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Immunity under the Provisions of the Louisiana Homeland Security and Emergency Assistance and Disaster Act: An Analysis of Case Law in Relationship to Pending Litigation

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Immunity under the Provisions of the
Louisiana Homeland Security and Emergency Assistance and Disaster Act:
An Analysis of Case Law in Relationship to Pending Litigation

A Dissertation

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy
in
Urban Studies

by

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May, 2007

DEDICATION TO CLAIRE SIMNO

Claire - mere words could never express what you have done me since we first met on the campus of Loyola University in the fall 1971. I had no idea that thirty-six years later the joys of being married to you still have no limits. You have been, are and will always be my greatest, most loving and ardent supporter.

Everyday you bring unlimited sunshine into the path of all that cross your path. You know no strangers and are loved by all.

It's been quite a trip, very stressful at times and laughable at others. We did it. How I'll never know!

I pray that we will continue to have faith in God, good health, much happiness and continued laughter all the days of our lives. The journey would never have been as much fun as it was without you.

So Dr. Claire Simno, I look forward to growing older and crankier with you, our ever-loving sons and whomever God has in store for them to make their lives as complete as you have made mine. I love you.

ACKNOWLEDGEMENT

This long journey began in the spring 1991 when Fritz Wagner, Dean of the College of Urban and Public Affairs, started the Ph.D. Program in Urban Studies. I am fortunate to have been one of the original cadre of students admitted to the program and to be completing the program after many years of course work part-time while working full time as a practicing attorney, officer in the United State Army Reserve, volunteer for innumerable charitable organizations, father of two wonderful sons and husband of one of the most kind, considerate, hard-working, intelligent and loving wives that any man could ask for. God has blessed me beyond all measure as only God can.

The late Robert O. Washington, Ph.D., former Dean of the Graduate School, University of New Orleans, holds a place deep in my heart. Because of his understanding and sense of fairness the dream of graduating with my beloved wife, Claire, becomes a reality. Dr. Washington will always be remembered with great honor and respect in our home.

John Wildgen, Bob Whelan and Jane Brooks have been excellent mentors in the field of urban studies. They always had an open door policy, receptive ears, good hearts and the interest of students at the forefront of each day. I consider them friends who challenged and directed me when I lost my way with never-ending encouragement and support.

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James E. Fitzmorris, Jr., former Lieutenant Governor of Louisiana, wrote a letter of recommendation on my behalf to the late Dr. Alma Young initial coordinator of the Ph.D. program in Urban Studies when it began. If all public officials served in the manner in which former Lt. Governor Fitzmorris served the public, for well over 50 years, the city of New Orleans and the state of Louisiana would be much better places to live.

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ABSTRACT

The effect of Hurricane Katrina on New Orleans was catastrophic and long-lasting. Katrina is the costliest, as well as one of the deadliest, natural disasters in the history of the United States. Eighty percent of New Orleans was flooded after the failure of levees bordering the 17th Street, London Avenue and Industrial canals. The United States Army Corps of Engineers (hurricane protection systems nationwide); Orleans Levee District (levee and floodwall maintenance); and Sewerage and Water Board of New Orleans (drainage 1899 to present) are key to the case study. This study traces the historical relationship between these governmental entities in connection with flood protection. The study began after the filing of massive class action litigation against the Corps of Engineers, Orleans Levee District and Sewerage and Water Board following Hurricane Katrina. The Louisiana Homeland Security and Emergency Assistance and Disaster Act of 1993 provided the boundaries for the study. A detailed analysis of the legislative history and legislative process added meaning and depth to the study. A comprehensive review of jurisprudence interpreting the act, particularly § 735 is the heart of the study. The act provides for “immunity of personnel employed by the state, political subdivisions or agencies thereof...engaged in any homeland security and emergency preparedness activities...” The Orleans Levee District and Sewerage and Water Board of New Orleans’ assertion that the immunity provision of § 735 applied to the discharge of their respective statutory responsibilities under state law in advance of, and following Katrina, is examined in context of the plaintiffs’ allegations for the levee and floodwall failures. The study concludes that § 735 is in dire need of overhaul given the judicial rulings rendered to date in the state and federal class court action litigation.

Additional research is needed on the federal, state and local level to develop legislation that will effectively and unquestionably render the state, political subdivisions or agencies thereof engaged in any homeland security and emergency preparedness activities immune from liability retroactively, now and in the future, in light of the recent narrow interpretation of the act by the courts.

Chapter I

Introduction

Like most citizens of the Greater New Orleans area on Friday August 26, 2005 I was aware of a Tropical Storm somewhere off the coast of Florida but relatively unconcerned that it would have any impact on the City of New Orleans. On Saturday morning, August 27th, local television news personalities and weather reporters were alerting the public about the potential danger of Hurricane Katrina and the need to immediately make plans to evacuate. By early afternoon Governor Kathleen Babineaux Blanco proclaimed the “contraflow”¹ plan would be in effect at 4:00 PM. Heeding the warnings by 8:00 PM we were on the road headed to Houston with thousands of other citizens fleeing the impending storm. By early Monday morning the worst of our fears rang true. The unimaginable sequence of events following the landfall of Hurricane Katrina on August 29th as a Category 4 hurricane,² on the Saffir-Simpson scale, would change not only our personal lives but also my professional life as General Counsel for the Sewerage and Water Board of New Orleans and lead me toward writing this dissertation narrowly defining the area of study.

When leaving work on Friday evening I expected to return Monday morning to face the usual drone of lawyers advocating on behalf of clients seeking damages for the ever changing mix of slip and fall cases, contractor disputes, toxic tort and a few wrongful death cases. Katrina changed that. I didn’t return to my desk until mid December 2005 having been detailed to live

¹ Contraflow lane reversal is a program designed for quick emergency evacuation of an area. Incoming highway lanes to a city are changed to outbound lanes. This doubles the number of lanes available for outbound evacuation traffic. Crossover sections are used to move outgoing traffic to these lanes. All incoming traffic is blocked until the end of the program.

² The Saffir-Simpson Hurricane Scale is a method developed in the early 1970s to measure storms based on wind speed, tidal surge and central pressure. The scale runs from Category 1 to Category 5, with Category 5 being the most destructive with winds greater than 155 mph and storm surge generally greater than 18 ft. above normal. Only three Category 5 hurricanes have made landfall in the United States since records began: The Labor Day Hurricane of 1935, Hurricane Camille (1969) and Hurricane Andrew in August 1992.

and work in Baton Rouge for over three and one half months. Upon my return the responsibility for representing the Sewerage and Water Board in numerous major class action lawsuits stemming from the failure of the levees and floodwalls of the 17th Street Canal, London Avenue Canal and Industrial Canal loomed larger than a behemoth. The litigation provides a challenging opportunity to in my continuing representation of the Sewerage and Water Board in what surely will be a landmark case.

An intense investigation of the allegations lodged against the Sewerage and Water Board began with the task of drafting responsive pleadings to the growing number of lawsuits arriving daily. Comprehensive legal research for available defenses to the common claims led to the Louisiana Homeland Security and Emergency Assistance and Disaster Act. The act has a unique provision that was intended to serve as a valid legal defense and vehicle for summary dismissal from the litigation that was quickly becoming quite burdensome. That provision was § 735 cloaked with the heading “immunity of personnel.” This is where this study begins.

The stage is set in Chapter II “The Storm” with a chronology of Tropical Depression Twelve, later known as Hurricane Katrina, and the events leading up to the flooding of over 80% of the City of New Orleans on August 29th, 2005, hours after Hurricane Katrina made landfall.

In Chapter III “The Sewerage and Water Board of New Orleans; Orleans Levee District; and United States Army Corps of Engineers.” These entities are the principal, but not the only, governmental defendants in the litigation. I begin with an explanation of the respective roles that each defendant: Sewerage and Water Board of New Orleans (drainage); Orleans Levee District (levee and floodwall maintenance); and United States Army Corps of Engineers (overall hurricane protection systems nationwide), individually and collectively play with flood control. The agencies working together at times, and sometimes independent of each other, have integral

roles in the overall network of facilities designed to prevent flooding from Lake Pontchartrain and vicinity in connection storm surges and hurricanes. Legislative reform of the Orleans Levee District after Hurricane Katrina will bring much needed and immediate changes to that manner in which that agency is operated.

The relevant state statutes that are the foundation governing emergencies and disasters in the state provide the framework around which Chapter IV “The Louisiana State Statutes Governing Emergencies and Disasters,” is built. The origins of early emergency legislation directed to Civil Defense in 1950 predated the passing of the Louisiana Disaster Act of 1974. The enactment of the Louisiana Homeland Security and Emergency Assistance and Disaster Act, as amended, in and since 1993, lead to the status of the current law in effect. A detailed review of legislative history sheds light on the circumstances following Hurricane Andrew (1992) that was the impetus for the legislation proposed by Louisiana State Representative Huntington B. “Hunt” Downer.

Chapter V provides an in-depth evaluation and analysis of pending litigation in light of the § 735 immunity defense claimed by the Sewerage and Water Board and Orleans Levee District. Intrinsic in the analysis is a complete and up-to-date review of case law supporting recent rulings of the state and federal court.

The findings as to whether § 735 of the Louisiana Homeland Security and Emergency Assistance and Disaster Act accomplished what the legislature intended is in Chapter VI. Lastly in Chapter VII the need for future research in suggested as a potential wide-ranging field will could lead those interested in this legal issue, or similar legal issues, with a plethora of ideas, references and directions.

Chapter II

“We’re facing the storm most of us have feared!”

On Tuesday, August 23, 2005, Tropical Depression Twelve formed over the southeastern Bahamas and was later upgraded to Tropical Storm Katrina. By 5:00 p.m. EDT, Thursday, August 25, 2005, Tropical Storm Katrina was upgraded to Hurricane Katrina, the fourth hurricane of the 2005 Atlantic hurricane season.³ The hurricane made its first landfall as a Category 1 hurricane on the Saffir-Simpson Hurricane Scale, near Hallandale Beach, Florida on the Miami-Dade/Broward county line. On Friday, August 26, 2005, the National Hurricane Center issued the following advisory: “...Katrina is forecast to become a Category 3...major...hurricane today and on Saturday.”⁴ The possible track of the hurricane was shifted from the Florida Panhandle to the Mississippi/Louisiana coast.

Following Hurricane Advisory No. 14, Louisiana Governor Kathleen Babineaux Blanco declared a state of emergency for the state.⁵ The declaration included activation of the state’s emergency response and recovery program under the command of the director of the state office of Homeland Security and Emergency Preparedness to supply emergency support services.

On Saturday, August 27, 2005, as predicted, Hurricane Katrina reached Category 3 intensity with winds between 111–130 mph. The National Hurricane Center posted a hurricane watch for southeast Louisiana, including the city of New Orleans. A hurricane watch means hurricane conditions are possible in the specified area, usually within 36 hours. Messages from

³“Hurricane Katrina Advisory Archive,” NOAA National Hurricane Center, Tropical Storm Katrina Advisory 4. Aug. 24-30, 2005 <<http://www.nhc.noaa.gov/archive/2005/katrina.shtml>>.

⁴ Ibid. Number 14.

⁵ State of Louisiana, Executive Department, Proclamation No. 48 KBB 2005 (Aug. 26, 2005)

the National Hurricane Center highlighted the potential for Katrina to make a second landfall as a Category 4 or Category 5 storm.⁶

Governor Blanco requested President George W. Bush to declare a major disaster for the State of Louisiana, in order to release federal assistance. President Bush complied declaring a federal state of emergency in Louisiana⁷ under the authority of the Stafford Act.⁸

Later that afternoon, New Orleans Mayor, C. Ray Nagin, accompanied by Governor Blanco, announced a state of emergency and called for a voluntary evacuation of the city of New Orleans. Mayor Nagin stopped short of calling for a mandatory evacuation citing the need for his legal team to determine if he could order a mandatory evacuation without exposing the city to legal liability for closure of hotels and other businesses. Nagin strongly recommended all residents and visitors to voluntarily comply with the evacuation order particularly those living in lower areas.⁹ “We want you to take this a little more seriously and start moving – right now, as a matter of fact,” Nagin said during the joint press conference with Governor Blanco.¹⁰ A shelter of last resort was established at the Louisiana Superdome for anyone facing the inability to evacuate for whatever reasons. According to Louisiana National Guard Major General Bennett C. Landreneau “15,000-20,000 people had already taken refuge there” by Tuesday August 30, 2005.¹¹

The National Hurricane Center is a part of the National Weather Service of the National Oceanic and Atmospheric Administration (NOAA) in the United States Department of Commerce. Max Mayfield director of the Tropical Prediction Center/National Hurricane Center

⁶ NOAA National Hurricane Center, 18, 18A, 19, 20 & 21.

⁷ President, Statement on Federal Emergency Assistance for Louisiana (August 27, 2005).

⁸ Stafford Disaster Relief and Emergency Assistance Act. Public Law 100-707, 42 U.S.C.A. §§ 5121-5206 (1988).

⁹ Staff Writers, *Times-Picayune* [New Orleans, LA], August 27, 2005.

¹⁰ Ibid. “*Mayor Urges Storm Preparations.*”

¹¹ Staff Writer, “Governor: Evac Superdome, Rescue Centers.” *Fox News/Associated Press*. Aug. 30, 2005.

briefed Governor Blanco, Mayor Nagin and Mississippi Governor Barbour on Katrina's status at 8:00 p.m. EDT. Following Mayfield's telephone conference the center issued Hurricane Katrina Advisory No. 19 at 10:00 p.m. CDT stating: "...dangerous Hurricane Katrina threatens the North Central Gulf Coast...a hurricane warning has been issued for the North Central Gulf Coast from Morgan City, Louisiana, Eastward to the Alabama/Florida Border...including the City of New Orleans and Lake Pontchartrain...coastal storm surge flooding of 15 to 20 feet above normal tide levels...locally as high as 25 feet along with large and dangerous battering waves...can be expected near and to the East of where the center makes landfall...heavy rains from Katrina should begin to affect the Central Gulf Coast Sunday evening. Rainfall totals of 5 to 10 inches...with isolated maximum amounts of 15 inches...are possible along the path of Katrina."¹²

It was reported that the National Hurricane Center Director had to call Nagin at home Saturday night and pleaded in no uncertain terms: "This is the Big One. In my thirty-three-year history at the Hurricane Center, I've never seen a storm this powerful, nor with the conditions like this that will allow it to become stronger, I would do whatever it took (sic) to get people out of there."¹³ Mayfield is also reported to have said: "I want to be able to walk out of the Hurricane Center tonight and go to sleep knowing I've done everything I can to make sure everybody knows the threat of Hurricane Katrina...New Orleans is never going to be the same."¹⁴

On Sunday August 28 2005 at 12:40 a.m. CDT Hurricane Katrina reached Category 4 level with 145 mph winds. By 6:15 a.m. CDT Katrina was a Category 5 storm, the highest

¹² Ibid., NOAA National Hurricane Center, 19.

¹³ John McQuaid and Mark Schleifstein, Path of Destruction: The Devastation of New Orleans and The Coming Age of Superstorms (New York: Little, Brown and Company, 2006) 175

¹⁴ Ibid.

possible rating on the Saffir-Simpson rating scale, with maximum sustained winds of 178 mph.¹⁵ The National Hurricane Center's Hurricane Katrina Special Advisory No. 22 issued at 7:00 a.m. CDT began with the following words: "...Katrina...now a potentially catastrophic Category 5 Hurricane..."¹⁶ Hurricane Katrina Advisory Number 23, issued at 10:00 a.m. CDT offered even bleaker news stating: "potentially catastrophic Hurricane Katrina...even stronger...headed for Northern Gulf Coast...maximum sustained winds have reached to near 175 mph...with higher gusts...Katrina is a potentially catastrophic Category Five hurricane on the Saffir-Simpson scale,"¹⁷ The dire warnings continued to get progressively worse throughout the rest of the day.¹⁸ Finally, at approximately 10:00 a.m. CDT Mayor Nagin ordered the mandatory evacuation of the entire city of New Orleans exempting hotels from the evacuation order because airlines had already cancelled all flights leaving New Orleans. In the press conference Nagin stated:

"We're facing the storm most of us have feared."¹⁹ [Emphasis added]

The reports issued on Monday, August 29, 2005, found Katrina moving onshore the southern coast of Plaquemines Parish, Louisiana, near Empire and Buras, and reaching the Louisiana-Mississippi border by early afternoon.²⁰ Shortly after 8:00 a.m. CDT the New Orleans office of the National Weather Service issued a flash flood warning for Orleans and St. Bernard Parishes. The arrival and passage of Katrina resulted in flooding of the Greater New Orleans metropolitan area beginning as early as 4:30 a.m. CDT with minor breaches on the Industrial

¹⁵ U.S. Senate, Commerce Committee, *NOAA National Hurricane Center Hurricane Katrina Forecast Timeline Aug. 23-31, 2005* <http://commerce.senate.gov/pdf/katrina_NOAA_Timeline.pdf>

¹⁶ NOAA National Hurricane Center 22.

¹⁷ Ibid. 23.

¹⁸ Ibid. 23A, 24, 24A, 25.

¹⁹ Press Conference "New Orleans Mayor, Louisiana Governor Orleans Levee District Press Conference" CNN. August 28, 2005

²⁰ NOAA National Hurricane Center 26A.

Canal; failure of the Mississippi River Gulf Outlet (MRGO)²¹ levees in St. Bernard Parish (5:00 a.m.); storm surges overtopping the levees on the East and West Banks of the Mississippi River and both sides of the Industrial Canal (6:10–6:30 a.m.); breaches of the levees on the west side of the Industrial Canal (7:30 a.m.); two major breaches on the east side of the southern end of the Industrial Canal (7:45 a.m.); overtopping of the embankment at the foot of the Orleans Canal (8:15 a.m.); overtopping of a one-mile stretch of the levee behind Lakefront Airport (8:30 a.m.); a major breach on the east side of the London Avenue Canal near Mirabeau (9:30 AM); a major breach one hundred fifty yards long on the east side of the 17th Street Canal (9:45 a.m.); and a major breach on the west side of the London Avenue Canal near Robert E. Lee Boulevard (10:30 a.m.).²²

By 10:00 a.m. “...the eye of the storm passed just slightly to the east of New Orleans and ...threw unusually severe wind loads and storm surges on the flood protection systems.”²³ By noon Katrina was reported as “still powerful but gradually weakening as it moves farther inland.”²⁴ The damage was done. Katrina was a “force majeure” that began a new chapter in the history of New Orleans.²⁵ The levee and floodwall failures were later determined to be the result of compounded long term and often repeated errors by Corps of Engineer personnel.

²¹ “MRGO” is an acronym for Mississippi River Gulf Outlet. MRGO is a 66-mile channel that provides a shorter route between the Gulf of Mexico and New Orleans’ inner harbor. It is intended to be useful both as a shorter route than the twists of the Mississippi River and for deep-draft vessels that cannot fit through canal locks of the Industrial Canal. The canal extends northwest from deep water in the Gulf of Mexico to the Inner Harbor Navigation Canal at the Port of New Orleans.

²² Ivor Van Heerden and Mike Bryan *The Storm* (New York: Viking, 2006) 92-94.

²³ Seed, et al, *Investigation of the Performance of the New Orleans Flood Protection Systems in Hurricane Katrina on August 29, 2005*, Independent Levee Investigation Final Report July 31, 2006, F-27. U.C. Berkeley 2006 <http://www.ce.Berkeley.edu/~new_Orleans/report/CH_1.pdf>.

²⁴ NOAA National Hurricane Center Hurricane 27A.

²⁵ An Act of God.

Chapter III

The Sewerage and Water Board of New Orleans; Orleans Levee District; and The United States Army Corps of Engineers

“Drainage has been a major concern since the founding of the city in the 18th century, remaining an important factor in the history of New Orleans through today.”²⁶ The low-lying topography of New Orleans offered a unique challenge to city developers. Solving the drainage problems of New Orleans has never been a simple matter. In 1893, the city government formed the Drainage Advisory Board to come up with better solutions to the city’s drainage problems. In 1899, a bond issue floated and a 2 mil per dollar property tax approved which funded and founded the Sewerage and Water Board of New Orleans.

Sewerage and Water Board of New Orleans

The Sewerage and Water Board of New Orleans is a political subdivision²⁷ of the state of Louisiana with limited scope and powers, created by a special act adopted by the Louisiana legislature on August 8, 1899.²⁸ Specifically the act states:

Creation and organization of sewerage and water board:

- A. (1) the public water system, the public sewerage system, and the public drainage system of the city of New Orleans shall be constructed, controlled, maintained, and operated by a sewerage and water board.²⁹

The Legislature’s delegation of authority and responsibility to the Sewerage and Water Board did not include any responsibility for flood control system(s), levees, floodwalls, floodgates or related appurtenances. Those responsibilities statutorily lie with the Orleans Levee District. The Sewerage and Water Board consists of fourteen (14) members composed of the

²⁶ U.S. Army Corps of Engineers, *History of the New Orleans Drainage System, 1893-1996*. Chapter 4 (1997) <http://www.mvn.usace.army.mil/pao/history/NO_Drainage/NO_Drain_chap4a.pdf>.

²⁷ Louisiana Constitution, Art. VI. Section 44(2) defining “political subdivision” to mean “a parish, municipality, and any other unit of local government, including a school board and a special district, authorized by law to perform governmental functions.”

²⁸ Acts 1899, La. Legislature, Ex. Sess., No. 6 § 8.

²⁹ Louisiana Statutes Annotated, Revised Statutes, Title 33 § 4071.

mayor, the two at large members of the council, one of the district councilmen selected by the council, two members of the board of liquidation, city debt, appointed by the mayor on recommendation of the board of liquidation, city debt, and seven citizens appointed by the mayor on recommendation of the city council, two from the city at large and one from each of the five councilmanic districts of the city.³⁰

In the early-twentieth century Sewerage and Water Board Superintendent George W. Earl summarized the major technical difficulties confronting engineers concerning New Orleans' drainage problems: "First of all, New Orleans had to face the problem of overflows from the Mississippi River and from tidal waters in Lake Pontchartrain, and the construction of levees, first along the river bank, because high water in the river was above the level of even the highest land in the city, and later, in the rear, to prevent high lake tides from backing into the lower part of the inhabited area, followed. Then came surface ditches and canals to drain the storm water into the tidal bayous, which often rose to a level which precluded much relief by such method, since only a small area of land along the river bank in New Orleans is higher than the high tides of the lake, and the ditches and canals were even more or less filled by tidal water and gave very inadequate drainage even for the highest portion of the city. Rainfall of great intensity was of frequent occurrence, and these falling on a ground which was already saturated made the need for better drainage imperative..."³¹

The Sewerage and Water Board vested with the statutory responsibility for drainage of the city of New Orleans is responsible for pumping rainfall and floodwaters into the drainage canals, or outfall canals, connected to Lake Pontchartrain. Vast pumping stations throughout the

³⁰ LSA – R.S. 33:4071A(1)(a) – (c).

³¹ Hon. Martin Behrman, Mayor, New Orleans, "*New Orleans. A History of Three Great Public Utilities, Sewerage, Water and Drainage, and their influence upon the Health and Progress of a Big City*," Convention of League of American Municipalities, Milwaukee, Wis., Sept. 29, 1914.
<http://www.penelope.uchicago.edu/Thayer/E/Gazetteer/Places/America/United_States/Louisiana/New_Orleans/texts/Behrman*.html>

city channel rain and floodwaters through an intricate network of subsurface and surface canals leading to the outfall canals connected to Lake Pontchartrain. The outfall canals are bordered by a system of levees and floodwalls. Under the statute that created the Sewerage and Water Board, any property the Sewerage and Water Board of New Orleans deemed necessary for the sewerage, water or drainage system for the city was acquired through expropriation proceedings in the name of the City of New Orleans. The building project finally got off the ground following the yellow fever epidemic of 1898.

There are eighteen historic and present day man-made canals in and around New Orleans comprising the drainage system designed to keep New Orleans dry. Three drainage canals contributed to the widespread flooding following Katrina as a result of the failure of levees and floodwalls, the 17th Street, London Avenue and Industrial Canals.

Collier's Weekly, in an article titled "A Wonderful Drainage System" noted in its issue published September 7, 1901, that: "New Orleans is building the largest, costliest and most elaborate drainage and sewerage system in the world."³²

The Sewerage and Water Board never designed, constructed, maintained, owned, improved or had any responsibility for levees, floodwalls or other flood-control appurtenances that form any part of the hurricane protection system. Those duties and responsibilities are clearly outside of its statutory mandate and lie squarely on the shoulders of the Orleans Levee District and Corps of Engineers.

Orleans Levee District

The Board of Levee Commissioners of the Orleans Levee District is a corporate body politic, a special state agency or subdivision of the state created by the Louisiana legislature in

³² *A Wonderful Drainage System*, Collier's Weekly, Vol. XXVII No. 23, September 7, 1901.

1890 for the purpose of protecting the city of New Orleans from floods.³³ From its inception through 2006, the Orleans Levee District was the governmental body having exclusive responsibility for levees under its jurisdiction and control. This includes the floodwall systems in Orleans Parish “to insure the thorough and adequate protection of the lands of the district from damage by flood...for the adequate drainage control of the district.”

Louisiana Revised Statutes, Title 38 § 307 provides that the Board of Commissioners of the Orleans Levee District has the full and exclusive right and jurisdiction over the levees:

§307. Orleans Levee District; powers of board of commissioners

A. (1) The board of commissioners of the Orleans Levee District shall have and exercise all and singular the powers now conferred upon that board by law, as well as such powers as are herein granted. The board shall have full and exclusive right, jurisdiction, power and authority to locate, relocate, construct, maintain, extend, and improve levees, embankments, seawalls, jetties, breakwaters, water-basins, and other works in relation to such projects...[emphasis added.]³⁴

The courts have upheld these exclusive duties and responsibilities. “A levee board is a creature or organization of the state brought into existence for the purposes of discharging the state’s duties of flood protection.”³⁵ The court has also found that the “...Orleans Levee District...maintains the hurricane protection levees in the New Orleans area...”³⁶ Any land owned by the state used in conjunction with levee construction or use is transferred to the Orleans Levee District.³⁷ Thus ownership of the levees lies with the Orleans Levee District.³⁸

Over the years politically appointed board members took on ambitious non-flood related building projects including the building of the Bohemia Spillway between the river and the Gulf

³³ Acts 1890, No. 93, §§ 1–8; LSA-R.S. 38 §§ 301–512. Acts 1890, No. 93, §§ 1–8.

³⁴ LSA-R.S. 38:307(A)(1).

³⁵ Bd. of Commissioners of the Orleans Levee District v. Dep’t of Natural Res., 496 So.2d 281, 289 (La. 1986)

³⁶ Volkswagen of America, Inc. v. Robertson, 713 F. 2d 1151, 1154 (La. 5 Cir. 1983).

³⁷ LSA-R.S. 38:336A.

³⁸ Ibid., § 307(A)(1).

of Mexico, Lakefront Airport, South Shore Harbor and the Orleans Marina, Lakeshore Drive, the Senator “Ted” Hickey Bridge spanning the Industrial Canal, five major subdivisions (Lake Vista, East & West Lakeshore, Lake Terrace and Lake Oaks) and miles of lakefront recreational areas.³⁹

“Levee systems of the size needed to protect the New Orleans area are often collaborative efforts between federal and local government.”⁴⁰ The Orleans Levee District is responsible for the maintenance of 129 miles of levees and floodwalls, 189 floodgates, 97 flood valves, and two flood control structures. To enhance flood protection the Orleans Levee District and Corps of Engineers participate and cost share with others, including the Sewerage and Water Board and East Jefferson Levee District, in several joint flood protection projects relative to the Lake Pontchartrain and Vicinity Hurricane Protection Plan.⁴¹ Neither the Orleans Levee District nor any other local entity had final authority or accountability for coordination of the various flood-defense systems.

The Corps of Engineers built most of the current levees using mostly federal funds.⁴² Colonel Eugene S. Witherspoon, District Engineer, reported in 1986, after more than 20 years in delays and disputes the project “is an excellent example of a federal/local partnership that is working to offer hurricane flood protection to the residents of our area.”⁴³

Tropical Storm Frances and Hurricane Georges in September 1998 struck the Gulf Coast regions with a vengeance significantly testing the integrity of the hurricane protection system.

³⁹ Bruce Eggler “*Orleans Levee Board is History*,” Times~Picayune, New Orleans, LA., Dec. 28, 2006.

⁴⁰ Ibid. IPET Final Report July 31, 2006, 4 –22.

⁴¹ Orleans Levee District Statement of Purpose. www.orleanslevee.com/Mission%20Statement.htm.

⁴² Ann Carns, “*Long Before Flood, New Orleans Was Prime for Leaks*,” *The Wall Street Journal*, [New York] Vol. 246, No. 111, Nov. 25, 2005.

⁴³ Eugene S. Witherspoon, “*Construction Moves Ahead on All Fronts*,” quoted in Notes for Briefing on Lake Pontchartrain and Vicinity Project; Orleans Levee Board Press Conference, May 30, 1986 (Lake Pontchartrain file); *Information Bulletin* (Spr. 1986): 8; “Water Resources Development Act of 1986 – It Was a Very Good Year for NOD,” *Information Bulletin* (Win/Spr. 1987): 3-5.

The system passed the test with minimal damage and inconvenience. In April 1999 according to the Corps of Engineers the Lake Pontchartrain and Vicinity Hurricane Protection Project⁴⁴ alone prevented an estimated \$749 million in damages, exceeding the total cost of the project as of 1998. This was only a small percent of the cumulative total of \$9.69 billion saved since 1983 by the Lake Pontchartrain project alone. “Our project not only worked, it demonstrated its worthiness as a public investment in dollars” proclaimed Colonel William L. Conner, District Engineer who soon thereafter retired from the military.⁴⁵

Six years later Hurricane Katrina ripped the heart out of the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project. The inadequacy of the levees and floodwalls showed the world that the project constructed under the direction of, and funded by, the Army Corps of Engineers failed to do what it was designed to do. The catastrophic collapse of the hurricane protection system on August 29, 2005, proved that both Colonels Witherspoon and Conner were absolutely wrong in their assessment about the success of the project in 1986 and 1999. Following Hurricane Katrina we learned after three independent and thorough investigations that the projects fatal flaws might have been prevented.

Much has been written about the cause(s) of the failure of the hurricane protection system especially the levees and floodwalls. The investigation and reports by the Independent Levee Investigation Team funded by the National Science Foundation, Interagency Performance Evaluation Task Force,⁴⁶ and Team Louisiana Report commissioned by the Louisiana

⁴⁴ Pub. L. No. 89-298 Section 204, 79 Stat. 1073, 1077; fn 2 Flood Control Act of 1965

⁴⁵ William L. Conner, “Corps and Sponsors prevent \$749 million of Pontchartrain-area Damage by 1998’s Hurricane Georges,” USACENOD News Release, Apr. 16, 1999 <www.mvn.usace.army.mil/PAO/releases/hurricane.HTM>.

⁴⁶ “Performance Evaluation of the New Orleans and Southeast Louisiana Hurricane Protection System. U.S. Army Corps of Engineers,” Final Draft, June 1, 2006 <<https://ipet.wes.army.mil>>

Department of Transportation and Development,⁴⁷ have filled volumes to date. Their respective findings blame the federal government in using data that was out dated, ill conceived, patently incorrect and flawed. The 1965 congressional mandate issued to the Corps to develop effective plans to protect the Greater New Orleans area against the “most severe combination of meteorological conditions reasonably expected” was for naught. Copies of the executive summaries of the reports are in the appendix.

United States Army Corps of Engineers

In the aftermath of the Great Mississippi Flood of 1927, Congress gave the United States Army Corps of Engineers supervision and control of design and construction of large-scale flood control projects to protect the Mississippi Valley from river flooding. The Flood Control Act of 1928 became law during the administration of U.S. President Herbert Hoover and has been frequently amended.⁴⁸

Hurricanes have long been a threat to U.S. Coastal regions especially to Louisiana. Approximately 165 hurricanes have struck Louisiana since 1559, “an average of more than one storm every three years.”⁴⁹ “Under the Flood Control Acts of 1962, and other legislation, the Corps developed plans to protect vulnerable areas from the damaging flood surges that accompany hurricanes and other tropical storms. Because the most vulnerable areas in the New Orleans District are adjacent to wetland areas environmental concerns became even more evident with hurricane protection projects than with other more established Corps projects.”⁵⁰

⁴⁷ Ivor L.I. Van Heerden, et al., “The Failure of the New Orleans Levee System During Hurricane Katrina.” Team Louisiana, Dec. 18, 2006 <http://www.publichealth.hurricane.lsu.edu/TeamLA.htm>.

⁴⁸ 33 USC 701 *et seq.*

⁴⁹ Damon Manders, “*The Bayou Builders: (Draft) A History of the U.S. Army Corps of Engineers, New Orleans District, 1976 – 2000*”, Aug. 2002 p. 86.

⁵⁰ Ibid.

Following Hurricane Betsy's landfall (September 9, 1965), at Grand Isle, Louisiana, a Category 4 hurricane, the dawn of a new day for flood protection projects in the New Orleans area shined brightly, or so we thought. Betsy was the fourth costliest storm in the United States, after Andrew (1992), Hugo (1989) and Camille (1969).⁵¹ Katrina now tops the list.

Reasoning that the greatest threat to the New Orleans area was from hurricane-induced storm surges, waves, and rainfall, Congress first authorized construction of the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project in the Flood Control Act of 1965 to provide hurricane protection to areas around Lake Pontchartrain.⁵² The legislation provided direction and funds for a comprehensive series of flood control structures, concrete floodwalls, and levees. The project was initiated to insure that the city's levees and floodwalls could withstand a direct hit by a hurricane of at least a fast-moving Category 3 intensity that might strike the coastal Louisiana region one in 200-300 years.

Although federally authorized the project was a joint federal, state, and local effort with the federal government paying 70% of the costs and the state and local interests (partners) paying 30%. The Corps of Engineers was responsible for project design and construction and the local interests were responsible for maintenance of the levees and flood control structures. "The Corps had several non-federal partners in the venture: the Orleans Levee District and East Jefferson Levee District, and Sewerage and Water Board. The levee districts maintained the canals while the Sewerage and Water Board maintained the pump stations and controlled the discharge into the drainage canals."⁵³ Original cost estimates when the project was first designed was \$85 million and expected to take about 13 years to complete. There were many setbacks for various

⁵¹ Eric S. Blake, Max Mayfield, Edward N. Rappaport and Christopher W. Landsea, *"The Deadliest, Costliest, and Most Intense United States Hurricanes from 1900 to 2000 (And Other Frequently Requested Hurricane Facts)"* NOAA Technical Memorandum, National Weather Service, Tropical Prediction Center, Oct. 1, 2001.

⁵² Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project in the Flood Control Act of 1965. Pub. L. No. 89-298, § 204, 79 Stat. 1073, 1077.

⁵³ Seed, Vol 1, Chap. 4, Section 4.7.7, 4-22.

projects in the overall plan for flood protection including design changes caused by technical issues, environmental concerns, legal challenges and local opposition to portions of the project by the Orleans Levee District and Sewerage and Water Board.⁵⁴

“As of early 2005, the project was not expected to be completed until 2015 – nearly 50 years after it was first authorized – and at a cost of about \$738 million...”⁵⁵ [Emphasis Added].

In the weeks following Hurricane Katrina public outcry for levee board reform was deafening statewide and especially in the Greater New Orleans area. In the 1st Extraordinary Session (2005) of the Louisiana legislature lawmakers with overwhelming public and private support accomplished something that reformers unsuccessfully had tried to do for decades, rein in the state’s levee boards.

Created by Act 2006, No. 43, newly configured levee districts statewide were given life.⁵⁶ The act became operative upon the passing and adoption of the Constitutional Amendment to Article VI, Sections 38(A)(1) and 39 and added Article VI, Section 38.1 to the Louisiana Constitution of 1974.⁵⁷ The voters of Orleans Parish and across the state overwhelmingly voted in favor of the proposed reform measures in a statewide election September 30, 2006. Eighty-one percent (81%) of the voters statewide and ninety-four percent (94%) of the voters in Orleans Parish voted for the proposed constitutional amendment.⁵⁸ The Constitutional Amendment took effect January 1, 2007. The newly authorized Orleans Levee District⁵⁹ replaced the former Board

⁵⁴ Anu Mittal, “*Army Corps of Engineers – Lake Pontchartrain and Vicinity Hurricane Protection Project*,” Subcommittee on Energy and Water Development, Committee on Appropriations, U.S. House of Representatives, Washington D.C. (GAO Report-05-1050T), Sept. 28, 2005.

⁵⁵ Ibid.

⁵⁶ La. Legislature, Acts 2006, 1st Ex.Sess., No. 1, contingent upon approval of constitutional amendments at a statewide election scheduled to be held September 30, 2006.

⁵⁷ La. Const. of 1974, art. VI, §§ 38(A)(1), 39; art. VI, § 38.1.

⁵⁸ La. Sec. of State, Official Election Results, Results for Election Date: 9/30/06.

<<http://www.sos.louisiana.gov:8090/cgi-bin/?rqstyp=elcms4&rqsda=09302006>>.

⁵⁹ LSA-R.S. 38:291K; LSA-Const. Art. 6, Sect. 38(A)(1), 38.1 & 39.

of Commissioners of the Orleans Levee District⁶⁰ with narrow and distinct authority for regional flood protection responsibilities within Orleans Parish. The Orleans Levee District's non-flood related assets and activities, once the treasure chest of local political power brokers, became the responsibility of the state Division of Administration⁶¹

⁶⁰ LSA-R.S. 38:1231 Et seq. LSA-Const. Art. 4, Sect. 4.

⁶¹ Ibid. Egger.

Chapter IV

State Statutes Governing Emergencies and Disasters in Louisiana

The Louisiana Homeland Security and Emergency Assistance and Disaster Act became law June 22, 1993.⁶² The act recognized the “ ...existing possibilities of the occurrence of emergencies and disasters of unprecedented size, and destructiveness, resulting from ...flood ...or other natural or manmade causes...”⁶³ Katrina surely met and exceeded the definition of a “disaster” of unprecedented size with its massive destruction causing flooding throughout 80% of the city of New Orleans.⁶⁴ The Act pertains to civil defense, emergency preparedness and provides for state and local civil defense and emergency preparedness agencies and the organization, powers, duties, functions, responsibilities, personnel and funding thereof.

Military, Naval, and Veterans’ Affairs: Civil Defense Agency

The research led to the discovery of a number of laws found in Title 29 of the Louisiana Revised States governing “Military, Naval, and Veterans’ Affairs,” one of which created a State Civil Defense Agency.”⁶⁵ It is here that we find the purpose of the law in § 601:

§ 601. Policy and purpose

A.Because of the existing possibility of the occurrence of disasters of unprecedented size and destructiveness resulting from enemy attack, sabotage, or other hostile action, or from fire, flood, earthquake, or other natural or manmade causes, and in order to ensure that preparations of this state will be adequate to deal with such disasters, and generally to provide for the common defense and to protect the public peace, health, and safety, and to preserve the lives and property of people of the state of Louisiana, it is hereby found and declared to be necessary:

(1)To create a Louisiana Civil Defense Agency, and to authorize

⁶² LSA-R.S. 29:721-738.

⁶³ Ibid. § 722A.

⁶⁴ Ibid. § 723(1).

