrivaled by any period of American history and with it goes an entire way of life. Small, respectable efforts at restoration have been successful to an extent, but they have merely placed fingers in the cracks of a faltering dam. Fundamental and robust action must be taken by the only entities capable of protecting the citizens of Louisiana: the state legislature and USACE. Unfortunately, it has become exceedingly apparent that the state and USACE do not have the time for scholarly insight or scientific recommendation regarding climate change and the rapidly shrinking wetlands. Thus, the only remaining avenue of recourse for the people of Louisiana has become the court.

III. LAPLACE’S CLAIMS UNDER THE PUBLIC-TRUST DOCTRINE AND THE FEDERAL TORT CLAIMS ACT

This section will begin by describing the Class, its central intent of the litigation and the common interests that it shares, as well as the various courts in which the suits will be filed. Additionally, as the argument of the Class will be entirely similar in both cases with regard to the public-trust doctrine claims, this section will combine the legal analysis instead of addressing them at both the federal and state levels. Finally, the claims to be brought under the Federal Tort Claims Act against the Corps will be discussed and further elucidated.

A. *Contours of the Class*

The central intent and common interest of the separate Laplace class action suits against the state of LDNR (Office of Coastal Management) and the Corps (“Defendants”) will be wholly the same: to effectuate the forced restoration and

reclamation of the wetland barriers in the Barataria, Breton Sound, Pontchartrain, and Atchafalaya Basins, so as to mitigate or prevent future flood disasters similar to those experienced in Hurricanes Katrina and Isaac.

In compliance with the requirements of Federal Rule of Civil Procedure 23(c)(1)(B) and Louisiana Code of Civil Procedure Article 591 (“Article 591”),¹²⁹ in order to bring a class action suit, it must be shown that: (1) the class is so numerous that joinder of all members is impracticable; (2) there are questions of law or fact common to the class; (3) the claims or defenses of the representative parties are typical of the claims or defenses of the class; and (4) the representative parties will fairly and adequately protect the interests of the class.¹³⁰

In the present case, the joinder of thousands of affected individuals from the Laplace community would be the *definition* of impracticable, and therefore, the description of those eligible for the “Class” will be defined as the following: Any member of the Laplace, Louisiana, community who suffered physical harm to their persons or property as a direct result of the flooding or high water during Hurricane Isaac. The Class will assert that they have common interest in the maintenance of the State’s natural wetlands for physical protection of their, *inter alia*, businesses, homes, and families against the ancient threat of hurricanes from the Gulf of Mexico and sea-level rise. Furthermore, the Class will assert that it has common claims against the Defendants; specifically, that the State of Louisiana and USACE negligently failed to maintain the integrity and vitality of the wetlands as required by their obligations set forth within the Louisiana and federal public-trust doctrines. As such, the health, safety, and economic interests of the citizens of Louisiana and the Class have been placed in continued, serious danger.

In the first action, the affected members of the Laplace community (“Class”) should file suit in the 40th Judicial District Court for St. John the Baptist Parish located in Edgard, Louisiana pursuant to Article 591. The Class should seek a judicial mandate that the State of Louisiana and the Department of Natural Resources (Office of Coastal Management): (1) substantially lobby the Corps for utilization of the available, and construction of additional, diversionary structures, in accordance with the State’s obligation set forth by the Louisiana public-trust doctrine; (2) mitigate future wetland loss by restoring and reclaiming inactive industrial canals; and (3) permanently amend the Louisiana public-trust doctrine to include wetlands within its language.¹³¹

In the second suit, the Class should file suit pursuant to Federal Rule of Civil Procedure 23,¹³² in the United States District Court for the Eastern District of Louisiana, located in New Orleans, seeking a judicial mandate that the USACE: (1) substantially utilize the available diversionary structures at Davis Pond, Morganza, Bonnet Carré and Caernarvon in accordance with the Corps’ obligation set forth by the federal public-trust doctrine; and (2) devise and construct flood control mechanisms to deter future flooding in the outer lying communities of New Orleans.

B. The Attack

The fundamental legal basis for the Class’s claims will be based upon federal jurisprudence in the area of the public-trust doctrine, as well as Article IX of the Louisiana Constitution, which states in pertinent part:

The natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people. The legislature shall enact laws to implement this policy.