⁶⁵ LSA-R.S. 29:601-617

the creation of local organizations for civil defense in the political subdivisions of the state;

(2) To confer upon the governor and upon the executive heads or governing bodies of the political subdivisions of the state the emergency powers provided in this Chapter...⁶⁶

In an effort to protect individuals acting in furtherance of the purposes of § 601 the legislature included an immunity provision insulating those engaged in civil defense activities from liability except in the case of willful misconduct. The provision states:

§ 613. Immunity of personnel

A. Neither the state nor any political subdivision thereof, nor other agencies, nor, except in the case of willful misconduct, the agents, employees, or representative of any of them, engaged in any civil defense activities, while complying with or attempting to comply with this Chapter or any rule or regulation promulgated pursuant to the provisions of this Chapter shall be liable for death of or any injury to persons, or damage to property, as a result of such activity.⁶⁷

The common fear of that era, the 1950s, was the possibility of enemy attack from within or afar following the end of WWII in addition to common risks from fire, flood, earthquake, or other natural or manmade causes.

Louisiana Disaster Act of 1974

In 1974 legislation signed by the governor, Act No. 636, created the Louisiana Disaster Act of 1974.⁶⁸ The act applied to man-made and natural disasters occurring in the state of Louisiana. Section § 704 of that act defined the term “disaster” as follows:

“Disaster” means occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property resulting from any natural or man-made cause, including but not limited to hurricane, tornado, storm, flood, high water, wind driven water, tidal wave, earthquake, landslide, mudslide, fire, explosion, hostile military actions, or other disasters;”⁶⁹

⁶⁶ LSA-R.S. 29:601. Added by Acts 1950, No. 38, § 1. Repealed by Acts 1993, No. 770, § 1

⁶⁷ Ibid. § 613.

⁶⁸ LSA-R.S. 29:701-716

⁶⁹ Ibid. § 704(1)

Section 705 gave the governor authority to declare by executive order a disaster emergency stating in the executive order or proclamation: (a) the nature of the disaster; (b) the area or areas threatened; and (c) the conditions which have brought it about or make possible termination of the state of disaster emergency.⁷⁰ Section 706 gave like power(s) to the principal executive officer of a local government subdivision to declare a local disaster emergency for a period not in excess of seven days.⁷¹ A state Department of Civil Defense and Emergency Preparedness was established under the adjutant general replacing the Louisiana Civil Defense Agency created in 1950. The new department was to be headed by a director appointed by and who served at the pleasure of the governor.⁷² The 1974 act updated the 1950s era law with modern day language. For almost twenty years the act went substantially unchanged but for minor amendments in 1974,⁷³ 1975,⁷⁴ 1983,⁷⁵ 1984,⁷⁶ and 1987.⁷⁷ The law remained in effect until it was repealed in 1993.⁷⁸

Louisiana Homeland Security and Emergency Assistance and Disaster Act.

Times change and the world was a much different place when the legislature convened for the 1993 Regular Session. According to official records maintained by the Federal Emergency Management Agency (FEMA)⁷⁹ between November 1974 and February 1993, there were 23 major disaster declarations all of which involved hurricanes, tropical storms, tornadoes, severe storms, heavy rains and flooding. Since 1953 all major disaster declarations in the state of

⁷⁰ Ibid. § 705(B)

⁷¹ Ibid. § 706(A).

⁷² Ibid. § 707.

⁷³ La. Acts 1974, No. 636 § 1.

⁷⁴ La. Acts 1975, no. 645 § 1.

⁷⁵ La. Acts 1983, 1st Ex.Sess., No. 1, § 6; LSA-R.S. 24:253.

⁷⁶ La. Acts 1984, No. 173, § 1, eff. June 25, 1984.

⁷⁷ La. Acts 1987, No. 761 § 1 eff. July 16, 1987.

⁷⁸ Ibid.

⁷⁹ Ibid. Stafford Act.

Louisiana but one involved flooding, hurricanes, and/or severe storms⁸⁰ Also on February 26th that year Middle Eastern terrorists detonated a car bomb in the underground parking garage below Tower One of the World Trade Center in New York City. The bomb killed six and injured 1,042 people. The terrorists intended for the bomb blast to devastate the foundation of the North Tower, causing it to collapse on its twin. As we all know that attempt failed. However less than ten years later terrorists were successful in causing the collapse of both towers on September 11, 2001 when two hijacked commercial airliners were flown directly into each tower.

The legislature considered sweeping changes to the Louisiana Disaster Act of 1974. Mindful of the actions taken by first responders to the World Trade Center following the bombing incident the legislature looked to current laws still on the books, especially in the area of immunity.

The immunity provision found in Title 29 § 613 was the starting point for change. Since the Louisiana Disaster Act of 1974 had no specific immunity protection the legislature amended and reenacted § 613, under a new heading with broader language. Section 735 in the proposed Louisiana Homeland Security and Emergency Assistance and Disaster Act provided for:

“immunity of personnel employed by the state, political subdivisions or agencies thereof...engaged in any homeland security and emergency preparedness activities, while complying with or attempting to comply with this Chapter or any rule or regulation.”

⁸⁰ “Louisiana Disaster History,” <http://www.fema.gov/news/disasters_state.fema?id=22>.

The legislature repealed the Louisiana Disaster Act of 1974 enacting a law commonly referred to as the “Louisiana Homeland Security and Emergency Assistance and Disaster Act.”⁸¹

Louisiana House of Representatives - Legislative History

The legislature repealed the Louisiana Disaster of 1974 in 1993. During the 1993 Regular Session Representative H. B. “Hunt” Downer filed House Bill No. 1312 (HB 1312) to: (a) amend and reenact Chapter 6, Title 29 of the Louisiana Revised Statutes of 1950, comprised of R.S. 29:701 through 716 relative to civil defense and emergency preparedness; (b) provide for a state civil defense and emergency preparedness agency; (c) provide for the organization, powers, duties, functions, responsibilities, personnel, and funding thereof; and (d) provide for related matters. The intended purpose was explicitly stated in Section 722:

§ 722. Purpose

A. Because of the existing possibility of the occurrence of emergencies and disasters of unprecedented size and destructiveness resulting from terrorist events, enemy attack, sabotage, or other hostile action, or from fire, flood, earthquake, or other natural or manmade causes, and in order to ensure that preparations of this state will be adequate to deal with such emergencies or disasters, and in order to detect, prevent, prepare for, investigate, respond to, or recover from these events, and generally to preserve the lives and property of the people of the state of Louisiana, it is hereby found and declared to be necessary...

(4) To reduce vulnerability of people and communities of this state to damage, injury, and loss of life and property resulting from natural or man-made catastrophes, riots, acts of terrorism, or hostile military or paramilitary action.

(5) To prepare for prompt and efficient evacuation, rescue, care, and treatment of persons victimized or threatened by disasters or emergency.

(6) To provide a setting conducive to the rapid and orderly start of restoration and rehabilitation of persons and property affected by emergencies or disasters.

(7) To authorize and provide for cooperation in emergency or disaster prevention, mitigation, preparedness, response, and recovery.

A. It is further declared to be the purpose of this Chapter and the policy of the

⁸¹ LSA-R.S. 29:721.

state of Louisiana that all homeland security and emergency preparedness functions of the state be coordinated to the maximum extent possible with the comparable functions of the federal government, other states and localities, and private agencies of every type, to the end that the most effective preparation and use may be made of the resources and facilities available for dealing with any emergency or disaster that may occur.

B. It is further declared to be the purpose of this Chapter and the policy of the state of Louisiana that all homeland security and emergency preparedness functions of the state shall follow the principles outlined in the National Incident Management System (NIMS) or its successor.⁸²

According to the legislative calendar, on April 12, 1993, the bill was read on the floor of the House and referred to the Committee on Judiciary.⁸³ On May 11, 1993, Representative Joseph Toomy, chairman of the committee called the committee to order in a committee room in the State Capitol. Members of the committee included Representatives John Siracusa (Vice-Chairman), Avery Alexander, C.E. “Peppi” Bruneau, Charles Riddle, C.O. Simpkins and Jack Smith, in addition to Toomy. All members were present for the discussion of HB 1312. Representative Downer distributed a draft of a proposed substitute bill for HB 1312, which renamed the Louisiana Disaster Act of 1974 as the Louisiana Assistance and Disaster Act. The act would have the effect of granting more specific powers to the governor, adjutant general, military department, and local governing authorities in dealing with emergencies and disasters. Ansel M. “Buddy” Stroud, Jr., State Adjutant General and Colonel Bill Croft, in their respective positions of Director and Assistant Director of the State Office of Emergency Preparedness, spoke in favor of the bill.

Following Hurricane Andrew (1992) the Office of Emergency Preparedness determined revisions of the Louisiana Disaster Act of 1974 were necessary. Among other things, the revisions addressed emergency preparedness for all hazards and more importantly would provide

⁸² LSA-R.S. 29:722(A)(B) & (C).

⁸³ La. House of Representatives, 7th Day’s Proceedings - April 12, 1993. House Journal 61.

for the Adjutant General to be the director of the Office of Emergency Preparedness rather than a gubernatorial appointee. The suggested revisions also stipulated that only the parish president or his equivalent could declare a local disaster or emergency, thereby giving the parish president the same authority as the governor under the proposed law.

After minor amendments, HB 1312 was reported by substitute House Bill No. 2084 (HB 2084) by a vote of 5-0.⁸⁴ HB 2084 also sponsored by Representative Downer provided comprehensive changes to HB No. 1312.⁸⁵ The most significant change in HB 2084 was the inclusion of the immunity language that was contained in R.S. 29:613.⁸⁶ That language provided:

“one who is engaged in emergency preparedness activities, and complying with the rules, shall not be liable for the death or injury to persons and property as a result of such activity.”⁸⁷

Specifically the proposed language stated:

§ 735. Immunity of Personnel

C. (1) Neither the state nor any political subdivision thereof, nor other agencies, nor except in the case of willful misconduct, the agents' employees or representative of any of them engaged in any homeland security and emergency preparedness activities, while complying with or attempting to comply with this Chapter or any rule or regulation promulgated pursuant to the provision of this Chapter shall be liable for the death of or any injury to persons or damage to property as a result of such activity.⁸⁸

The legislative history notes that Representative Toomy submitted a report on the bill (HB 1312) reflecting that the bill was reported by substitute (HB 2084) with the committee

⁸⁴La. House of Representatives, House Committee on Judiciary, Min. of Mtg, 1993 Reg. Sess., May 11, 1993.

⁸⁵H.B. 2084, HLSX 93-2854, Engrossed, Regular Session, 1993, Digest prepared by House Legis. Services.

⁸⁶LSA-R.S. 29:613.

⁸⁷Ibid.

⁸⁸LSA-R.S. 29:735A(1).

voting 5-0 in favor of the bill.⁸⁹ On second reading the bill was read by title, substitute title adopted and HB 2084 lies over in same order of business, noted as a substitute for HB 1312.⁹⁰

HB 2084 was read by title and on motion of Representative Toomy ordered engrossed, passed to a third reading and under the rules, placed on the regular calendar.⁹¹ On May 20th HB 2084 was on the house calendar for a third reading when it was amended and passed with a vote of 96 yeas, 3 nays. Following passage HB 2084 was referred to the Louisiana State Senate.⁹²

Louisiana Senate - Legislative History

Senator Dennis Bagneris handled the bill and obtained a suspension of the rules to take up House Bills and Joint Resolutions just received from the House. Among the bills taken up was HB 2084 and referred to the Committee on Judiciary B.⁹³

The Senate Committee on Judiciary B met on May 28, 1993. Senator Bankston, the chairman, called the meeting to order. Representative Downer sponsor of both bills (HB 1312 and HB 2084) addressed the committee explaining the need for the legislation. He said the Louisiana Disaster Act of 1974⁹⁴ had never been updated. Following Hurricane Andrew (1992) he found the act said nothing about hurricanes or authorities being allowed to actually declare an emergency prior to the occurrence of a natural disaster in order for the state's resources to mobilize and assist the state or local government agency. Under the act the disaster came first and then the declaration of the emergency. The new law would provide ability for the Governor, or local government representative(s), to first declare a state of emergency in light of a perceived actual or apparent natural or man made disaster and then invoke the provisions of law enabling the state or political subdivisions to act in response thereto.

⁸⁹ Ibid. La. House of Representatives, May 11, 1993. House Journal 52.

⁹⁰ Ibid. House Journal 53.

⁹¹ Ibid. House Journal 10.

⁹² Ibid. House Journal 49.

⁹³ La. State Senate, 1993 Regular Sess. 29th day's proceedings – May 23, 1993, Senate Journal 4.

⁹⁴ Ibid., La. Disaster Act of 1974.

After a colloquy between Representative Downer and members of the committee, minor amendments were adopted without objection. HB 2084 was reported favorably with amendments. In closing remarks Representative Downer urged the members of the committee to be vigilant when dealing with emergencies in their respective districts and encouraged the members to give us some feedback so that the legislation could be updated as need be.⁹⁵

The Senate committee took up HB 2084 for the second time on May 28th. HB 2084, reported with amendments, was adopted. Under Joint Rule No. 3 of the Rules of the Senate, the amended bill was read by title and referred to the Legislative Bureau. The Legislative Bureau is a group composed of two members of the Legislature, one selected by each house, and ex-officio, the secretary of the Senate, the Clerk of the House, and unofficially the Executive Director of the Legislative Bureau.⁹⁶

Senator Bagneris on behalf of the Legislative Bureau submitted a report to the Senate that included the action taken with respect to HB 2084 on May 29, 1993. The Legislative Bureau reported a minor amendment. The Legislative Bureau amendments were adopted and the Concurrent Resolutions and Bills and Joint Resolutions, including HB 2084, were read by title and passed to a third reading on motion of Senator Bagneris.⁹⁷

On June 2, 1993 HB 2084 on third reading and final passage was taken up on the floor of the Senate. The bill was read by title and moved for passage by Senator Bean. After roll call vote, 37 yeas, 0 nays, 2 members absent, the Chair declared the bill was passed. The title was read and adopted. Senator Bean moved to reconsider the vote and laid the motion on the table.⁹⁸

⁹⁵ La. State Senate, Senate Committee on Judiciary B, Minutes, May 28, 1993

⁹⁶ Rules of the Louisiana Legislature: Joint Rule No. 3; House Rules 7.20, 8.19 and 11.4; Senate Rule 10.15; <<http://www.legis.state.la.us/glossary2.htm>>.

⁹⁷ La. State Senate 1993 Reg. Sess. 35th day's proceedings – May 29, 1993, Senate Journal 29

⁹⁸ La. State Senate 1993 Reg. Sess. 39th day's proceedings – June 2, 1993, Senate Journal 38

The House of Representatives received a message from the Senate stating “To the Honorable Speaker and Members of the House of Representatives: I am directed to inform your Honorable body that the Senate has passed the following House Bills: ...House Bill No. 2084, reported with amendments. /s/ Michael S. Baer, III, Secretary of the Senate.”⁹⁹

Representative Ackal moved to take up House Bills and Joint Resolutions returned from the Senate with amendments. Among the bills considered HB 2084 substitute for HB 1312. The bill was taken up with the amendments proposed by the Senate. On motion of Representative Downer a vote was ordered on the concurrence of the amendments proposed by the Senate. The amendments were unanimously approved.¹⁰⁰

Representative Francis Thompson, on June 3, 1993, on behalf of the Committee on Enrollment, submitted a report to the Speaker and Members of the House of Representatives that: “...House Bills have been properly enrolled...HB 2084.”

The House reported to the Senate that the Speaker signed HB 2084 in a message on June 7, 1993.¹⁰¹ The bill was then signed by the Senate President and taken to the Governor for executive approval.¹⁰² The Louisiana Homeland Security and Emergency Assistance and Disaster Act became law on June 22, 1993.¹⁰³

Prior to the 2003 Regular Session of the legislature Representative Downer pre-filed House Bill 942 (HB 942). HB 942 sought to amend the Louisiana Homeland Security and Emergency Assistance and Disaster Act. The bill was provisionally referred to the Committee on Judiciary before the legislature met. The bill was pre-filed by Downer. When the session began HB 942

⁹⁹ Ibid. House Journal 105, 106

¹⁰⁰ Ibid. House Journal 5,23

¹⁰¹ La. State Senate 1993 Reg. Sess. 42nd day’s proceedings – June 7, 1993, Senate Journal 49-50

¹⁰² Ibid. House Journal 54,57

¹⁰³ La. Acts 1993 No. 800

was read and referred to the Committee on Judiciary. The bill sailed through the House with minor amendments, passed unanimously (100 yeas, 0 nays) and reported to the Senate.

The Senate referred HB 942 to the Legislative Bureau where no amendments were made. The bill was reported back to the Senate for final passage and passed by the Senate (35 yeas, 1 nay). Act 40 (HB 942) signed by the Governor became law on May 23, 2003.¹⁰⁴ Section 735, the immunity provision, wholly intact but for the addition of the words “homeland security.”

During the 2005 1st Extraordinary Session Representative Danny Martiny pre-filed House Bill No. 28 (HB 28). The proposed legislation had no effect on the existing immunity provision of the 1993 act. However HB 28 bill added a new provision to § 735 stating:

(2) Additionally, no prisoner in the custody of the sheriff or law enforcement agency who was evacuated to another prisoner jail during and immediately after Hurricane Katrina or Rita, and who was not released within the time required by the Code of Criminal Procedure or Title 15 of the Louisiana Revised Statutes of 1950, shall have a cause of action for damages against the sheriff or law enforcement agency for the failure to timely release the prisoner, if the failure was due to the effects of Hurricane Katrina or Rita and the lack of access to prison records and information specifying when the prisoner is to be released; however, the sheriff or law enforcement agency shall be liable for damages if within a reasonable length of time following Hurricane Katrina or Rita, the sheriff or law enforcement agency makes no attempt to ascertain when the prisoner is to be released and fails to release the prisoner from custody.¹⁰⁵

The new provision provided immunity to sheriffs or law enforcement agencies for delays in failing to timely release prisoners in custody during Hurricanes Katrina and Rita. The bill sailed through the House passing with a vote of 97 yeas, 4 nays before referral to the Senate. The Senate quickly passed the bill by a vote of 35 yeas, 2 nays. Governor Blanco signed the bill

¹⁰⁴ La. House of Representatives, 2003 Reg. Sess. H.B. 942 (Act 40) History, <<http://www.legis.state.la.us/bills/byinst.asp?sessionid=03RS&billid=HB942>>.

¹⁰⁵ LSA-R.S. 29 § 735A(2).

making it law on December 6, 2005.¹⁰⁶ The most unique aspect of the law was that it was given retroactive application to August 29, 2005.

The Governor called the legislature to meet for the 1st Extraordinary Session 2006. During that session the Louisiana Homeland Security and Emergency Assistance and Disaster Act was amended once again. House Bill No. 61 (HB 61) later adopted as Act No. 35 created a new state agency, the Governor's Office of Homeland Security and Emergency Preparedness. The new office, in and under direction of the Governor, became responsible for homeland security and emergency preparedness. The Military Department was relieved of its former obligations and responsibilities with the responsibilities now being assigned to the Director of the Governor's Office of Homeland Security and Emergency Preparedness.¹⁰⁷ The immunity provision § 735A again remained wholly intact.

¹⁰⁶ La. House of Representatives, 2005 1st Ex. Sess. H.B. 28 (Act 46) History, <<http://www.legis.state.la.us/billdata/History.asp?sessionid=051ES&billid=HB28>>.

¹⁰⁷ LSA-R.S. 29:725.

Chapter V

The Litigation

Louisiana law is different than all the other 49 states. Louisiana law is based on the Code Napoleon while the other 49 states all have laws based on the English common law. The common law system is based on precedent. The Louisiana Civil Code takes the civilian law approach based on scholarly research and the drafting a code of laws passed by the legislature. When involved in litigation it becomes a judge's job to interpret the legislative intent rather than just follow judicial precedent.

The determination of the meaning of a statute from its language, controlled by certain settled rules, and assisted by certain accepted aids, constitutes construction. The legislature is presumed to mean what it plainly expressed. Consequently where a statute is in plain and unambiguous terms there is no necessity for construction for the province of construction lies wholly within the domain of ambiguity. Where, however the words of a statute do not make clear the meaning of the legislature (the intent), the court must resort to construction, and may go to the extent of expunging, inserting or changing the very words of the legislature.

The object of construction is to ascertain the intent of the legislature as expressed in the words of the statute. The principle that intent is the cardinal rule of construction, though long asserted by the courts, is misleading; for intent is more than a mere rule of construction; it is the object of construction. The purpose of the courts in formulating such rules is to provide directions for finding intent. This intent, when discovered prevails; and the language used is to be given such meaning as will make it effective.

The Sewerage and Water Board and Orleans Levee District, among others, are defendants in multiple consolidated Class Action Complaints filed in the United States District Court for the Eastern District of Louisiana and elsewhere as is hereinafter noted.¹⁰⁸

The local bar did not wait long to gather facts and tens of thousands of clients sufficient to support claims wrought by Hurricane Katrina. On September 19, 2005 while the city of New Orleans was in the process of being drained by the U.S. Army Corps of Engineers, a mad dash to courthouse was taking place. The first of what would be fifty-one civil actions were filed against the Sewerage and Water Board and others including private companies, elected officials, the state and political subdivisions. All are seeking damages resulting from the levee and floodwall breaches following Hurricane Katrina.

The suits were filed in the United States District Court for the Eastern District of Louisiana, the United States District Court for the Middle District of Louisiana, Civil District Court for the Parish of Orleans, State of Louisiana and the Twenty-Fourth Judicial District Court for the Parish of Jefferson, State of Louisiana.

The study deals with the issue of the immunity defense argued as a preliminary defense in the litigation by the Sewerage and Water Board and Orleans Levee District. The plaintiffs are represented by local, state and nationally known members of the bar of Louisiana and elsewhere who literally flooded the courts with thousands of Hurricane Katrina related damage suits. The top defense lawyers and law firms from all over the state of Louisiana equally represent the defendants.

On September 19, 2005, three weeks following landfall of Hurricane Katrina in Louisiana, the first Class Action Complaint¹⁰⁹ was filed in the United States District Court for the Eastern District of Louisiana, located in New Orleans, by Colleen Berthelot, et al,

¹⁰⁸ *In Re: Katrina Canal Breaches Consolidated Litigation*, No. 05-4182, (E.D.La.) 2006.

“on their own behalf, and on behalf of a class of plaintiffs similarly situated but as yet unidentified as plaintiffs herein represent that they have injuries in common to all those similarly situated who incurred damages arising out of the breach and failure of the hurricane protection levees and flood walls situated in the Parish of Orleans, State of Louisiana in the wake of Hurricane Katrina.”¹¹⁰

Neither the state nor any political subdivision of the state of Louisiana was named in the initial complaint. The complaint named only Boh Brothers Construction Co., L.L.C. and Gulf Coast, Inc. as being responsible for the damages caused by negligence during the course of construction activities of levees and floodwalls.¹¹¹

In identifying the members of the alleged “class” the allegation included:

“all residents, domiciliaries, and property owners of Orleans and Jefferson in the state of Louisiana who were affected by the flooding caused by the failure of the hurricane protection levees and flood wall in New Orleans, Louisiana, and who have sustained any injury or damage thereby, or (b) who may suffer such injury or damage in the future as a result thereof, or (c) who have sustained a justifiable fear of sustaining such injury or damage in the future as a result thereof.”¹¹²

In amended pleadings and new suits filed in the year following Hurricane Katrina the list expanded to include the city of New Orleans, state of Louisiana, public officials, political subdivisions of the state, insurance carriers, contractors, architects, engineers and others as named defendants.

United States District Court Judge Stanwood R. Duval, Jr., is the presiding judge assigned the litigation in federal court. Judge Duval promulgated a Protocol for Case Management, Case Management Order Number 1, on July 19, 2006, ordering:

“...the caption of the consolidated matters shall be, and is hereby changed from Colleen Berthelot, et al. v. Boh Brothers Construction Co., L.L.C., et al to In Re: Katrina Canal Breaches Consolidated Litigation...for case management purposes, In Re: Katrina Canal Breaches Consolidated Litigation shall be divided

¹⁰⁹ A legal action undertaken by one or more plaintiffs on behalf of themselves and all other persons having an identical interest in the alleged wrong. Not one case has been certified by the court as a Class Action to date.

¹¹⁰ In Re: Katrina Canal Breaches Consolidated Litigation, No. 05-4182, (E.D.La.) Doc. 1-1, I., (2006).

¹¹¹ Ibid III.

¹¹² Ibid IV.

into four sub-categories which are as follows: (1) Levee Cases, (2) MRGO Cases, (3) Insurance Cases, and (4) Responder Cases.”¹¹³ In a subsequent case management order the court added two new sub-categories (5) St. Rita and (6) Dredging Limitations.¹¹⁴

Early in the litigation the Orleans Levee District moved for recusal of all Judges and Magistrates of the United States District Court En Banc, contending that pursuant to the constricts of Title 28 U.S.C.A. §§ 455(a)¹¹⁵ and § 455(b)(4)¹¹⁶, such recusal is mandated.¹¹⁷ The arguments were that as the result of the flooding of 80% of the city of New Orleans:

(a) the courthouse closed its doors for two months forcing Judges and their staffs to work from other locations;

(b) Chief Judge Helen “Ginger” Berrigan had issued a Global Order granting the United States of America’s Motion to Continue all pending criminal proceedings in the Eastern District;

(c) other District Court Judges and Magistrates had issued rulings recognizing the incalculable impact of Hurricane Katrina on themselves, their families, and the court as a whole; and

(d) numerous Judges and Magistrates had recused themselves for reasons relating to the storm in other cases.

Simply put the Orleans Levee District advocated that all Judges and Magistrates were technically putative members of the alleged class.

Judge Duval denied the motion citing it to be procedurally improper but gave the Orleans Levee District additional time to file a proper motion seeking disqualification of Magistrate Wilkinson and himself.¹¹⁸ Following the adverse ruling the Orleans Levee District filed a

¹¹³ *Berthelot v. Boh*, No. 05-4182 (E.D.La) Doc. 790.

¹¹⁴ *In Re: Katrina Canal Breaches Consolidated Litigation*, Doc. 1403.

¹¹⁵ Section 455(a) provides, “Any justice, judge or magistrate of the United States shall disqualify himself in any proceeding in which his partiality might reasonably be questioned.

¹¹⁶ Section 455(b)(4) provides in relevant part: “He shall also disqualify himself...[where] he knows that he, individually or as a fiduciary, or his spouse or minor child residing in his house Orleans Levee District, has a financial interest in the subject matter or controversy or is a party to the proceedings, or any other interest that could be substantially affected by the outcome of the proceeding.”

¹¹⁷ *In Re: Katrina Canal Breaches Consolidated Litigation*, Doc. 53.

¹¹⁸ *Ibid.* Doc. 56.

separate Motion for Disqualification of Judge Duval as trial judge citing specific reasons why recusal was in order.¹¹⁹ Another defendant, Washington Group International, Inc., filed a similar motion.¹²⁰ The court allowed oral argument on April 19, 2006.¹²¹ In a lengthy ruling issued May 4, 2006, Judge Duval denied both motions.¹²²

The Orleans Levee District then filed a Petition for Writ of Mandamus to the United States District Court for the Eastern District of Louisiana to the United States Court of Appeals Fifth Circuit.¹²³ The writ was denied.¹²⁴

Thereafter the Orleans Levee District applied for a Supervisory Writs to the Supreme Court of the United States. The writs were denied.¹²⁵

In Civil District Court for the Parish of Orleans the Orleans Levee District (CDC) filed Motions for Recusal of each judge assigned a Katrina related case for similar reasons as were argued in federal court. The Civil District Court has yet to rule on any motion(s) for recusal. Every time a judge of the court is assigned to hear a pre-trial motion the Orleans Levee District has challenged that judge's impartiality to hear the matter causing the case to be reassigned to another judge for the purpose of holding an impartial hearing on the issues. For this reason the cases are at a virtual standstill in Civil District Court.

The status of the litigation in the Twenty-Fourth Judicial District Court for the Parish of Jefferson (24th JDC) is not much better even though all judges voluntarily stepped aside and a judge from outside the Greater New Orleans area was appointed to handle the matters.¹²⁶

¹¹⁹ Ibid. Doc. 61.

¹²⁰ Ibid. Doc. 63.

¹²¹ Ibid. Doc. 198.

¹²² Ibid. Doc. 285.

¹²³ An order issued from a court requiring the performance of a specified act, or giving authority to have it done. Latin: We command.

¹²⁴ *In Re: Board of Commissioners of the Orleans Levee District; Washington Group International, Inc.* 06-30351(C.A. 5 Cir) (2006).

¹²⁵ Katrina Canal Breaches Consolidated Website; Current Developments Section, Last Updated: March 28, 2007, <<http://www/laed.uscourts.gov/CanalCases/CanalCases.htm>>.

In federal court the Post-Katrina litigation has become so voluminous that for the benefit of the lawyers, litigants and other interested parties seeking information about the “In Re: Katrina Canal Breaches Consolidated Litigation” a special website has been created.¹²⁷

According to Case Management Order No. 4: “The total number of cases consolidated in this action varies from day to day, but currently includes approximately 170 separately filed civil actions, including about four dozen putative class actions. They have been consolidated in this court for case management purposes because they appear to include common issues of law and fact involving the cause and effect of the inundation by water of the Greater New Orleans area during Hurricane Katrina on August 29, 2005 and immediately thereafter.”¹²⁸

The state court litigation seeks damages from the Sewerage and Water Board of New Orleans and the Orleans Levee District and others. The United States of America is not named in any state court proceeding because the federal government can only be sued in federal court.¹²⁹

In order to address the never-ending issues arising daily Protocol For Case Management – Case Management Order Number 1 was issued to delineate a set of rules by which parties in those cases presently consolidated before the court and all parties in litigation subsequently consolidated shall be bound.¹³⁰

¹²⁶ Honorable John Peytavin of the 23rd Judicial District Court for Assumption Parish.

¹²⁷ <http://www.laed.uscourts.gov/CanalCases/CasesCases/.htm>.

¹²⁸ *In Re: Katrina Canal Breaches Consolidated Litigation*, Doc. 3299

¹²⁹ *Baudot v. Sewerage and Water Board of New Orleans*, 06-09718 (Civ. Dist. Ct.), 2006; *Bennett v. Board of Commissioners for the East Jefferson Levee District*, 635-594 (La. 24th JDC) 2006; *Brubbacher v. Board of Commissioners for the Orleans Levee District*, 06-09775 (Civ. Dist. Ct.) 2006; *Diggs v. Sewerage and Water Board of New Orleans*, 06-09753 (Civ. Dist. Ct.) 2006; *Fleming v. United States of America*, 06-5159 (E.D.La) 2006; *Green v. Board of Commissioners for the Orleans Levee District*, 06-09803 (Civ. Dist. Ct.) 2006; *Hoskins v. State of Louisiana*, 06-8439, (Civ. Dist. Ct.) 2006; *Laurendine v. Board of Commissioners for the Orleans Levee District*, 05-11660 (Civ. Dist. Ct.) 2005; *Metters v. Board of Commissioners for the Orleans Levee District*, 06-09796 (Civ. Dist. Ct.); *Pfister v. Board of Commissioners for the Orleans Levee District*, 06-09786 (Civ. Dist. Ct.) 2006; *Rieth v. Sewerage and Water Board of New Orleans*, 06-09744 (Civ. Dist. Ct.) 2006; *Robinson v. Sewerage and Water Board of New Orleans*, No. 06-09726 (Civ. Dist. Ct.) 2006; and *Rodriguez v. Sewerage and Water Board of New Orleans*, 06-09763 (Civ. Dist. Ct.) 2006.

¹³⁰ *Berthelot*, 05-4182, Doc. 790.

On March 1, 2007 the court issued “Case Management and Scheduling Order No. 4” mandating the filing of “Master Class Action Pleadings” in the Levee, MRGO and Insurance cases, the only three claim categories addressed in the order.¹³¹

The Superceding Master Consolidated Class Action Complaint was “intended to supercede and replace all class action complaints arising from the catastrophe which previously have been filed in or transferred to this (sic) Section of Court, and placed within the “Levee” category of cases.”¹³²

Plaintiffs allege that the Orleans Levee District and Sewerage and Water Board had responsibility for: dredging activity in the 17th Street Canal that compromised the safety of the canal levees and floodwall systems; breached duties by seeking a dredging permit for the 17th Street Canal; was negligent by failing to withdraw the request for the dredging permit; seeking to have the 17th Street Canal dredged to a depth lower than the sheet piles; and for refusing to agree to the implementation of the Congressionally-authorized “Barrier Plan” which would have reduced storm surge from Hurricane Katrina and prevented the adoption of a flawed, alternative plan with respect to the 17th Street Canal.¹³³

In connection with the design and construction of the levees and floodwalls plaintiffs allege the Sewerage and Water Board had responsibility for design and construction of the levees/flood wall system along with the Orleans Levee District and others¹³⁴ and was negligent in failing to discover risks and dangers associated with the design and construction of the 17th Street Canal levee/flood wall system.¹³⁵

¹³¹ *In Re: Katrina Canal Breaches Consolidated Litigation*, Doc. 3299.

¹³² *Ibid.*, Doc. 3420.

¹³³ *In Re: Katrina Canal Breaches Consolidated Litigation*, Doc. 3420.

¹³⁴ *Ibid.*, Doc. 3420, ¶ 217

¹³⁵ *Ibid.*, Doc. 3420, ¶ 229

Similar allegations are directed at the Orleans Levee District in that they: also refused to agree to the implementation of the “Barrier Plan” which would have reduced storm surge from Hurricane Katrina and prevented the adoption of a flawed, alternative plan with respect to the 17th Street Canal; and failed to conduct appropriate oversight, maintenance and inspection of the 17th Street Canal levee/floodwall system by allowing dredging in the 17th Street Canal.¹³⁶

In connection with design and construction of the levees and floodwalls plaintiffs allege that the Orleans Levee District: had responsibility for design and construction of the levees/flood wall system along with the Sewerage and Water Board and others and¹³⁷ was negligent in failing to discover risks and dangers associated with the design and construction of the 17th Street Canal levee/floodwall system.¹³⁸

The damages run the gamut from wrongful death, property damage, property losses, evacuation expenses, mental anguish and suffering, loss of income and other economic losses and a need for medical monitoring (Robinson);¹³⁹ destruction and environmental contamination to property, mental anguish, emotional distress, inconvenience, loss of use of property, loss of property, loss of property value, loss of profits, loss of business opportunity and fear of future injury and death (Fleming);¹⁴⁰ exposure of individuals and property to flood-borne toxic substances requiring future medical monitoring and increased insurance costs and family separation (Bennett).¹⁴¹

In law, a class action is an equitable procedural device used in litigation for determining the rights of and remedies, if any, for large numbers of people whose cases involve common questions of law and fact. Anyone in the state of Louisiana impacted by Hurricane Katrina are

¹³⁶ Ibid. Doc. 3420, ¶¶ 210-212

¹³⁷ Ibid. Doc. 3420, ¶ 217

¹³⁸ Ibid. Doc. 3420, ¶ 229

¹³⁹ *Robinson*

¹⁴⁰ *Fleming*

¹⁴¹ *Bennett v. Board of Commissioners of the East Jefferson Levee District*, No. 635-594 (La. 24th JDC)

conceivably putative members of the class. The Federal Rules of Civil Procedure govern Class Action proceedings.¹⁴² On March 30, 2007, the plaintiffs filed a formal Motion for Class Certification in accordance with Rule 23 of the Federal of Civil Procedure.¹⁴³ If the class is certified and the plaintiffs are successful in proving liability and damages, the judgment will be staggering.

Risk Management Solutions, the world's leading provider of products and services for the quantification and management of catastrophic risks, expects the economic loss only will exceed \$100 billion from Hurricane Katrina and the Great New Orleans Flood.¹⁴⁴ The Corps of Engineers documented that the claims filed by the state of Louisiana and the City of New Orleans alone exceed \$277 billion dollars.¹⁴⁵ Literally the potential damages in the litigation are incalculable.

The immunity section of the Louisiana Homeland Security and Emergency Assistance and Disaster Act, § 735 is of paramount importance to the Sewerage and Water Board and the Orleans Levee District. It serves to insulate these governmental entities from all liability for their role in “emergency preparedness” under the act. If the agencies are protected by the act, as the legislature intended them to be, then the public trough at state and local levels is protected as it should be.

The immunity provision was enacted to protect those entities and individuals covered by the act: “while complying with or attempting to comply with this Chapter, or any rule or regulation promulgated pursuant to the provisions of this Chapter from liability for the death of or any injury to persons or damage to property as a result of such activity, “except in the case of

¹⁴² Fed.R.Civ.P. 23

¹⁴³ *In Re: Katrina Canal Breaches Consolidated Litigation*, Doc Nos. 3629, 3612

¹⁴⁴ <http://www.rms.com/NewsPress/PR_090205_HUKatrina.asp>.

¹⁴⁵ Eyewitness News Report at 6 p.m., WWL-TV, New Orleans, Mar. 21, 2007.

willful misconduct”.¹⁴⁶ The statute is silent as to need for a formal declaration of a state of emergency by the governor to trigger relevant provisions of the act.¹⁴⁷

The Sewerage and Water Board and Orleans Levee District have in pre-trial pleadings argued that dismissal under § 735 is warranted.¹⁴⁸ Critical to an understanding of this mandatory, non-discretionary provision is the definition of “emergency preparedness.”

La. R.S. 723(3) defines emergency preparedness as follows:

“Emergency preparedness” means the mitigation of, preparation for, response to, and the recovery from emergencies or disasters. The term “emergency preparedness shall be synonymous with “civil defense”, “emergency management”, and other related programs of similar name.”¹⁴⁹

The Orleans Levee District and Sewerage and Water Board are political subdivisions of the State of Louisiana.¹⁵⁰ In providing reasons for dismissal under § 735 there are substantial and irrefutable facts: the claims arose out of a natural or manmade disaster, Hurricane Katrina and any actions the Orleans Levee District and/or Sewerage and Water Board took in furtherance of their statutory mandate for flood protection or drainage fit squarely within the broad definition of “emergency preparedness.” Moreover “emergency preparedness” is synonymous with “emergency management.”

§ 723 Definitions As used in this Chapter:

“Disaster” means the result of a natural or man-made event which causes loss of life, injury, and property damage, including but not limited to natural disasters, such as hurricanes, tornado, storm, flood, high winds, and other weather related events, forest and marsh fires, and man-made disasters, including but not limited to nuclear power plant incidents, hazardous material incidents, oil spills, explosion, civil disturbances, public calamity, acts of terrorism, hostile military action, and other events, related thereto.”¹⁵¹

¹⁴⁶ LSA-R.S. 29:735A(1).

¹⁴⁷ Ibid. § 724.

¹⁴⁸ Ibid. § 735(A).

¹⁴⁹ Ibid. § 723(3)

¹⁵⁰ LSA-R.S. 38:291(K), 307, *et seq.* & 33:4071 *et seq.*

¹⁵¹ LSA-R.S. 29:723(1)

Without question Hurricane Katrina was a “disaster.” The Superceding Master Class Action Complaint acknowledges this fact. The entire premise of the litigation is firmly rooted in principle that Hurricane Katrina was the precipitating cause for a sequence of events leading to the failure of the levees and floodwalls.

§ 723 (2) “**Emergency**” is defined in the Act as:

- (a) The actual or threatened condition which has been or may be created by a disaster; or
- (b)(i) Any natural or man-made event which results in an interruption in the delivery of utility services to any consumer of such services and which affects the safety, health, or welfare of a Louisiana resident; or
- (ii) Any instance in which a utility’s property is damaged and such damage creates a dangerous condition to the public.
- (iii) Any natural or state emergency, including acts of terrorism or a congressional authorization or presidential declaration pursuant to the War Powers Resolution (50 U.S.C. 1541 et seq.)¹⁵²

It is indisputable that Hurricane Katrina as it approached the coast of Louisiana as a Category 5 hurricane created an “emergency.”¹⁵³ Striking Coastal Louisiana and following the path it took just east of New Orleans with its torrential rainfall and wind speeds nearly approaching 175 mph created an actual “disaster.”

Maintaining levees, floodwalls, flood control structures and equipment needed in furtherance thereof are ongoing statutory responsibilities of levee districts. Likewise planning for, implementing and/or making improvements in flood control structures be they floodgates or water depth monitors constitutes “emergency preparedness.” Dredging outfall canals to facilitate greater hydraulic flow of water from pumping stations to and thru outfall canals connected to Lake Pontchartrain and increasing pumping capacity also unquestionably constitute “emergency

¹⁵² Ibid. § 723(2)(a) and (b)

¹⁵³ Ibid. Proclamation No. 62 KBB 2005.

preparedness.” Levees, floodwalls, drainage pumping station and drainage canals are not built overnight. Looking at the big picture a broad time frame (i.e. years) rather than a limited timeline (i.e. days, weeks or months) should be factored into the equation.

La. R.S. 38:325 empowers each levee board within the state to engage in any activities related to flood protection and the construction and maintenance of levees. Building and maintaining levees and other flood control structures are acts of emergency preparedness entitling a levee district to immunity under La. R.S. 29:735¹⁵⁴

The immunity provision § 735 applies to both man-made and natural disasters, pretermittting any argument over the cause(s) of the levee failures or floodwalls. As a matter of law, La. R.S. 29:735 bars plaintiffs’ actions for personal injury and property damage arising out of levee breaches in the wake of Hurricane Katrina.

Recognizing the Orleans Levee District and Sewerage and Water Boards’ immunity, advances the Act’s purpose articulated in La. R.S. 29:722(A) for Katrina certainly was a “disaster” of unprecedented proportion. President Bush, Governor Blanco and Mayor Nagin all issued formal proclamations identifying Katrina and its aftermath as both a disaster and emergency.¹⁵⁵

Further arguing that constructing, maintaining and inspecting levee are acts of “emergency preparedness” as defined in the act we look to the statutory mission of the Orleans Levee District (in compliance with specific federal guidelines and assurances, and at the direction of the Corps of Engineers) to locate, relocate, construct, maintain, extend and improve levees...”¹⁵⁶ Levees

¹⁵⁴ *Hontex Enterprises, Inc. v. City of Westwego*, No. 02-506 (La. App. 5 Cir 12/11/2002); 833 So.2d 1234, *writ denied*, 2003-0505 (La. 9/5/2003); 852 So. 1041.

¹⁵⁵ *Ibid.* Proclamation No. 62 KBB 2005; President George W. Bush Declaration of Emergency, Aug. 2005.

¹⁵⁶ LSA-R.S. 38:307(A)(1)

have but one purpose; namely, to protect residents from flooding.¹⁵⁷ The plaintiffs are well aware of this fact for they allege in their complaint in great detail that the purpose of the levees was to protect residents in Southern Louisiana from flooding.¹⁵⁸ Louisiana courts have also recognized the role of levees in “emergency preparedness.”¹⁵⁹

Plaintiffs alleged the Orleans Levee District was negligent and/or strictly liable for failing to test whether the design, construction and maintenance of the levees were adequate, proper and within standards and ensure the adequacy of the construction, design and maintenance of the levees. Essentially the plaintiffs allege that their damages resulted from the Orleans Levee District being unprepared for this emergency. These allegations are directed to acts of negligence in preparing for any emergency or disaster potentially caused by a hurricane such as Hurricane Katrina. For these reasons and others § 735 should clearly serve as a complete bar to claims against the Orleans Levee District as a result of the levee and floodwall failures.

The Sewerage and Water Board of New Orleans, as noted previously, is charged with drainage of the City of New Orleans to prevent flooding.¹⁶⁰ The purpose of drainage is to prevent flooding from rainfall, storms, and/or hurricanes. The Superceding Master Consolidated Class Action Complaint alleges failures in the Lake Pontchartrain Hurricane Protection Project resulting in flooding after Hurricane Katrina and the failure of the Hurricane Protection System.¹⁶¹ The Lake Pontchartrain Hurricane Protection Project is a federal project for which the Sewerage and Water Board or Orleans Levee District bear no responsibility. Their only

¹⁵⁷ 33 U.S.C. 701, *et seq.*, The Flood Control Act; *Board of Com’rs of the Orleans Levee District v. Kelly* 73 So.2d 299 (La. 1954)

¹⁵⁸ E.g. *Berthelot*, 05-4182 (E.D.La.) Class Action Complaint, ¶ XIII, *Tauzin*, 06-0020, (E.D.La.) Class Action Complaint, Introduction and ¶¶ 44-50,59-60; *Sanchez*, 06-2287 (E.D.La.) Class Action Complaint ¶12.

¹⁵⁹ *Ibid.* *Hontex Enterprises, Inc.*

¹⁶⁰ LSA-R.S. 33:4082.1-4093.

¹⁶¹ *Ibid.* *In Re: Katrina Canal Breaches Consolidated Litigation*, Doc. 3420, 104-149.

contributions to the project were the federally mandated cost-sharing agreement that in default of payment would have contributed to the delay of implementing the project.

In response to the complaints the Sewerage and Water Board denied all allegations specifically averring forty-eight separate affirmative defenses including the defenses of immunity found in Title 9 of the Louisiana Revised Statutes § 2793.1 and § 2800. The relevant portions of these statutes state:

§ 2793.1 Immunity from liability for public entities; fire departments; law enforcement agency; public emergencies; F.B.I. agents

A.No person shall have a cause of action against a public entity or the officers or employees thereof for damage to property at the site of a crime, accident, or fire, including without limitation the destruction or deterioration of property, caused while the officer or employee was acting in the course and scope of his office or employment and while taking reasonable remedial action which is necessary to abate a public emergency, unless such damage was caused by willful or wanton misconduct or gross negligence.

B. (1) As used in this Section, “public entity” means the state, or a political subdivision...

(2) For purposes of this Section, the term “public emergency” includes any emergency in which there is a potential threat to life or property requiring immediate or remedial action, in order to insure the safety and health of persons and property...

§ 2800.Limitation of liability for public bodies

A.A public entity is responsible under Civil Code Article 2317 for damages caused by the condition of things within its care and custody.

B. Where other constructions are placed upon state property by someone other than the state, and the right to keep the improvements on the property has expired, the state shall not be responsible for any damages caused thereby unless the state affirmatively takes control of and utilizes the improvement for the state’s benefit and use.

C. Except as provided for in Subsections A and B of this Section, no person shall have a cause of action based solely upon liability imposed under Civil Code Article 2317 against a public entity for damages caused by the condition of things within its care and custody unless the public entity had actual or constructive notice of the particular vice or defect which caused the damage prior to the

occurrence, and the public entity has had a reasonable opportunity to remedy the defect and has failed to do so.

D. Constructive notice shall mean the existence of facts which infer actual knowledge.

G (1) “Public entity” means and includes the state and any of its branches, departments, offices, agencies, boards, commissions, instrumentalities, officers, officials, employees, and political subdivisions and the departments, offices, agencies, boards, commissions, instrumentalities, officers, official, and employees of such political subdivisions...

The immunity defenses available under Title 9 are separate and totally distinct from the immunity defense available under § 735 of the Louisiana Homeland Security and Emergency Assistance and Disaster Act.¹⁶² The act’s immunity provision does not end at affording protection to a political subdivision’s actions in designing, constructing and maintaining levees or performing drainage responsibilities. In very clear terms, La. R.S. 723(A)(3) extends the scope of immunity to a political subdivision’s “response to, and the recovery from emergencies or disasters.”

The Plaintiffs’ first line of defense in opposing the Orleans Levee District’s and Sewerage and Water Boards’ Motion for Dismissal was that the motions were premature. Citing that the litigation was still in its early stage plaintiffs’ argued that there was much discovery to be done dealing with a multiplicity of issues including: (a) all dredging and other improvement activities undertaken by the Orleans Levee District and/or the Sewerage and Water Board of New Orleans in the 17th Street or London Avenue Canals; (b) interference by the defendants with the Corps of Engineers desire to install tidal gates and pumps at the drainage canal outfalls along Lake Pontchartrain in the 1960’s and thereafter; (c) the application and approval process concerning the permit the Sewerage and Water Board received from the Corps of Engineers in 1988 to widen and deepen the 17th Street Canal; (d) other permits for projects that the Sewerage and Water Board or the Orleans Levee District applied for and received from the Corps of

¹⁶² LSA-R.S. 9:2793.1 & 2800.

engineers; (e) the Sewerage and Water Board's investigation and response to citizen complaints of water allegedly leaking from the 17th Street Canal and pooling in their back yards in advance of the floodwall collapse; and (f) a complete examination of the maintenance and inspection procedures undertaken by the agencies in furtherance of their statutory mandated and/or agreements with the Corps of Engineers.

Secondly plaintiffs' argued that even if the most favorable provisions of the Louisiana Homeland Security and Emergency Assistance and Disaster Act were applicable, as suggested by the Orleans Levee District and Sewerage and Water Board, the specific provisions of § 735 does not exempt the agencies if proof of "willful misconduct" is proven in the agencies disaster response or emergency preparedness activities.

Plaintiffs' contend that the building of levees and floodwalls in and around New Orleans are not "emergency preparedness" activities as defined by the act. They contend that there must actually be an impending emergency or an emergency in progress for § 735 to apply. They cite, for example, that: years of shoddy levee construction; annual inspections of 129 miles of levees taking less than three hours by vehicle; opposition to Corps of Engineers recommendations delaying construction and implementation of the complete hurricane protection system project envisioned in 1965, among other reasons, cannot be considered as "emergency preparedness" activities under any reasonable interpretation of these terms. Plaintiff attorneys attempted to distinguish the jurisprudence (case law) cited by the governmental agencies as being clearly inapplicable considering the particular facts and circumstances alleged in the Katrina litigation. Plaintiffs' further suggested that the Orleans Levee District breached its statutory obligations giving rise to absolute or strict liability.

Relevant statutory law submitted firmly rooted their argument that § 735 does not apply.¹⁶³ The statutory violations coupled with the levee district's negligence and sub-standard levee construction arguably provided overwhelming reasons for the court to ultimately deny the relief prayed for by the Orleans Levee District after holding the matter under advisement for over four months.

Plaintiffs argued that the Sewerage and Water Board: failed to follow recommendations suggested by the Corps of Engineers to remedy that the board's drainage canals were slowly sinking; opposed the Corps plan to install tidal gates and pumps at the drainage canal outfalls along Lake Pontchartrain for fear that the tidal gates would malfunction inhibiting the outflow of pumped storm water, which would in turn cause flooding; knew that widening and deepening of the 17th Street Canal might weaken the stability of the canal, its levees and floodwalls; failed to properly investigate, report to other authorities (i.e. the Corps or Levee District) and come to a reasonable conclusion as to the source of water pooling in rear yards of homeowners who lived directly adjacent to the 17th Street Canal in the year before the floodwalls failed after multiple citizen complaints.

Plaintiffs acknowledge the Sewerage and Water Board's statutory responsibilities are to operate and maintain the drainage systems of the City of New Orleans.¹⁶⁴ Rejecting the Sewerage and Water Board's argument that its responsibility for drainage ends at the discharge end of the pumping stations (i.e. the base of the outfall canal) the plaintiffs' contend that the Board's position ignored over 100+ years of their historical duty to maintain the drainage canals – the entire length and full extent of the canals. Consistent with the duty to maintain the canals

¹⁶³ LSA-R.S. 38:181, 301, 307, 315, 325.

¹⁶⁴ LSA-R.S. 33:4071

plaintiffs argued that the Board had an obligation to insure that it (the Board) did nothing to diminish the structural integrity of the drainage system.

Although the Board disclosed no evidence of any involvement in the maintenance of the 17th Street Canal, the plaintiffs' argued that the case of Kelly v. Boh Bros. Const. Co., Inc., contradicted this fact.¹⁶⁵

In Kelly the Sewerage and Water Board participated in joint venture with the Orleans Levee District in the 17th Street Canal. Boh Bros. was hired to perform dredging operations to improve hydraulic flow and drainage capacity of the canal just north of the pumping station and the bridge over the canal on Veterans Boulevard. Chet Kelly and Kenneth Perez were injured on November 3, 1990 in the 17th Street Canal when the small boat there were in collided with an unmarked wire or cable attached to one end to a crane boom high above the water line and at the other end to a heavy bucket being used as an anchor, at the bottom of the waterway. The crane was situated on a barge owned by Boh Bros., doing the dredging work for the Orleans Levee Board and the Sewerage and Water Board. The Louisiana Fifth Circuit Court of Appeal accepted the factual findings of the trial court that Boh was acting on behalf of the levee district and board resulting in a judgment in favor of the plaintiffs.¹⁶⁶

Responding to the Sewerage and Water Board's argument that the Corps of Engineers and the Orleans Levee District are statutorily responsible for maintaining the levees and that the Flood Control Act is dispositive on that issue, the plaintiffs asserted the Flood Control Act clearly provides that once completed -- levee projects are to be turned over to the levee district protected for maintenance thereafter.¹⁶⁷

¹⁶⁵ 694 So. 463 (La. App. 5th Cir,1997)

¹⁶⁶ Ibid, 466.

¹⁶⁷ 33 U.S.C.A. § 702. Mississippi River.

Lastly the plaintiffs rejected the Sewerage and Water Board's assertion that the Southeast Louisiana Urban Flood Control Project (SELA) established a federally mandated legal responsibility concerning the subject levees.¹⁶⁸ The purpose of the SELA project in Orleans and Jefferson Parishes was for the channel and pumping station improvements to support the parishes' master drainage plans and generally provide flood protection on a level associated with a ten-year rainfall event, while also reducing damages for larger events.¹⁶⁹

The Louisiana Fifth Circuit recognized the right of a levee district to invoke the Act's immunity provisions in Hontex Enterprises, Inc. v. City of Westwego. In Hontex the court noted that defendant, the City of Westwego had immunity under § 735 for the alleged negligent acts taken to prepare for an emergency. What the city did was build a ring levee around a leaking pie at Hontex's shrimp processing plant because the plant was outside the West Jefferson Levee District's hurricane protection levee and flooding inside the ringed levee caused damages to plant equipment and nearby landowner's properties. The Hontex case was fact specific and was decided on Motion for Summary Judgment after many depositions were taken. The pump that was leaking water that caused the problem (flooding) belonged to the seafood company and not the city.¹⁷⁰

Another reported decision addressing in applicability of La. R.S. 29:735 is Castille v. Lafayette City-Parish Consolidated Government, in which case the § 735 afforded immunity to the City of Lafayette in a negligence action brought by vehicle occupants injured as the result of debris city employees left on the roadway during clean up efforts after Hurricane Lili (2002). Affirming the trial court's granting the City's summary judgment, the Third Circuit held that

¹⁶⁸ Water Resource Development Act (WRDA) of 1996, Pub. L. 104-303; Pub. L. 104-46 (§§ 108 and 533.

¹⁶⁹ Southeast Louisiana Urban Flood Control Project, Jefferson, Orleans & St. Tammany Parishes, LA Fact Sheet, U.S.Army Corps of Engineers, January 26, 2005.

¹⁷⁰ *Hontex*, 02-506 (La. App. 5 Cir. 12/11/2002) 833 So. 1234, writ denied, 2003-0505 (La. 9/5/2003) 852 So.2. 1041.

“clearing roadways of debris deposited by a hurricane to allow emergency vehicles to pass” constituted emergency preparedness activities, entitling the City and its employees to immunity. However it is noted that in this case only the city, no employees, were sued and the only statute involved was R.S. 29:735. The city was held immune but the willful misconduct provision was not considered because no employees were sued.¹⁷¹

In Clement v. Reeves the defendant, Lafayette Parish Consolidated Government (LCG), argued that they were immune from civil liability as a result of the state of emergency declared in advance of and in the wake of Hurricane Lili.¹⁷² Shannon Clement and others were passengers in a truck driven by Dusty Reeves on December 20, 2002. Reeves lost control of the vehicle and crashed into a ditch when he failed to safely negotiate a ninety-degree turn on a road in a rural area of Lafayette Parish. Plaintiffs argued that the LCG failed to maintain the road sign that would have warned Reeves of the approaching turn. LCG presented evidence that Hurricane Lili struck the coast of Louisiana on October 3, 2002. Governor Mike Foster declared a state of emergency on October 1, 2002, which was extended for an additional forty-five days on October 31, 2002 and that the Lafayette City-Parish President, had declared a state of local disaster and/or emergency on October 1, 1992. LCG argued that the alleged act of negligence occurred on October 20th, when a Department of Transportation employee inspected the sign on October 30th during the time period that the states of emergency were in effect therefore triggering the immunity provision.¹⁷³ Rejecting LCG’s argument the court found that the accident occurred on December 20, 2002, after Governor Foster’s declared state of emergency expired on December

¹⁷¹ *Castille v. Lafayette City-Parish Government*, 04-1569(La. App. 3 Cir. 3/2/2005); 896 So. 1261, writ denied, 2005-0860(La. 5/13/2005) 902 So. 1029.

¹⁷² *Clement v. Reeves*, 935 So.2d 279 (La. App. 3 Cir. 2006).

¹⁷³ Rabon testified in deposition testimony that he had no independent recollection of the sign in question. However he also testified that the sign in question was slightly leaning and in need of repair, but still visible and functioning to motorists, at p. 282.

14th and that the “actual or threatened condition” of Hurricane Lili had obviously long been over on December 20.¹⁷⁴

Building and maintaining levees and other flood control structures are acts of emergency preparedness and the immunity provision applicable as is noted in a footnote in the case of Yates v. Elmer.¹⁷⁵ Charles Elmer a property owner in Jefferson Parish brought suit against the West Jefferson Levee District for damages due to inverse condemnation and/or damages due to the construction of public works. Elmer alleged that construction of a levee along the edge of his property amounted to an illegal taking and caused devaluation of his remaining property. Finding for the West Jefferson Levee District the court held that the levee district’s actions in raising the Northern levee in 1985-86 after Hurricane Juan was not a taking, thus not an expropriation, as the taking of the property for construction of the levee occurred in the early 1920’s with the construction of the four foot “Westwego levee” on the north side of the property. The court further noted in Yates that under the defense of governmental immunity, the public entity is immune from liability for negligence when the acts are discretionary under La. R.S. 9:2798.1 which provides:

§ 2798.1 Policymaking or discretionary acts or omissions of public entities or their officers or employees

A. As used in this Section, “public entity” means and includes the state and any of its branches, departments, offices, agencies, boards, commissions, instrumentalities, officers, officials, employees, and political subdivisions and the departments, offices, agencies, boards, commissions, instrumentalities, officers, officials, and employees of such political subdivisions.

B. Liability shall not be imposed on public entities or their officers or employees based upon the exercise or performance or the failure to exercise or perform their policymaking or discretionary acts when such acts are within the course and scope of their lawful powers and duties.

¹⁷⁴ Clement, 285.

¹⁷⁵ *Yates v. Elmer*, 06-267 (La. App. 5th Cir. 11/28/06), 2006 WL 3422220 at n.8.

C. The provisions of Subsection B of this Section are not applicable:

(1) To acts or omissions which are not reasonably related to the legitimate governmental objective for which the policymaking or discretionary power exists; or

(2) To acts of omissions which constitute criminal, fraudulent, malicious, intentional, willful, outrageous, reckless, or flagrant misconduct.

(D) The legislature finds and states that the purpose of this Section is not to reestablish any immunity based on the status of sovereignty but rather to clarify the substantive content and parameters of application of such legislatively created codal articles and laws and also to assist in the implementation of Article II of the Constitution of Louisiana.

or taken to prepare for an emergency under R.S. 29:735.

The Louisiana State Supreme Court has yet to rule on the immunity defense available to the state, state agencies, public officials, and others under § 735. However the court has weighed in on other provisions of state law that provides immunity for discretionary acts. In Hardy v. Bowie the court examined the traditional public duty doctrine. The public duty doctrine has been defined as follows:

[I]f the duty which the official authority imposes upon an officer is a duty to the public, a failure to perform it, or an adequate or erroneous performance, must be a public, not an individual injury and must be redressed, if at all, in some form of public prosecution. On the other hand, if the duty is to the individual, then a neglect to perform it, or to perform it properly, is an individual wrong, and may support an individual action for damages. “The failure of a public officer to perform a public duty can constitute an individual wrong only when some person can show that in the public duty was involved also a duty to himself as an individual, and that he has suffered a special and particular injury by reason of its nonperformance”

concluding that the public duty doctrine and its exceptions are not the law of Louisiana. Rather, the court concluded the provisions of La. R.S. 9:2798.1 and the duty-risk analysis are used to determine whether public entities and their officers and employees are liable.¹⁷⁶

On December 29, 2006, Judge Duval in the case of Armstead v. Nagin,¹⁷⁷ issued an order approving the Report and Recommendation of the United States Magistrate Judge (Wilkinson)¹⁷⁸

¹⁷⁶ *Hardy v. Bowie*, 744 So. 606 (1999).

¹⁷⁷ *Armstead v. Nagin*, 2006 WL 3861759, at pp. 15-16 (E.D. La. 2006).

adopted its (sic) opinion as to the plaintiffs' failure to state a claim against the Orleans Levee District under state law citing as the reason therefore was that Plaintiffs' have not alleged any facts to show that the Levee District committed any willful misconduct that would exempt it from the immunity granted by Section 29:735.¹⁷⁹ In adopting Magistrate Judge Wilkinson's Report and Recommendation in Armstead Judge Duval rejected Magistrate Wilkinson's interpretation of La. R.S. 29:735 stating:

“the court does not agree with any tangential inference that the acts or omissions of the levee board performed at times remote from Hurricane Katrina come under the ambit of the immunity statute LA Rev. Stat. 29:735.”¹⁸⁰

Considering that the Louisiana State Supreme Court has yet to rule on this issue we turn to the Erie Doctrine.¹⁸¹ The Erie case involved a fundamental question of federalism and the jurisdiction of federal courts in the United States. Congress passed a law, still in effect today called the Rules of Decision Act that states that the laws of a state furnish the rules of decision for a federal court sitting in that state.¹⁸²

The Erie Doctrine case law is well settled. When the state's highest court has not squarely addressed an issue of state law, the federal court must make an “Erie guess.”¹⁸³ The United States Court of Appeal for the Fifth Circuit has instructed: “[i]f the Louisiana Supreme Court has not ruled on an issue, then this court must make an ‘Erie guess’ and ‘determine as best as it

¹⁷⁸ Ibid. Doc 74.

¹⁷⁹ Milton and Mayda R. Armstead, acting pro se, filed suit against several federal, state and City of New Orleans governmental defendants, alleging various claims arising out of the flooding on New Orleans caused by Hurricane Katrina. After securing counsel, plaintiffs filed a Second Amended Complaint deleting some of the originally named defendants and restated plaintiffs' claims against the remaining defendants. The Orleans Levee Board was named as an original defendant.

¹⁸⁰ Armstead, Doc 75.

¹⁸¹ *Erie R.R. v. Tompkins*, 304 U.S. 64 (1938).

¹⁸² Rules of Decision Act, 28 U.S.C. 1652.

¹⁸³ *Howe Ex Rel Howe v. Scottsdale Ins. Co.*, 204 F.3d 624 (5th Cir. 2000); *Powers v. Vista Chemical Co.*, 109 F.3d. 1089, 1093 (5th Cir. 1997); *Rogers v. Corrosion Products, Inc.*, 42 F.3d 292, 295 ((5th Cir. 1995); *Kirkland v. Franco*, 92 F.Supp. 578, 581 (E.D. La. 2000)); *Bauer v. GEICO*, 61 F.Supp. 514, 517 (E.D. La. 1999)

can' what the Louisiana Supreme Court would decide.”¹⁸⁴ “In making an Erie guess, the court may look to decisions of intermediate courts for guidance.”¹⁸⁵ Decisions of intermediate appellate courts in Louisiana “are a datum for ascertaining state law which is not to be disregarded by a federal court unless it is convinced by other persuasive data that the highest court of the state would decide otherwise.”¹⁸⁶ The Fifth Circuit has also noted: “[a]lthough the refusal to grant a writ has no precedential effect, such a refusal does provide ‘persuasive’ evidence that the Louisiana Supreme Court approves of the legal conclusions reached by the appellate court.”¹⁸⁷

The Erie doctrine, discussed above, called for the federal court to rely upon the decision of the intermediary court (the Louisiana Courts of Appeal) for guidance on an issue of state law. The Louisiana State Supreme Court’s denial of writs in Hontex is “persuasive” evidence that the Court approves of the legal conclusions reached by the appellate court.¹⁸⁸ Thus the argument made to the court was that the it was bound to follow the Louisiana Fifth Circuit’s ruling in Hontex and the Louisiana Third Circuit’s ruling in Castille, recognizing the Orleans Levee District’s and Sewerage and Water Board of New Orleans’ rights to statutory immunity under La. R.S. 735.

An analysis of the immunity provision from the standpoint of the agencies and the litigants sets the framework for the issue squarely in the arena for judicial interpretation and legislative revision in the upcoming and futures sessions of the Louisiana Legislature.

¹⁸⁴ *Howe Ex Rel Howe*, 204 F.3d at 627.

¹⁸⁵ *Kirkland*, 92 F.Supp. at 581, citing *Matheny V. Glen Falls Ins. Co.*, 152 F.3d 348, 354 (5th Cir. 1998).

¹⁸⁶ *Howe Ex Rel Howe*, at p. 627.

¹⁸⁷ *Blair v. Sealift, Inc.*, 91 F.3d. 755 (5th Cir. 1996), citing *Colonial Pipeline Co. v. Agerton*, 289 So.. 93,96 (La. 1974) *aff’d*, 421 U.S. 100, 95 S.Ct. 1538 (1975).

¹⁸⁸ *Hontex.*, 04-1569(La. App. 3 Cir 3/2/05) 896 So. 1261, *writ denied*, 2005-0860(La. 5/13/2005) 902 So. 1029.

The Ruling(s)

The court denied the motions in a ruling issued December 29, 2006 citing the test for determining the sufficiency of a complaint under Rule 12(b)(6).¹⁸⁹ The court found that the plaintiffs had, at this point set forth, a sufficient set of facts in support of their claims that would entitle them to relief. The court addressed the immunity provision in light of the definition of “emergency preparedness” and found that the allegations, acts or omissions by the Orleans Levee District and Sewerage and Water Board spanned many years before any specific emergency had taken place and even in some instances before the Act was passed. The court also found that the Orleans Levee District and Sewerage and Water Board each had statutory duties that “are separate and apart from the duties arising from the Act.”¹⁹⁰

In denying the motion for dismissal Judge Duval reasoned:

“The gravamen of this motion is whether the statutory obligations and/or acts or omissions of defendants as set forth above meet the definition of “emergency preparedness” of La. Rev. Stat. 29:735. The Court notes that the acts or omissions alleged by plaintiffs span many years.”

The court went on to recite the passing of the Louisiana Homeland Security and Emergency Assistance and Disaster Act in 1993 referring to various provisions of the act including the § 735(A) immunity provision. The court stated:

“the allegations of plaintiffs which must be accepted as true allege acts and omissions which took place years before any specific emergency, and some of them took place before the Act was passed. Additionally, plaintiffs have alleged that each defendant has statutory duties that are separate and apart from the duties arising from the Act. The acts of defendants complained of here are substantially attenuated from what this Court deems is the purpose of the Act and the concomitant grant of immunity. In the Court’s opinion, the acts complained of herein are not the type of “emergency” actions contemplated under Section 735.”

¹⁸⁹ Ibid. *In Re: Katrina Canal Breaches Consolidated Litigation*, Doc. 2423.

¹⁹⁰ Ibid. 5.

In distinguishing the reasons for ruling contrary to the ruling in the Armstead case wherein he adopted the Report and Recommendations of Magistrate Wilkinson, Judge Duval concluded:

“The Court does not agree with any tangential inference that the acts or omissions of the Levee Board performed at times remote from Hurricane Katrina come under the ambit of the immunity statute. La. Rev. Stat. 29:735.” “...the actions of defendants immediately prior to and subsequent to Hurricane Katrina were the thrust of the complaint in Armstead. Thus, Armstead is factually distinguishable from the allegations of this case.”¹⁹¹

While Judge Duval was considering the motion for dismissal Judge John L. Peytavin, Judge Ad Hoc, sitting for the Twenty-Fourth Judicial District Court for the Parish of Jefferson issued rulings September 29, 2006, in two Post Katrina flooding cases.

In Levy v. Parish of Jefferson and Loga v. Parish of Jefferson the court rejected exceptions based on immunity. In both cases the Parish of Jefferson argued they were immune from liability citing § 735 arguing that Katrina was a “disaster” and created an “emergency.” They further argued that the Act provided Aaron Broussard, the Parish President, and the parish with “absolute immunity with no temporal element.” They claimed the immunity would apply to any course of conduct even ones “extending back for years and years.” In the Levy case the Parish was sued, among other reasons, because the Parish President, Aaron Broussard, ordered pumping station personnel to leave their posts prior to the anticipated brunt of Hurricane Katrina. While the stations were unmanned the drainage canals on the East Bank of the Parish filled with water and flooded various areas of Jefferson Parish causing damages to eight town houses owned by the plaintiff.¹⁹² Citing that the plaintiffs pleaded facts alleging willful, wanton and gross negligence in the first amended petition were sufficient to overcome the immunities of the immunity statutes cited.

¹⁹¹ Ibid. *In Re: Katrina Canal Breaches Consolidated Litigation*, Doc 2423.

¹⁹² *Levy v. Parish of Jefferson*, No. 624-778 (La. 24th JDC) ¶ 4.

The court further concluded that the statutory immunity provided by La. R.S. 9:2798.1 is not absolute, citing the case of Mitter v. St. John the Baptist Parish wherein the 5th Circuit Court of Appeal stated:

“In well-analyzed and well-written reasons for judgment, the trial judge stated in pertinent part:

‘It is unthinkable that a governmental authority could be protected from liability in such a case as this where improvements to the drainage system relieving the problems of certain citizens (Belle Grove residents), causes problems to other citizens...’

Citing McCloud v. Parish of Jefferson,¹⁹³ the trial judge quoted language from that case which supports a conclusion that the immunity in discretionary matters exercised by governmental agency is not absolute:

“...Once a governmental body, however undertakes to provide drainage or to make general improvements to an existing system, it has a duty to perform this function according to reasonable standards and in a manner which does not cause damage to particular citizens...”¹⁹⁴

The court further pointed out that according to the definition in Webster’s dictionary “absolute” is defined as “not limited by a Constitution, parliament, etc., unrestricted (an absolute ruler).” The phrase “absolute immunity” does not appear in any of the immunity statutes cited by either party.¹⁹⁵

Though Judge Peytavin’s rulings predated the ruling of Judge Duval (December 29, 2006) the rulings for the moment confirm that the state and federal courts are in agreement with each other on the interpretation of § 735 at this point in the respective litigation.¹⁹⁶

Judge Duval attempting to lend some direction to the litigation convened a status conference January 11, 2007 at which time state judges from Orleans (Reese & Medley),

¹⁹³ *McCloud v. Parish of Jefferson*, 383 So. 2d 477 (La. App. 4th Cir. 1980).

¹⁹⁴ *Mitter v. St. John the Baptist Parish*, 920 So. 265 (La. App. 5th Cir. 2005); 383 S.. 477 (La. App. 4th Cir. 1980) at p. 266.

¹⁹⁵ *Levy*, Reasons for Judgment September 29, 2006.

¹⁹⁶ *Levy & Loga*, Judgments, Sept. 29, 2006.

Jefferson (Peytavin) and St. Bernard (Vaughn) Parishes participated along with selected plaintiffs' counsel, defense counsel and others.¹⁹⁷ Upon recommendation by the court all agreed to abide by a discovery plan designed to avoid needless duplication and streamline discovery.¹⁹⁸ It is anticipated that a proposed plan to consolidate all state cases and incorporate them in federal court under the umbrella of the "In Re: Katrina Canal Breaches Consolidated Litigation" would be in the best interest of all parties. Only time will tell if this is possible.

The United States Supreme Court has found that legislative intent is the touchstone of federal statutory interpretation. In Philbrook v. Glodgett the court noted "Our objective...is to ascertain the congressional intent and give effect to the legislative will."¹⁹⁹ In the case of United States v. Am. Trucking Ass'ns the court held "In the interpretation of statutes, the function of courts is easily stated. It is to construe the language so as to give effect to the intent of Congress."²⁰⁰ See also the case of ICC v. Baird wherein the court found "The object of construction, as has often been said by the courts and writers of authority, is to ascertain the legislative intent, and, if possible, to effectuate the purposes of the lawmakers."²⁰¹ Although the decision was rendered in 1904 the ruling is still valid today.

In a constitutional system predicated upon legislative supremacy, within constitutional boundaries, judges must try to ascertain what the legislative body meant by the words it used. Is there any question that the Louisiana Legislature when defining the purpose of the Act by using terms such as "...emergencies and disasters of unprecedented size and destructiveness resulting from...flood...or other natural or manmade causes" in § 722; "disaster and emergency

¹⁹⁷ *In Re: Katrina Canal Breaches Consolidated Litigation*, Doc. 2655.

¹⁹⁸ *Ibid.*

¹⁹⁹ *Philbrook v. Glodgett*, 421 U.S. 707, 713 (1975).

²⁰⁰ *United States v. Am. Trucking Ass'ns*, 310 U.S. 534, 542 (1940).

²⁰¹ *ICC v. Baird*, 194 U.S. 25, 38 (1904).

preparedness” in § 723; and “immunity of personnel” in § 735 was not amply clear in their intent. I think not.

The term “textualism” refers to a philosophy that emerged in the courts near the close of the twentieth century. The term “textualism does not admit of a simple definition, but in practice is associated with the basis proposition that judges must seek and abide by the public meaning of the enacted text, understood in context (as all texts must be).”²⁰²

Justice Antonin Scalia joined the Supreme Court of the United States in September 1986 following his nomination by President Ronald Reagan. Before Justice Scalia’s appointment--and to this day--the Court’s approach to statutory interpretation could be described as eclectic, devoid of any unifying theory.²⁰³ The Court is sometimes governed by statutory text.²⁰⁴ At other times it looks beyond the text to statutory purposes,²⁰⁵ legislative history,²⁰⁶ or other nontextual sources.²⁰⁷ Justice Scalia challenged the Court’s traditional approach to interpreting statutes “He has argued that the only legitimate source for interpretive guidance is the statutory text at issue, the structure of the statute as a whole, or other related provisions of statutory law. As part of this textualist theory, Justice Scalia has targeted the Court’s longstanding reliance on legislative history to interpret statutes.”²⁰⁸

²⁰² *Textualism and Legislative Intent*; John F. Manning, *Virginia Law Review*, Vol. 91, No. 2. p. 420.

²⁰³ See Eskridge & Frickey, *Statutory Interpretation as Practical Reasoning*, *Stan. L. Rev.* Vol. 42., No. 2, 321, 322-33 (1990).

²⁰⁴ See e.g. *Northbrook Nat’l Ins. Co. v. Brewer*, 110 S.Ct. 297 (1989); *United States v. Ron Pair Enters.*, 109 S. Ct. 1026 (1989); *Board of Governors v. Dimension Fin. Corp.*, 474 U.S. 361 (1986).

²⁰⁵ See e.g. *FDIC v. Philadelphia Gear Corp.*, 476 U.S. (1986); *United Steelworkers v. Weber*, 443 U.S. 193 (1979).

²⁰⁶ See e.g. *Jett v. Dallas Indep. School Dist.*, 109 S. Ct. 2702 (1989); *Clarke v. Securities Indus. Ass’n*, 479 U.S. 388 (1987).

²⁰⁷ See, e.g. *Bob Jones Univ. v. United States*, 461 U.S. 574 (1983)(relying on congressional refusal to overturn agency interpretation); *Cannon v. University of Chicago*, 441 U.S. 677 (1979)(relying on Congress’s knowledge of and acquiescence in case law interpreting a related statute).

²⁰⁸ Nicholas S. Zeppos, “*Legislative History and the Interpretation of Statutes: Toward a Fact-Finding Model of Statutory Interpretation.*” *Virginia Law Review*, Vol. 76. No. 7 (October 1990) 1295-1374.

Justice Scalia, along with U.S. Court of Appeals for the Seventh Circuit Chief Judge Frank H. Easterbrook, are “the leading exponents of modern “textualism”²⁰⁹ which deviates from “classic intentionalism”, a term used to connote “that when a statute was vague or ambiguous, judges as interpreters, should seek clarification if possible, in the bill’s internal legislative history.”²¹⁰ Judge Easterbrook has opined “[T]he concept of ‘an’ intent for a person is fictive and for an institution hilarious. A hunt for this snipe liberates the interpreter, who can attribute to the drafters whatever ‘intent’ serves purposes derived by other means.” Justice Scalia argues “the quest for the ‘genuine’ legislative intent is probably a wild-goose chase.”²¹¹

Justice Scalia and Judge Easterbrook “have advocated a radical assessment of the concept of legislative intent. They would reject, or at least sharply limit, reliance on legislative history, or they would abandon any consideration of congressional actions or statements after a statute was passed” and “they would go further and jettison the whole idea of legislative intent as a guide to interpretation.”²¹²

Philip A. Farber, Professor of Law, University of Minnesota and Philip P. Frickey, Associate Professor of Law, University of Minnesota, suggest that “courts foolishly give credence...to evidence of a legislative intent that itself is little more than a legal fiction” and argue that “only by jettisoning the whole idea of legislative intent can judges escape this chamber of illusions.”²¹³ Advocating a “public choice” theory which would “apply economic methodology to the study of political institutions” Farber and Frickey suggest that some aspects of the public choice literature support the specific concerns raised by Justice Scalia and his

²⁰⁹ Ibid. *Bob Jones*, fn 217.

²¹⁰ Ibid. 419.

²¹¹ Ibid. 420 fn 8.

²¹² Daniel A. Farber & Philip P. Frickey, “*Legislative Intent and Public Choice*,” Virginia Law Review, Vol. 74, No. 2, Symposium on the Theory of Public Choice. (Mar. 1988) 423-469, 423.

²¹³ Ibid. 423.

fellow judges.”²¹⁴ Briefly stated the “Public Choice Theory” is a body of theory developed by James Buchanan and Gordon Tullock to try to explain how public decisions are made. It involves the interaction of the voting public, the politicians, the bureaucracy and political action committees.²¹⁵

“Appeals to legislative intent are a commonplace part of our judicial process. Nevertheless there are many unresolved disputes about the existence and discoverability of legislative intent” according to Professor Gerald C. Mac Callum, Jr., Associate Professor of Philosophy, University of Wisconsin.²¹⁶ Mac Callum noted that University of California Law Professor Dr. Max Radin “argued that the presence of genuine legislative intent in connection with a statute is at best a rare circumstance and that, in any event, the legislative intent could not be discovered from the records of the legislative proceedings.” MacCallum further noted that Radin’s view drew “an immediate response from James Landis” a law professor at Harvard Law School. “Landis distinguished between two senses of “intent” – “intent” as “intended meaning” and “intent” as “purpose.” Landis “maintained that legislative intent in the first sense (and apparently in the second also) is an ordinary although not invariable feature of legislative processes.” Landis’ contention was that “this feature, when present, is clearly discoverable in the records of the legislative proceedings.”²¹⁷

Landis argues “the real difficulty is not that the intent is irrelevant but that the intent is often undiscoverable, especially when the passer of a state statute is, in most cases, a representative assembly.”²¹⁸ Landis further stated “purpose and meaning commonly react upon

²¹⁴ Ibid. 424.