...

The legislature shall neither alienate nor authorize the alienation of the bed of a navigable water body, except for purposes of reclamation by the riparian owner to recover land lost through erosion. This Section shall not prevent the leasing of state lands or water bottoms for mineral or other purposes. Except as provided in this Section, the bed of a navigable water body may be reclaimed only for public use.¹³³

Louisiana and the Corps have long maintained the capability of effectuating wetland restoration but have negligently failed to implement the reasonable measures at their disposal.¹³⁴ In fact, the very regulations prescribing USACE’s policies and procedures in carrying out water control management activities compel the Corps:

... to insure that all water impounding structures are operated for the safety of users of the facilities and the general public. Care will be exercised in the development of reservoir regulation schedules to assure that controlled releases minimize project impacts and do not jeopardize the safety of persons engaged in activities downstream of the facility. Water control plans will include provisions for issuing adequate warnings or otherwise alerting all affected interests to possible hazards from project regulation activities.¹³⁵

This state and federal negligence has left the people of Southern Louisiana in exponentially increasing danger as the natural barriers between their homes, businesses, families and cultural heritage have eroded due to three factors: (1) the inaction of the State and LDNR by not issuing a firm recommendation to the Corps to open extensively the diversion structures to facilitate wetland growth; (2) the systematic blocking of every major conduit and distributary of the Mississippi River, via levees and diversion structures; and (3) the failure to meaningfully regulate canalization and mitigate its destructive effects. As such, the Defendants have substantially impaired sediment deposition within the wetlands in order to maintain the Port of New Orleans, thereby placing the interests of commerce and industry over the sanctity and value of human life.

The Defendants will undoubtedly argue that the release of freshwater necessary to rehabilitate and reclaim lost wetlands through the diversionary structures would completely occupy the leaseholds of hundreds of fishermen and businessmen who currently do business within the aforementioned basins, thereby committing an unconstitutional taking under Article I, § 4 of the Louisiana Constitution¹³⁶ and the Fifth Amendment to the U.S. Constitution.¹³⁷ In its defense, the Defendants will rely upon the October 2012 Supreme Court ruling in *Arkansas Game and Fish Commission v. United States*, which held:

We rule today, simply and only, that government induced flooding temporary in duration gains no automatic exemption from Takings Clause inspection. When regulation or temporary physical invasion by government interferes with private property, our decisions recognize, time is indeed a factor in determining the existence *vel non* of a compensable taking.¹³⁸

However, the case *sub judice* is markedly different from that of *Arkansas Game and Fish Commission*, where the Corps flooded a swath of forest that “damaged or destroyed more than 18 million board feet of timber and disrupted the ordinary use and enjoyment of the Commission’s property.”¹³⁹ Unlike the Corps’ flood control intent in *Arkansas Game and Fish Commission*, the Corps will be mandated to release freshwater upon those leaseholds and property interests in the basins for the purpose of wetlands restoration, an imperative mandated in its duty under the Federal and Louisiana public-trust doctrines.¹⁴⁰ Additionally, in anticipation of this argument, the Class will refer to the Louisiana Supreme Court’s decision in *Avenal* and Article IX of the Louisiana Constitution, each stating that the basins are the sole property of the State and, thus, immune from unconstitutional takings claims.¹⁴¹

Relying upon the Louisiana public-trust doctrine and its jurisprudential interpretation, the Class can successfully secure a mandate from the Court for the substantial opening of the diversion structures at Davis Pond, Caernarvon, Bonnet Carré and Morganza. Indeed, the basins clearly fall within the scope of those protected lands, as they secure substantial economic benefits and protect the “health, safety, and welfare of our people, as coastal erosion removes an important barrier between large populations and ever-threatening hurricanes.”¹⁴²

C. Claims Under the Federal Tort Claims Act against the USACE

The Class will pursue a second claim against the United States (*i.e.*, USACE) under the Federal Tort Claims Act (“FTCA”)¹⁴³ for an unconstitutional taking and destruction of their property when the flood control measures built around New Orleans diverted floodwaters from Hurricane Isaac into the community of Laplace, Louisiana.