²¹⁵ James M. Buchanan and Gordon Tullock, The Calculus of Consent: Logical Foundations of Constitutional Democracy (Ann Arbor, University of Michigan Press 1962) 27

²¹⁶ Gerald C. MacCallum, Jr., “*Legislative Intent*,” Yale Law Journal, Vol 75, No. 5 (Apr., 1966) 754-787

²¹⁷ Ibid. 754.

²¹⁸ James M. Landis, “*A Note on Statutory Interpretation*,” Harvard Law Review Vol 43, No. 6. (Apr., 1930) 886-893, 888.

each other”...noting “that intent when used to mean purpose usually will be found to accompany the process of spurious interpretation, whereas intent when used as equivalent to meaning commonly accompanies the process of genuine interpretation.”²¹⁹

A look into the legislative history, that is opening the records of a legislative assembly “read with a knowledge of legislative procedure often reveal the richest kind of evidence.”²²⁰ According to Landis “legislative history...affords in many instances accurate and compelling guides to legislative meaning” and by examining “successive drafts of the same act do not simply succeed each other as isolated phenomena, but the substitution of one for another necessarily involves an element of choice often leaving little doubt as to the reasons governing such a choice.”²²¹

MacCallum theorizes “the most obvious difficulty with the notion of legislative intent concerns the relationship between the intent of a collegiate legislature and the intentions of several legislators. Many difficulties would remain, however, if a legislature had only one authoritative member. We would profit, therefore, by asking what it would mean to speak of the legislative intent of a single legislator.”²²²

Recent legal research on statutory interpretation has raised questions about the use of legislative history---committee reports, hearings, floor debates---in assisting judges in interpreting the intent of legislation. As an approach to interpretation of the meaning of a statute, McNollgast suggests that one of the three categories of recent literature on interpretation “seeks to develop interpretive principles that avoid the pitfalls identified by critical and political

²¹⁹ Ibid.

²²⁰ Ibid.

²²¹ Ibid. 889

²²² Ibid. 756

theories.” When someone is faced with applying a statute, this literature recommends an interpretive agenda of roughly the following form:

1. Read the text; if it is not clear, then proceed to step two.
2. Consider the overall structure and purpose of the statute as written and, where relevant, other related statutes; if it is still not clear, then proceed to step three.
3. Consult the legislative history to see if, in the course of the legislative process, elected political officials left a record about how ambiguities should be resolved, and proceed to step four.
4. Based on the information collected in the previous steps, ascertain whether the statutory provision in questions reflects politically legitimate values or the pathologies of representative democracy; if the statute remains ambiguous, or if it reflects a democratic pathology, then proceed to step five.
5. Invoke normative principles (varying among the authors) to determine whether the statute should be applied, and if so, how to resolve the ambiguities and compensate for the pathologies.²²³

According to McNollgast “the legal literature to date lacks an approach to the broader methods of statutory interpretation that is fully compatible with how legislation is actually created and how elected officials oversee the implementation of policy by agencies and courts.”²²⁴

Following this approach Justice Scalia “believes that a judge first should attempt to interpret a statutory term according to its plain meaning. If the language is ambiguous, as is often the case, the judge should look to considerations such as whether one possible meaning of a term comports better with the rest of the statute in question. Finally, the judge should offer an

²²³ McNollgast, “*Legislative Intent: The Use of Positive Political Theory in Statutory Interpretation, Law and Contemporary Problems*”, Vol. 57, No.1 Regulating Regulation: The Political Economy of Administrative Procedures and Regulatory Instruments: [Part 1]. (Winter, 1994) 3-37, 4 &5.

²²⁴ Ibid. p. 5

interpretation that makes the best sense of the disputed statute in light of other related statutes.”²²⁵

Richard A. Posner observed that “methods of statutory interpretation are not guided by an overall theory of legislation, and most academic lawyers, like most judges and practicing lawyers, would consider it otiose, impractical and pretentious to try to develop one.”²²⁶ Interpreting legislative intent is important but does have limitations. The benefits accruing from the use of legislative history are marginal when weighed against the potential for abuse and the enormous effort involved. Undue reliance on legislative history when weighed in light of the democratic theory and practical considerations make the effort of the exercise questionable.²²⁷

The legislative history of the Louisiana Homeland Security and Emergency Assistance and Disaster Act is silent as to the time periods applicable. How far should a court look forward or backwards, when faced with the question of the § 735 immunity defense in the face of “emergencies and disasters” or taking action in the form of “emergency preparedness” in advance either condition? Is there justification for recognizing legislative silence as an indicator of legislative intent as to the meaning of statutes?

The problem of interpreting legislative silence usually arises after a court has construed a statute and the legislature either does nothing or re-enacts the statute without material change as is the case here. The interpreter should consider whether the legislature had knowledge of this construction. Then, if it assumed that the legislature did have such knowledge, he should determine whether the legislature’s inaction was intended to indicate approval of that construction. Those favoring the legislative silence doctrine in effect propose that these two

²²⁵ “Why Learned Hand Would Never Consult Legislative History Today.” Harvard Law Review, Vol. 105, No. 5. (Mar., 1992), 1005-1024.

²²⁶ Richard A. Posner, “*Statutory Interpretation—in the Classroom and in the Courtroom*,” 50 U.Chi. L.Rev. 800 (1983).

²²⁷ Under democratic theory, the statute rather than extra-statutory materials govern the nation.

unknowns should be presumed in the affirmative, in the absence of proof to the contrary. The legislative silence doctrine, in most of the cases in which it is applied, is inconsistent with the proposition that statutes are to be construed in accordance with the intent of the enacting legislature.

The Louisiana Legislature well aware of risks that Louisiana faced by: “emergencies and disasters of unprecedented size and destructiveness... from...flood...or other natural or manmade disasters” passed the broad sweeping Louisiana Homeland Security and Emergency Assistance and Disaster Act in 1993. The legislative history documented the need for revision of the Louisiana Disaster Act of 1974 following Hurricane Andrew (1992).²²⁸

Thus in their wisdom the Louisiana Homeland Security and Emergency Assistance and Disaster Act came into being in 1993 completely overhauling the 1974 legislation.²²⁹ In the years following the passage of the 1993 act, eight major hurricanes struck Louisiana: Opal (1995); Josephine (1996); Danny (1997); Frances (Sept. 10 –14,1998); Georges (Sept. 27-28,1998); Katrina (Aug. 29, 2005); and Rita (Sept. 24, 2005). The legislature has been called into session at least twenty-six times since the Act was passed with very few amendments to the act between 1994 and 2006. Knowing full well that hurricane protection system(s) are and were designed, constructed and maintained with funds provided by the federal government, including levees and floodwalls (that cannot be built overnight), the undeniable conclusion is that the legislature certainly intended these activities to be protected by the Act, even though the statute and the legislative history are silent in this regard.

To assess the success of the legislative intent of the Act for purposes of this study I have reviewed elsewhere the relevant decisions of state courts in Louisiana. I will not readdress the

²²⁸ LSA-R.S. 29 § 701-716.

²²⁹ Ibid. § 721-738

cases but suffice to say the cases have been few. The Louisiana State Supreme Court, and conceivably the Supreme Court of the United States, will certainly face these issues in the future in light of the devastation wrought by Katrina and the billions of dollars at issue in the litigation.

The immunity issue under § 735 can be raised again in the federal proceedings after extensive discovery has been completed via a Motion for Summary Judgment. The Orleans Levee District and the Sewerage and Water Board, along with other governmental defendants, must slowly and securely close the wide gaps that Judge Duval has opined are looming and unanswered questions to relevant factual and legal issues yet to be addressed. Based on law and/or facts the governmental defendants will again petition the court for dismissal by way of summary judgment upon proper showing that there are no genuine issues about any material fact(s) and that they are entitled to judgment as a matter of law.²³⁰

However the line between issues of fact and issues of law can be often difficult to draw.²³¹ For example, when the application of rule of law depends on the resolution of disputed facts, the motion for summary judgment presents a mixed question of law and fact. In this situation, summary judgment might not be appropriate.²³²

In light of the Erie Doctrine the trial court will once again have a weighty issue to decide. This issue, the applicability of § 735 immunity provision, may ultimately drown the governmental defendants, the Orleans Levee District and Sewerage and Water Board of New Orleans, among others, with monetary judgments far beyond their ability to pay over the course of the lifetimes of all impacted by Hurricane Katrina. At this point in the history of the federal

²³⁰ F.R.Civ.P. 56(c); *Celotex, Baton Rouge Oil & Chem. Workers Un .v. ExxonMobil Corp.* 477 U.S. at 322, 106 S. Ct. at 2552; *Policaastro v. Northwest Airlines, Inc.*, 297 F.3d 373,375 (5th Cir. 2002); *Flath v. Garrison Pub. Sch. Dist.*, 82 F.3d 244, 246 (8th Cir. 1996).

²³¹ *Pullman-Standard v. Swint*, 456 U.S. 273, 288, 102 S. Ct. 1781, 1789-90 (1982).

²³² *Lujan v. National Wildlife Fed'n*, 497 U.S. 871, 889, 110 S. Ct 3177, 3189 (1990).

and state litigation it is safe to say that the Act has not accomplished what the legislature intended.

The governor convened the Legislature to an Extraordinary Session pursuant to Proclamation No. 62 KBB 2005 following Hurricanes Katrina and Rita. The proclamation limited the Legislature to legislate only the 77 enumerated items in the Proclamation under penalty of nullity,²³³ The Governor was short sighted in neglecting to include in Item No. 69²³⁴ or in an additional item, a legislative proposal to re-enact and/or amend other provisions of LSA-R.S. 721- 738, the Louisiana Homeland Security and Emergency Assistance and Disaster Act.

The Governor specifically addressed § 735 of the Act for special interest groups at the urging of law enforcement officials. By creating §735 (2) the revised Act, passed by the Legislature, provided immunity to yet another class of public officials and agencies who housed prisoners in custody during and after Hurricanes Katrina and Rita.

What should have been included in the legislative call was a plan to include in plain and simple language that the building of levees, floodwalls and/or other parts of the hurricane protection systems within the state should unquestionably fall under the umbrella of “emergency preparedness” regardless of when the projects were planned, implemented, funded, constructed or maintained. Since the amendment to §735(2) had retroactive application it is inconceivable how and why our elected officials neglected to address a legislative problem that has far reaching consequences, much farther than the relatively small number of prisoners whose release from custody was delayed due to the devastation of records maintained by the criminal justice system.

²³³ State of Louisiana, Executive Department, Proclamation No. 62 KBB 2005.

²³⁴ Ibid. Item No. 69 “To legislate relative to limitation of liability of law enforcement agencies, law enforcement officers, or correction officers due to the detention of persons in parish prisons or local jails as a result of a gubernatorially declared disaster or emergency.”

Convening the Legislature for another Extraordinary Session for 12 calendar days, February 6 – 17, 2006, following the Extraordinary Session November 6 – November 22, 2005, the Governor again failed in including a proposal to buttress the Louisiana Homeland Security and Emergency Assistance and Disaster Act in the limited 34 items on the agenda.²³⁵

Likewise the Legislature failed to address the need to address shortcomings in the Louisiana Homeland Security and Emergency Assistance and Disaster Act when conducting the 2006 Regular Session of the Legislature, March 27 – June 19, 2006. In that 85 calendar day period limited to a maximum of 60 legislative days, not one elected representative filed legislation to strengthen the Act.²³⁶

Governor Blanco in convening the Legislature to an Extraordinary Session for 10 calendar days, December 8 – 17, 2006, failed again to address the gaping holes in the Act. The Governor's agenda was limited to 25 items some of which dealt with the after effects of Hurricane and Rita and some of which had nothing whatsoever to due with protecting the public fisc from "disasters."²³⁷

²³⁵ State of Louisiana, Executive Department, Proclamation No. 12 KBB 2006.

²³⁶ La. Legislature, 2006 Regular Session Information Bulletin.

²³⁷ State of Louisiana, Executive Department, Proclamation No. 81 KBB 2006.

Chapter VI.

Findings

As the Legislature prepares for the 2007 Regular Session an opportunity to fortify the legislation exists by any number of legislative means.²³⁸ Clearly there is a great need for addressing all aspects of the Hurricane Protection System(s) and the laws governing the agencies that maintain and/or control the systems. The legislature should revisit all statutory duties and responsibilities of levee districts statewide, local or parish drainage commissions, drainage districts and other state, quasi-state agencies, their employees and officials with an eye towards making the individuals immune from liability and the public fisc impenetrable. The time period addressed in any proposed legislation should be very broad in order for it to be liberally construed by the courts.

The revised legislation should be stated succinctly so that the rules and aids for statutory construction can be plainly applied. The legislation must include explicit protection for all times relevant to any manner of “emergency preparedness,” “emergency preparedness planning,” “flood protection planning,” “drainage improvements, and “disaster planning.” By doing so the state, political subdivisions, or other agencies can rest assured that when confronting the:

“existing possibility of the occurrence of emergencies and disasters of unprecedented size and destructiveness resulting from terrorist events, enemy attack, sabotage, or other hostile action, or from fire, flood, earthquake, or other natural or manmade causes, and in order to ensure that preparations of this state will be adequate to deal with such emergencies, or disasters, and in order to detect, prevent, prepare for, investigate, respond to, or recover from these events, and generally to preserve the lives and property of the people of the state of Louisiana...”²³⁹

they will be protected and immunity from liability.

²³⁸ La. Legislature 2007 Regular Session Information Bulletin.

²³⁹ Act § 722 cited supra.

Finding that the immunity provision § 735 of the act bears need for revision we need only look to the actions of the Louisiana Legislature in the First Extraordinary Session of 2005. I noted in Chapter three the legislative history including the reference to Act No. 46. Specifically Act No. 46 originated in the Louisiana House of Representatives as House Bill No. 28 (HB 28) filed by Representative Danny Martiny the primary author, with 52 other representatives signing on as co-authors, for the purpose:

“to amend and reenact R.S. 29:735(A), relative to immunity of law enforcement agencies during Hurricane Katrina or Rita; to provide for limitation of liability for law enforcement agencies and officers based on detention of persons in any parish prison or local jail under certain circumstances; to provide for liability of law enforcement agencies under certain circumstances; to provide for retroactive application; and to provide for related matters²⁴⁰

The bill was passed and signed by the Governor becoming law on December 6, 2005. Section 2 of the act states: “The provision of this Act shall be applied retroactively to August 29, 2005.”

A law is retroactive if it alters the legal status of acts that were performed before it came into existence. In discussing the theories of retroactive law, Professor Stephen R. Munzer states “the concept of retroactivity has been paid scant attention in our jurisprudence.”²⁴¹ Munzer argues “that an account of what it means for a law to be valid for the past explains how the legal status of the act affected by a retroactive law can change.”²⁴² The Supreme Court has upheld retroactive legislation.²⁴³ Retroactive legislation is permissible except for the constitutional prohibition against ex post facto laws applicable to penal statutes only.²⁴⁴

The enactment of Act No. 46 with its retroactive application was clearly a response to a social crisis and disaster. The disaster was Hurricane Katrina. The social crisis was the complete

²⁴⁰ La. Acts 2005, 1st Ex. Sess., No. 46 § 2.

²⁴¹ Steven R. Munzer, “Retroactive Law” *The Journal of Legal Studies*, Vo. 6, No. 2 (Jun., 1977) 373-397

²⁴² *Ibid.* 373

²⁴³ *Welch v. Henry*, 305 U.S. 134 (1938); *Home Bldg. & Loan Ass’n v. Blaisdell*, 290 U.S. 398 (1934); *Graham & Foster v. Goodcell*, 282 U.S. 409 (1931);

²⁴⁴ *Collins v. Youngblood*, 497 U.S. 37 (1990); *California Dep’t of Corrections v. Morales*, 514 U.S. 499 (1995); U.S. Const. Art I, § 9; Art. I, § 10

shut down of the criminal justice system in Orleans, Jefferson and St. Bernard Parishes where approximately eight thousand people, mostly indigents, languished indefinitely in state prisons. The court system shut its doors, the police department fell into disarray, few prosecutors remained, and a handful of public defenders could not meet with, much less represent, the thousands detained.²⁴⁵

Representative Martiny confirmed that the legislative revision to the act insulating law enforcement agencies from liability by way of Act No. 46, § 735(A)(2), was successful stating that “the time has passed for filing suits and none were filed.”²⁴⁶ The statute of limitations, one year, has run (Aug. 29, 2006) so the public fisc for law enforcements agencies statewide that denied constitutional rights of individuals by way illegal detention past their rightful release date was protected. This was exactly what the sheriffs’ offices statewide wanted and they got what they wanted. Thus the response to the social crisis and disaster was both legal and appropriate.

Based on the foregoing the argument I find that if retroactivity in lawmaking is legal when on the face of this particular legislation, § 735(2), it treaded on the constitutional rights of individuals by depriving them of a right to seek damages from law enforcement agencies due to the crisis and disaster, Katrina, then why could not § 735(A) be retroactively applied to political subdivisions of the state in areas of “emergency preparedness and disaster planning.” I conclude that it can and it should.

Such legislation making immunity retroactive to the state, political subdivisions and other agencies, in light of unprecedented disasters is certain to be highly unpopular in the eyes of the general public yet it would serve the public good by insulating the public pocketbook from potential bankruptcy given the depth and scope of the damage claims currently in litigation.

²⁴⁵ Brandon L. Garrett and Tania Tetlow, “Criminal Justice Collapse: The Constitution after Hurricane Katrina”. Duke Law Journal, Vol. 56, 2006

²⁴⁶ Telephone conference with Representative Danny Martiny, April 9, 2007.

To find an author to sponsor such legislation, in spite of the lame duck status of the majority of the legislature, would be difficult if not nearly impossible. Constituents want help, they want grants, loans, Road Home²⁴⁷ money and their lives brought back to some sense of normalcy. Additionally the public represented by the nameless faces of Class Action litigation want someone answerable in damages for their personal and property losses that are incalculable in many instances. Were this not so the courts would not have been inundated with Post-Katrina litigation of the nature and scope addressed in this study. Local and state governments are no different in this quest for financial relief. They too find themselves begging at the troughs of FEMA, the federal government and in the halls of Congress for relief in the form of hundreds of billions of dollars.

So what the legislature intended to do creating immunity in accordance with § 735 of the Louisiana Homeland Security and Emergency Assistance and Disaster Act is precisely what the state, political subdivisions and other agencies desperately need today. They need a clearly defined, statutorily sound and easily interpreted immunity provision and they need it now. They should not have to collectively endure the cost of millions of dollars in litigation expenses and the threat of money judgments rendered in response to the rising tide of litigation in the Post Katrina arena in the federal and state courts.

The state, political subdivisions, and agencies, along with private individuals, are faced with insurmountable odds of recovery from the Post-Katrina flooding even though the Corps of Engineers bears full responsibility for the failure of the levees and floodwalls according to the three independent investigations to date.

²⁴⁷ *The Road Home* program is designed to help residents of Louisiana affected by Hurricane Katrina or Rita get back into their homes as quickly and fairly as possible. This groundbreaking program represents the single largest housing recovery program in U.S. history. Working together, Governor Kathleen Babineaux Blanco, the Louisiana Recovery Authority and the Office of Community Development created *The Road Home* with the approval of the Louisiana Legislature. The program affords eligible homeowners up to \$150,00 in compensation for their losses to get back into their homes.

The Mississippi River Flood Control Act²⁴⁸ renders the United States immune from liability for floods in connection with the construction or maintenance of flood works. Persons suffering damage from floodwaters have in such case no legal claim against the government.²⁴⁹

The specific language of § 702c that states:

“no liability of any kind shall attach to or rest upon the United States for any damage from or by floods or floodwaters at any place.”

The task for the Louisiana Legislature is to draft a statute with the impenetrability that the federal government has enjoyed for the last eighty years with barely a chip in the armor. Only then will agencies such as the Orleans Levee District and the Sewerage and Water Board of New Orleans be able accomplish their statutory duties and responsibilities with full abandon.

²⁴⁸ 33 U.S.C.A. § 702c

²⁴⁹ *Clark v. United States*, 109 F. Supp. 213 (D. Or. 1952), judgment aff'd 218 F. 446 (9th Cir. 1954).

Chapter VII.

Future Research

Insofar as future research is warranted I suggest some very broad avenues researchers might find of interest. An extensive review of legislation currently in effect nationwide serves as the starting point for potential remedial legislation. Considering that Alabama,²⁵⁰ Alaska,²⁵¹ Arizona,²⁵² Arkansas,²⁵³ California,²⁵⁴ Connecticut,²⁵⁵ Delaware,²⁵⁶ District of Columbia,²⁵⁷ Florida,²⁵⁸ Georgia,²⁵⁹ Illinois,²⁶⁰ Indiana,²⁶¹ Iowa,²⁶² Kansas,²⁶³ Maine,²⁶⁴ Maryland,²⁶⁵ Michigan,²⁶⁶ Missouri,²⁶⁷ Nebraska,²⁶⁸ Nevada,²⁶⁹ New Hampshire,²⁷⁰ New Jersey,²⁷¹ New York,²⁷² North Carolina,²⁷³ Oklahoma,²⁷⁴ Oregon,²⁷⁵ Pennsylvania,²⁷⁶ Rhode Island,²⁷⁷ South Carolina,²⁷⁸ South

²⁵⁰ Code 1975, §§ 31-9-1 to 31-9-24

²⁵¹ AS 26.23.130

²⁵² A.R.S. § 26-309 note

²⁵³ A.C.A. §§ 12-76-101, 12-76-102

²⁵⁴ West's Ann. Cal.Gov.Code, §§ 177 to 178.5

²⁵⁵ C.G.S.A. § 28-23

²⁵⁶ 20 Del.C. §§ 3301, 3401 to 3403

²⁵⁷ D.C. Code 1981 §6-1409

²⁵⁸ West's F.S.A. §§ 252.921 to 252.933

²⁵⁹ O.C.G.A. §§ 38-3-70 to 38-3-73

²⁶⁰ S.H.A. 45 ILCS 150/0.01 to 150/14

²⁶¹ West's A.L.C. 10-4-2-1 to 10-4-2-3

²⁶² I.C.A. § 29C21

²⁶³ K.S.A. 48-3201, 48-3202

²⁶⁴ 37-B- M.R.S.A. §§ 901 to 915; 921 to 933

²⁶⁵ Code 1957, art. 41, §§ 19-101, 19-102

²⁶⁶ M.C.L.A. § 30.261

²⁶⁷ V.A.M.S. § 44.415

²⁶⁸ R.R.S. 1943, Vol. 2A., § 1-109

²⁶⁹ N.R.S. 415.010

²⁷⁰ R.S.A. 108.1, 108.2

²⁷¹ N.J.S.A. 38A:20-3

²⁷² McKinney's Unconsol.Laws, §§ 9231 to 9233

²⁷³ G.S. §§ 166A-34 to 166A-47

²⁷⁴ 63 Okl.St.Ann. §§ 684.1 to 684.13

²⁷⁵ ORS 401.045

²⁷⁶ 35 Pa.C.S.A. § 7111

²⁷⁷ Gen.Laws 1956, §§ 30-15-14; 30-15.9-1 to 30-15.9-14

²⁷⁸ Code 1976, §§ 25-9-10, 25-9-20.

Dakota,²⁷⁹ Tennessee,²⁸⁰ Utah,²⁸¹ Virginia,²⁸² Vermont,²⁸³ U.S. Virgin Islands,²⁸⁴ Washington,²⁸⁵ West Virginia,²⁸⁶ and the United States of America²⁸⁷ all have complementary laws of differing degrees indicate the field is fertile for investigation and thought provoking ideas.

Coordinating information through the National Conference of State Legislatures would provide an immediate channel to begin discussions between legislators, legislative bureaus and legislative staffs nationwide. The database online is readily accessible to members along with a dedicated staff of professionals who are up-to-date in current, pending and pro-active legislation.²⁸⁸

The National Governor's Association identifies priority issues and deals collectively with issues of public policy and governance at both the national and state levels and is an excellent source for Governors to plan legislative input of special interest common to states susceptible to hurricanes, flooding, tornadoes, earthquakes and other common natural or manmade disasters.²⁸⁹

Lobbying members of Congress to pass legislation creating an independent, bipartisan commission, similar to the "The National Commission on Terrorist Attacks Upon the United States" also known as the "9-11 Commission" to investigate and adopt the findings of the three independent groups.²⁹⁰ These investigators all concluded that the failure of our federal government, the U.S. Army Corps of Engineers, is the root cause of the levee failures resulting in

²⁷⁹ SDCL § 33-15-48.

²⁸⁰ West's Tenn.Code §§ 58-2-401, 58-2-402..

²⁸¹ U.C.A.1953, 39-5-1 to 39-5-3.

²⁸² Code 1950, § 44-146.28:1.

²⁸³ 20 V.S.A. §§ 81 to 94.

²⁸⁴ 23 V.I.C. § 1128.

²⁸⁵ West's RCWA 38.52.091.

²⁸⁶ Code 15-5-22.

²⁸⁷ Jan. 12, 1951, Ch. 1228, 64 Stat. 1249.

²⁸⁸ www.ncsl.org.

²⁸⁹ www.nga.org.

²⁹⁰ Ibid. IPET, ILET & Team Louisiana.

the utter devastation and flooding of 80% of the city of New Orleans. Such a commission, with the help of Congress and the President, could recommend legislation to resolve all damage claims out of court that would assist hundreds of thousands of people getting their lives in order.²⁹¹

Legislative overhaul of the duties and responsibilities for the United States Department of Homeland Security, including the Federal Emergency Management Agency (FEMA), in dealing with disasters of unprecedented size and scope is long overdue and merits further study.

In light of the unprecedented crippling and near death of one of America's greatest cities, New Orleans, Louisiana, the need for federal, state and local legislation to direct, protect, compensate and insure that no other U.S. city in the future will find themselves mired in the quick sand of the bureaucracy years after a catastrophic event such as Hurricane Katrina, the costliest hurricane ever in the history of world.

This is but the first chapter in what will surely be a long lasting saga in the history of the state of Louisiana and the United States of America. God willing the experiences of all who suffered will aid others in dealing with seemingly un-surmountable odds of attaining full and complete recovery.

²⁹¹ <www.9-11commission.gov/report>.

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**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA**

**IN RE: KATRINA CANAL BREACHES
CONSOLIDATED LITIGATION**

CIVIL ACTION

NO.: 05-4182

SECTION "K" (2)

**FILED IN: 05-4181, 05-4182, 05-4191, 05-4568, 05-5237, 05-6073,
05-6314, 05-6324, 05-6327, 05-6359, 06-0020, 06-1885,
06-0225, 06-0886, 06-11208, 06-2278, 06-2287, 06-2346,
06-2545, 06-3529, 06-4065, 06-4389, 06-4634, 06-4931,
06-5032, 06-5042, 06-5159, 06-5163, 06-5367, 06-5471,
06-5771, 06-5786, 06-5937, 06-7682, 07-0206, 07-0647,
07-0993, 07-1284, 07-1286, 07-1288, 07-1289**

PERTAINS TO: LEVEE

SUPERSEDING MASTER CONSOLIDATED CLASS ACTION COMPLAINT

NOW COMES THE LEVEE PLAINTIFFS' SUBGROUP LITIGATION COMMITTEE ("LEVEE PSLC"), pursuant to Case Management Order No. 4 and for the purpose of filing this Superseding Master Consolidated Class Action Complaint:

INTRODUCTION

1.

This Complaint arises out of catastrophic failures of, and deficiencies in, the hurricane protection system surrounding the Parish of Orleans, State of Louisiana, which occurred on and after August 29, 2005. These failures and deficiencies caused and substantially contributed to the flooding and inundation of approximately 80% of the City of New Orleans, causing extensive harm and loss of life, and destroying or rendering uninhabitable approximately 160,000 residences and

buildings.

2.

Numerous actions, including class actions, have been brought as a result of this disaster, which was one of the worst, but most predictable and preventable, human tragedies in the history of this country. A number of defendants have been named in these proceedings. The instant Complaint, mandated by Case Management Order No. 4 entered on March 1, 2007, is intended to supersede and replace all class action complaints arising from the catastrophe which previously have been filed in or transferred to this Section of Court, and placed within the "Levee" category of cases.

PARTIES

3.

Named plaintiffs, **MICHELLE HENNESSEY, LAURIE CONIGLIO, LEO MITCHELL, LENNIECE MORRELL, CHARLES MOSES, ALICE MEYER, LAURA GREER, GARY GREER, GERTRUDE ESTEVES, STELLA WASHINGTON, JOHN B. WILLIAMS, EMANUEL WILSON, LUCINDA COCO, LESLIE DORANTES, ANITA HARRISON, TRENISE JACKSON, DWAYNE MALLET, DONNA AUGUSTINE, GLADYS LA BEAUD, DAISY INNIS, BETTY JONES, DENISE MEADE, JOELLA CEPHAS, BEATRICE DREW, EDDIE KNIGHTEN, CALVIN LEVY, and NICOLA McCATHEN**, are all majors and citizens of the United States who reside within the jurisdiction of this Court, who, for themselves individually and on behalf of others similarly-situated, seek damages resulting from the above-referenced catastrophe. The definitions of the proposed class and subclasses to which these named plaintiffs belong and which they seek to represent, are specified *infra* under the heading **CLASS ACTION ALLEGATIONS**.

4.

Named defendants herein are:

- (a) **The United States of America**, a sovereign government amenable to suit for civil liability in accordance with the federal laws and regulations set forth herein; and the **United States Army Corps of Engineers**, a division of the United States Government under the direct jurisdiction of the Department of the Army (both defendants collectively referred to hereafter as "**Corps**");
- (b) **The Board of Commissioners of the Orleans Parish Levee District** (hereafter "**OLD**"), a local government entity created by LSA-R.S. 38:291, amenable to suit, and domiciled in the Parish of Orleans, State of Louisiana;
- (c) **The Sewerage and Water Board of New Orleans** (hereafter "**SWB**"), a political subdivision of the State of Louisiana created by La. R.S. 33:4071 *et seq.*, amenable to suit, and domiciled in the Parish of Orleans, State of Louisiana;
- (d) **The Board of Commissioners of the East Jefferson Levee District** (hereafter "**EJLD**"), a political subdivision of the State of Louisiana created by LSA-R.S. 38:291, amenable to suit, and domiciled in the Parish of Jefferson;
- (e) **The Board of Commissioners of the Port of New Orleans** (hereafter "**PNO**"), a local government entity created by LSA-R.S. 34:21, amenable to suit, and domiciled in New Orleans, Louisiana;
- (f) **Modjeski & Masters, Inc.** (hereafter "**M&M**"), a foreign corporation doing business in the Parish of Orleans, State of Louisiana;
- (g) **Eustis Engineering Co., Inc.** (hereafter "**Eustis**"), a Louisiana corporation domiciled in the Parish of Jefferson, and doing business in the Parish of Orleans, State of Louisiana;
- (h) **Boh Bros. Construction Company, Inc.** (hereafter "**Boh Bros.**"), a Louisiana Limited Liability Company domiciled in the Parish of East Baton Rouge, and doing business in the Parish of Orleans, State of Louisiana;
- (i) **B&K Construction Company, Inc.** (hereafter "**B&K Construction**"), a Louisiana corporation, formerly known as "B&K Construction Company," domiciled in the Parish of St. Tammany, and doing business in the Parish of Orleans, State of Louisiana;
- (j) **Burk-Kleinpeter, Inc.** (hereafter "**Burk-Kleinpeter**"), a Louisiana corporation domiciled in the Parish of Orleans, and doing business in the Parish of Orleans, State

of Louisiana;

- (k) **Burk-Kleinpeter, L.L.C.** (hereafter "**Burk-Kleinpeter**"), a Louisiana Limited Liability Company domiciled in the Parish of Orleans, and doing business in the Parish of Orleans, State of Louisiana;
- (l) **Gotech, Inc.** (hereafter "**Gotech**"), a Louisiana corporation domiciled in the Parish of East Baton Rouge, and doing business in the Parish of Orleans, State of Louisiana;
- (m) **CSX Transportation Corporation** (hereafter "**CSX**"), a foreign corporation doing business in the Parish of Orleans, State of Louisiana;
- (n) **CSX Transportation, Inc.** (hereafter "**CSX**"), a foreign corporation doing business in the Parish of Orleans, State of Louisiana;
- (o) **Gulf Group, Inc. of Florida** (hereafter "**Gulf Group**"), a foreign corporation doing business in the State of Louisiana;
- (p) **Pittman Construction Co., Inc.** (hereafter "**Pittman**"), a Louisiana corporation domiciled in Orleans Parish, Louisiana, and doing business in the Parish of Orleans, State of Louisiana at all times pertinent herein;
- (q) **C. R. Pittman Construction Co., Inc.** (hereafter "**C.R. Pittman**"), a Louisiana corporation domiciled in Orleans Parish, Louisiana, and doing business in the Parish of Orleans, State of Louisiana at all times pertinent herein;
- (r) **James Construction Group, Inc.** (hereafter "**James Construction**"), a foreign corporation authorized to and doing business in the State of Louisiana;
- (s) **Public Belt Railroad Commission for the City of New Orleans** (hereafter "**PBR**"); an entity amenable to suit and domiciled in the Parish of Orleans, State of Louisiana; and
- (t) **St. Paul Fire and Marine Insurance Company** (hereafter "**St. Paul's**"), a foreign insurer authorized to do and doing business as an insurer in the State of Louisiana.

JURISDICTION

5.

The Court has subject matter jurisdiction pursuant to the provisions of 28 U.S.C. §1346(b)(1) as to the defendant Corps. All named plaintiffs have presented to this defendant the written,

administrative claims required by the provisions of the Federal Tort Claims Act, and in all respects have complied with the provisions of this Act. A period of at least six months has elapsed since the filing of each of these written, administrative claims.

6.

As to the foregoing claims, named plaintiffs reserve the right, both individually and on behalf of all proposed plaintiff class members, to contest the legal and/or jurisdictional necessity of filing administrative claims in this matter. This right is reserved pursuant to the “futility doctrine,” *inter alia*.

7.

The Court also has subject matter jurisdiction pursuant to 28 U.S.C. §1331 (federal question jurisdiction), inasmuch as plaintiffs’ claims arise under the Constitution and/or laws of the United States, which statutory laws include, without limitation, the Federal Water Pollution Control Act, 33 U.S.C. §§1251 *et seq.*, the Coastal Zone Management Act, 16 U.S.C. §§1451 *et seq.*, and the River & Harbors Act, 33 U.S.C. §§403 *et seq.*

8.

The Court also has subject matter jurisdiction pursuant to the provisions of 28 U.S.C. §1332(d)(2), which vests original jurisdiction over the class claims asserted herein based upon the Class Action Fairness Act of 2005, 28 U.S.C. §§1711 *et seq.*

9.

The Court also has subject matter jurisdiction over those claims asserted herein which arise under the Admiralty/Maritime Law of the United States, pursuant to 28 U.S.C. §1333(1) and saving to all plaintiffs as suitors all legal and equitable remedies to which they otherwise are entitled.

10.

The Court also has subject matter jurisdiction as to the defendant Corps pursuant to 46 U.S.C. §§741 & 752 (the Suits in Admiralty Act), and/or 46 U.S.C. §§781-790 (the Public Vessels Act) as applicable, and/or 46 U.S.C. §740 (the Admiralty Extension Act). All named plaintiffs have presented to this defendant the written, administrative claims required by the provisions of 26 U.S.C. §740. A period of at least six months has elapsed since the filing of each of these written, administrative claims.

11.

As to the foregoing claims, named plaintiffs reserve the right, both individually and on behalf of all proposed plaintiff class members, to contest the legal and/or jurisdictional necessity of filing administrative claims in this matter. This right is reserved pursuant to the “futility doctrine,” *inter alia*.

12.

The Court also has subject matter jurisdiction pursuant to 28 U.S.C. §1367 as to those claims asserted under state law. These claims are so related to claims within the federal jurisdiction of the Court that they form part of the same case or controversy, within the meaning of Article III of the United States Constitution.

13.

All named defendants have engaged in sufficient conduct within the jurisdiction of this Honorable Court, and/or have sufficient contacts with the jurisdiction of this Honorable Court related to the events complained of herein, to be subject to the Court’s *in personam* jurisdiction.

VENUE

14.

Venue is proper pursuant to the provisions of 28 U.S.C. §§1391(b) & 1391(e), inasmuch as a substantial part of the events or omissions giving rise to the claims asserted herein occurred, and a substantial part of the property that is the subject of this action is situated, within this judicial district.

WAIVER OF SOVEREIGN IMMUNITY

15.

The defendant Corps has waived sovereign immunity in connection with the claims asserted herein pursuant to the provisions of the Federal Tort Claims Act, 28 U.S.C. §§2671 *et seq.* Alternatively, this defendant's immunity has been waived for purposes of the admiralty/maritime claims asserted and the causes of action arising under the statutory laws of the United States, including, without limitation, the Admiralty Extension Act, the Suits in Admiralty Act, the Public Vessels Act, the Federal Water Pollution Control Act, the Coastal Zone Management Act, and the River & Harbors Act.

16.

Any immunity sought by the defendant Corps pursuant to 33 U.S.C. §702c (the Flood Control Act of 1928) is not available to the extent the provisions of this Act do not apply, have not been complied with, and/or the liability of the Corps is not predicated on flood control activity.

FACTUAL ALLEGATIONS

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(A) History and Construction of the 17th Street Canal

17.

The canal known today as the “17th Street Canal” forms a significant portion of the boundary between Orleans Parish, Louisiana and Jefferson Parish, Louisiana. Historically, the 17th Street Canal has also been known as the “Metairie Outlet Canal,” the “Metairie Outfall Canal,” the “Metairie Relief Canal,” and the “Upperline Canal.”

18.

The 17th Street Canal originated at the start of the 1850's as a canal dug through swampy ground to provide a right-of-way. It was located where the Jefferson and Lake Pontchartrain Railway was built, a railway connecting the town once called Carrollton with a shipping port on Lake Pontchartrain in the area today known as “Bucktown.”

19.

In 1858 a secondary canal was built, connecting the original canal to the river side of the Metairie Ridge. This spur canal was situated alongside a projected street numbered “17th Street,” and thus became known as the “17th Street Canal.” The name eventually came to commonly refer to the original, larger canal to which this spur canal connected.

20.

The community of Bucktown, where the northern end of the 17th Street Canal enters Lake Pontchartrain, began more than a hundred years ago as a group of fishing and hunting camps along the canal and Lake Pontchartrain. The earliest structures were wooden huts raised on stilts; and the canal provided transportation as well as a harbor for fishing boats.

21.

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More substantial development in this area occurred during the mid-19th century, with construction of a commercial wharf and a resort called "Lakeport." Steamboats docked at the entrance to the New Basin Canal (now Pontchartrain Boulevard), and at the terminus of the Jefferson and Lake Pontchartrain Railway (where Bucktown is today).

22.

Until recent years, the 17th Street Canal was home to a fleet of approximately one hundred shrimp boats. The fleet previously had a lease agreement with the defendant SWB.

23.

The 17th Street Canal historically is, and at all times pertinent herein has been, a navigable waterway in New Orleans that flows into Lake Pontchartrain.

24.

The defendant SWB took over the operation of the 17th Street Canal at the end of the 19th century. The canal was re-dredged in 1897, and again in 1929. In 1913, the SWB completed the construction of Pumping Station No. 6, which drained a large portion of New Orleans through the canal.

(B) The 17th Street Canal Dredging Project

25.

On July 15, 1974, the SWB initiated a project to improve drainage through the 17th Street Canal. Initially, this project called for the dredging of 2.4 miles of the canal from Pump Station No. 6 to Lake Pontchartrain, in order to remove sediment from the canal bottom and reshape the canal cross-section for the improvement of the flow characteristics of the canal as well as the pump capacity of Pump Station No. 6. The removal of approximately 85,000 cubic yards of bottom

sediment was anticipated.

26.

Since dredging projects in navigable waters of the United States require a Department of the Army permit pursuant to the River & Harbors Act, the SWB filed an application with the defendant Corps for a "Permit to Discharge or Work in Navigable Waters and their Tributaries."

27.

The Operations Division of the defendant Corps is responsible for the issuance of permits to dredge navigable waterways. Hence, the issuance of the dredging permit for the 17th Street Canal was the province of the Corps' Operating Division, and not, for example, the Corps' Engineering Division, which is responsible for flood control.

28.

The permit approval process required the SWB to also obtain approval from, among others, the Louisiana Department of Public Works. In August of 1974, the Louisiana Department of Public Works responded to the 17th Street Canal dredge permit application by stating it could not complete a review of the application because the applicant (SWB) had no soil data substantiating the stability or integrity of the canal's levees.

29.

On May 23, 1977, the Corps returned the application with no action because the SWB had failed to furnish information requested by, among others, the Louisiana Department of Public Works.

30.

In 1978, the SWB retained a civil engineering firm, the defendant M&M, to provide a plan

for the design and implementation of the dredging project; and, on August 23, 1979, M&M submitted a second dredging permit application on behalf of the SWB.

31.

The latter application was resubmitted on December 29, 1980, after environmental concerns were raised relative to the disposal of the dredged material in Lake Pontchartrain and on the banks of the canal.

32.

On January 28, 1981, M&M responded to inquiries about the impact of the dredging on existing levees, by providing the Corps with its first memorandum addressing the stability of the existing levees and sheet pile wall along the canal. The memo indicated that on three of the six test locations, the factors of safety fell below the required values set by the Corps. The handwritten report specifically stated that “two locations yielded low factors of safety due to...the existence of very soft clays....”

33.

On February 6, 1981, M&M provided the Corps with a stability analysis of the existing sheet pile wall along the east side of the canal, north of Hammond Highway. This report stated that “portions of the wall are extremely unstable as they now stand. This instability, even under normal water level situations is due to...the soft to very soft clays which make up the soil stratum....”

34.

On March 5, 1981, the Corps issued an internal memorandum addressing the soil stability analyses provided by M&M, which acknowledged that, in connection with the proposed dredging of the canal, factors of safety were substantially below the minimum 1.30 factor of safety, requiring

that the project should be redesigned.

35.

The specific location of the canal's levee system to which the latter memo refers, coincides with the area where the canal levee breached following Hurricane Katrina.

36.

On March 31, 1981, the Corps held a public hearing regarding the 17th Street Canal dredging permit application. There was discussion at this hearing about whether raising the existing sheet pile wall along the canal, as opposed to the requested dredging to deepen the canal, would provide a greater cross-section and greater pump capacity. The consulting engineer representing M&M voiced his concerns about widening the canals, and stated that not only were the levees already in violation of the Corps' engineering standards for levee stability, but that dredging attempts to remove material adjacent to the levees would only worsen the stability problem.

37.

On April 20, 1981, in response to concerns that the proposed dredging of the 17th Street Canal would negatively impact the existing canal levee, M&M announced a preliminary plan to install sheet pile walls with concrete caps for the entire length of the dredging project, prior to any dredging or excavation. The sheet pile walls were to be of a sufficient height to meet all applicable flood protection criteria.

38.

An internal Corps memorandum dated June 16, 1981, based on a review of this proposal by M&M, acknowledged that a number of levee and flood wall stability problems were likely if the SWB permit were granted.

39.

An internal memorandum from the Corps' Engineering Division to the Corps' Operations Division dated February 12, 1982 noted the existence of a stability problem in the canal at a location where excavation would directly tap the sands underlying the levee. The memo suggested that a stability analysis be done for the land side of the canal, incorporating effects of seepage to determine what corrective action might be needed. Sands underlay the entire 2.4 miles of the 17th Street Canal, from Pumping Station NO. 6 to Lake Pontchartrain, and the stability problem recognized in the aforementioned memo therefore cannot be confined to any one section of the canal.

40.

On August 23, 1982, Eustis provided M&M with a more comprehensive subsoil investigation report, which in pertinent part recognized that measures "should be taken" because of "the possibility of a blow-out during extreme high water in the canal." The report also identified "preventive measures," including "the installation of a seepage cutoff through the levee crown, installation of pressure relief wells near the land side toe of the levee, and sealing the canal bottom."

41.

These recommendations by Eustis were restricted to only specific areas of the canal, however, and not to the entire canal levee system.

42.

On November 30, 1982, M&M furnished the Corps with copies of the above soil analysis and from Eustis.

43.

On February 22, 1983, the Chief of the Corps' Engineering Division advised the SWB that

the Corps believed "the installation of relief wells would be an appropriate way to provide the necessary assurance against uplift" of the canal levee's sheet piles.

44.

On May 9, 1983, M&M submitted on behalf of the SWB a new permit application for the 17th Street Drainage Canal Improvement Project. This application was to supersede the application for Phase I, submitted on December 29, 1980, and Phase II, submitted on April 20, 1981, by combining the two phases in to one project, with the project limits being Pump Station No. 6 on the south, and 370.0 feet north of the Bucktown Pedestrian Bridge. The project now envisioned 470,000 cubic yards of canal bottom to be removed, whereas the original plan only called for 85,000 cubic yards.

45.

On July 27, 1983, Eustis submitted a revised soil stability report, which both confirmed the potential for a blow-out at the land side toe of the levee and extended the area of concern to the pumping station. In this report Eustis recommended dredging a test section in the canal to study the hydrostatic uplift pressure.

46.

From November 29 to December 16, 1983, a test section was dug just south of Interstate 10. Six piezometers were installed on the Jefferson side of the canal to closely monitor changes in the hydrostatic pressures before, during, and after completion of the excavation. Eustis' report concerning the test was submitted to the Corps on January 17, 1984. The report concluded that no relevant changes were monitored by the piezometers when the test section was dug, and that it was, therefore, believed that the possibility of a blow-out during high water conditions in the canal was

probably slight.

47.

The piezometer study of the test section failed to take into account that seepage flow through the permeable soils of the canal already was in progress when the piezometers were installed, so that the study's conclusions as to stability and permeability were unreliable.

48.

On June 13, 1984, the Corps issued a permit to "dredge to enlarge and maintain an area and install and maintain flood walls and mooring structures, in the 17th Street Canal (Metairie Relief Canal) from Pumping Station No. 6 to a point about 400 feet north of the Bucktown Pedestrian Bridge...."

49.

The "Statement of Findings" issued with the permit states that factors considered in issuing the permit included, *inter alia*, "navigation," present and prospective; flood heights and flood plain use; and "other public interests."

50.

The project ultimately was divided into the following phases: Phase I from Pump Station No. 6 to Interstate 10; Phase II-A from Interstate 10 to Hammond Highway - Orleans side; Phase II-B from Interstate 10 to Hammond Highway - Jefferson side; and Phase III from Hammond Highway to Lake Pontchartrain.

51.

Phase I was completed June 1, 1984. However, because the SWB and the defendant OLD could not effect an agreement with defendant EJLD regarding Phase II of the Project, an extension

of the permit work was granted by the Corps on February 20, 1987.

52.

On April 24, 1987 the Corps created a drawing showing a sheet pile design, which located the sheet pile tips 16 feet lower than the bottom of the canal. Even as the Operations Division of the Corps was addressing the SWB permit, therefore, the defendant's Engineering Division was addressing levee wall design that might incorporate the sheet piles that were permitted under the dredging project.

53.

On August 11, 1988, the SWB issued the work order for Phase III of the project, and the job was completed on December 6, 1989.

54.

The work order for Phase II-A of the permitted SWB dredging project, which included the installation of sheet piles on the Orleans side of the canal, was issued on July 4, 1990, and the job was completed on January 10, 1992. The contractor for this part of the Project was defendant Boh Bros.

55.

The dredging activity conducted in the 17th Street Canal pursuant to the SWB permit was specified contractually to entail "bucket dredging" from a series of flex-float barges in the canal. These barges constituted vessels in navigation for the time period during which the dredging occurred.

(C) Construction of 17th Street Canal Concrete Monoliths

56.

Without any Congressional authorization or re-authorization, the Corps unilaterally deviated from a Congressionally-authorized "Barrier Plan," which called for the installation of gates at the mouth of the canal (at Lake Pontchartrain). The defendants SWB and OLD had objected to the installation of these gates.

57.

The Corps thereafter proposed a "Parallel Protection Plan" for the 17th Street Canal, which called for increasing the height of the flood barriers on the east and west banks of the canal. This was part of an overall "High Level Plan," which replaced the "Barrier Plan" even though this change was not authorized by Congress.

58.

In connection with this plan, the Corps considered three options: levees, T-walls, or I-walls. It rejected the ideas of levees and T-walls; such construction was impracticable because it was not economically justified.

59.

The I-wall design selected by the Corps called for the construction of a concrete monolith on top of the sheet pile which previously had been permitted pursuant to the dredging project.

60.

Under the auspices of the Corps, acting in coordination with the OLD, levee flood walls for the 17th Street Canal eventually were constructed with an "I-wall" design. The U.S. Army Corps of Engineers Manual on Engineering, Design and Construction of Levees dated April 30, 2000 states

that for stability reasons, flood walls utilizing the "I-wall" design rarely exceed seven (7) feet above ground surface, and that an inverted "T-wall" design is used when walls higher than seven feet are required.

61.

The I-walls on the 17th Street Canal nonetheless were built in concrete sections that rise eleven (11) feet above the ground.

62.

The "I-wall" design consists of steel sheet pilings driven into the compacted dirt atop the levee and then reinforcing steel rods are threaded through the top of the piling. Concrete is then poured to encapsulate the top of the piling and form the wall. The wall is composed of individual concrete slab sections that are linked together by rubbery gaskets which allow the concrete to expand and contract.

63.

Upon information and belief, a soil analysis had been performed in 1981 by the defendant Eustis, which entailed borings along the canal's levee.

64.

The borings revealed alternating layers of soft clay and black humus or peat, a soft, spongy soil comprised of decaying trees and other organic material, occurring from fifteen to twenty-one feet below sea level.

65.

The layer of humus or peat substantially reduced the strength of the soil, particularly its strength in resisting lateral pressure and its ability to support the levee and flood walls under

pressure from flood water.

66.

Despite the discovery of such soil material, the flood walls of the 17th Street Canal levee were constructed with steel sheet piling driven to a depth that was seventeen (17) feet below sea level. At such depths, the protective sheet pilings ended above or in the middle of layers of weak soil.

67.

Additionally, the soil adjacent to the 17th Street Canal levee had subsided significantly after construction of the levee and flood wall, thereby significantly reducing the amount of support that the land behind the levee provided against the pressure of flood waters.

68.

In 1993, the defendant Pittman was retained for the construction of the concrete monoliths atop the steel sheet pile wall along the 17th Street Canal.

69.

During the construction of the concrete monoliths, Pittman reported to the Corps that it was encountering major problems: the sheet pile walls with the concrete monolith installed on the top were beginning to lean towards the canal side, because the supporting soil foundation was not of sufficient strength, rigidity and stability.

70.

Despite these concerns and problems, the construction of the I-walls was allowed to proceed, and was completed prior to the events giving rise to this litigation.

71.

Soil studies performed in connection with this construction activity failed to account for the possible weakening of the soil in connection with the affect of subsidence of land alongside the levee, soft soils at the base of the levee, and/or soil that would be weakened if flood waters pushed through the subterranean levels under the levee and flood wall.

72.

In the course of conducting construction activity, defendant Pittman built and placed concrete flood walls on top of sheet piling driven into unstable soil beneath the sheet piling. The soil conditions were either discovered or discoverable at the time of this activity.

(D) Post-Construction Events

73.

On information and belief, defendant Gulf Group contracted to repair a certain bridge spanning the 17th Street Canal from Old Hammond Highway to Robert E. Lee Boulevard, after the above construction project had ended. In conducting this activity, this defendant used and placed construction vehicles and other heavy equipment on the portion or portions of the 17th Street Canal levee which eventually failed. It is believed that the use and placement of these heavy vehicles and/or other heavy construction equipment compromised or damaged the levee and/or flood wall system so as to cause and/or contribute to the ultimate failure of same.

74.

On information and belief, reports of canal water in the yards of homes adjacent to the 17th Street Canal — an indicator of underseepage due to the flawed design and construction of flood walls — were made to the defendant SWB prior to the catastrophe giving rise to this litigation.

(E) The History and Construction of the London Avenue Canal

75.

The London Avenue Canal was constructed in the first half of the 19th century, through an area that was mostly swampland, and later became part of the City of New Orleans. The canal originally served a dual purpose of commerce and drainage, *i.e.*, it both permitted small boat traffic from Lake Pontchartrain to a section of New Orleans, and provided for swamp drainage.

76.

The defendant Corps, in coordination with the defendants OLD and SWB, was responsible for the design and construction of the London Avenue Canal's levee system.

77.

A major project of upgrading the flood walls and bridges along the London Avenue Canal was begun in the early 1980's. In connection with this upgrading project, the defendant OLD contracted several firms for engineering, design, and construction, namely: defendants B&K Construction, James Construction, Gotech, C.R. Pittman, and Burk-Kleinpeter.

78.

The defendant Corps previously had proposed to provide protection from storm surge by placement of a flood gate at the hurricane levees where the London Avenue Canal entered Lake Pontchartrain. The defendants OLD and SWB objected to this plan and instead favored building and raising the height of the parallel flood walls and levee structures along each side of the canal (the aforementioned Parallel Protection Plan). By 1991, the Corps, OLD and SWB had decided to proceed with this plan.

79.

The resulting flood walls along the London Avenue Canal were constructed atop earthen levees with an "I-wall" design, consisting of steel sheet pilings driven into the compacted dirt atop the levee with reinforcing steel rods threaded through the top of the piling. Concrete was poured to encapsulate the top of the piling and form the wall. The wall is composed of individual concrete slab sections (monoliths) that are linked together by rubbery gaskets (water stops), intended to prevent water from flowing between the monoliths and to allow the concrete to expand and contract.

80.

The entirety of the London Avenue Canal is constructed over beach sands of the Pine Island trend. The sands are encountered about 13 to 15 feet below the crowns of the I-wall levees of the canal, but are deeper at the vicinity of the northern breach which forms part of the catastrophe giving rise to this litigation (station 113 to 118). The sand is covered with a veneer of peaty swamp deposits.

81.

Of primary importance in constructing an I-wall atop an earthen levee are the composition of the soil into which the sheet piles will be driven and upon which the I-wall will rest, and the depth of the sheet piles as dictated by the composition of the soil.

82.

Soil borings of the levee at the site of London Avenue Canal south breach, which contributed to the catastrophe giving rise to this litigation, indicate the presence of sand at a depth of 10 to 15 feet below sea level.

83.

Soil borings of the levee at the site of London Avenue Canal north breach, which also contributed to the catastrophe, indicate conditions similar to those of the south breach site, with the layer of sand present at the north breach site at a depth of 12 feet below sea level, as well as a layer of peat, a highly porous material that shrinks when dry and expands when wet, and makes for highly unstable soil conditions.

84.

The sheet piles supporting the flood wall monoliths at the site of the London Avenue Canal south breach were driven to a depth of 14 feet below sea level. Thus, the bottom of the sheet piles terminated within a layer of sand.

85.

The flood walls along the London Avenue Canal are constructed with an "I-wall" design. The U.S. Army Corps of Engineers Manual on Engineering, Design and Construction of Levees dated April 30, 2000 states that for stability reasons, flood walls utilizing the "I-wall" design rarely exceed seven (7) feet above ground surface, and that an inverted "T-wall" design is used when walls higher than seven feet are required.

86.

The flood walls at the breach sites of the London Avenue Canal, although built with an "I-wall" design, nonetheless have concrete sections that rise to eleven (11) feet above ground surface.

87.

Defendants B&K Construction, James Construction, Gotech, C.R. Pittman and Burk-Kleinpeter either failed to discover and account for the soil and flood wall stability problems

associated with the London Avenue Canal, or proceeded with their engineering, design and construction activity aware of such problems.

88.

Upon information and belief, defendant James Construction contracted to flood-proof the Filmore Avenue Bridge and the Mirabeau Bridge over the London Avenue Canal. Flood-proofing of the bridges required that the original bridges be demolished and replaced with new bridges that have steep concrete sides which continue the flood wall from one side of the canal to the other. It is believed that negligence in the demolition of the old bridges and construction of the new bridges and the use of heavy vehicles and/or other heavy construction equipment in the demolition of the old bridges and construction of the new bridges caused and/or contributed to the eventual breach or breaches in the levee and/or flood wall.

(F) The Inner Harbor Navigation Canal

89.

Construction of the Inner Harbor Navigation Canal ("IHNC") commenced on June 6, 1918. Excavation work initiated with the construction of parallel dikes on either side of the canal. The more resistant clay materials that were excavated were dragged up onto the dikes, and were gradually built up to become permanent protective levees.

90.

From the onset, contractors battled problems with slope stability, as the soft oozy soils constantly slid back into the excavation. The defendant Corps was aware of these problems.

91.

The canal excavation was completed in September 1919. The lock structure was completed

on January 29, 1923, and dedication ceremonies for the entire IHNC were convened on May 5, 1923.

92.

At that time, the water level in the IHNC (at times now called "The Industrial Canal") was controlled by the tides in Lake Pontchartrain.

(G) The Gulf Intracoastal Waterway

93.

The Gulf Intracoastal Waterway ("GIWW") forms a protected shipping lane between Port Isabel, Texas (the Mexican border) and Apalachee Bay, Florida. It was originally conceived in 1808, but was not authorized by Congress until 1919. The GIWW was excavated by dredge under Corps authority in the late 1930s, to create a channel size measuring 9-feet deep by 100-feet wide. This later was enlarged to a 12- foot deep by 125- feet wide channel. The work was officially completed in June 1949.

94.

In 1944, under the authority of the Corps, the GIWW was rerouted to pass through the southern part of the IHNC, creating the first shallow channel through the wetlands to facilitate propagation of hurricane surge from Lake Borgne. By causing and allowing this to occur, the Corps had created the first part of a "Hurricane Alley," directed into the center of New Orleans.

95.

In 1947, a back protection levee adjacent to the IHNC was overtopped at Tennessee Street during a hurricane, spilling 10 feet of water into the East Side of New Orleans. Fortunately, the levee did not collapse, the area was undeveloped, and the flooded properties were quickly remediated. Still, there was flooding in the Metairie and Jefferson Parish areas attributable to even

this temporary overtopping. The Corps was aware of these events.

(H) The Mississippi River Gulf Outlet

96.

From its inception over forty years ago, the Mississippi River Gulf Outlet navigational canal ["MRGO"] has run from the Gulf of Mexico alongside St. Bernard and into the GIWW and the IHNC.

97.

In constructing the MRGO without using a separate canal (parallel to the GIWW) to connect to the IHNC, the Corps unilaterally deviated from a MRGO Authorization Report it submitted to Congress. This unilateral action significantly deepened and widened the GIWW from the point of connection to the IHNC thus increasing vessel traffic and producing significantly increased hydrologic consequences that caused or substantially contributed to the flooding and inundation complained of herein.

98.

The MRGO Authorization Report of the Corps further recommended studies of the MRGO's impact on the Louisiana coast and opined: "...[t]he exact location of the outlet to the Gulf and the alignment of the seaway should be determined after more complete studies of sand movement, wave action, and local currents are made in cooperation with the Beach Erosion Board. Hence, if the improvement is authorized, ample provision should be made for modifications of the location and alignment of the canal should further studies show that a more suitable location is available."

99.

No such studies were done; and, thus, the Corps did not consider alternatives that would be

less destructive to the lands and wetlands of Louisiana.

100.

At all times during its existence, the MRGO has had the inherent and known capability to funnel rapidly-accelerated, storm-driven surges, and magnify such surge force against levees, flood walls and spoil banks in New Orleans and St. Bernard Parish. It also has been known from the outset to be a waterway capable of denuding and destroying a critical natural buffer on the east side of New Orleans against storm surges associated with hurricanes.

101.

The Corps is responsible for the maintenance of the MRGO. This ongoing responsibility has included dredging the bottom of the waterway to remove deposited soil and silt. Proper dredging of the MRGO could ameliorate the "funnelings effect" of the waterway by maintaining its design depth, thereby diminishing the lethal threat to residents and businesses in Orleans and St. Bernard Parishes during hurricanes such as Katrina. The Corps has not caused or allowed this to occur.

102.

The northeast shore juncture of the MRGO and the GIWW is particularly susceptible to erosion induced by saltwater intrusion and the force of waves from passing vessels.

103.

The relationship between the MRGO and the IHNC/GIWW was made manifest in the conditions associated with Hurricane Betsy in September 1965. Both sides of the IHNC experienced breaks and overtopping. 6,560 homes and 40 businesses were flooded in water up to seven feet deep on the west side of the IHNC. The east side of the IHNC also failed, flooding the west end of St. Bernard's parish. The Corps' 1965 report on Hurricane Betsy confirmed that both internal levee

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failures and overtopping occurred along the IHNC on both the west and east sides.

**(I) The Lake Pontchartrain, Louisiana and Vicinity,
Hurricane Protection Project**

104.

The flood control structures that surround the New Orleans metropolitan area were constructed, in part, under the authority of the “Lake Pontchartrain, Louisiana and Vicinity, Hurricane Protection Project” (hereinafter referred to as “Lake Pontchartrain Project”).

105.

Congress first authorized construction of the Lake Pontchartrain Project in the Flood Control Act of 1965 to provide hurricane protection to areas around the Lake Pontchartrain. Although federally authorized, it was a joint federal, state, and local effort with the federal government paying 70% of the costs and the state and local interests paying 30%. The Corps was responsible for project design and construction, and local interests were responsible for maintenance of levees and flood control structures.

106.

The legislatively-mandated overall design criterion of the Lake Pontchartrain Project mandated by Congress was to protect the area from

“the most severe combination of meteorological
conditions considered characteristic for the region.”

107.

The Corps expected these conditions to occur once in 200 to 300 years, and they were deemed to be equivalent with the “Standard Project Hurricane” (“SPH”).

108.

However, the Corps' based its overall design specifications on the 1959 U.S. Weather Bureau 1-in-100 year SPH, which was contradictory to Congress' mandate to protect from a 1-in-200 years to a 1-in-300 year hurricane.

109.

Moreover, the 1959 SPH was known to be obsolete by 1972, just as construction of initial parts of the Lake Pontchartrain Project, the flood walls along the IHNC, was getting underway. The 1959 SPH specification of maximum sustained wind speeds of 107 mph was increased by the National Weather Service to 129 mph. An increase of 20% in maximum winds can lead up to a 40% elevation of maximum surge elevation.

110.

In 1979, the National Oceanic and Atmospheric Administration ("NOAA") raised the maximum sustained winds again to 140 mph, a category 4 hurricane (Technical Report NWS 23), which further exacerbated the Corps' design deficiencies.

111.

In 1981, the Office of the Chief of Engineers in Washington issued Engineering Regulation ER 1110-2-1453. The regulation provides direction for the development of SPH and Probable Maximum Hurricane wind fields along the Gulf and east coasts of the United States. The regulation states specifically:

"5. Requirements> ER 1110-2-1453 provides direction on the selection of the level of protection to be afforded by Corps flood damage prevention projects in urban areas. All field operating activities having Civil Works responsibilities are required to use the National Oceanic and Atmospheric

Administration (NOAA) Technical Report NWS 23 for specifying meteorological criteria for SPH and PMH wind fields along the gulf and east coasts of the United States.”

112.

Notwithstanding this order to revise all SPH-based analysis to reflect the new understanding of threat, the Corps elected to base its designs for the Lake Pontchartrain Project on the 1959 SPH.

113.

In addition to the application of the wrong SPH, the Corps’ elected to base the Project’s overall design specifications on the wrong elevation datum.

114.

The Corps applied the National Geodetic Vertical Datum of 1929 (“NGVD29”), even though they were aware of the fact that NGVD29 was not any longer equal to — and interchangeable with — local mean sea level (“LMSL”), and that LMSL was the only relevant datum for superimposition of hurricane surge and wave height from a 1950’s era oceanographic analysis.

115.

However, when the Corps’ adopted design specifications for the Lake Pontchartrain Project in 1965, zero NGVD29, was already between 1.3 and 1.6 feet below LMSL at different parts of the system, and the flood walls crowns were constructed lower by this margin.

116.

This design flaw was perpetuated in the construction of hurricane protection works when the Corps’ New Orleans District adopted a policy in 1985, with the approval of the USACE Lower Mississippi Valley Division (LMVD), to explicitly use the outdated 1929 NGVD29 adjustment for elevation control.

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117.

As a result, no provision was made to account for the 3 to 4 feet per century subsidence rates characteristic of the greater New Orleans metropolitan area even though this rate was known at the time of congressional authorization of the Lake Pontchartrain Project.

118.

Crown elevation deficiencies ranging up to 6 feet at the time Katrina struck resulted in prolonged overtopping of flood walls and levees along IHNC that otherwise would have been overtopped only briefly. Prolonged overtopping led to catastrophic breaches into the Orleans Metro area west of the IHNC.

119.

The original and only project design authorized by Congress, known as the "Barrier Plan," included a series of levees along the lakefront, concrete flood walls along the IHNC, and control structures, including barriers and flood control gates located at the Rigolets, Chef Menteur Pass, and Seabrook at the northern end of the IHNC. These structures were intended to prevent storm surges from entering Lake Pontchartrain and the IHNC, protecting from overflowing the levees along the lakefront and the flood walls along the IHNC.

120.

The Barrier Plan was selected over another alternative, known as the "High-Level Plan," which excluded the barriers and flood control gates at the Rigolets, Chef Menteur Pass, and Seabrook complexes, and instead employed higher levees and flood protection structures along the lakefront and along the IHNC.

121.

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The Barrier Plan was selected because the High-Level Plan was believed to have many serious drawbacks, including the following:

- (a) High Level Levees would take years longer to construct because of subsidence problems;
- (b) They would be wider, thus requiring more rights of way;
- (c) In some locations flood walls, which are more vulnerable to severe damage and/or rupture by impact of runaway vessels during a hurricane and would virtually destroy the esthetic quality of the lakefront, are required rather than levees;
- (d) More rights of way would result in displacement of more residents, businesses, etc.;
- (e) With higher lake levels, the interior drainage system would be severely hampered;
- (f) The High Level Plan would offer no protection to less densely populated areas such as the Northshore;
- (g) Lakefront Levees would have to be 6 to 9 feet higher than the present design grade; and
- (h) Studies leading to project authorization, the high level plan was determined to cost approximately 50% more than the Barrier Plan.

122.

The estimated completion date for the Barrier Plan was 1978.

123.

The final design memoranda for the flood walls along the IHNC were completed in the late 1960s, and construction was completed in the 1970s.

124.

During the 1970s, the control complexes at the Rigolets and Chef Menteur were facing significant opposition from environmentalists. This opposition culminated in a December 1977 court decision that enjoined the Corps from constructing the barrier complex and certain other parts

of the Project, until a revised Environmental Impact Statement was prepared and accepted.

125.

After the court-ordered injunction, the Corps was unable to produce a satisfactory Environmental Impact Statement for the Barrier Plan. In 1984, the Corps finally abandoned the Barrier Plan and elected to implement the High-Level-Plan, even though the High-Level-Plan was believed to have many serious flaws.

126.

No action was taken to adjust the flood walls that were built along the IHNC to the new high-level design, thus leaving them at a considerably lower design.

127.

As of 2005, the Lake Pontchartrain Project was still under construction, forty years after its authorization. While most public work structures would be scheduled for replacement or rehabilitation after forty years, planning for a more modern system was put off while the original project remained incomplete and continued to fall further behind in achieving a completion date. Design assumptions and policy made in 1965 continue to diminish the Lake Pontchartrain Project today.

(J) Hurricane Katrina and the Failure of the Hurricane Protection System

128.

Hurricane Katrina made landfall at 6:10 a.m. near Buras, Louisiana, on the morning of Monday, August 29, 2005 with estimated maximum winds of 117 mph.

129.

After its first landfall, Hurricane Katrina followed a track due north that took it across the

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Mississippi River to a final landfall near the mouth of the Pearl River at the Louisiana/Mississippi border at about 9:45 a.m. The central pressure rose gradually as the storm was traversing southeast Louisiana. At the time of the Mississippi landfall, pressure had reached 928 mb and Katrina was still a Category 3 hurricane with estimated maximum winds of 105 mph. The hurricane accelerated after its Louisiana landfall from about 13 to 16 mph making it a relatively fast-moving storm. After moving inland over south and central Mississippi, it became a Category 1 hurricane by 1:00 p.m., about three hours after the Mississippi landfall. The National Hurricane Center downgraded Hurricane Katrina to a tropical storm about six hours later, when the remnants of the eye were northwest of Meridian, Mississippi.

130.

The center of Katrina's eye, which was estimated at 25 to 35 miles in diameter, passed about forty miles east of downtown New Orleans, but the city did not experience winds stronger than Category 1 or Category 2 (95 mph) velocities. Katrina's strongest winds were in the right-hand leading quadrant that was almost continually over water. A few instrumented towers placed in various locations in the greater New Orleans metropolitan area measured sustained winds in the range of 71-79 mph.

131.

As Katrina's storm surge increased in intensity, water levels within the MRGO, the GIWW, and the IHNC began to rise.

132.

The first breach within the metropolitan New Orleans Region occurred at approximately 5:00

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a.m. at the CSX train Floodgate W-30 beside the Industrial Canal and immediately to the south of the Interstate-10 overpass. At this location, a steel storm gate on rollers had been damaged by a train several months prior to Hurricane Katrina. In lieu of this missing gate, a sandbag levee crest section had been constructed in the opening left by the missing floodgate. The sandbags completely washed out during Katrina.

133.

At this same site, flow along the juncture between the railroad embankment and the adjacent embankment fill supporting an asphalt paved roadway passing over the levee, resulted in erosion and scour that produced a second breach failure at essentially this same site. The roadway fill at this location was comprised largely of highly erodible lightweight "shell sand" fill, a material not suitable for levee fill, especially without sheet pile cutoff or similar features to prevent erosion.

134.

The defendant PNO's container facility received the full impact of the surge jet entering from the east through the MRGO/GIWW ship channel. This area experienced the highest surge levels in the IHNC, up to 15.4 feet (NAVD88), and more than a foot higher than the 14.2 feet at the south of the IHNC lock gate. The surge diminished by at least 2 feet between the container facility and Lake Pontchartrain.

135.

Two lines of flood protection have been constructed in this area. The original Corps flood walls and levees are set back from the canal bank and follow the south and west sides of the facility. The defendant PNO has been constructing a bank side line of protection that is at least as high as the Corps' hurricane protection system; however, it is incomplete at the northern end of the facility.

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The Corps I-walls and levees that failed at the PNO facility were exposed to surge that came primarily around the north end of the incomplete PNO flood wall.

136.

The first breach at the PNO container facility occurred at the rail yard behind the container facility. These breaches were the result of overtopping of an I-wall, with the overtopping flow then eroding a trench in the earthen levee crest at the inboard side of the flood wall. This removal of lateral support unbraced the flood wall, and it was pushed over laterally by the water pressures from the storm surge on the outboard side. The installation of erosional protection would have prevented the failure. In addition, the depth of the sheet piles was unusually shallow at this location. The I-wall failed by toppling laterally to the inboard (protected) side in a "rigid, post-hole" toppling mode as it became progressively unbraced by the erosion of the supporting soil at the inboard toe and, thus, became unable to support the water pressures on the outboard (canal) side due to the storm surge and hydrodynamic force.

137.

The other two large failures in this area occurred at transitions between disparate levee and flood wall sections, and/or at sections where unsuitable and highly erodible lightweight shell sand fills had been used to construct levee embankments. These two adjacent erosional embankment breaches, which were less than fifty yards apart, occurred at the south end of the Port of New Orleans. In both of these breaches, the embankment fill material was lightweight shell-sand, a material known to be unusually highly erodible. This type of shell-sand material performed notably poorly and is a material not suitable for construction of critical flood protection systems protecting large populations.

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138.

A major breach on 17th Street Canal occurred on the Orleans (east) side, between 9:00 and 9:15 a.m. on August 29, 2005.

139.

The breach rapidly scoured to depths below mean sea level, allowing lake and canal water to flow through the New Orleans (east) bank of the canal well after the storm surge had subsided.

140.

The flooding as a result of the breach of the 17th Street Canal was totally catastrophic, and caused at least 588 of the approximate 1,293 deaths attributed to date to the known flood wall failures associated with this event.

141.

Upon information and belief, water began to enter the Gentilly area east of the London Avenue Canal between 7:00 and 8:00 a.m. on August 29, 2005, pouring through a 200-foot wide breach in the levee/flood wall on the east side of the London Avenue Canal, just north of the Mirabeau Avenue bridge. This breach is referred to as the "south breach" of the London Avenue Canal levee.

142.

The water from this south breach initially inundated the Gentilly area of the City, an area bounded on the west by the London Avenue Canal, on the south by Gentilly Boulevard (the Metairie/Gentilly Ridge), on the east by the Inner Harbor Navigational Canal (the Industrial Canal) and on the north by Lake Pontchartrain. This water eventually combined with the flood waters from other breaches, which inundated other parts of the City.

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143.

Upon information and belief, water began to enter the Gentilly area west of the London Avenue Canal sometime before 9:00 a.m. on August 29, 2005, pouring through a 400-foot wide breach in the levee/flood wall on the west side of the London Avenue Canal, just south of the Robert E. Lee Bridge. This is referred to as the “north breach” of the London Avenue Canal levee.

144.

The water from the north breach initially inundated the Gentilly area of the city bounded on the west by Bayou St. John, on the north by Lake Pontchartrain, on the east by the London Avenue Canal, and along the southeastern side on a line drawn along Chef Menteur Highway to Gentilly Boulevard to Broad Street where it intersects with Orleans Avenue and then northwest along Orleans Avenue to Bayou St. John. This water eventually combined with the flood waters from other breaches, which inundated other parts of the City.

145.

The soil underlying London Avenue Canal flood walls formed a highly permeable pathway through which groundwater originating in the canal penetrated and moved below the sheet piles and up into the layer of peat. This caused the peat to expand and push through the ground on the outside of the canal resulting in a “ground heave,” providing a flow path for water undermining the levee, and causing the collapse of the levee and flood wall.

146.

The water in the canal, with the added pressure due to increased water from storm surge, moved through the sand and then moved below the sheet piles and up to the surface on the land side of the levee, eventually undermining the levee and causing the levee and flood wall to collapse.

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147.

The undermining and collapse of the levee and flood wall at the London Avenue breaches could have been prevented by placing the sheet piles to a depth of 50 feet below sea level, where their bottom ends would have terminated in a layer of clay.

148.

The storm surge associated with this hurricane did not overtop the flood walls at the sites of either of the 17th Street Canal breach or the north or south London Avenue Canal breaches. Because the eye-wall of Hurricane Katrina passed dozens of miles east of the City, none of the levee or flood walls experienced storm forces exceeding or even equaling the Category 3 forces for which they were allegedly designed. Further, the maximum sustained winds that would have impacted Lake Pontchartrain were only 95 miles per hour, some 16 miles per hour less than the 111 mile per hour minimum for winds in a Standard Project Hurricane (Category 3 storm).

149.

Even though only Category 2 forces impacted Lake Pontchartrain, the flood walls of which were not overtopped, the 17th Street Canal and London Avenue Canal levees/flood walls failed and allowed waters from Lake Pontchartrain to flood New Orleans. None of the flood wall breaches in question would have occurred under the conditions of nature associated with this event; these breaches occurred due to basic engineering, design, construction, maintenance and oversight failures and deficiencies, respectively and collectively attributable to the named defendants herein.

CLASS ACTION ALLEGATIONS

150.

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This action should be certified as a class action pursuant to Rule 23 of the Federal Rules of Civil Procedure.

151.

Named plaintiffs **MICHELLE HENNESSEY, LAURIE CONIGLIO, LEO MITCHELL, LENNIECE MORRELL, and CHARLES MOSES** are class representatives of a class defined as follows:

All individuals and entities, both private and public and both natural and juridical, in the geographic area bounded to the north by Lake Pontchartrain, to the south by the Mississippi River, to the east by the IHNC, and to the west by the 17th Street Canal running from Lake Pontchartrain south to Metairie Road and then west on Metairie Road to Causeway Boulevard, and then south on Causeway Boulevard to the Mississippi River, who/which sustained damages as a result of the inundation/flooding in this area which occurred during and immediately following the landfall of Hurricane Katrina on or about August 29, 2005, and who/which, as to the defendant Corps only, have—or, by a date to be determined by the Court, will have—fulfilled whatever administrative claim filing requirements this Court deems applicable in this matter.

152.

The proposed class is so numerous that a joinder of all members and a proceeding of the claims individually through such a mass joinder would be impracticable. Hence, the “numerosity” requirement of Rule 23 is satisfied.

153.

There are common questions of law and fact applicable to both the named plaintiffs and putative class members, including, but not limited to:

- (a) The cause or causes of the breaches and/or failures of the hurricane protection systems associated with the 17th Street Canal, the London Avenue Canal and the IHNC, the MRGO, and the Lake Pontchartrain and Vicinity Hurricane Project;

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- (b) The legal duties to plaintiffs owed by each defendant;
- (c) Each defendant's breach of said duties;
- (d) The causal relationship between any such breaches and the failures of the hurricane protection systems at issue; and
- (e) Whether the named defendants may assert certain affirmative defenses applicable to all named plaintiffs and putative class members.

Hence, the commonality requirement of Rule 23(a) is satisfied.

154.

The claims of the named plaintiffs are typical of all claims similarly situated in the class as defined above. Hence, the typicality requirement of Rule 23(a) is satisfied.

155.

Named plaintiffs will fairly and adequately represent the interests of the proposed plaintiff class. Each named plaintiff is represented by skilled counsel, experienced in the handling of mass tort cases and class action litigation. On behalf of the named plaintiffs, these counsel may be expected to handle this matter in an expeditious and economical way, serving the interests of all class members. Moreover, the named plaintiff class member themselves have agreed to enthusiastically and faithfully protect the interests of all absent plaintiff class members, by remaining involved as necessary in the decision-making required on the part of claimants herein. Accordingly, the adequacy of representation requirement of Rule 23(a) is satisfied.

156.

The aforementioned common questions or issues of fact and law not only exist, but predominant over individualized questions of fact and law herein. Accordingly, the predominance requirement of Rule 23(b)(3) is satisfied in this matter.

157.

The class action procedure which plaintiff seeks under Rule 23 offers a superior vehicle for the efficient handling and disposition of the issues and claims presented in this litigation. Alternatively, piecemeal litigation would result in a process that would be judicially inefficient, enormously expensive, greatly protracted, time-consuming, and unduly burdensome for the litigants and the Court. Therefore, the superiority requirement of Rule 23(b)(3) also is satisfied.

158.

Based upon the foregoing, plaintiffs specifically request that this matter be certified as a class pursuant to Rule 23(b)(3) of the Federal Rules of Civil Procedure.

159.

Alternatively, plaintiffs request that this matter be certified as a class pursuant to Rule 23(b)(2) of the Federal Rules of Civil Procedure, inasmuch as certain defendants have acted or refused to act on grounds generally applicable to the class, thereby making appropriate final injunctive relief or corresponding declaratory relief with respect to the class as a whole.

160.