In furtherance of the claim, the Class will distinguish the present case from that of *In re Katrina Canal Breaches Litigation*,¹⁴⁴ where multiple citizens who lost homes or experienced severe property damage filed a class action suit against

the Corps for negligently maintaining MRGO and failing to construct adequate levees.¹⁴⁵ In that case, the plaintiffs claimed that MRGO acted as a flood conduit during Hurricane Katrina and that water was essentially funneled into their homes in St. Bernard Parish, the Lower Ninth Ward, and Chalmette.¹⁴⁶ However, the Court of Appeals for the Fifth Circuit found that the Corps was immune from litigation under the discretionary function exception of the FTCA.¹⁴⁷ The Court further held that the government could not be held liable for damage caused by the faulty levees because they were constructed as a discretionary decision to protect the citizens of New Orleans.¹⁴⁸ Essentially, the Court concludes that the government cannot be held liable for trying its best to protect citizens from disaster.

In the present case, the United States will likely assert that it has this same immunity under the pertinent FTCA section, stating that the design of the improvements around New Orleans were made in the interest of the general public and that the designs were not scientifically faulty.¹⁴⁹ However, the Laplace litigation is far different from that of *In re Katrina*, because the improvements that diverted water into the Laplace community were designated and designed primarily for the City of New Orleans, not the citizens of Laplace. Unlike *In re Katrina*, there were no discretionary decisions made by the Corps regarding the flood protections of Laplace other than *not to protect the city at all*.

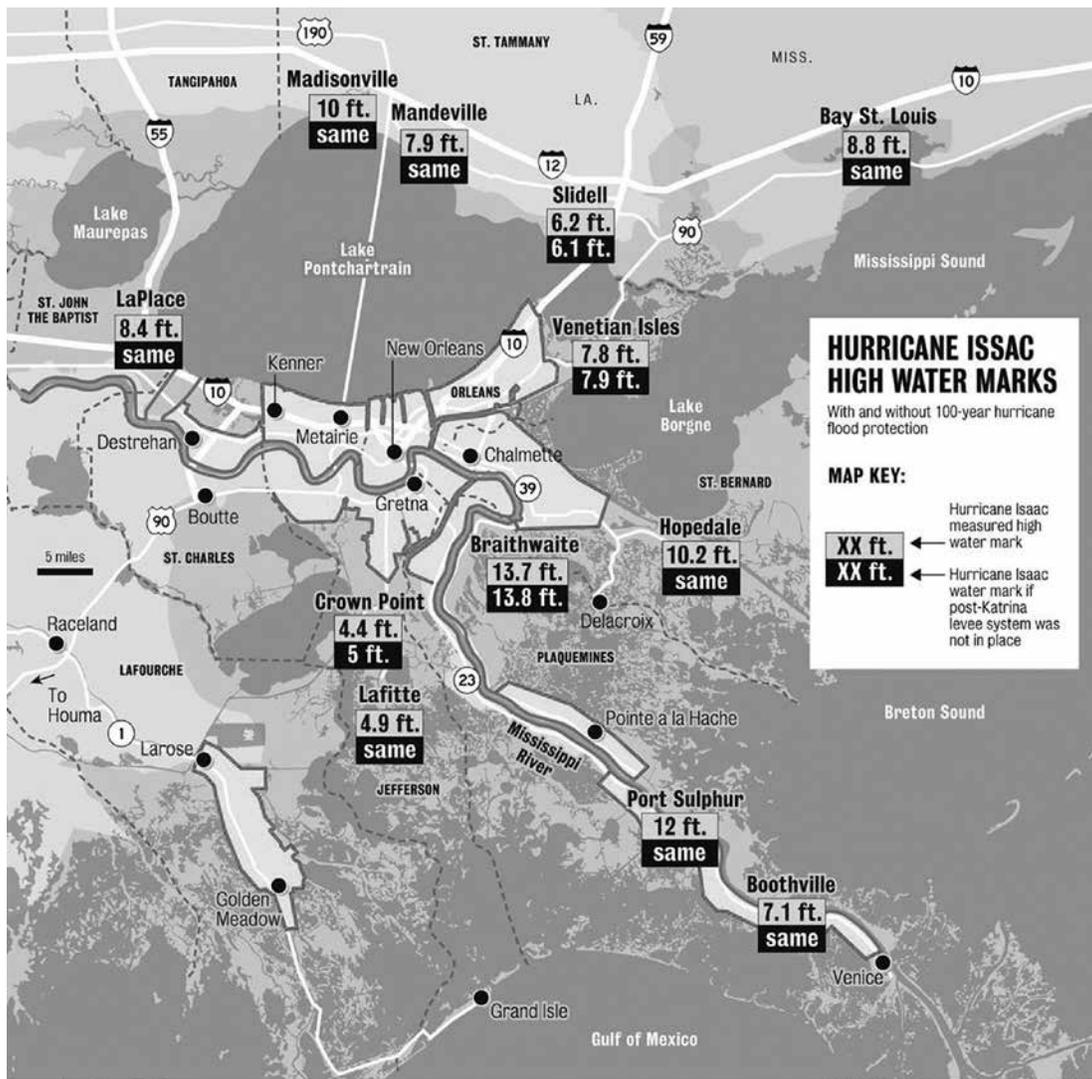
If the State and the Corps had done sufficient analysis of potential hurricanes, they would have discovered that the improvements made upon the levee and flood control systems of the city would divert large amounts of water to those communities outside its protection, as well as further degenerate those natural barriers that the outer lying cities do possess. Therefore, these water control structures are at least contributorily responsible for the flooding that occurred in Laplace during Hurricane Isaac in August of 2012.