In addition to requesting certification of the foregoing, general class as defined, named plaintiffs request pursuant to the provisions of Rule 23(c)(4) that the above class be divided into the following subclasses, each subclass to be treated as a class:

SUBCLASS ONE

161.

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Plaintiffs **MICHELLE HENNESSEY, ALICE MEYER, LAURA GREER, GARY**

GREER are subclass representatives of a subclass defined as follows:

All individuals and entities, both private and public and both natural and juridical, in the geographic area bounded to the north by Lake Pontchartrain, to the south by Metairie/Gentilly Ridge, to the east by the Orleans Canal, and to the west by the 17th Street Canal, who/which sustained damages as a result of the inundation/flooding in this area which occurred during and immediately following the landfall of Hurricane Katrina on or about August 29, 2005, and who/which, as to the defendant Corps only, have—or, by a date to be determined by the Court, will have—fulfilled whatever administrative claim filing requirements this Court deems applicable in this matter.

162.

There are common questions of law and fact applicable to both the named plaintiffs and putative class members, including, but not limited to:

- (a) The cause or causes of the breaches and/or failures of the hurricane protection system associated with the 17th Street Canal;
- (b) The legal duties to plaintiffs owed by each defendant responsible for said failures;
- (c) Each such defendant's breach of said duties;
- (d) The causal relationship between any such breaches and the failures of the hurricane protection system at issue; and
- (e) Whether the named defendants may assert certain affirmative defenses applicable to all putative subclass representatives and members.

Hence, the commonality requirement of Rule 23(a) is satisfied.

163.

The claims of the named plaintiffs are typical of all claims similarly situated in the class as defined above. Hence, the typicality requirement of Rule 23(a) is satisfied.

164.

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Named plaintiffs will fairly and adequately represent the interests of the proposed plaintiff class. Each named plaintiff is represented by skilled counsel, experienced in the handling of mass tort cases and class action litigation. On behalf of the named plaintiffs, these counsel may be expected to handle this matter in an expeditious and economical way, serving the interests of all class members. Moreover, the named plaintiff class member themselves have agreed to enthusiastically and faithfully protect the interests of all absent plaintiff class members, by remaining involved as necessary in the decision-making required on the part of claimants herein. Accordingly, the adequacy of representation requirement of Rule 23(a) is satisfied.

165.

The aforementioned common questions or issues of fact and law not only exist, but predominant over individualized questions of fact and law herein. Accordingly, the predominance requirement of Rule 23(b)(3) is satisfied in this matter.

166.

The class action procedure which plaintiff seeks under Rule 23 offers a superior vehicle for the efficient handling and disposition of the issues and claims presented in this litigation. Alternatively, piecemeal litigation would result in a process that would be judicially inefficient, enormously expensive, greatly protracted, time-consuming, and unduly burdensome for the litigants and the Court. Therefore, the superiority requirement of Rule 23(b)(3) also is satisfied.

167.

Based upon the foregoing, plaintiffs specifically request that this matter be certified as a subclass pursuant to Rule 23(b)(3) of the Federal Rules of Civil Procedure.

SUBCLASS TWO

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168.

Plaintiffs **LAURIE CONIGLIO, GERTRUDE ESTEVES, STELLA WASHINGTON, JOHN B. WILLIAMS, and EMANUEL WILSON** are subclass representatives of a subclass defined as follows:

All individuals and entities, both private and public and both natural and juridical, in the geographic area bounded to the north by Lake Pontchartrain, to the south by Gentilly Boulevard running to Broad Street, where it intersects with Esplanade Avenue, and then running northwest along Esplanade Avenue to City Park Avenue, to Marconi Boulevard, and to the Orleans Canal, to the east by the London Avenue Canal, and to the west by Bayou St. John, who/which sustained damages as a result of the inundation/flooding in this area which occurred during and immediately following the landfall of Hurricane Katrina on or about August 29, 2005, and who/which, as to the defendant Corps only have—or, by a date to be determined by the Court, will have—fulfilled whatever administrative claim filing requirements this Court deems applicable in this matter.

169.

There are common questions of law and fact applicable to both the named plaintiffs and putative class members, including, but not limited to:

- (a) The cause or causes of the breaches and/or failures of the hurricane protection systems associated with the 17th Street and London Avenue Canals;
- (b) The legal duties to plaintiffs owed by each defendant responsible for said failures;
- (c) Each such defendant's breach of said duties;
- (d) The causal relationship between any such breaches and the failures of the hurricane protection systems at issue; and
- (e) Whether the named defendants may assert certain affirmative defenses applicable to all putative subclass representatives and members.

Hence, the commonality requirement of Rule 23(a) is satisfied.

170.

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The claims of the named plaintiffs are typical of all claims similarly situated in the class as defined above. Hence, the typicality requirement of Rule 23(a) is satisfied.

171.

Named plaintiffs will fairly and adequately represent the interests of the proposed plaintiff class. Each named plaintiff is represented by skilled counsel, experienced in the handling of mass tort cases and class action litigation. On behalf of the named plaintiffs, these counsel may be expected to handle this matter in an expeditious and economical way, serving the interests of all class members. Moreover, the named plaintiff class member themselves have agreed to enthusiastically and faithfully protect the interests of all absent plaintiff class members, by remaining involved as necessary in the decision-making required on the part of claimants herein. Accordingly, the adequacy of representation requirement of Rule 23(a) is satisfied.

172.

The aforementioned common questions or issues of fact and law not only exist, but predominant over individualized questions of fact and law herein. Accordingly, the predominance requirement of Rule 23(b)(3) is satisfied in this matter.

173.

The class action procedure which plaintiff seeks under Rule 23 offers a superior vehicle for the efficient handling and disposition of the issues and claims presented in this litigation. Alternatively, piecemeal litigation would result in a process that would be judicially inefficient, enormously expensive, greatly protracted, time-consuming, and unduly burdensome for the litigants and the Court. Therefore, the superiority requirement of Rule 23(b)(3) also is satisfied.

174.

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Based upon the foregoing, plaintiffs specifically request that this matter be certified as a subclass pursuant to Rule 23(b)(3) of the Federal Rules of Civil Procedure.

SUBCLASS THREE

175.

Plaintiffs **LUCINDA COCO, LESLIE DORANTES, ANITA HARRISON, TRENISE JACKSON, and DWAYNE MALLET**, are subclass representatives of a subclass defined as follows:

All individuals and entities, both private and public and both natural and juridical, in the geographic area bounded to the north by Lake Pontchartrain, to the south by Gentilly Boulevard and along Gentilly Boulevard to its intersection with the London Avenue Canal, to the east by the IHNC, and to the west by the London Avenue Canal who/which sustained damages as a result of the inundation/flooding in this area which occurred during and immediately following the landfall of Hurricane Katrina on or about August 29, 2005, and who/which, as to the defendant Corps only have—or, by a date to be determined by the Court, will have—fulfilled whatever administrative claim filing requirements this Court deems applicable in this matter.

176.

There are common questions of law and fact applicable to both the named plaintiffs and putative class members, including, but not limited to:

- (a) The cause or causes of the breaches and/or failures of the hurricane protection system associated with the London Avenue Canal;
- (b) The legal duties to plaintiffs owed by each defendant responsible for said failures;
- (c) Each such defendant's breach of said duties;
- (d) The causal relationship between any such breaches and the failure or failures of the hurricane protection system at issue; and
- (e) Whether the named defendants may assert certain affirmative defenses applicable to

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all putative subclass representatives and members.

Hence, the commonality requirement of Rule 23(a) is satisfied.

177.

The claims of the named plaintiffs are typical of all claims similarly situated in the class as defined above. Hence, the typicality requirement of Rule 23(a) is satisfied.

178.

Named plaintiffs will fairly and adequately represent the interests of the proposed plaintiff class. Each named plaintiff is represented by skilled counsel, experienced in the handling of mass tort cases and class action litigation. On behalf of the named plaintiffs, these counsel may be expected to handle this matter in an expeditious and economical way, serving the interests of all class members. Moreover, the named plaintiff class member themselves have agreed to enthusiastically and faithfully protect the interests of all absent plaintiff class members, by remaining involved as necessary in the decision-making required on the part of claimants herein. Accordingly, the adequacy of representation requirement of Rule 23(a) is satisfied.

179.

The aforementioned common questions or issues of fact and law not only exist, but predominant over individualized questions of fact and law herein. Accordingly, the predominance requirement of Rule 23(b)(3) is satisfied in this matter.

180.

The class action procedure which plaintiff seeks under Rule 23 offers a superior vehicle for the efficient handling and disposition of the issues and claims presented in this litigation.

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Alternatively, piecemeal litigation would result in a process that would be judicially inefficient, enormously expensive, greatly protracted, time-consuming, and unduly burdensome for the litigants and the Court. Therefore, the superiority requirement of Rule 23(b)(3) also is satisfied.

181.

Based upon the foregoing, plaintiffs specifically request that this matter be certified as a subclass pursuant to Rule 23(b)(3) of the Federal Rules of Civil Procedure.

SUBCLASS FOUR

182.

Plaintiffs **DONNA AUGUSTINE, GLADYS LA BEAUD, DAISY INNIS, BETTY JONES, and DENISE MEADE**, are subclass representatives of a subclass defined as follows:

All individuals and entities, both private and public and both natural and juridical, in the geographic area bounded to the north by Gentilly Boulevard (Gentilly Ridge), to the south by the Mississippi River, to the east by the IHNC, and to the west by Esplanade Avenue, who/which sustained damages as a result of the inundation/flooding in this area which occurred during and immediately following the landfall of Hurricane Katrina on or about August 29, 2005, and who/which, as to the defendant Corps only, have—or, by a date to be determined by the Court, will have—fulfilled whatever administrative claim filing requirements this Court deems applicable in this matter.

183.

There are common questions of law and fact applicable to both the named plaintiffs and putative class members, including, but not limited to:

- (a) The cause or causes of the breaches and/or failures of the hurricane protection systems associated with the IHNC and MRGO;
- (b) The legal duties to plaintiffs owed by each defendant responsible for said failures;
- (c) Each such defendant's breach of said duties;

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- (d) The causal relationship between any such breaches and the failures of the hurricane protection systems at issue; and
- (e) Whether the named defendants may assert certain affirmative defenses applicable to all putative subclass representatives and members.

Hence, the commonality requirement of Rule 23(a) is satisfied.

184.

The claims of the named plaintiffs are typical of all claims similarly situated in the class as defined above. Hence, the typicality requirement of Rule 23(a) is satisfied.

185.

Named plaintiffs will fairly and adequately represent the interests of the proposed plaintiff class. Each named plaintiff is represented by skilled counsel, experienced in the handling of mass tort cases and class action litigation. On behalf of the named plaintiffs, these counsel may be expected to handle this matter in an expeditious and economical way, serving the interests of all class members. Moreover, the named plaintiff class member themselves have agreed to enthusiastically and faithfully protect the interests of all absent plaintiff class members, by remaining involved as necessary in the decision-making required on the part of claimants herein. Accordingly, the adequacy of representation requirement of Rule 23(a) is satisfied.

186.

The aforementioned common questions or issues of fact and law not only exist, but predominant over individualized questions of fact and law herein. Accordingly, the predominance requirement of Rule 23(b)(3) is satisfied in this matter.

187.

The class action procedure which plaintiff seeks under Rule 23 offers a superior vehicle for

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the efficient handling and disposition of the issues and claims presented in this litigation. Alternatively, piecemeal litigation would result in a process that would be judicially inefficient, enormously expensive, greatly protracted, time-consuming, and unduly burdensome for the litigants and the Court. Therefore, the superiority requirement of Rule 23(b)(3) also is satisfied.

188.

Based upon the foregoing, plaintiffs specifically request that this matter be certified as a subclass pursuant to Rule 23(b)(3) of the Federal Rules of Civil Procedure.

SUBCLASS FIVE

189.

Plaintiffs **JOELLA CEPHAS, BEATRICE DREW, EDDIE KNIGHTEN, CALVIN LEVY, and NICOLA McCATHEN** are subclass representatives of a subclass defined as follows:

All individuals and entities, both private and public and both natural and juridical, in the geographic area bounded to the north by Metairie Road/City Park Avenue, to the south by the Mississippi River, to the west by Causeway Boulevard, and to the east by Esplanade Avenue, who/which sustained damages as a result of the inundation/flooding in this area which occurred during and immediately following the landfall of Hurricane Katrina on or about August 29, 2005, and who/which, as to the defendant Corps only, have—or, by a date to be determined by the Court, will have—fulfilled whatever administrative claim filing requirements this Court deems applicable in this matter.

190.

There are common questions of law and fact applicable to both the named plaintiffs and putative class members, including, but not limited to:

- (a) The cause or causes of the breaches and/or failures of the hurricane protection systems associated with the 17th Street Canal, the London Avenue Canal, the IHNC

and the MRGO, and the Lake Pontchartrain and Vicinity Hurricane Project;

- (b) The legal duties to plaintiffs owed by each defendant;
- (c) Each defendant's breach of said duties;
- (d) The causal relationship between any such breaches and the failures of the hurricane protection systems at issue; and
- (e) Whether the named defendants may assert certain affirmative defenses applicable to all putative subclass representatives and members.

Hence, the commonality requirement of Rule 23(a) is satisfied.

191.

The claims of the named plaintiffs are typical of all claims similarly situated in the class as defined above. Hence, the typicality requirement of Rule 23(a) is satisfied.

192.

Named plaintiffs will fairly and adequately represent the interests of the proposed plaintiff class. Each named plaintiff is represented by skilled counsel, experienced in the handling of mass tort cases and class action litigation. On behalf of the named plaintiffs, these counsel may be expected to handle this matter in an expeditious and economical way, serving the interests of all class members. Moreover, the named plaintiff class member themselves have agreed to enthusiastically and faithfully protect the interests of all absent plaintiff class members, by remaining involved as necessary in the decision-making required on the part of claimants herein. Accordingly, the adequacy of representation requirement of Rule 23(a) is satisfied.

193.

The aforementioned common questions or issues of fact and law not only exist, but predominant over individualized questions of fact and law herein. Accordingly, the predominance

requirement of Rule 23(b)(3) is satisfied in this matter.

194.

The class action procedure which plaintiff seeks under Rule 23 offers a superior vehicle for the efficient handling and disposition of the issues and claims presented in this litigation. Alternatively, piecemeal litigation would result in a process that would be judicially inefficient, enormously expensive, greatly protracted, time-consuming, and unduly burdensome for the litigants and the Court. Therefore, the superiority requirement of Rule 23(b)(3) also is satisfied.

195.

Based upon the foregoing, plaintiffs specifically request that this matter be certified as a subclass pursuant to Rule 23(b)(3) of the Federal Rules of Civil Procedure.

ALLEGATIONS OF FAULT

**COUNT I:
LEGAL FAULT IN THE DREDGING OF THE 17TH STREET CANAL**

196.

Plaintiffs representing and within proposed Subclasses One, Two and Five refer to the preceding allegations of fact which relate to the dredging activity in the 17th Street Canal. All allegations of fault incorporated therein are respectfully re-averred.

197.

The following defendants had the legal responsibility and duty to these plaintiffs to cause, allow, and/or conduct the aforesaid dredging activity in a manner that would not compromise the safety of the canal's levee/flood wall system: the defendants Corps, OLD, EJLD, SWB, M&M, Eustis and Boh Bros. The defendant St. Paul's Fire and Marine Insurance Company is directly liable

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to these plaintiffs as the liability insurer of defendant OLD.

198.

The defendant Corps negligently failed to follow federal regulations and its own engineering standards and procedures, in regard to the issuance of a permit to dredge the 17th Street Canal.

199.

The defendant Corps violated federal law to the extent the River & Harbors Act prohibits the granting of a dredging permit that is contrary to the public interest.

200.

Published federal regulations (including 33 CFR §320.4) established general policies for the federal government's evaluation of permit applications, and require that the reasonably expected benefits of the requested dredging be balanced against the reasonably foreseeable harm from same, including possible harm related to detrimental effects on flood control. The defendant Corps violated this policy in not considering the impact of its approval of the dredging permit for the 17th Street Canal, and in fact disregarded overwhelming evidence to the effect that approval of the permit would dangerously compromise the 17th Street Canal's flood protection levee.

201.

The defendant Corps negligently issued a dredging permit which caused and allowed changes to occur in the 17th Street Canal bottom, leading to subsurface and soil destabilization of the canal levee.

202.

The Corps' fault in connection with the dredging of the 17th Street Canal arises under the Federal Tort Claims Act, under which the Corps is accountable for money damages caused by its

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negligence in causing, permitting and allowing the aforesaid dredging activity.

203.

The Corps' negligent fault in connection with the foregoing alternatively is based upon the Federal Maritime/Admiralty Law of the United States, including the provisions of the Admiralty Extension Act. Plaintiffs in proposed Subclasses One, Two and Five specifically aver that the Corps' dredging permit decision-making and activity relate to traditional maritime matters, activity, and commerce. Moreover, the flood damage of which plaintiffs in proposed Subclasses One, Two and Five complain, directly resulted from dredging activity involving vessels on navigable water.

204.

The activities undertaken by the Corps in connection with the issuance of the referenced dredging permit are not activities forming part of a federal flood control project; and neither are these actions by the Corps such that they occurred in connection with an authorized federal control project. Accordingly, the provisions of the Flood Control Act of 1928 [33 U.S.C. §702(c)] are not applicable as a basis for Corps immunity.

205.

The Corps had no discretion to permit the dredging activity in question, since the approved activity constituted damage to the public interest in violation of the defendant's clear statutory duties and obligations, and constituted activity which undermined already-existing flood protection for the benefit of citizens.

206.

The defendant SWB breached its legal responsibilities and duties to plaintiffs in proposed Subclasses One, Two and Five by seeking the dredging permit for the 17th Street Canal, and by

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failing to withdraw its application for the permit upon learning of the flood protection dangers which might result from the requested dredging activity.

207.

The defendant SWB was negligent in requesting and causing the 17th Street Canal to be dredged to a depth lower than the sheet piles, to be dredged only in the Orleans Parish side, to be dredged too close to the flood wall on the Orleans Parish side, and to be dredged generally in a manner that would compromise the safety of the canals/levee flood walls.

208.

The defendant SWB was negligent in refusing to agree to the implementation of the Congressionally-authorized "Barrier Plan," which would have reduced the storm surge from Hurricane Katrina and prevented the adoption of a flawed, alternative plan with respect to the 17th Street Canal.

209.

The defendant OLD violated its legal responsibilities and duties to the plaintiffs in proposed Subclasses One, Two and Five by negligently allowing, and/or by negligently failing to challenge and prevent, the aforesaid dredging in the 17th Street Canal.

210.

The defendant OLD is liable to the plaintiffs in proposed Subclasses One, Two and Five for its refusal to agree to the implementation of the "Barrier Plan," which would have reduced the storm surge from Hurricane Katrina and prevented the adoption of a flawed, alternative, plan with respect to the 17th Street Canal.

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211.

The defendants OLD and EJLD both and each negligently failed to conduct appropriate oversight, maintenance and inspection of the 17th Street Canal levee/flood wall system, pursuant to which the safety flaws and discoverable dangers of the system would have been disclosed to the public and/or corrected.

212.

The defendants OLD and EJLD both and each violated legal responsibilities and duties to the plaintiffs in proposed Subclasses One, Two and Five by negligently allowing, and/or by negligently failing to challenge and prevent, the aforesaid dredging in the 17th Street Canal.

213.

Plaintiffs in proposed Subclasses One, Two and Five aver that defendant St. Paul's had in full force and effect a policy of liability insurance affording coverage to the defendant OLD with respect to the matters, risks and things for which this defendant is liable herein, thereby affording plaintiffs the right to proceed against this defendant insurer under the provisions of the Louisiana Direct Action Statute, LSA-R.S. 22:655.

214.

Plaintiffs in proposed Subclasses One, Two and Five aver that defendants Eustis and M&M both and each were negligent in the engineering, design, analysis and recommendations regarding critical aspects of the dredging project for the 17th Street Canal.

215.

Defendants Eustis and M&M negligently failed to place proper hydrostatic pressure monitors during the dredging of a test section of the 17th Street Canal in 1983, and specifically placed the

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monitoring piezometers on the wrong side of the canal, erroneously concluding that digging the test section resulted in no relevant hydrostatic changes. These defendants negligently failed to take into account the seepage flow of the permeable soils already in progress when the piezometers were installed.

COUNT II:
LEGAL FAULT IN THE DESIGN AND CONSTRUCTION
OF THE 17TH STREET CANAL LEVEES AND FLOOD WALLS

216.

Plaintiffs representing and within proposed Subclasses One, Two and Five refer to the preceding allegations of fact which relate to the design and construction of the 17th Street Canal levees and flood walls. All allegations of fault incorporated therein are respectfully re-averred.

217.

The following defendants had the legal responsibility and duty to these plaintiffs to design and construct the levees and flood walls of the 17th Street Canal in a manner that would not compromise the safety of the canal's levee/flood wall system: the defendants Corps, OLD, EJLD, SWB, M&M, Eustis, Boh Bros., Pittman and Gulf Group.

218.

The 17th Street Canal was not an authorized federal flood control project. Accordingly, the defendant Corps enjoys no immunity under 33 U.S.C. §702c with respect to the alleged failures and deficiencies in the levees and flood walls of the 17th Street Canal.

219.

The defendant Corps' design of the I-wall for the 17th Street Canal was never authorized by Congress. The design and construction of these I-walls therefore was not a flood protection project

heavy equipment used and placed by this defendant, weakened the integrity of the 17th Street Canal levees and/or flood walls, directly and/or proximately contributing to the catastrophic breach which occurred on or about August 29, 2005.

233.

Defendant Gulf Group's liability in this regard is based both on negligence and on ultra-hazardous activity for which it is legally accountable in the absence of negligence.

234.

On information and belief, the defendant SWB also failed to properly respond to actual reports of canal water in the yards of homes adjacent to the 17th Street Canal — an indicator of underseepage due to the flawed design and construction of flood walls — which were made to the defendant SWB prior to the catastrophe giving rise to this litigation.

COUNT III:
LEGAL FAULT IN THE DESIGN AND CONSTRUCTION
OF THE LONDON AVENUE CANAL LEVEES AND Flood walls

235.

Plaintiffs representing and within proposed Subclasses One, Three and Five refer to the preceding allegations of fact which relate to the design and construction of the London Avenue Canal levees and flood walls. All allegations of fault incorporated therein are respectfully averred.

236.

The following defendants had the legal responsibility and duty to these plaintiffs to design and construct the levees and flood walls of the London Avenue Canal in a manner that would not

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compromise the safety of the canal's levee/flood wall system: the defendants Corps, OLD, Burk-Kleinpeter, Gotech, and B&K Construction.

237.

In addition to its liability caused upon negligent acts of omission and commission, defendant OLD had care, custody and control of the London Avenue Canal levee and flood wall system at all times pertinent herein, and accordingly are answerable under Articles 2317 & 2317.1 of the Louisiana Civil Code for the vices and/or defects in the levee and flood wall system which caused the damages of which plaintiffs complain.

238.

Defendant B&K entered into a construction contract to build the London Avenue Canal levee and flood wall system and built the flood walls on both sides of the canal. In performing its work, B&K was responsible for driving sheet piling into the soil and pouring the concrete monoliths that form the I-walls atop the sheet piles. B&K negligently constructed the I-walls in question, which faulty construction directly and/or proximately caused and/or contributed to both the north and south breaches of the London Avenue Canal.

239.

Upon information and belief, defendant Burk-Kleinpeter, an engineering company, was contracted to design and/or construct the London Avenue Canal levee and flood wall system. Defendant Burk-Kleinpeter's negligent design and construction directly and/or proximately caused and/or contributed to both the north and south breaches of the London Avenue Canal levee and flood wall system.

240.

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Upon information and belief, defendant Gotech, an engineering company, entered into a contract regarding design and/or construction of the London Avenue Canal levee flood wall system. The levees and/or flood walls were negligently designed and/or constructed and that defendant's faulty design and/or construction directly and/or proximately caused and/or contributed to both the north and south breaches in the London Avenue Canal.

241.

Plaintiffs in proposed Subclasses One, Three and Five aver that defendant St. Paul's had in full force and effect a policy of liability insurance affording coverage to the defendant OLD with respect to the matters, risks and things for which this defendant is liable herein, thereby affording plaintiffs the right to proceed against this defendant insurer under the provisions of the Louisiana Direct Action Statute, LSA-R.S. 22:655.

COUNT IV:
LEGAL FAULT REGARDING THE MRGO

242.

Plaintiffs representing and within proposed Subclasses Four and Five refer to the preceding allegations of fact which relate to the MRGO. All allegations of fault incorporated therein are respectfully re-averred.

243.

The following defendants had the legal responsibility and duty to these plaintiffs to protect against the harm and damages alleged herein resulting from the MRGO: the defendants Corps, OLD, and St. Paul's.

244.

The Corps' negligence in designing, engineering and constructing the MRGO, *inter alia*,

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included:

- (a) failing to take account of the waterway's inherent capability to serve as a funnel or conduit for rapidly-accelerated, storm-driven surges, which would magnify the storm surge's force against levees, flood walls and spoil banks in New Orleans;
- (b) failing to "armor" levees on both banks of the MRGO, and
- (c) failing to account for the devastation (through the construction itself as well as salt water intrusion and accelerated erosion) of the wetlands walls and land masses, thus denuding and destroying a critical natural buffer against storm surge, and exacerbating the funnel effect created by MRGO's design.

245.

The Corps also designed, constructed, operated, and maintained the MRGO according to faulty plans and specifications, in violation of the River & Harbors Act, which directed the Corps to "coordinate its investigation and planning with the United States Department of the Interior ["DOI"]. The Corps failed to coordinate with and involve the Governor and the DOI and thus violated its duties and obligations.

246.

The Fish and Wildlife Coordination Act, 16 U.S.C. §662, also required coordination between any federal agency proposing to "impound," "divert," or "control," a waterway or body of water, and the DOI, Fish and Wildlife Service. The MRGO is such a waterway. This statute also required the Corps to consult with officials of the State of Louisiana and DOI during all phases of the MRGO project, including investigation, planning, and construction.

247.

The Corps breached these statutory duties to consult and cooperate with State authorities. The defendant negligently and recklessly proceeded to build MRGO without waiting for the completion of an essential four-year study requested by the DOI.

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248.

The Corps failed to follow requirements of 33 CFR 335-38, particularly 33 CFR 336.1(c)(4) and 33 CFR 320.4(b) and Executive Order 11990. The Corps failed to execute MRGO dredging activities in the manner required by 33 CFR 337.5 and 338.2. Furthermore, the Corps failed to follow requirements of the State of Louisiana (made applicable by CFR 337.2), including those contained in Chapter 7, Sections 701 and 707 of the Louisiana Administrative Code relating to dredging activities.

249.

In its actions and omissions set forth above, the Corps also violated several federal and state statutes implicated in the design, construction, maintenance and operation of the MRGO, including the National Environmental Policy Act (NEPA), 42 U.S.C. §4332(c); the Water Resources Development Act of 1990 (NRDA), 33 U.S.C. §§2316 and 2317; the Coastal Zone Management Act, 16 U.S.C. §1452, *et seq.* and the Louisiana State and Local Coastal Resources Management Act, La.-R.S. 49:214.21 *et seq.* Additionally, the Corps illegally and improperly transported or otherwise disposed of dredge spoil, including, but not limited to in negligent and illegal placement of said spoil as spoilbanks.

250.

As a proximate result of the negligent and reckless acts or omissions of the Corps, the flooding/inundation of which plaintiffs complain was significantly aggravated and made extensive.

251.

Defendant OLD was granted the authority to establish adequate drainage and flood control

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in Orleans Parish and other areas within the jurisdiction including the IHNC. OLD specifically was granted authority to erect flood control works as they relate to tidewater flooding, hurricane protection and saltwater intrusion, and engage in the construction and maintenance of safe levees and/or spoilbanks. All levee districts and their commissioners, including OLD, have the responsibility for the care and inspection of levees.

252.

The negligence and/or fault of OLD caused or contributed to cause the failure of the levee system which failed in connection with the MRGO.

COUNT V:
LEGAL FAULT REGARDING THE IHNC
PROTECTION SYSTEM ON THE WEST SIDE

253.

Plaintiffs representing and within proposed Subclasses Four and Five refer to the preceding allegations of fact which relate to the IHNC. All allegations of fault incorporated therein are respectfully re-averred.

254.

The following defendants had the legal responsibility and duty to these plaintiffs to protect against the harm and damages alleged herein resulting from the failure of the IHNC: the defendants Corps, OLD, St. Paul's, CSX, PBR, and PNO.

255

The City of New Orleans is the sole owner of the New Orleans Public Belt Railroad Commission, a non-profit switching railroad which operates switches and terminal services for over 100 miles of track in New Orleans, Louisiana.

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256.

On or about September 11, 2004, a New Orleans Public Belt Railroad Train derailment caused a thirty-two and a half foot wide gap in Floodgate W-30, which is part of the flood wall system situated immediately west of, and running in a north-south direction parallel to, the IHNC north of the Interstate 10 high-rise.

257.

On December 14, 2004, the defendant PBR paid OLD \$427,387.96, the full estimated cost of the reconstruction of Floodgate W-30, but, on information and belief, both PBR and OLD failed to assure these repairs were made, prior to the August 2005 catastrophe giving rise to this action.

258.

Upon information and belief, defendant CSX designed and constructed a railroad crossing at or near the IHNC's flood protection structures. In so doing, CSX utilized highly erodible, lightweight, and/or porous materials including, but not limited to, "shell sand" and gravel, which caused CSX's structure to be significantly weaker than its surrounding flood protection structures.

259.

Upon information and belief, CSX also failed to install a "sheet pile cutoff" or similar device to prevent or limit erosion of its structure.

260.

Upon information and belief, CSX could have prevented the failure of its structure at minimal additional cost by installing concrete "splash pads" or other erosion protection devices at the base of the "I-walls."

261.

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CSX failed to exercise due care in buildings its structure, and its failures directly and/or proximately caused and/or contributed to the breaches of the IHNC on the west side.

262.

The PNO has the full and exclusive right, jurisdiction, power, and authority to govern the Port of New Orleans and is responsible for the maintenance of its wharves, terminals, marshaling yards, cranes, and all transportation infrastructure affecting the regulation of commerce.

263.

The IHNC is a canal connected to the Port of New Orleans and is within the jurisdiction and control.

264.

Upon information and belief, the PNO never tested whether the design, construction, and/or maintenance of the structures and/or appurtenances of the IHNC were adequate, proper, and compliant with requisite standards.

265.

The PNO's failure to ensure the adequacy of the design, composition, construction and maintenance of the IHNC levees' and floodgates' constituted negligence, subjecting the PNO to liability for those flood damages attributable to the failure of these structures.

266.

Further, the levees and floodgates were within the care, custody, control and *garde* of the PNO, and said levees and floodgates contained vices and defects, which were known or should have been known to the PNO. Accordingly, the defendant PNO's actions render it liable pursuant to Louisiana Civil Code Articles 2317 and 2317.1.

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Louisiana Civil Code for the vices and/or defects in the levee and flood wall system which caused the damages of which plaintiffs complain.

271.

The defendant OLD also is liable to plaintiffs for failing to expropriate any and all land adjacent to the New Orleans levee system, as necessary to insure compliance with its responsibility to preserve and maintain a safe levee and flood wall system.

272.

Plaintiffs aver that defendant St. Paul had in full force and effect a policy of liability insurance affording coverage to the defendant OLD with respect to the matters, risks and things for which this defendant is liable herein, thereby affording plaintiffs the right to proceed against this defendant insurer under the provisions of the Louisiana Direct Action Statute, LSA-R.S. 22:655.

COUNT VII:
LEGAL FAULT IN CONNECTION WITH THE LAKE
PONTCHARTRAIN VICINITY HURRICANE PROTECTION PROJECT

273.

Plaintiffs representing the entire, general class, including all subclasses, refer to the preceding factual allegations concerning the Lake Pontchartrain Vicinity Hurricane Protection Project, and the allegations of legal fault incorporated therein, all of which are respectfully re-averred.

274.

A legal responsibility was owed to plaintiffs by the defendant Corps, to devise, implement and maintain the Lake Pontchartrain Vicinity Hurricane Protection Project in a manner that afforded

plaintiffs protection against the catastrophic failure and deficiencies giving rise to this litigation.

275.

In regard to its deliberate departures from authorized, current and safe criteria, the defendant Corps instead assured that an inherently flawed Project would exist as of the time of this catastrophe.

276.

The Corps is liable to plaintiffs for its negligence as well as its willful and wanton recklessness in causing or allowing the serious failures and deficiencies of this Project, which in turn caused or substantially contributed to the catastrophic harm suffered by plaintiffs.

COUNT VIII:
NUISANCE IN VIOLATION OF LOUISIANA
AND/OR FEDERAL COMMON LAW

277.

Plaintiffs representing the entire, general class, including all subclasses, refer to the preceding factual allegations, concerning the MRGO, and the allegations of fault incorporated therein, all of which are respectfully re-averred.

278.

As the proprietor of the MRGO, the Corps had a duty pursuant to Louisiana Civil Code Article 667 to refrain from creating a nuisance with respect to the MRGO that would deprive, and threaten the deprivation of, the property use and ownership rights of plaintiffs in the event of a hurricane. The Corps violated this state statutory duty by creating the MRGO's hazardous conditions.

279.

As the owner and operator of the MRGO, the Corps also had a federal common law duty to

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plaintiffs to avoid creating a hazardous condition that would harm, and threaten to harm, the lives and property of nearby residents in the event of a hurricane. Defendant violated this federal common law duty by allowing the MRGO to become a threat to human life, property, and the environment on the occurrence of Hurricane Katrina.

PRAYER FOR RELIEF

WHEREFORE, plaintiffs individually, and on behalf of the class and subclasses they seek to represent, respectfully ask that judgments be entered in their favor and against the defendants, jointly, individually and *in solido*, to include the following:

- (a) an order certifying the requested class and subclasses;
- (b) an order appointing undersigned counsel as class counsel;
- (c) the award of economic and compensatory damages in amounts to be determined at trial;
- (d) the award of pre-judgment and post-judgment interest as allowed by law;
- (e) the award of attorney fees and costs of litigation pursuant to Rule 23(h) of the Federal Rules of Civil Procedure, the Federal Tort Claims Act, and/or the Equal Access to Judgment Act;
- (f) such other relief to the class representatives and class/subclasses as is available under Louisiana and/or federal law;
- (g) a jury trial as to all issues triable by jury herein; and
- (h) such other relief as the Court deems just and equitable.

RESPECTFULLY SUBMITTED:

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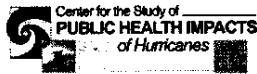
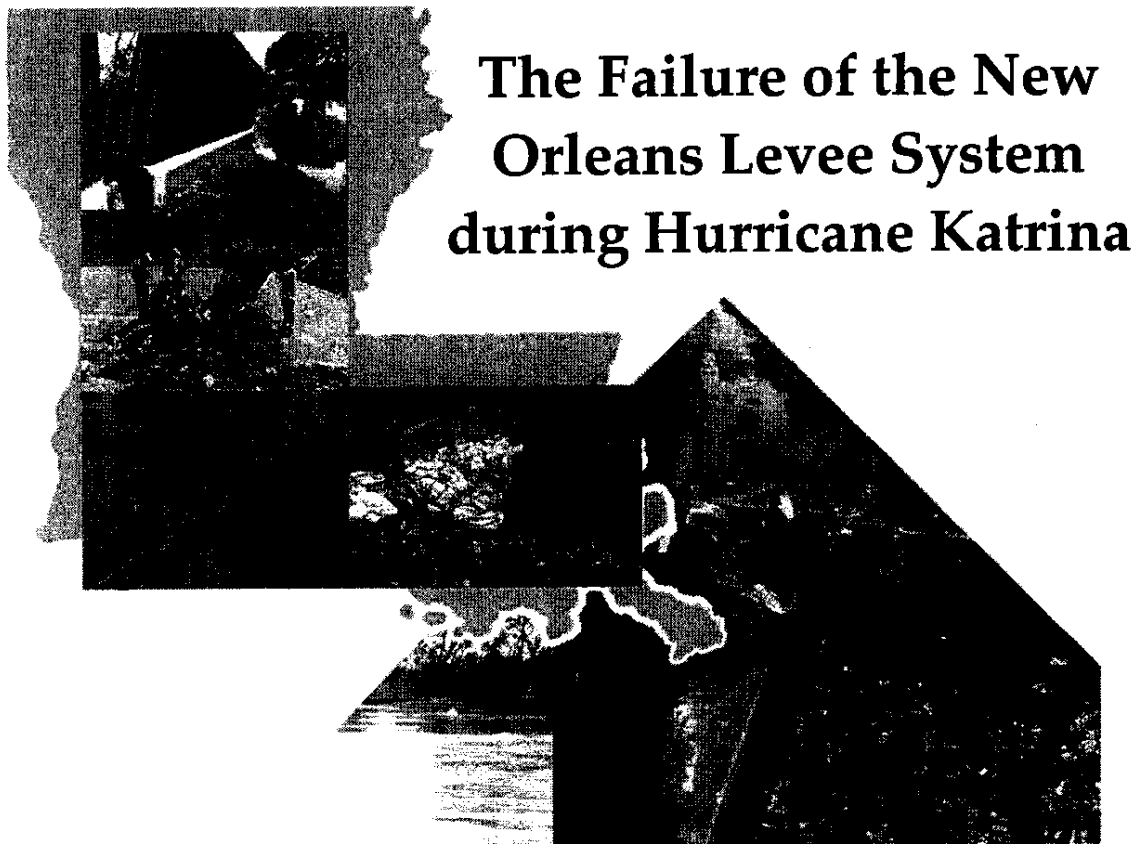
CERTIFICATE OF SERVICE

I hereby certify that on March 15, 2007, I electronically filed the foregoing with the Clerk of Court by using the CM/ECF system which will send a notice of electronic filing to all counsel of record who are CM/ECF participants. I further certify that I mailed the foregoing document and the notice of electronic filing by first-class mail to all counsel of record who are non-CM/ECF participants:

s/Gerald E. Meunier
GERALD E. MEUNIER, #9471

TEAM LOUISIANA

Ivor Ll. van Heerden, Ph.D. - Lead, G. Paul Kemp, Ph.D., Hassan Mashriqui, Ph.D. & PE, Radhey Sharma, Ph.D., Billy Prochaska, PE, Lou Capozzoli, Ph.D. & PE, Art Theis, PE, Ahmet Binselam, M.S., Kate Streva, B.S., and Ezra Boyd, M.A.



A Report prepared for Secretary Johnny Bradberry
Louisiana Department of Transportation and Development, Baton Rouge, Louisiana
State Project No. 704-92-0022, 20 --- December 18, 2006

Executive Summary

Louisiana State University (LSU) was commissioned in October, 2005 by the Louisiana Department of Transportation and Development (LDOTD) to assemble a team of Louisiana-based academic and private sector experts to “collect forensic data related to the failure of the levee systems around greater New Orleans” that occurred during passage of Hurricane Katrina on the morning of 29 August 2005. This group, later known as ‘Team Louisiana,’ was to focus on the hurricane protection system (HPS) designed and constructed over a 40-year period by the U.S. Army Corps of Engineers (USACE) for the East Bank of the Greater New Orleans area (GNO), including New Orleans East and St. Bernard Parish.

One way to look at the Katrina event is as a catastrophic natural disaster, and, with respect to the magnitude of the storm surge, it was. This approach tends, however, to minimize the engineering contribution to the direct or indirect loss of as many as 1,500 Louisiana residents (including the over 130 still missing as of December 2006, most considered swept away and drowned). Over 100,000 families were rendered homeless, making the destruction of New Orleans the worst from that perspective since the record Mississippi River flood of 1927. The response of the Nation to that natural disaster, even though it cost far fewer human lives, came in the form of an unprecedented engineering program to ensure that the flooding of the Lower Mississippi Valley would never happen again. The federal HPS that was authorized in 1965 to protect New Orleans following Hurricane Betsy had the same goal, but was clearly ineffective. It is important to understand why.

From an engineering perspective, forensics science is the study of materials, products, structures or components that do not operate as intended. In the context of the flooding of New Orleans, the purpose is to understand, first, what performance was expected from the GNO HPS and, second, to identify causes of failure as part of an effort to improve future performance.

Team Louisiana was asked, more specifically, to develop a time-history of surge and wave elevations for levee and floodwall reaches that failed, to compare this information to the designed and actual levee crown and floodwall crest elevations, and to assemble and examine all relevant design memoranda, construction plans and as-built surveys. In addition, Team Louisiana was asked to participate in debriefing of eye-witnesses, assembling stopped clock data, collecting aerial and ground level photographic evidence, and conducting non-destructive testing to determine soil foundation conditions and sheetpile depths in the vicinity of floodwall breaches.

At the time that Team Louisiana was commissioned, researchers from the LSU Hurricane Center had already fielded a reconnaissance effort that had uncovered apparent discrepancies between what was observed and early USACE statements about the causes of levee and floodwall failures. Following public discussion of these findings, three other investigations were organized by external groups as diverse as the University of California, Berkeley and the American Society of Civil Engineers, as well as by the USACE itself. These investigative teams included few scientists or engineers from Louisiana. Secretary Johnny Bradberry of the LDOTD saw a need for an official state-sponsored initiative to ensure that state and local perspectives were not ignored as the investigations proceeded.

The external study teams, particularly the Independent Levee Investigation Team (ILIT) that grew out of the UC Berkeley initiative, and the Interagency Performance Evaluation Team (IPET) sponsored by the USACE, concluded their work and issued final reports earlier this summer. The findings of these investigations differ with respect to some details, but generally concur on the specific mechanisms of most of the foundation-related floodwall failures. It is not surprising, however, that from a local perspective, these external probes appeared to miss some of the context in which the design and construction of the still incomplete federal HPS – originally planned to take 13 years at a total cost of less than \$90 million – stretched out over 40 years.

The GNO HPS project employed two generations of USACE employees at an estimated total cost more than \$700 million, while consuming nearly \$200 million in locally generated funds. Over this time, the USACE provided local sponsors with many conflicting claims, but few reliable assurances, of the actual level of protection being provided. The cost to repair the GNO HPS to pre-storm condition has cost as much in the year since Katrina as was spent in the previous 40 years. The repaired HPS still provides a substantially lower level of protection than was originally authorized in 1965. Given this history, the multi-generational tension between the USACE and those being protected in the GNO is complex and easily misunderstood. It is hoped that this report will enrich the historical record and provide additional local perspective.

Dr. Ivor van Heerden, Director of the Center for the Study of Public Health Impacts of Hurricanes and Deputy Director of the LSU Hurricane Center, was selected to lead these efforts. Dr. van Heerden recruited three other LSU scientists including an oceanographer, a hydraulic engineer, and a geotechnical engineer. This group of academic researchers was significantly augmented by the addition of three senior engineers from the private sector. These members included two geotechnical

engineers and a water resources engineer who had each participated in the design of numerous flood control works in the GNO area across the entire 40 year evolution of the Lake Pontchartrain and Vicinity Hurricane Protection Project.

The surge generated by Hurricane Katrina, a Saffir-Simpson Category 3 storm on landfall, is unprecedented in U.S. history. There is a potential for any forensics investigation to convey an apparent omniscience derived from 20:20 hindsight, and to lose sight of key points like this one. We have tried to avoid this trap by focusing on what was known at the time the GNO HPS was designed, the analytical tools that were available then, and what tools were used.

On the other hand, engineers – then or now – all work with uncertainty and follow accepted practice to account for unknowns that increase the risk of failure. As one of our senior engineers pointed out, it is the anomalous stratum, rather than the average soils condition, that generally causes foundation failure. Engineers address these uncertainties in levee and floodwall design by adding freeboard to raise crown elevation beyond the minimum specified, by inflating the stress to be resisted by a “factor of safety” sufficient to account for unknowns, and by incorporating redundant measures to limit the effect of the failure of a single component. These are some of the key features that distinguish a safe system from one that is unsafe. Such elements are the focus of this investigation.

This report is organized in two parts. The first part provides background information critical to understanding the physical and historical setting relevant to flood protection and drainage; the magnitude and sequence of stresses placed on the HPS by Hurricane Katrina; and the nature of the flooding that directly or indirectly led to the loss of as many as fifteen hundred Louisiana residents, and the destruction of much of New Orleans. The second part addresses the forensics issues as we see them. The following key questions were formulated to guide the forensics investigation. Each is discussed briefly here, and examined in more detail in a separate section of this report.

1. Was the GNO HPS properly conceived to accomplish the 1965 Congressional mandate to protect against the “most severe combination of meteorological conditions reasonably expected?”
2. Were the levels of protection, or crown elevations, specified in designs for HPS elements sufficient to resist overtopping by surge and waves associated with the 100-year Standard Project Hurricane?

3. Did incorrect design assumptions compromise performance? Should these have been detected and corrected by engineers equipped with the tools available at the time?
4. Did the Mississippi River Gulf Outlet (MRGO), a free-flowing, deep-draft navigation canal that pierced the HPS on the eastern side, compromise system performance?
5. Was the system maintained and operated to assure the required level of protection through time? Specifically, how did the 40-year construction schedule impact system performance?

Question 1. Was the GNO HPS properly conceived to accomplish the 1965 Congressional mandate to protect against the “most severe combination of meteorological conditions reasonably expected?”

Answer 1. No. The initial meteorological and oceanographic analysis based on the 1959 U.S. Weather Bureau 1 in 100 year Standard Project Hurricane (SPH) was known to be obsolete by 1972, just as construction of initial parts of the GNO HPS was getting underway. The primary deficiency of the 1959 SPH was in the specification of maximum sustained wind speed, which the National Weather Service (NWS) had increased by 20 percent, from 107 to 129 mph. The steady-state analytical approach used by the USACE to develop surge estimates was as sensitive to the effect of wind velocity as later numerical modeling approaches (i.e. SLOSH or ADCIRC), and should have alerted the USACE to the danger of underestimating wind speed. This analysis provided a design basis for setting the minimum heights above mean sea level for levee and floodwall crowns to resist overtopping by combined SPH waves and surge. A 20 percent underestimate of maximum winds can lead to a 40 percent reduction in the predicted surge elevation. In 1979 the NWS raised the maximum sustained winds to 140 MPH, a category 4 hurricane!

The New Orleans District USACE was aware of this deficiency in the original analysis, as is indicated by testimony in 1976 and 1982 General Accounting Office (GAO) reports, but never revised the original SPH-based analysis to reflect the new understanding of the threats, even after being ordered to do so by the Chief of Engineers in 1981 (ER 1110-2-1453). New Orleans residents were not advised that the GNO HPS required significant improvements to meet 1 in 100 year SPH requirements, but, instead, the New Orleans District claimed at times that the GNO HPS would protect against a 1 in 200 to 1 in 300 year hurricane. No basis for this claim has been established, while numerous storms that have affected the GNO area – before and after the 1965 initiation of the HPS -- were more severe than the 1959 SPH.

The New Orleans District (NOD) USACE missed opportunities to revise the original SPH-based analysis after the NWS revised the SPH in 1972 and 1979, and when the SLOSH storm surge model came into use in 1979. SLOSH showed clearly that the GNO HPS, as it was constructed at the time, was vulnerable to overtopping by many possible Category 3 storms. This result was confirmed later by the ADCIRC model, as recently as during the 2004 FEMA Hurricane Pam exercise (http://hurricane.lsu.edu/floodprediction/PAM_Exercise04/). The USACE supported development of both surge models and was aware of GNO HPS vulnerabilities, but appeared to accept the inadequacy of the system with a complacency that undercut efforts to sound alarms and begin pressing for improvement.

Question 2. Were the levees and floodwalls at or above the crown elevations specified in designs for HPS elements necessary to resist overtopping by surge and waves associated with the Standard Project Hurricane?

Answer 2. No. Floodwall and levee crown elevations were built 1 to 2 ft low because of an erroneous assumption at USACE New Orleans District (NOD) that an elevation of zero referenced to the National Geodetic Vertical Datum of 1929 (NGVD29) was equal to -- and interchangeable with -- local mean sea level (LMSL). LMSL was the relevant datum for superimposition of hurricane surge and wave height from a 1950's era oceanographic analysis. In 1965, zero NGVD29 was between 1.3 and 1.6 feet below LMSL at different parts of the system, and floodwalls and levee crowns were constructed lower by this margin. This mistake was locked in for continuing HPS construction when the NOD adopted a policy in 1985, with the approval of the USACE Lower Mississippi Valley Division (LMVD), to explicitly use the outdated 1965 NGVD29 adjustment for elevation control. As a result, no provision was made to account for the 3 to 4 ft/century subsidence rates characteristic of the GNO area even though this rate was known at the time of authorization. Crown elevation deficiencies ranging up to 5 feet at the time Katrina struck resulted in prolonged overtopping of floodwalls and levees along the Inner Harbor Navigation Canal (IHNC) and to the east in the Lake Borgne funnel that otherwise would have been overtopped only briefly. Prolonged overtopping led to catastrophic breaches into the Lower 9th Ward on the east and into Orleans Metro on the west, and contributed to the early failures of levees along the Gulf Intracoastal Waterway (GIWW) and MRGO. Early failure of the MRGO levee allowed the 32,000 acre wetland buffer between MRGO and 40 Arpent back levee to fill and overtop the 40 Arpent back levee while the surge was still rising, and resulted in catastrophic flooding in St. Bernard to an elevation of 11 ft (NAVD88).

Question 3. Did the USACE follow existing engineering practice and USACE guidance for construction of levees and floodwalls? Should issues about levee

materials and floodwall designs have been detected and corrected by engineers equipped with the tools available at the time of construction?

Answer 3. No to the first question, and yes to the second. Weak soil strengths or potential for underseepage were evident in strata tested for the USACE during the early 1980s under Orleans Metro drainage canal floodwall levees that failed. The potential consequences of these layers on levee stability were known to practicing engineers at the time but were missed or ignored because of inappropriate averaging of soil strengths on long levee reaches and across layers. Design engineers assumed that consolidation of soils beneath the I-wall levees on the 17th Street Canal would have increased soil strengths over time, but borings and soundings conducted since Katrina show that very soft clays in the failure zone have strengths less than values assigned in 1981. Where Division-level reviewers identified potential problems, they were rebuffed by District personnel citing “professional judgment.”

The New Orleans District USACE failed to conduct appropriate analyses of the potential for seepage to compromise levee and floodwall stability where shallow sand deposits occurred beneath the levee, such as at the London Avenue Canal. Design memoranda indicate reliance upon the Lane’s Weighted Average Creep method for underseepage analysis. This method was recognized in the profession at the time to be inappropriate for final design in a critical life-support structure. The presence of layered sands and clays should have led to analysis using more rigorous flow net and finite-element techniques in widespread use at the time, and specified in the governing USACE engineering manual for Design and Construction of Levees (EM 1110-2-1913, 1978 ed.). Sheetpile supported I-walls that were installed on levees with cross-sections too small to prevent underseepage also did not provide sufficient resistance when fully loaded, no matter what the sheetpile length. There is no evidence that rigorous analysis of uplift pressures was undertaken.

Idealized design templates were applied to long levee and floodwall reaches without adjustment for variable subsoil conditions or for variations in elevation on the protected side. IPET believes that such a mistake caused the levee supporting the I-wall levee to be constructed improperly in the vicinity of the north breach into the Lower 9th Ward, where the ground elevation on the protected side was lower. The foundation may have failed early in the storm sequence at a water elevation well below the design level of protection because of inadequate resistance.

The New Orleans District USACE did not follow standard engineering practice or Corps guidance when evaluating whether to protect (armor) earthen sea dikes from erosion caused by waves in the funnel area east of the city. Such evaluations should

have followed the 1954 TR-4 Shore Protection Planning and Design (Beach Erosion Board) or its successor, the Shore Protection Manual, first published in 1973. Instead of the required analysis, Design Memoranda for the New Orleans East and Chalmette Levees substitute the following disclaimer.

“Due to the short duration of hurricane flood stages and the resistant nature of clayey soils, no erosion protection is considered necessary on the levee slopes.”

These levees were not designed to withstand general overtopping, as was amply demonstrated in Katrina, but were expected to experience overtopping by waves greater than the significant wave provided in the oceanographic analysis. Many miles of the Chalmette and New Orleans East Levees were constructed of shell-rich sands with poor erosion resistance derived from the hydraulic excavation of the adjacent GIWW and MRGO channels, rather than the hauled clay soils specified for levees protecting urban areas (EM 1110-2-1913, 1978 ed.).

Question 4. Did the free-flowing, deep-draft navigation canal that pierces the HPS on its eastern side compromise system performance?

Answer 4. Yes. The MRGO and GIWW channels provide efficient conduits to funnel surge into the heart of New Orleans. As a result, surge elevations peaked in Lake Borgne and the IHNC almost simultaneously at higher levels relative to levee and floodwall crowns, and earlier, than would have been true if the MRGO had not been built, and if the wetland loss it caused had not occurred. The effect of these federally constructed and operated channels on surge and waves has consistently been underestimated by the USACE from before Hurricane Betsy, right through to the recent IPET report, as has the effect of accelerated wetland loss in the funnel area. One consequence of this institutional “blind spot” was that a hurricane barrier of the type proposed in the original pre-1980s HPS for the other two main passes into Lake Pontchartrain was never included for the MRGO.

The ILIT and IPET have indicated that the original “barrier” approach was a better design than the “high-level,” levees-only HPS ultimately adopted twenty years after authorization. But our work indicates that disastrous flooding during Katrina from the Lake Borgne funnel and the IHNC would have been exacerbated by the barrier proposed at the Lake Pontchartrain terminus of the IHNC (Seabrook). On the other hand, the Lake Pontchartrain surge along the south shore might have been reduced by up to 3 ft, and by a greater margin on the north shore, by the barriers that were proposed for the two other Lake Pontchartrain passes. This might have been enough to

prevent one or more of the failures of the defective Orleans Metro drainage canal floodwalls built in the 1990s, and this would have greatly reduced the severity of prolonged flooding in Orleans Metro. Such trade-offs were never rigorously assessed when the decision was made to change the HPS design in such a major way in 1985 at a time when surge modeling techniques using SLOSH were available. Again, the level of protection was reduced without informing the population at risk.

Question 5. Was the system maintained and operated to assure the required level of protection through time? Specifically, how did the 40-year construction schedule impact system performance?

Answer 5. No. The GNO HPS was managed like a circa 1965 flood control museum. Design assumptions and policy made in 1965 continue to diminish the HPS today. Local sea level has risen 0.4 ft since the 1960s and much of New Orleans has sunk over 1.5 ft in the same period for a combined change of nearly 2 ft relative to sea level, but as IPET (II-78) noted,

“It was not clear how projected subsidence rates were applied in structural elevation design, if at all. Subsidence was apparently not factored into the design freeboard allowance.”

Prudent engineers operating in coastal Louisiana have made allowances for subsidence for a century. The New Orleans District was one of the first agencies to directly map coastal wetland loss in Louisiana, but this ever continuing diminishment of surge protection was never incorporated into design philosophies. An analysis of all factors affecting levee elevation is required as part of FEMA Levee Elevation and Certification Requirements (44CFR65.10). It is inexcusable that this was not done for what was the most critical urban coastal protection project in the country.

Most public works structures would be scheduled for replacement or rehabilitation after 40 years, but planning for a more modern system was put off while the original project fell farther and farther behind. Because the USACE never completed the 1965 project, it could not legally pass responsibility for major maintenance or upgrades to the local sponsors, or initiate a new project to bring protection to a higher standard. Local sponsors kept levees and rights of way mowed, operated drainage structures, commented on USACE design memoranda, and participated in inspections. They were not, however, consulted on design or construction decisions. On the other hand, they were required to pay 30 percent of all costs incurred for a level of protection that appeared on some reaches to diminish over time. When Katrina struck, the crown height on most levee and floodwall reaches was between 1 and 3 ft low relative to

current mean sea level, the only datum that is relevant to the oceanography of hurricane waves and surge. On the IHNC and MRGO, every foot of crown deficiency when the surge was above 11 ft meant that overtopping and levee erosion started a half hour earlier. A half-hour in the lifetime of a moving hurricane can mean the difference between success and failure.

Lessons of Forensics Findings

The design assumptions for the GNO HPS remained static despite growing scientific evidence that the threat posed by surge was actually far greater than originally estimated. Design histories for individual HPS elements showed a pervasive trend over time toward substitution of less reliable structures for more conservative designs. On a regional perspective, management of the Lake Pontchartrain and Vicinity project led, over time, to ever greater departures from the overall objective of the original authorization, to protect against the *“the most severe meteorological conditions considered reasonably characteristic for that region.”* This Congressional objective could be read as a mandate for continual reevaluation and adjustment.

In fact, the project did evolve in a different way, as it grew to incorporate greater undeveloped areas to the east and west of the City and as the original barrier plan was abandoned in favor of the “high-level” levees-only alternative. So, the original project was changed in fundamental ways without rigorous analysis of the trade-offs in level of protection afforded and reliability. The 1984 Reevaluation, inspired by court decisions questioning whether the environmental impacts of the proposed Lake Pontchartrain barriers had been adequately assessed, could have been seen as an opportunity to critically examine the overall integrity and reliability of the system, and to improve the design (USACE 1984). Instead, the USACE concluded that it would cost more to leave out undeveloped wetlands than to continue the construction already started on the longer routes initially chosen to aid private drainage and development efforts.

In contrast to this history of expansion and modification, other decisions were made within the USACE organization presumably to control costs that were rationalized as a meticulous adherence to the largely discarded 1965 authorization. Contractors were required to use outdated benchmark elevations during construction, for example, while the erroneous substitution of the NGVD29 datum for the mean sea level datum specified in the original SPH oceanographic analysis – like that analysis itself -- never got a second look.

Role of Local Governments, Levee Boards and the State

Interactions between the USACE and local cooperating or sponsoring agencies affected the design of protective structures like the parallel floodwalls along the banks of the

Orleans Metro drainage canals. Although the federal government had overall responsibility for the GNO HPS, the slow pace at which federal funds were made available (\$3 to 5 million per year) led local agencies and their contractors to take a lead in many cases to get work started with local funds. As has been discussed, the USACE escalated the protection claimed for a completed Lake Pontchartrain and Vicinity Project from the 100-year to the 300-year storm level without changing any proposed structures. This claim led local engineers to believe that designs originally proposed for some HPS elements were excessively conservative, and that an adequate system could be constructed more quickly and at lower cost without significantly sacrificing performance or reliability. In contrast, most investigators who have reviewed the designs after Katrina have concluded that factors of safety applied by the USACE were anything but conservative given the criticality of subsurface soils and the consequences of failure.

Levee districts are state commissioned entities advised on engineering issues by the LDOTD. LDOTD assumed this function after a reorganization in which it absorbed the duties of the earlier Louisiana Department of Public Works in 1978. The levee districts have the authority to raise funds within their boundaries for flood protection projects. They have typically been the cost-sharing sponsors for development of jointly funded federal hurricane protection systems. They also assumed limited responsibilities for maintenance of portions of the federal system that the USACE decided were “substantially” complete, if not actually finished.

Another important factor came into play, however, after the National Flood Insurance Program (FIP) was established in 1968. Local governments sought to enhance economic growth by encouraging residential and commercial construction in new areas, often former wetlands, which were ringed by relatively low levees and subject to pumped drainage. With the advent of the FIP, development in these newly drained areas could proceed only if those who purchased properties there could also protect that investment with federal flood insurance. The Federal Emergency Management Agency (FEMA) would permit new areas to enter the FIP only if the levees and drainage system could be certified as providing protection against both the 100-year storm surge and 100-year rainfall event.

In the GNO, FEMA relied upon the USACE to provide engineering evaluations of flood risk in areas protected by both federal and non-federal levee systems. So local governments, rather than the levee districts, entered into discussions with the USACE to find out what minimal levee heights were necessary for certification against the 100-year surge event. If the USACE found that the perimeter levee system was high enough to prevent overtopping, then FEMA generally accepted this finding without requiring

geotechnical or construction information normally called for to meet FEMA levee standards (44CFR65.10).

Once the USACE determined that the levees were adequate, or, quite often, slated to become adequate sometime in the future, the “protected” areas were then analyzed only for the capacity of the internal drainage system to remove rainfall. The probability that the perimeter levee would be breached or overtopped was not considered. The internal drainage capacity was then used to determine the Base Flood Elevation (BFE) that governed how high buildings had to be elevated, and the location of flood zones on the Flood Insurance Rate Maps (FIRMs). Development accelerated once BFEs and FIRMs were issued. Thousands of people moved into suburban areas on the outskirts of the GNO in some cases before levee and drainage systems were complete or fully functional.

The IPET found that the GNO HPS failed to function as a system, but from a local perspective the HPS was successful for decades as a multi-purpose economic development tool that had an important role in facilitating drainage. Extreme rainfall events were far more frequent than hurricane surges, and apparently could be addressed, at least in the short-term, without a complete SPH-level hurricane protection system in place. Local officials were all too ready to believe glib assurances from the Nation’s premier civil engineering organization that they were well protected against 100-year hurricane flooding.

Where Things Stand Today

The Lake Pontchartrain and Vicinity project employed generations of USACE employees and contractors at an estimated total cost of more than \$500 million, while consuming nearly \$200 million in state and locally generated funds. Prior to Katrina, it was estimated to be about 85 percent constructed, but was not expected to reach completion until 2015. A similar West Bank and Vicinity project had been initiated on the other side of the river in 1986 after serious flooding associated with Hurricane Juan. The West Bank HPS was expected to cost \$330 million, again with a 35 percent local cost share, and was only 38 percent built prior to Katrina. Though it started much later, it was scheduled to be completed only a year after the east bank HPS. This much less capable system was not tested in 2005 to the same degree as the east bank HPS.

The pre-Katrina combined estimate of cost to complete the east and west bank GNO hurricane protection systems, a total of about \$1 billion, can be compared with costs recently compiled by the USACE for emergency repairs to the two projects since Katrina, and with estimates of additional expenditures necessary to achieve a more realistic 100-year level of protection. Emergency repairs carried out by USACE

contractors in the year since Katrina to return the GNO levees and floodwalls to the pre-storm condition have cost between \$400 and \$600 million, if the interim lakeshore drainage canal closures are included.

The repaired HPS still provides a substantially lower level of protection than that originally authorized in 1965. Dr. Bob Bea, Co-Director of the University of California, Berkeley, Center for Catastrophic Risk Management, and an ILIT member, recently pointed out that “the repaired sections of the hurricane protection system are the strongest parts,” but that “strong pieces embedded within weak pieces do not translate to a reliable system” (Bea 2006). Currently authorized projects to construct permanent lakeshore closures with pumps for Orleans Metro drainage canals will add an additional \$100 to \$200 million. Surge gates for the IHNC and MRGO are expected to cost at least \$200 million more.

It is evidence of how pervasively under-built the system was that it has cost as much after Katrina to repair the GNO HPS to a marginally stable pre-storm condition as was spent in the previous 40 years. The USACE now estimates that between \$2 and \$4 billion will actually be required to achieve the minimal 100-year level of protection generally required for participation in the Federal Emergency Management Agency (FEMA) flood insurance program. The level of protection that this will achieve should not be confused with the much higher Category 5 hurricane protection now being studied by the State and USACE. That will cost much, much more.

The Barrier Plan Revisited

One of the flaws of the Lake Pontchartrain and Vicinity Project authorized in 1965 is inherent in its name. The primary threat to New Orleans at the time the oceanographic analysis was being conducted in the 1950s -- prior to the construction of the MRGO and before most of the suburban development in New Orleans East and St. Bernard -- was always seen as coming from the Lake. This is apparent in the planned Seabrook structure, which, had it been in place during Katrina, would have been as useful as the French Maginot Line in World War II, addressing a threat coming from the wrong direction. The highest storm surges that have caused flooding in the GNO since Hurricane Betsy have always come from Lake Borgne rather than Lake Pontchartrain, and this is likely to remain the most probable scenario going forward.

Today, the USACE seeks funds to rebuild flood defenses for a ruined city that will offer a level of protection originally conceived in the late 1950s. The evolution of the Standard Project Hurricane shows that this level of protection was known to be inadequate by at least the early 1970s. Since Katrina, elements of the 1950s era plan that were not built, notably the tidal pass closure structures, have been retrieved from

mothballs, and are now being included in virtually all restoration plans. Given this impetus, Team Louisiana used the ADCIRC model to see how these closures would have affected performance during Katrina.

Results do not show the large reductions in surge in Lake Pontchartrain that some have suggested, except along the north shore, where they would certainly have helped. Elsewhere around Lake Pontchartrain, the more important effect would have been to reduce the cumulative volume of flooding through the drainage canal breaches over the next two days. Lake elevation along the south shore with the barriers in place would have dropped to its normal level within hours, instead of taking more than two days.

The lake closure at Seabrook, on the other hand, would have prevented drainage to Lake Pontchartrain of the surge coming in from Lake Borgne and caused more damage due to overtopping and breaching of levees along the IHNC. The model predicts that the greatest increase, over 3 feet, would have been observed just south of the Seabrook structure, but an increase in the surge maximum of a foot or more would be spread over a very large part of the MRGO funnel as water that actually drained to Lake Pontchartrain during Katrina was trapped.

Looking Ahead

The integrated levees and barrier structures now being proposed to provide “Category 5” protection to the GNO by state and federal agencies are similar in many ways to the barrier plan proposed in the late 1950s and authorized after Hurricane Betsy. Clearly, redundant flood protection features can be built to improve reliability. The same can be said about multiple levee lines separated by restored wetland areas designed for short-term storage of surge waters. It appears, however, that most of the proposals being presented continue to rely on legacy levees, which, though they may be built higher, are likely to suffer from legacy flaws. Katrina has taught that the long-term reliability of such structures cannot be assured, given the exposure to surge and wave that must now be assumed.

The experience with the Chalmette levee along the south bank of the MRGO is instructive. The reasons that it failed as early as it did can be debated, whether due to design or construction, but the result is indisputable. Ultimately, the USACE found that it could not retain this earthen structure at the design grade despite two major augmentations in the late 1970s and mid-1980s, and a less extensive rebuilding in the early 1990s. Efforts to improve reliability by armoring the recently rebuilt MRGO levee have been hampered by awareness that the new embankment will require additional lifts at relatively short intervals to counteract erosion and settlement, before it reaches a

less dynamic condition. This remediation would be complicated by the need to repeatedly remove and replace armor installed on the levee slopes and crown.

The only structures that survived on the Chalmette levee run were the water control structures at Bayous Bienvenue and Dupre. They were left by the storm as islands of solidity in a sea of destruction. One of the most important lessons of Katrina was that pile-supported structures like these, as well as T-walls used sparingly elsewhere in the GNO HPS, were capable of surviving the worst that Katrina could deliver.

Team Louisiana members have been excluded from the planning for Category 5 protection now in progress. Some USACE-IPET investigators have apparently been engaged for this work, however, so it is hoped that information derived from study of Katrina levee failures will, one way or another, have an impact on what is built in the future. Our study tells us that failure is not inevitable, but must be actively guarded against. Proposals for more reliably protecting the eastern side of New Orleans can be derived both from study of the GNO HPS failures during Katrina, and from inspection of more reliable structures that have been built elsewhere. Dutch engineers would undoubtedly propose a modular, pile-supported structure like the Oosterschelde closure across the 'funnel,' for example, to reduce the threat of surges originating in both of the lakes that flank New Orleans. The Oosterschelde closure is an elevated causeway supported by concrete piers providing guides for vertically sliding closure gates that would be lowered only when a storm approaches. It is surely time for this type of creativity, and not just in New Orleans, if we are to honor the 1,500 who lost their lives during Katrina, and avoid more costly mistakes in the future.



US Army Corps
of Engineers

Performance Evaluation of the New Orleans and Southeast Louisiana Hurricane Protection System

Draft Final Report of the Interagency Performance Evaluation Task Force

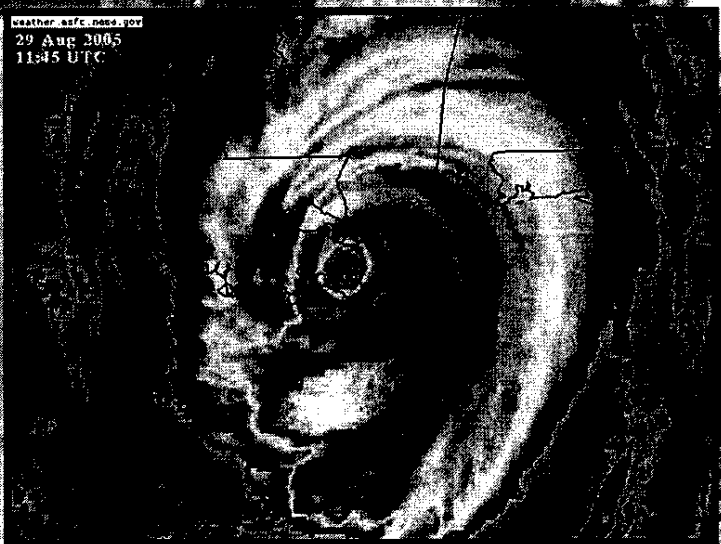
Volume I – Executive Summary and Overview

2006

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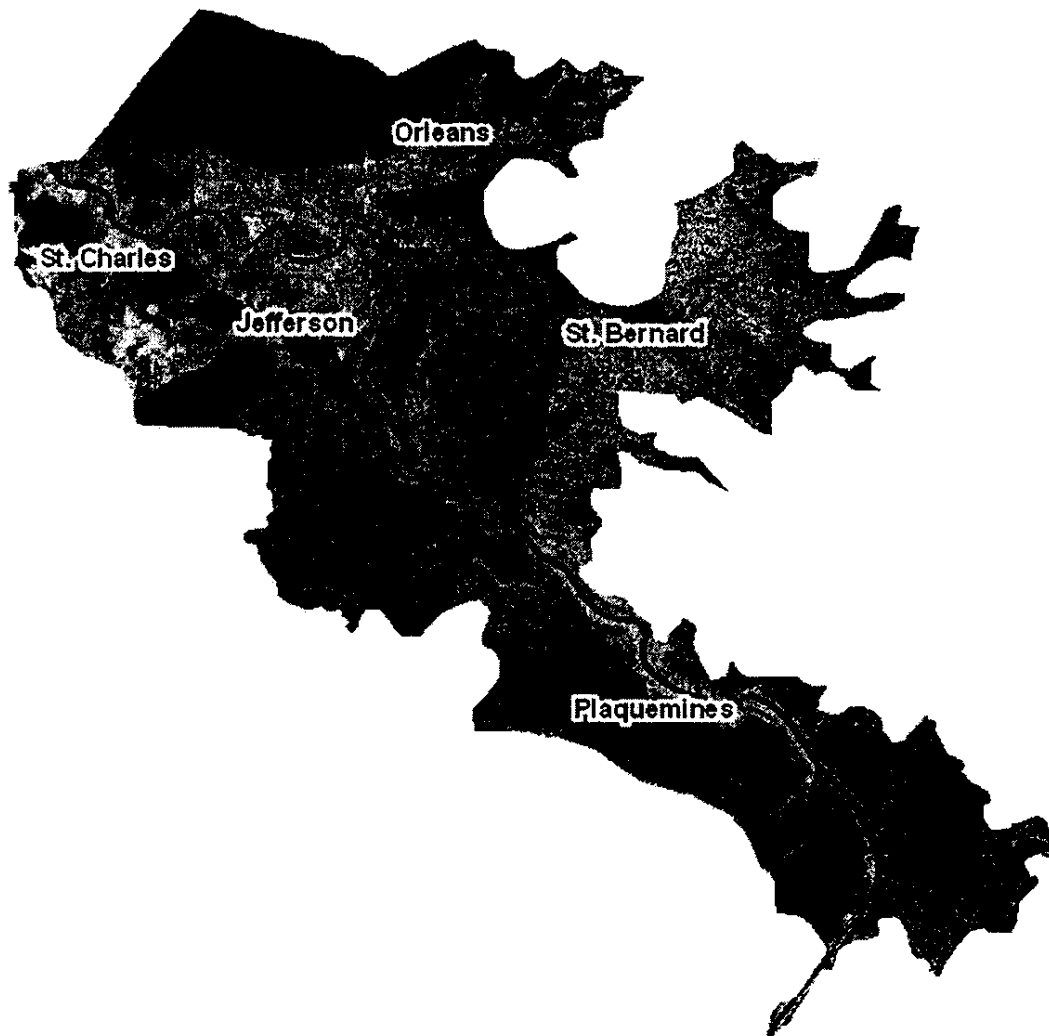
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Volume I

Executive Summary and Overview



This report is not intended as a final expression of the findings or conclusions of the United States Army Corps of Engineers, nor has it been adopted by the Corps as such. Rather, this is a preliminary report summarizing data and interim results compiled to date. As a preliminary report, this document and the information contained therein are subject to revisions and changes as additional information is obtained.

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Preface

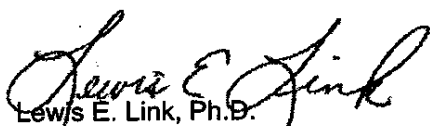
This report is the result of an intense performance evaluation of the New Orleans and Southeast Louisiana hurricane protection system during Hurricane Katrina. It was conducted by the Interagency Performance Evaluation Task Force, a distinguished group of government, academic, and private sector scientists and engineers who dedicated themselves solely to this task from shortly after Katrina struck through the start of the next hurricane season. Created by the Chief of Engineers, U.S. Army Corps of Engineers and peer reviewed literally on a weekly basis by an equally distinguished external review panel of the American Society of Civil Engineers, the group applied some of the most sophisticated capabilities available in civil engineering to understand what happened during Katrina and why. Their purpose was not just new knowledge, but application of that knowledge to the repair and reconstitution of protection in New Orleans as well as improvement to engineering practice and policies. The results of their work are largely already in the ground, having been transferred and applied prior to the completion of this report. The bulk of the information and documents used or generated by the Task Force has been placed on a public Web site, <https://IPET.wes.army.mil>, as they became available. At the time of the distribution of this draft report, there were well over 4300 documents on this site.

There are nine volumes in the final report, designed to provide a detailed documentation of the technical analyses conducted and their associated findings. They are organized around major technical tasks that together provided an in-depth, system-wide assessment of the behavior of the hurricane protection system and lessons learned that have been incorporated into the immediate repairs and are integrated into the continuing efforts to improve the system and assessing approaches for higher levels of protection. The volumes and their individual focus areas are as follows:

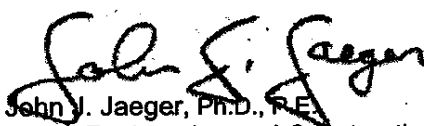
- Volume I: Executive Summary and Overview – Summary of findings and lessons learned. Overview of performance evaluation activities and reports.
- Volume II: Geodetic Vertical and Water Level Datums – Update of geodetic and water level references for the region and determining accurate elevations for all critical structures.
- Volume III: The Hurricane Protection System – Documentation of the character of the hurricane protection system, including the design assumptions and criteria, as built and maintained condition.
- Volume IV: The Storm – Determining the surge and wave environments created by Katrina and the time history and nature of the forces experienced by protection structures during the storm.
- Volume V: The Performance – Levees and Floodwalls – Understanding the behavior of individual damaged structures and development of criteria for evaluation of undamaged sections. Providing input to repairs and ongoing design and planning efforts.

- Volume VI: The Performance – Interior Drainage and Pumping – Understanding the performance of the interior drainage and pumping systems with regard to extent and duration of flooding. Examination of scenarios to understand system-wide performance.
- Volume VII: The Consequences – Determination of the economic, human safety and health, environmental, and social and cultural losses due to Katrina. Examination of scenarios to understand implications of losses and possible recovery paths on future risk.
- Volume VIII: Risk and Reliability – Determination of the inherent risk for all parts of the system prior to and following Katrina. Provision of capability for risk-based decision support for continuing improvement and development of hurricane protection.
- Volume IX: Supporting Appendices – Documentation of information resources and management, program management, and communications.

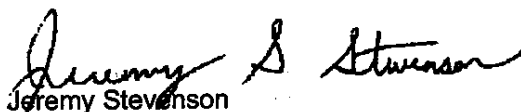
On behalf of the entire Interagency Performance Evaluation Task Force, the undersigned offer this report and the results therein as a contribution to the well being of the people of New Orleans and Southeast Louisiana and the reconstitution of effective hurricane protection for their future.



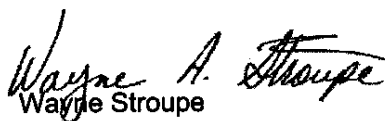
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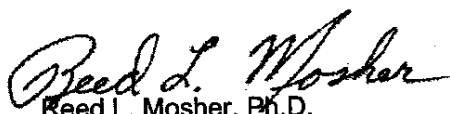
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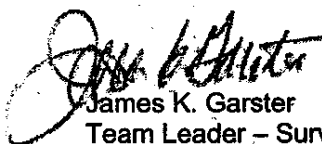
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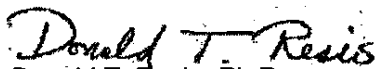
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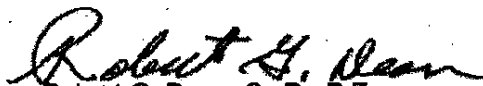
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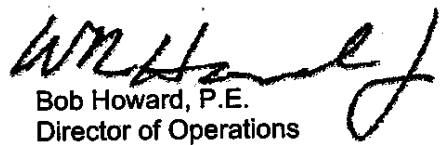


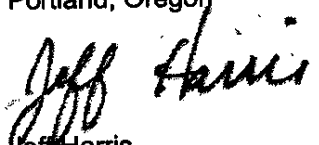
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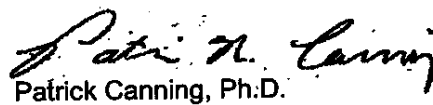

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Executive Summary

Introduction

This report, Performance Evaluation of the New Orleans and Southeast Louisiana Hurricane Protection System, is a draft of the final report in a series concerning the in-depth analysis of the New Orleans and Southeast Louisiana Hurricane Protection System conducted by the Interagency Performance Evaluation Task Force (IPET). The IPET was established by the Chief of Engineers to determine the facts concerning the performance of the Hurricane Protection System in New Orleans and Southeast Louisiana during Hurricane Katrina. This report provides a comprehensive description of the IPET activities and the findings and lessons learned from those activities. The frequent professional interaction and review comments provided by the American Society of Civil Engineers (ASCE) External Review Panel and the strategic oversight of the National Research Council (NRC) Committee on New Orleans Regional Hurricane Protection Projects have made substantial contributions to the conduct of the analysis and development of the results described in this report. This volume, Volume 1, Executive Summary and Overview, provides an executive summary of the findings and lessons learned and an overview of the IPET efforts described in more detail in Volumes II-IX.