D. A Challenge to Succeeding and How the Class will Prevail

In November of 2012, the Corps released a report labeled *Hurricane Isaac With and Without 2012 100-Year Evaluation*. The report states:

[T]here were only a few places that the old system would have been overtopped during Hurricane Isaac; thus the old system would have displaced about the same amount of water as the new system and the HSDRRS [Hurricane & Storm Risk Reduction System] could not have significantly influenced inundation at communities external to the system.¹⁵⁰

However, if the report is correct and the improvements did not increase or create flooding by directing additional water into the Laplace community, this does not preclude two additional scenarios that the Class will pursue in court: (1) that the water control structures in existence prior to the improvements were already directing flooding waters into the Laplace community; and (2) that the water control structures are damaging the natural



Source: Army Corps of Engineers DAN SWENSON / GRAPHICS REPORTER

Figure 3. Hurricane Isaac High Water Marks. Source: Dan Swenson & Mark Schleifstein, *Blame Hurricane Isaac, Not Post-Katrina Levee System, for high surge, Corps says*, TIMES-PICAYUNE, Nov. 12, 2012, <http://media.nola.com/environment/photo/map-isaacsurge-111212jpg-af6a43422c34fce8.jpg>.

barriers around the Laplace community, thereby indirectly inducing flooding.¹⁵¹ In fact, the data released by the Corps only compares the flood level estimates at various points in the New Orleans Metropolitan area in pre- and post-improvement terms.¹⁵² There remains the possibility that the original water control structures (those existent in 2005) were already funneling floodwater into the surrounding region. Additionally, the Corps has a rather famous track record of dodging blame with regard to disastrous projects along the Mississippi River in Louisiana.¹⁵³ In fact, in August of 2012, the commanding general of the Corps in post-Katrina New Orleans

“The time to act in order to save Louisiana’s dwindling coastal wetlands was 30 years ago.”

admitted in a Times-Picayune interview that when he publicly blamed the flooding on city officials in 2006, he was relying entirely upon things he had heard and not on any scientific or reliable evidence.¹⁵⁴

IV. A TIRED STORY AND A NEW HOPE

I’m sitting in Zotz, a coffee shop straddling the Uptown and Leonidas neighborhoods of New Orleans, when she asks me, “So what was the most difficult part about writing your article?” I look away and stare at the words floating stoically on my computer screen, “I cannot help but feel as if I’m writing a eulogy for my home. For my people.”

With every letter that I press into the recesses of this keyboard there is a sinking that echoes the loss of Louisiana—60,000 characters remind me why this isn't a simple *cause célèbre*. This is not another Kony¹⁵⁵ sensation splashed across every corner of the Internet for a burning moment. As Southern Louisiana sinks into the Gulf, so does a culture unlike any other in this world.

I realize that my finger was holding down the *shift* key when she asks me if there is any hope for this place. As I remove my finger, I feel the rise below. I look up at her and nod, “Yes.”

* * *

The time to act in order to save Louisiana's dwindling coastal wetlands was 30 years ago. The gut-wrenching truth is that scholars, such as Oliver Houck, have been recommending, then heavily suggesting, then screaming, and now are groveling

for action by the State of Louisiana and the U.S. Army Corps of Engineers. Although the efforts to save the State have begun to trickle in, gains are slow, and many are disillusioned or convinced that the point of no return happened sometime around Katrina.

However, Harriet Beecher Stowe once wrote, “Never give up then, for that's just the place and time that the tide'll turn.”¹⁵⁶ The citizens of Laplace, Louisiana, have the distinct opportunity to hold off the oppressive tide of the Gulf of Mexico. Through organizing and filing a class action suit against the State of Louisiana, the Department of Natural Resources, and the U.S. Army Corps of Engineers based upon the public-trust doctrine and the Federal Tort Claims Act, a tiny town of Louisianans might incite change that will alter the face of a continent. 🌐

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- 72 See Michael Metzger, *Assessing the Effectiveness of Louisiana's Freshwater Diversion Projects Using Remote Sensing*, UNIV. NEW ORLEANS THESES & DISSERTATIONS No. 633, at 57 (2007), available at <http://scholarworks.uno.edu/cgi/viewcontent.cgi?article=1633&context=td&sei-redir=1&referer=http%3A%2F%2Fwww.google.com%2Furl%3Fsa%3D%26rct%3Dj%26q%3Dhow%2520much%2520is%2520the%2520caernarvon%2520diversion%2520structure%2520actually%2520used%26source%3Dweb%26>.
- 73 *Id.*
- 74 See Army Corps of Eng'rs, *supra* note 61.
- 75 Jill A. Jenkins, et al., *Photographic Images Captured While Sampling for Bald Eagles near the Davis Pond Freshwater Diversion Structure in Barataria Bay, Louisiana (2009-10)*, U.S. GEOLOGICAL SURVEY 1 (2011), available at <http://pubs.usgs.gov/ds/605/downloads/DS605.pdf>.
- 76 U.S. Army Corps of Eng'rs, *Bonnet Carré Spillway 7* (2012), <http://www.mvn.usace.army.mil/Portals/56/docs/PAO/Brochures/BCspillwaybooklet.pdf>.
- 77 *Id.* (noting by reference on a chart title "Spillway Openings (as of 2011) for years 1937, 1945, 1950, 1973, 1975, 1979, 1983, 1997, 2008, 2011).
- 78 *Id.* (suggesting these leakage events usually occur in periods of high water in the spring and early summer.).
- 79 *Id.* at 9.
- 80 *Id.* at 7.
- 81 Cindy Brown, et. al., *All the King's Horses and All the King's Men: What is the Future of the Pontchartrain Basin Wetlands?*, NATURE CONSERVANCY OF LA. 2 (2005), http://www.csc.noaa.gov/cz/CZ05_Proceedings/pdf%20files/Brown.pdf.
- 82 Roy Reeds, *Engineers Open Spillway in Attempt to Save an Imperiled Mississippi Dam; Earlier Problems*, N.Y. TIMES, April 18, 1973, at 93.
- 83 U.S. Army Corps of Eng'rs, *Morganza Floodway*, Team New Orleans, <http://www2.mvn.usace.army.mil/bcarre/morganza.asp> (last updated Jan. 3, 2012).
- 84 Coastal Wetlands Planning, Protection and Restoration Act, *The Atchafalaya Basin*, http://lacoast.gov/new/about/basin_data/at/default.aspx#dynamics (last visited November 3, 2013).
- 85 Metzger, *supra* note 72, at 13.
- 86 Metzger, *supra* note 72, at 15.
- 87 See TROPICAL ISLE, <http://tropicalisle.com/> (last visited Nov. 3, 2013) (suggesting the Hand Grenade as a most popular Bourbon Street adult beverage served at Tropical Isle).
- 88 Metzger, *supra* note 72, at 62.
- 89 Metzger, *supra* note 72, at 62.
- 90 Metzger, *supra* note 72, at 14.
- 91 New Orleans District, U.S. ARMY CORPS OF ENG'RS, *Modification of Davis Pond Diversion 2* (May 2012), <http://www2.mvn.usace.army.mil/>

environmental/Mod%20of%20Davis%20Pond%20Fact%20Sheet%20May%202012%20PAO.pdf.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ LA. COASTAL AREA, *Modification of Davis Pond Diversion*, <http://www.lca.gov/Projects/14/Default.aspx> (last visited Nov. 15, 2013).

⁹⁵ *Id.*

⁹⁶ Mark Schleifstein, *West Bay Diversion Wins Reprieve from Federal-State Coastal Restoration Task Force*, TIMES-PICAYUNE, Oct. 11, 2012, http://www.nola.com/environment/index.ssf/2012/10/west_bay_diversion_wins_reprieve.html.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ See generally Gina Schilmoeller, *Invoking the Fifth Amendment to Preserve and Restore the Nation's Wetlands in Coastal Louisiana*, 19. TUL. ENVTL. L. J. 317 (2006).

¹⁰⁰ Houck, *supra* note 29, at 26-27.

¹⁰¹ SOLOMON NORTHRUP, TWELVE YEARS A SLAVE 139 (1997), available at <http://docsouth.unc.edu/fpn/northup/northup.html>.

¹⁰² Houck, *supra* note 29, at 26-27.

¹⁰³ CAL. STATE LANDS COMM'N, THE PUBLIC TRUST DOCTRINE 1 (2001), available at http://www.slc.ca.gov/Policy_Statements/Public_Trust/Public_Trust_Doc-trine.pdf (citing Institutes of Justinian 2.1.1; Las Seite Partidas 3.28.6 (S. Scott trans. & ed. 1932)).

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ Shively v. Bowlby, 152 U.S. 1, 58 (1894) (holding that historically states have been granted the sovereign ability to control lands and waterways subject to the tide's influence so long as they still conform to the obligations of the federal public-trust doctrine.); See generally, *Phillips Petroleum Co.*, 484 U.S. 469 (1988).

¹⁰⁷ *Id.*

¹⁰⁸ Ill. Cent. R. Co. v. Ill., 146 U.S. 387, 435-36 (1892).

¹⁰⁹ *Id.*; Joseph D. Kearney & Thomas W. Merrill, *The Origins of the American Public Trust Doctrine: What Really Happened in Illinois Central*, 71 U. CHI. L. REV. 799, 800-01 (2004).

¹¹⁰ See Jamie Bartram, et al., *Water Quality Monitoring – A Practical Guide to the Design and Implementation of Freshwater Quality Studies and Monitoring Programmes*, UNITED NATIONS ENV'T PROGRAMME & WORLD HEALTH ORG. (1996), available at http://www.who.int/water_sanitation_health/resourcesquality/wqmchap13.pdf.

¹¹¹ Ill. Cent. R. Co., 146 U.S. at 455-56.

¹¹² Ill. Cent. R. Co., 146 U.S. at 435-36 (holding that the “ebb and flow of the tide” rule for waters protected under the public trust is under-inclusive in the case of the United States, as there are many bodies of water necessitating protection that are not subject to this phenomenon, unlike the British Isles).

¹¹³ *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469 (1988).

¹¹⁴ *Id.* at 476.

¹¹⁵ Nat'l Audubon Soc'y v. Superior Court, 33 Cal.3d 419, 425 (1983).

¹¹⁶ *Id.* at 431.

¹¹⁷ *Id.* at 452.

¹¹⁸ Responsible Wildlife Mgmt. v. State, 103 P.3d 203 (Wash. Ct. App. 2004).

¹¹⁹ *Id.* at 208 (C.J. Brintnall, concurring).

¹²⁰ Sam Brandao, *Louisiana's Mono Lake: The Public Trust Doctrine and Oil Company Liability for Louisiana's Vanishing Wetlands*, 86 TUL. L. REV. 759, 774-75 (2012).

¹²¹ *Id.* at 774; Save Ourselves, Inc. v. La. Env't Control Comm'n, 452 So.2d 1152, 1157 (La. 1984).

¹²² *Id.* at 1156.

¹²³ *Id.* at 1156-57; James G. Wilkins & Michael Wascom, *The Public Trust Doctrine in Louisiana*, 52 LA. L. REV. 861, 863-64 (1992).

¹²⁴ *Avenal v. Louisiana*, 886 So.2d 1085, 1091-92 (La. 2004).

¹²⁵ *Id.* at 1091.

¹²⁶ *Id.*

¹²⁷ *Id.* at 1101-02.

¹²⁸ *Id.* at 1102.

¹²⁹ FED. R. CIV. PRO. 23(c)(1)(B) (For purposes of this article, Fed. R. Civ. Pro. 23(g), appointment of counsel, will not be addressed); LA. CODE CIV. PROC. ANN. art. 591 (2013).

¹³⁰ *Id.*

¹³¹ LA CONST. art. IX, § 1.

¹³² FED. R. CIV. P. 23.

¹³³ LA CONST. art. IX, §§ 1,3.

¹³⁴ See discussion of Morganza, Bonnet Carré, Davis Pond and Caernarvon diversion structures, *supra*.

¹³⁵ 33 C.F.R. § 222.5(f)(7).

¹³⁶ LA CONST. art. I, §4.

¹³⁷ *United States v. Carmack*, 329 U.S. 230, 241-42 (1946).

¹³⁸ *Arkansas Game & Fish Comm'n v. U.S.*, 33 S. Ct. 511 (2012).

¹³⁹ *Id.* at 515.

¹⁴⁰ See *Ill. Cent. R. Co.*, 146 U.S. 387 (detailing the federal public-trust doctrine as it relates to the sovereign states); LA. CONST. art. IX §1.

¹⁴¹ *Avenal*, 886 So.2d at 1102 (citing LA. CIV. CODE ANN. art. 450 and Comment (b), “navigable water bodies are ‘public things that belong to the State,’ and . . . such property is ‘dedicated to public use, and held as a public trust, for public uses.’”); LA. CONST. art. IX §3.

¹⁴² *Avenal*, *supra* note 127, at 1101.

¹⁴³ 28 U.S.C. § 1346(b).

¹⁴⁴ *Robinson v. United States (In re Katrina Canal Breaches Litig.)*, 696 F.3d 436 (Ct. App. 5th 2012).

¹⁴⁵ See *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *Id.* at 127.

¹⁴⁸ *Id.*

¹⁴⁹ 33 U.S.C.A. § 702(c).

¹⁵⁰ U.S. Army Corps of Eng'rs, *Hurricane Isaac With and Without 2012 100-Year HSDRRS Evaluation* at i (November 2012), <http://www2.mvn.usace.army.mil/pao/HurrIsaacWapp.pdf>.

¹⁵¹ DAVID ROGERS, JAYE CABLE & WILLIAM NUTTLE, *LEVEES AND FLOOD PROTECTION 22-23* (2012), <http://www.mississippiriverdelta.org/files/2012/07/Question-6.pdf>.

¹⁵² See Dan Swenson & Mark Schleifstein, *High Water Marks, Blame Hurricane Isaac, Not Post-Katrina Levee System, for high sure, Corps says*, TIMES-PICAYUNE, Nov. 12, 2012, <http://media.nola.com/environment/photo/map-isaacsurge-111212jpg-af6a43422c34fce8.jpg>.

¹⁵³ Richard Rainey, *Corps of Engineers Critic Repeats Accusations of Shoddy Work*, TIMES-PICAYUNE, Aug. 22, 2012, http://www.nola.com/katrina/index.ssf/2012/08/corps_of_engineers_critic_repe.html.

¹⁵⁴ *Id.*

¹⁵⁵ Anthony G. Craine, *Joseph Kony*, ENCYCLOPEDIA BRITANNICA (2013), available at <http://www.britannica.com/EBchecked/topic/1017670/Joseph-Kony>.

¹⁵⁶ HARRIET BEECHER STOWE, *OLD TOWN FOLKS*, ch. 39 (1869), available at <http://digital.library.upenn.edu/women/stowe/folks/folks.html>.