The draft final report provides a detailed documentation of a broad, multi-disciplinary analysis of the hurricane protection system and its performance during Hurricane Katrina. Since the system is only designed to manage flooding in the metro-New Orleans basin, wind-based consequences and all direct consequences exterior to the system are excluded from this report. This report is being provided as a draft, offering provisional final results for the entire spectrum of the work accomplished with the exception of the risk and reliability assessment which is undergoing validation and peer review. Some of this work will continue to be reviewed and validated after the release of this draft. This includes final reviews by the ASCE External Review Panel and the NRC Committee on New Orleans Regional Hurricane Protection Projects. The results of those reviews will be incorporated into the draft prior to final publication, which is expected to be in September 2006. As such, the information provided in this draft report should be considered as provisional and subject to revision. This report and all other IPET-produced documents are available on the IPET Web site, <https://IPET.wes.army.mil>.

The key objective of the IPET is to understand the behavior of the New Orleans Hurricane Protection System in response to Hurricane Katrina and assist in the application of that knowledge to the reconstitution of a more resilient and capable system. As such, the IPET analysis is geared toward determining why certain sections and structures breached and why others did not, using that understanding to assess the integrity of the remaining portions of the system, and providing an analytical and knowledge base to assist in designing more resilient protection measures. IPET is also conducting a risk and reliability assessment of the entire system to aid in understanding the levels of protection that will exist for the future. This methodology will support the Louisiana Comprehensive Protection and Restoration Study. To do this, the IPET Teams have conducted an integrated set of analyses designed to provide a balanced assessment of the performance of all aspects of the physical system. The IPET is not examining organizational and jurisdictional issues that impact the effectiveness of the physical

system. These issues are being examined by the Hurricane Katrina Decision Chronology Study being conducted by a separate group of investigators.

The architecture of this report is aligned with the five major questions that comprise the IPET mission. Those questions involve:

- **The System:** What were the pre-Katrina characteristics of the hurricane protection system (HPS) components; how did they compare to the original design intent?
- **The Storm:** What was the surge and wave environment created by Katrina and the forces incident on the levees and floodwalls?
- **The Performance:** How did the levees and floodwalls perform, and what insights can be gained for the effective repair of the system, and what is the residual capability of the undamaged portions? This also involved understanding the performance of the interior drainage and pump stations and their role in flooding and un-watering of the area.
- **The Consequences:** What were the societal-related consequences of the flooding from Katrina to include economic, life and safety, environmental, and historical and cultural losses?
- **The Risk and Reliability:** What was the risk and reliability of the hurricane protection system prior to Katrina, and what will it be following the planned repairs and improvements (1 June 2006).

All of these efforts are underpinned by the establishment of accurate elevations for geodetic reference points throughout the region and re-establishing the relationship of local mean sea level to the geodetic datum.

Findings

The IPET findings are presented in three tiers: the first two presented in Volume I and the third in the individual volumes addressing major topical areas of analysis. The first tier is the overarching findings that represent a synthesis of the component analyses. The second tier, presented in Volume I as a synopsis of principal findings, is a synthesis of the findings from the component analyses of the hurricane protection system. The detailed findings are presented in Volumes II–VIII. A unique aspect of the IPET work is that the results are in many cases, already “in the ground” in the form of the repairs accomplished. They are also incorporated into the planning and design processes that are the basis for continued work to recover to authorized levels and for completion of the system. The analytical tools and information bases will be transitioned to the Louisiana Comprehensive Protection and Restoration Study, to develop effective approaches for higher levels of protection.

Overarching Findings

The System did not perform as a system: the hurricane protection in New Orleans and Southeast Louisiana was a system in name only. Flood protection systems are an example of a series system—if a single levee or floodwall fails, the entire area is impacted. It is important that all components have a common capability based on the character of the hazard they face. Such systems also need redundancy, an ability for a second tier of protection to help compensate for the failure of the first tier. Pumping may be the sole example of some form of redundancy; however, the pumping stations are not designed to operate in major hurricane conditions. The system's performance was compromised by the incompleteness of the system, the inconsistency in levels of protection, and the lack of redundancy. Incomplete sections of the system resulted in sections with lower protective elevations or transitions between types and levels of protection that were weak spots. Inconsistent levels of protection were caused by differences in the quality of materials used in levees, differences in the conservativeness of floodwall designs, and variations in structure protective elevations due to subsidence and construction below the design intent due to error in interpretation of datums. The presence of closure gates such as those for the CSX railroad that must function as a part of the system, but are separately controlled, add to the inherent risk in the system. Redundancy was simply not included. Continuity of pumping could have significantly reduced at least the duration of flooding and in some areas the extent. Armoring the back sides and crests of levees and the protected side of floodwalls would have added significant redundancy and reduced breaching. Surge gates at the mouths of the outfall canals are an excellent example of providing redundancy. The combination of the surge protection for the canals and resilient levee-floodwall systems will dramatically reduce risk in Orleans East Bank.

The storm exceeded design criteria, but the performance was less than the design intent: sections of the hurricane protection system were in many ways overwhelmed by the conditions created by Hurricane Katrina. This is particularly true for the sections of the Gulf Intracoastal Waterway (GIWW) along New Orleans East, and the levees in St. Bernard and Plaquemine Parishes where the combination of record high surge and long period waves exceeded the design conditions and devastated the levees. This devastation, however, was aided by the presence of incomplete protection, lower than authorized structures, and levee sections with erodible materials. While overtopping and extensive flooding from Katrina were inevitable, a complete system at authorized elevations would have reduced the losses incurred. The designs were developed to deal with a specific hazard level, the Standard Project Hurricane as defined in 1965; however, little consideration was given to the performance of the system if the design event or system requirements were exceeded.

Within two of the three outfall canals in Orleans Parish, and at one site within the Inner Harbor Navigation Canal (IHNC), foundation failures occurred prior to water levels reaching the design levels of protection, causing breaching and subsequent massive flooding and extensive losses. These failures were all associated with I-wall structures and a common failure mode involving the formation of a gap on the canal side of the floodwall that precipitated and accelerated the failure in the foundation materials. The designs for these structures were marginal with respect to practice and the uncertainty inherent in the variable geological conditions and the hurricane hazard for the area. The duration of flooding could have been

reduced if the pumping capability had been able to continue, but the pumping systems were not designed to operate in severe hurricane conditions.

Two other sites within the IHNC experienced I-wall breaches due to overtopping and scour behind the walls which reduced the stability of the structures. These breaches added to the flooding in Orleans (East Bank) and the Lower Ninth Ward. The storm surge levels in the IHNC exceeded the design levels, and lower structure elevations, reduced over 2 ft by 35 years of subsidence, contributed to the amount of overtopping that occurred. Reduced protection elevations at transitions between structure types and incomplete sections of the system similarly reduced protection levels and increased flooding. Another site on the west side of the IHNC breached from overtopping and scour of a levee. The elevation of the levee was lower than adjacent areas, which added to its vulnerability.

The flooding and the consequences of the flooding were pervasive, but also concentrated. Consequences of the flooding and the associated losses were greater than any previous disaster in New Orleans and, in themselves, create a formidable barrier to recovery. Loss of life was concentrated by age, with more than 75 percent of deaths being people over the age of 60. Loss of life also correlated to elevation, in terms of depth of flooding, especially with regard to the poor, elderly and disabled, the groups least likely to be able to evacuate without assistance.

The majority, approximately two-thirds by volume, of the flooding and half of the economic losses can be attributed to water flowing through breaches in floodwalls and levees. Losses and in many respects recovery can also be directly correlated to depth of flooding and thus to elevation. In some areas flooded by Katrina, where water depths were small, recovery has been almost complete. In areas where water depths were greater, little recovery or reinvestment has taken place.

Another concentration of consequences is in the nature of the losses. Twenty five percent of residential property values were destroyed by Katrina and this loss represents 78 percent of all direct property damages. Non-residential properties suffered a 12 percent loss in total value or half the rate of residential. Clearly residential areas were more prone to flooding.

The repaired sections of the hurricane protection system are likely to be the strongest parts of the systems until the remaining sections can be similarly upgraded and completed. Since there are many such areas where the protection levels will be the same as before Katrina, the New Orleans metropolitan area remains vulnerable to any storm creating surge and wave conditions that rival those from Katrina.

Synopsis of Principal Findings

Geodetic Vertical and Water Level Datum (Volume II)

The variable and considerable subsidence in the New Orleans area was reflected in the performance of the system in Katrina in two ways. First, the magnitude of the subsidence and adjustments to the datums were not fully considered in the design and construction of the Hurricane Protection System. Spatial and temporal variations of 0.2 to 3 ft were found between

the geodetic datums and water level reference datums. Flood control structures in the region were authorized and designed relative to a water level datum (mean sea level), but constructed relative to a geodetic vertical datum incorrectly assumed to be equivalent to the water level datum. This resulted, in the case of the outfall canals, in structures built approximately 1 to 2 ft below the intended elevation. In at least one case, the Corps made a deliberate decision not to re-examine elevations of existing project structures after datum adjustments were made. Second, updating of the reference elevation points for the region, although underway, was not completed and left decision makers without an accurate understanding of the actual elevations of the hurricane protection. The IHNC structures, for example, are more than 2 ft below their intended design elevations, mostly from subsidence over the 35-year life of the project.

Hurricane Protection System (Volume III)

There was no evidence of government or contractor negligence or malfeasance. With the exceptions noted below, the system was generally built as designed, and design approaches were consistent with local practice. However, several factors described below significantly impacted the system's performance during Katrina. Sections of the system were built below specified design elevations due to the use of an inaccurate relationship between the geodetic datum and mean sea level. While varying across the system, this elevation difference can be as much as 1 to 2 ft. Foundation soil strengths were derived from relatively widely spaced borings and at times using average values that may not capture the high variability inherent in this type of geology. The decision to use uniform soil shear strengths, based on the greater strengths of the soils under the center line of the 17th Street Canal levee, resulted in an overestimation of the subsurface strength at the levee toe. Coupled with the use of average values obtained from widely spaced samples in a geology with highly variable conditions, the structure was left with a marginal factor of safety. This same assumption was not made in other sections of the system where more conservative strength values were used.

The original design criteria developed through use of the Standard Project Hurricane (SPH) in 1965 and used for the outfall canals in the late 1980s, was not representative of the hurricane hazard at the time of the design. While updates in original 1959 definition of the SPH for the New Orleans area were made by the National Oceanographic and Atmospheric Administration (NOAA) in 1979, the Corps chose to continue to use the 1965 and 1966 original definitions developed for the Lake Pontchartrain and Vicinity and New Orleans to Venice Projects.

The hurricane protection in New Orleans was designed and developed in a piecemeal fashion, resulting in inconsistent levels of protection. Four slightly different SPH's were used, and the designs for specific structures were influenced by the local conditions. For example, the levee and I-wall system designed for the Orleans Canal was more conservative than that for the 17th Street Canal. The Orleans levee was broader and the I-wall freeboard less (height above the levee crest). Soil strength assumptions were also more conservative, using the weaker values at the toe instead of the stronger values under the centerline as assumed for the 17th Street levees.

Sections that are not completed represent anomalously low areas, more vulnerable to overtopping and failure. The majority of the pump stations are not designed to provide capability

during large storms. Levee materials ranged from highly resistant to scour to poorly resistant, resulting in large variations in the protection levels afforded nearby areas. Other factors such as the CSX closure gate not functioning and the maintained condition of the levees were additional negative factors in the performance of the system. While the presence of trees and other features on the levees were not obvious causes of breaching, it is possible that they were enablers in the overall breaching process.

Storm (Volume IV)

Hurricane Katrina generated water levels that for much of the system significantly exceeded the design criteria. Katrina surge levels were substantially higher, up to 5 or 6 ft, than the design levels for all areas along the eastern and southern portions of the hurricane protection system, and were roughly equivalent along the south shore of Lake Pontchartrain. Katrina-generated wave heights were approximately equal to the design criteria with the exception of Plaquemines Parish where Katrina-generated waves were significantly higher. Wave periods, however, especially along New Orleans East, St. Bernard, and Plaquemine Parishes, were approximately three times that estimated for the design criteria. The waves impacting the levees were long period ocean storm waves that cause much more runup and overtopping than shorter period waves.

Detailed hydrodynamic analyses showed that dynamic forces were a significant portion (20 to 30 percent) of the total forces experienced by many of the levees and floodwalls. The dynamic forces considered in the original design were significantly less. For example, the IHNC design assumed 1-ft waves, while at least 4-ft waves were experienced during Katrina.

Overtopping by waves generated very high velocities over the crest and back sides of the levees, leading to a high potential for scour and erosion. Velocities from 10 to 15 ft/sec were calculated for the back sides of the levees along St. Bernard Parish, while the front sides of the levees experienced velocities of about one-third of those on the back side. Since erosion potential is related to the cube of velocities, the erosion potential on the back side of the levees was up to 10 times greater. The exception was in the east/west-trending leg of the GIWW near the I-10 bridge, where wave energy and currents were almost parallel to the orientation of the levees and while overtopping occurred, the back side velocities were not severe. Examination of the levees that failed due to erosion determined that all were caused by erosion of the crest and back face.

The southeast trending leg of the Mississippi River Gulf Outlet (MRGO) had little influence on the water levels in the IHNC during Katrina. The relative size of the channel with respect to the very large flow area available when the marsh areas have been inundated by surge, make the amount of water conveyed through the channel a relatively small part of the total. During Katrina, MRGO was far from the 'hurricane highway' moniker with which it has been branded. Model results show that this is the case for very large surge generating storms in this area. This finding agrees with those of an independent study conducted for the State of Louisiana.

Performance (Volumes V and VI)

Of the 50 major breaches experienced by the hurricane protection system during Katrina, all but four were due to overtopping and erosion. For floodwalls, the overtopping caused erosion behind the walls that eventually caused instability and wall failure. For levees, the scour eroded the back sides and tops of the levees due to high velocities of the overtopping waves in areas of erosion-susceptible soils creating breaching. The value of added erosion resistance was clear, an attribute that could also be provided by measures such as armoring. Areas with high quality levee materials performed reasonably well in the face of water conditions that exceeded their design criteria. Structures at authorized design elevations would have reduced the amount of overtopping. There was no evidence of systemic breaching caused by erosion on face or water sides of the levees exposed to surge and wave action.

Four breaches, all in the outfall canals and IHNC and all involving I-walls, occurred before water levels reached the top of the floodwalls. All were caused by foundation failures induced by the formation of a gap along the canal side of the floodwall. All of these structures were built over a layer of marsh sediments, in two cases underlain by clays and in the other two underlain by relict beach sand deposits. The subsurface conditions dictated the specific mechanics that, coupled with the high hydrostatic pressures introduced to depth by the gap along the face of the sheet pile, led to instability and failure. The sites underlain by sand experienced significant seepage and in one case a massive piping of subsurface sand from under the levee to the protected side, undermining the floodwall. The formation of the gap and the associated hydrostatic pressures introduced at depth resulted in a significant reduction in the factor of safety of the structure. This failure mechanism, in particular the gap formation, was not considered in the original design of these structures.

Transitions between types and levels of protection and between protection structures and other features created vulnerabilities to erosion and breaching and reduced the effectiveness of the protection. Some of the transitions are associated with changes in the organization responsible for the structures, some are due to incompleteness of the authorized construction, and others are associated with necessary penetrations through the levee/floodwall system.

In spite of being subjected to design-exceeding conditions and forces, many sections of the hurricane protection system performed well. These tended to be sections with materials resistant to erosion and more conservative designs.

Flooding from Katrina covered approximately 80 percent of the New Orleans metropolitan area. Approximately two-thirds of that flooding can be attributed to water flowing through breaches. The one-third due to overtopping and the very large amount of rainfall would itself have caused a significant level of interior flooding.

The three foundation failures associated with flooding in Orleans East Bank were responsible for approximately 70 percent of the flooding in that area. The remainder was due to the heavy rainfall (up to 14 in. in 24 hr) and some overtopping-induced breaching along the west side of the IHNC.

Because of inoperability, pump stations played no significant role in the reduction in flooding during Katrina. Sixteen percent of the total pumping capacity was operating during the storm, equivalent to approximately 18000 cfs. The distribution of operating pumps across four parishes, however, reduced the impact of the pumping. Their inoperability, due to a combination of the necessary evacuation of operators, loss of power, loss of cooling water, and flooding, impacted the ability to un-water the city after the storm. Temporary pumps were useful after Katrina, but provided only a small fraction of the capacity needed. Reverse flow through some pumps added to the flooding in at least one parish. While methods are available to prevent reverse flow, they are dependent on human implementation and electrical power.

Consequences (Volume VII)

The most serious direct impact of Katrina was the high number of deaths. While large numbers of people were able to evacuate, the groups least likely to be able to do so on their own, the poor, elderly, and disabled, were hardest hit. This emphasizes the critical need for additional capabilities in this area. The depth of flooding was high correlated to land elevation, and the areas with the lowest elevations were largely residential. This places the residential population who cannot readily evacuate at the greatest risk.

Katrina caused direct property losses (excluding Plaquemines Parish) of over \$20 billion, approximately 78 percent (\$16 billion) of which was attributed to residential losses. The next largest component was the 11.5 percent (\$2.4 billion) attributed to commercial losses. There was an additional \$6.0 to \$6.7 billion in losses attributed to public infrastructure, including the hurricane protection system itself. The most significant infrastructure impact was incurred by the hurricane protection system (1.8 to 2.08 billion) followed by roadway networks and assets of the regional electrical distribution/transmission grid. Together, the damages to these categories of infrastructure totaled approximately \$2.0 billion. This estimate is followed by damages to public transit assets of approximately \$690 to \$730 million followed by damages to rail lines, airport facilities, gas and water distribution, telecommunications assets, and assets for waterborne transportation totaling an additional \$1.7 to \$1.9 billion. Approximately half of the direct economic losses, excluding public and utilities infrastructure, can be associated with breaching of levees and floodwalls. The remaining losses alone, attributable to rainfall and overtopping, constitute the largest losses experienced in any disaster in the New Orleans vicinity.

Combined with the significant and far-reaching impact of Hurricane Katrina regarding initial displacement of population, workforce, and businesses, the impacts to infrastructure and affiliated public welfare and services will contribute to slowed phasing of recovery with regard to return of populace and business activities. Orleans Parish alone is estimated to have lost over 60 percent of its population and St. Bernard Parish nearly 80 percent. On the other hand, St. Charles and Tammany Parishes have increased in population since before the storm.

In terms of the social consequences of the Katrina event specifically, the social organization of the community and region has been compromised by the mass exodus of the population, the structural damage, and the demands to respond and rebuild. The flooding caused a breakdown in New Orleans' social structure, a loss of cultural heritage, and dramatically altered the physical,

economic, political, social, and psychological character of the area. These impacts are unprecedented in their social consequence and unparalleled in the modern era of the United States. The flooding disproportionately impacted the poor, the elderly, and the disabled.

The performance of the levees protecting New Orleans obviously is a key to its social, cultural, and historic conditions. The immediate physical damage made large portions of the city uninhabitable, with thousands of residential, commercial, and public structures destroyed. Basic infrastructure facilities, such as power, water, sewer, and natural gas lines, were made inoperable and continued to be out of service for months after the event. Many victims not only lost their homes, but also their schools, health care, places of worship, places of trade, and jobs. The forced relocations disrupted family and friend networks. As a result, the event not only had an immediate impact on the well being of the population of those living and working in the metropolitan area, but also resulted in basic changes in the social organization of all aspects of that population.

The available information indicates that if environmental harm has come from the Katrina flooding of Greater New Orleans, it was associated with past regional land and water development. Like many other cities, the soils and sediments of land and waters in New Orleans and other delta urban areas are contaminated with metals and organics at concentrations that often exceed health standards in areas of most dense development. The flooding of greater New Orleans removed some contamination from greater New Orleans and transported it to Lake Pontchartrain and Violet Marsh with pumped flood-water where it added a small increment to estuarine sediments. The IPET analysis did not look at local redistribution of contaminants within individual drainage basins. Loss of wetlands regionally appears to fit a pattern of loss associated with past regional development as well. Overall, any sustained environmental loss from flooding and flood management is indicated to be very small in the context of long-term impacts from development in the region.

Risk and Reliability (Volume VIII)

The findings for the risk and reliability assessment will be provided upon completion of the ongoing validation of the methodology and products as recommended by the ASCE External Review Panel.

Lessons Learned

Lessons learned are presented in three tiers in compliance with the presentation of findings. Tier one, overarching lessons learned, represents an integration of the major principal lessons learned that are presented here in Volume I. Volumes II to VIII provide a more detailed discussion of lessons learned relevant to the individual topics addressed in each volume.

Overarching Lessons Learned

The IPET analysis provides broad insights into the many aspects of the New Orleans and vicinity hurricane protection system and why the system performed as it did during Hurricane Katrina. Integration of a number of these principal lessons learned provides some strategic insights for the future relevant to the continued reconstitution of protection in Southeast Louisiana and for hurricane and flood protection projects in general. These insights are presented here as overarching lessons learned.

Resilience: It is clear that a resilient hurricane protection system can provide enormous advantages. Resilience in this case refers to the ability to withstand, without catastrophic failure, forces and conditions beyond those intended or estimated in the design. For our purposes, resilience refers to the ability to withstand higher than designed water levels and overtopping without breaching. As demonstrated in this analysis of Katrina, approximately two-thirds of flooding and losses were the result of breaching, i.e., the significant loss of protective elevation in structures. While overtopping alone from Katrina would have created dramatic flooding and losses, the difference is staggering in many regards. Reductions in losses of life, property, and infrastructure; associated reductions in the displacement of individuals, families, and the workforce, coupled with reduced disruption to businesses and social and cultural networks and institutions, would have a dramatic impact on the ability of a community and region to recover. Added to this is the savings of the time and funding needed to rebuild the protection system itself, which would accelerate the pace of recovery. Resilience is not a national priority in the development of hurricane protection systems, and was not an element in the New Orleans Hurricane Protection System design. While resilience here is referring to the performance of the physical system, there is also a need for resilience in managing consequences. This falls squarely in the domain of emergency preparedness and response.

It is important to view resilience as time-dependent, given changes in requirements for protection (i.e., changes in potential consequence) or changes in the hazard (climate dynamics or changes in the nature of the protection system and subsidence). Resilience must be part of the adaptive nature of a system and be reviewed frequently as a fundamental character of the design and capacity of the system. Three main principles are suggested:

- Designs conservative enough to appropriately account for the unknown and flexible enough to be augmented as hazards or requirements change.
- Performance redundancy such as armoring to prevent scour from overtopping that leads to failure and breaching.
- Integrated systems approach to protection, from design, construction, operation, maintenance, and emergency operations perspectives. Pumping resilience as a component of the system is one example.

Systems Performance: Planning and design methodologies need to allow for an examination of system-wide performance. It is obvious from the IPET analysis that the piecemeal development of the New Orleans Hurricane Protection System provided a system in name only. This is especially true of the sections that have not been completed, transitions

between types of protection that differ in capability (thereby representing weak points), and differences in the relative levels of reliability that generate areas with greater vulnerability to failure. The systems approach should have a time dimension to allow consideration of the potential changes in requirements or conditions over the life of the project and to examine approaches to build in adaptive features and capabilities. Subsidence, changing population demographics, and the changing patterns of hurricane intensity and frequency are obvious examples of the time-dependent challenges hurricane protection systems face. All components that contribute to the performance of the overall system must be treated as an integral part of the system. Pump stations are one example in New Orleans. For any given drainage basin, the protection is only as robust as the weakest component of the system protecting that area and how effectively the various components that are interdependent operate together.

Risk and Reliability: A risk-based planning and design approach would provide a more viable capability to inform decisions on complex infrastructure such as hurricane protection systems. The traditional approach, as used for the New Orleans protection measures, is component-performance-based, uses standards to define performance, and relies on factors of safety to deal with uncertainty. It is difficult to examine the integrated performance of multiple components, and standards are usually limited to past experience. Risk-based planning is systems-based, requiring that the entire system be described in consistent terms and explicitly including uncertainty. Component performance is related to system performance as well as the consequences of that performance.

The risk-based approach is well suited for consideration of a variety of measures of merit. Factors such as loss of life, environmental losses, and cultural consequences can be included in decision making without reducing everything to one measure such as dollars. As applied for the IPET assessment, it allows aggregation and de-aggregation of information to address issues at different scales, providing a useful tool for collaborative planning between responsible agencies at different levels. It also allows for a more comprehensive consideration of hazards. Instead of a single definition derived from limited historical data, a joint probability approach can consider events that reflect historical information as well as a wide variety of possible events, providing a more robust basis for considering the spectrum of hurricanes that may occur. Most importantly, Risk and Reliability allows decision makers to understand the relative levels of vulnerability that specific areas face, the nature of the consequences (e.g., loss of life, economic loss or environmental loss), and to understand the source of the vulnerability. As such, it is an excellent tool for understanding the effectiveness of alternative approaches to reduce risk, which can be managed by changing the performance of the protection system or changing the nature or degree of related consequences.

Knowledge, Technology and Expertise: The history of the planning, design, and performance of the Hurricane Protection System in New Orleans points out a dilemma. While new pieces of knowledge were available over time that were relevant to the ultimate performance of the I-walls on the outfall canals, the pieces were not put together to solve the puzzle of the failure mechanism that occurred. The Corps' own testing of sheetpile floodwalls (E99 Sheet Pile Wall Field Test Report, Technical Report 1, Lower Mississippi Valley Division, June 1988) in the mid 1980s was not directed at the global stability of I-walls, but with hindsight, some of the behavior observed was indicative of the wall deflections that could lead to

a gap forming between the pool side soil and the wall. Similarly, late in the 1990s, research published in part by the Waterways Experiment Station (Soil Structure Interaction Effects in Floodwalls. *Electronic Journal of Geotechnical Engineering*, Vol. 2, 1997) discussed the need to include hydrostatic water pressures with regard to a gap forming between the pool side soil and wall in the numerical modeling of sheetpile floodwalls. Work, not directly related to levee or floodwalls, in England discussed the deflection and hydrostatic water pressure problem for earth retaining walls. How do these puzzle pieces get placed together to create knowledge for designers and how do designers and reviewers get access to this information? How does the research or testing community become aware of applications, perhaps different from their original purpose, for their new knowledge?

Part of the solution to this dilemma relates to the amount of overall effort and resources put into the search for new knowledge and capabilities to deliberately update design criteria and planning capabilities. Awareness and capability are gained best when there is both technology push (research creating new knowledge and capabilities) and requirements pull (designers/constructors seeking and pulling information from the research and professional communities). The solution is not more research or more outreach alone, it is the ability of the design/construction and research communities to work together in an environment enabling collaboration and experimentation with new knowledge and approaches to old and new problems. There has been a distinct loss in energy and resources expended in this area, particularly in the domain of hurricane and flood protection and specifically in the geotechnical fields that are at the heart of the levee and floodwall performance issues in Katrina. The focus on “standards” may in fact also deter this process. Standards imply stability and constancy, when in fact the concept of “guidelines” may be more appropriate, allowing and encouraging customization and adaptation as new knowledge emerges. In either case, standards and/or guidelines need to be refreshed at a greater and greater frequency as the generation of new knowledge continues to accelerate.

The other dimension to this issue is expertise. As technology accelerates and engineering practice evolves at an increasing pace, it becomes more difficult to maintain the level of technical expertise necessary to cope with the ever more complex issues faced in water resources. This is true for the government and the private sectors. Government agencies are especially challenged in an era of outsourcing and competition for experienced professionals. Significant measures are needed to re-emphasize technical expertise and renewal of that expertise as water resources practice evolves. These measures must be part of the culture of organizations and cover the entire profession to ensure that the total team addressing priority issues such as hurricane protection are working from the latest knowledge and professional practice. The Corps should be a leader in this area.

Synopsis of Principal Lessons Learned

The principal lessons learned from the primary areas of analyses are presented below by major topical area. These lessons learned are discussed in more detail in the individual volumes cited that provide the full details of the IPET work in each area.

Geodetic Vertical and Water Level Datums (Volume II). All hurricane and flood control protection structures should be designed, constructed, and maintained relative to an up-to-date local sea level reference datum. Areas experiencing variable subsidence, such as New Orleans, are likely to have systematic datum and elevation accuracy issues that need frequent attention. It is important to have appropriate monitoring stations (for tide and subsidence) in place and associated up-to-date guidelines for the application of this information to existing and new projects. In subsidence-prone areas, designs should consider multiple elevation increases over the life cycle of the structure. The relatively recent advent of LIDAR systems will contribute to updating elevations over large areas such as New Orleans.

The Hurricane Protection System (Volume III). Design methods and designs need frequent review to determine whether they represent best practice and knowledge. Designs in coastal hurricane projects need to include the concepts of resilience, adaptation, and redundancy to accommodate unanticipated conditions or structural behaviors. Design should be based on a system-wide understanding of the processes affecting the system and the interaction and interdependencies of the system components. This is especially true for the characterization of the hazard where modern probabilistic methods should be used.

The Storm (Volume IV). Meteorological designations such as the Saffir-Simpson scale by themselves are not adequate to characterize the distributed surge and wave conditions that a hurricane protection system will face. Sophisticated modeling using physics-based codes with high spatial resolution is necessary to depict the highly variable hydrodynamic environments created by large storms. Similarly, the traditional methods of assessing the frequency of occurrence of hurricanes, dependent primarily on historical data, are too simplistic to capture important characteristics of the hurricane hazard such as time- and space-dependent storm intensity and track patterns.

The SPH process is outdated. More comprehensive probabilistic methods that consider a broader variety of storm characteristics and storm generated conditions should be used as a basis for planning and design.

The Performance (Volumes V and VI). The design approaches taken for the outfall canals were not conservative enough to deal with the unknowns. Floodwall design methods need to consider a broader spectrum of possible behaviors, and resilience should be considered as a fundamental performance characteristic. Research is needed to understand the full performance limits of structures and to discover new approaches for creating adaptive designs. Design methods should be clearly based on physical behavior of engineering components and systems and should be reviewed periodically to determine if they represent the latest knowledge, practice, and technology. Similarly, existing projects should be periodically reviewed to ensure that their original design has not been compromised by changing hazard or changing knowledge base.

Planning methods should facilitate examination of system-wide performance. In addition, hurricane protection systems should be deliberately designed and built as integrated systems to enhance reliability and provide consistency in levels of protection. Integration of armoring is especially important to provide resilience to erosion. Components such as the interior drainage and pumping need to be an integral part of the system because of the important role they can

play in limiting the amount and duration of flooding. Resilience in pumping capacity is especially important.

The Consequences (Volume VII). Losses from a hurricane event causing water levels that exceed design criteria can be expected to be significant, but can be much less if the hurricane protection system has a high level of resilience. While the reduction in direct losses can be substantial and readily estimated, it is the more difficult to quantify reduction in the indirect economic and cultural losses that may be most relevant to the ability of the affected area to rapidly recover. In addition, the perceived character and expected performance of the hurricane protection system itself is a significant factor in the choices people will make with respect to re-population and re-investment.

If there is one lesson learned from the Consequence analysis, it is the direct correlation of losses with elevation, or lack thereof. Damages and loss of life were both directly tied to depth of flooding, which in turn is inversely tied to the elevation of the location or sub-basin. Areas with lower elevations experienced the most severe losses and will continue to harbor the highest probabilities of experiencing flooding into the future.

A broad and systems-based planning capability can increase the effectiveness of integrating evacuation, recovery, and reconstruction aspects into the hurricane protection system. In particular, a risk-based approach can provide an effective means to examine approaches to manage both the probability of an adverse event and the exposure to losses as well as the consequences. Spatial analysis of consequences and the ability to relate consequences to physical performance are powerful tools for making difficult decisions concerning hurricane protection.

Risk and Reliability (Volume VIII). Risk and Reliability lessons learned will be incorporated into the report after completion of the ongoing validation of the risk methodology and risk products as recommended by the ASCE External Review Panel.

Overview

Introduction

Last year the world watched Hurricanes Katrina, Rita, and Wilma devastate the Gulf Coast. The Corps of Engineers, in conjunction with other federal, state, and local partners, mounted an unprecedented, multi-faceted effort to assist in the recovery and rebuilding of the areas affected by these massive storms. The devastation from Hurricane Katrina in New Orleans and vicinity was particularly unprecedented. Because of the extent of the damage to the hurricane protection system itself and the consequences of the subsequent flooding it was imperative to understand what happened and why. Only through this knowledge could the levees and floodwalls be repaired and rebuilt to provide more effective protection in the future. This report provides a detailed accounting of the IPET work to determine why the hurricane protection measures performed as they did and how to provide more effective protection for the future. The area of principal study is shown in Figure 1 and represents the bulk of New Orleans and Southeast Louisiana. This overview includes a brief historical perspective of the evolution of hurricane

protection in the New Orleans region, a descriptive synopsis of what happened during Katrina through the eyes of the analyses accomplished, a brief description of IPET, and a synopsis of the organization and content of this report.

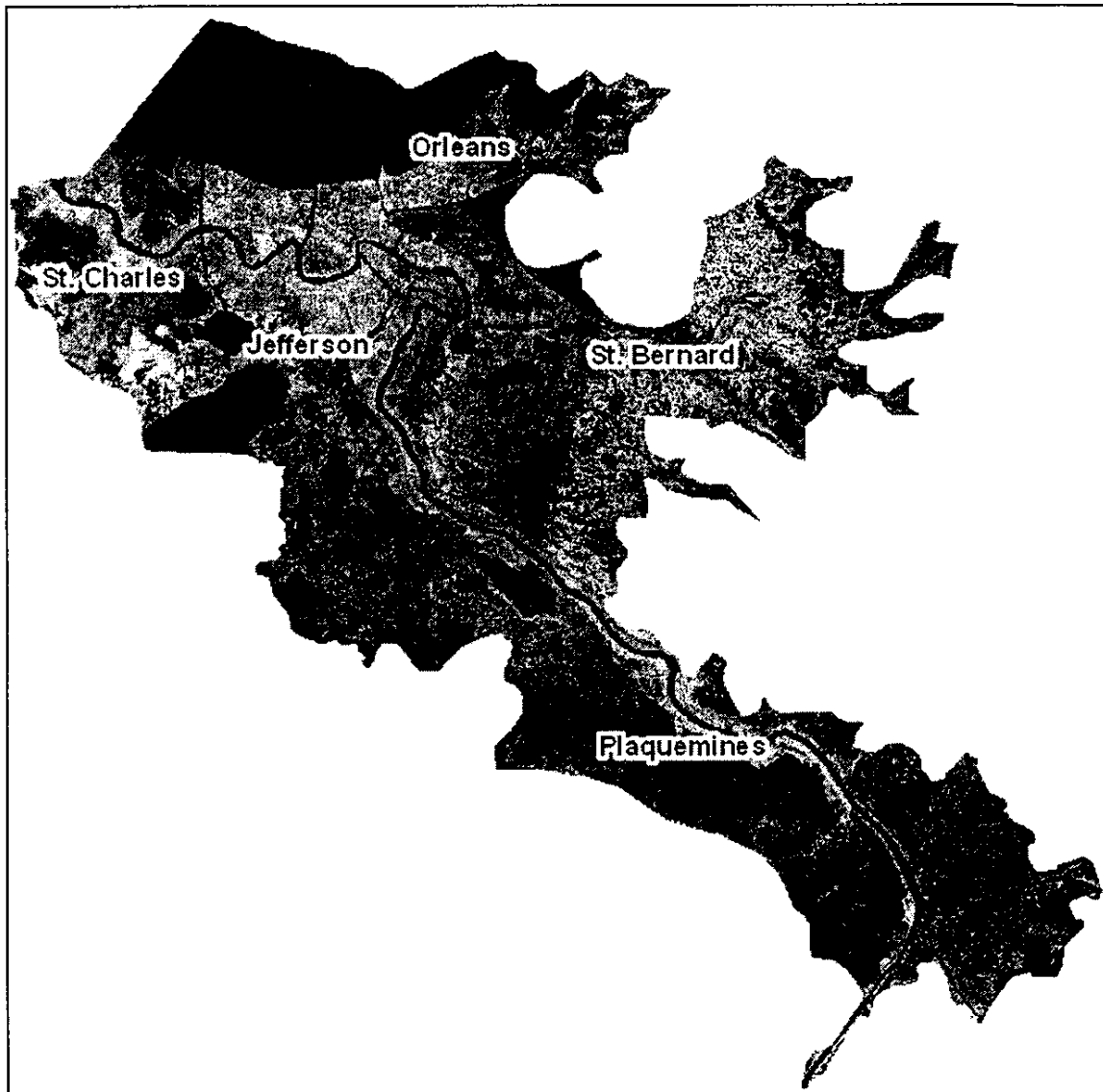


Figure 1. Principal area of analysis

Historical Perspective

Located in the low-lying Mississippi River delta in Louisiana, large portions of the city of New Orleans lie near or below sea level, a fact that has posed complex flood management problems since the city's founding in 1718. Historically, the greatest natural threat posed to

residents and property in the New Orleans, Louisiana, area has been from hurricane-induced storm surges, waves, and rainfall, especially those associated with Hurricane Betsy in 1965, Camille in 1969, and Lilli in 2002. Although some hurricane protection had been provided to a few areas of New Orleans, it was not until Hurricane Betsy struck the city, killing 75 people and causing substantial damage and loss of property, that a comprehensive hurricane protection plan was initiated. Over time, three hurricane protection projects have been designed and partially constructed in New Orleans and the Southeast Louisiana region: Lake Pontchartrain and Vicinity, the West Bank project, and the New Orleans to Venice project. The Lake Pontchartrain and Vicinity project is used here to illustrate the events that preceded Hurricane Katrina.

Congress first authorized the Lake Pontchartrain and Vicinity hurricane protection under the Flood Control Act of 1965. The project was intended to protect areas around the lake (in the parishes of Orleans, Jefferson, St. Bernard, and St. Charles) from flooding caused by a storm surge or rainfall associated with a hurricane that would be roughly the same as what is today classified as a fast-moving "Category 3" hurricane. The basis for this was the standard project hurricane (SPH) developed by the Corps with the assistance of the U.S. Weather Bureau (now the National Weather Service). The model (assumed at that time to represent a storm that would occur once in 200-300 years) was intended to represent the most severe meteorological conditions considered reasonably characteristic for that region: winds up to 111-113 miles per hour and that can be expected to cause some structural damage from winds and flooding near the coast from the storm surge and inland from rains. Although federally authorized, the project was to be a joint federal, state, and local effort, with the federal government paying 70 percent of the costs and the state and local interests paying 30 percent. The Corps of Engineers was assigned responsibility for project design and construction, and the local interests were responsible for maintenance of the levees and flood controls.

During the first 17 years of construction of what has become known as the "barrier plan," project delays and cost increases occurred as a result of technical issues, environmental concerns, legal challenges, and local opposition to various aspects of the project. The barrier plan included a series of levees along the lakefront, concrete floodwalls along the IHNC, and control structures, including barriers and flood control gates located at the Rigolets and Chef Menteur Pass areas. These structures were intended to prevent storm surges from entering Lake Pontchartrain and overflowing the levees along the lakefront. A paradox of these massive levees is that in keeping water from the city, they also prevent Mississippi River sediment--which has historically been important in replenishing deltaic land surfaces--from spreading across the region. As a result of this and other activities such as pumping of groundwater, many areas of the city have been slowly subsiding, which has further exacerbated flood risks.

A December 1977 court decision enjoined the Corps from constructing the barrier complexes and certain other parts of the project until a revised environmental impact statement was prepared and accepted. After the court order, the Corps changed course and recommended abandoning the barrier plan and shifting to what became known as the "higher level plan" originally considered in the early 1960s. Local sponsors executed new agreements to ensure their share of the non-federal contribution to the revised project. Even before construction began on the barrier plan, design changes to raise the levees along the three main drainage canals that drain water from New Orleans into Lake Pontchartrain were incorporated to protect against

storm surges from the lake. The construction of higher levees has long been an option for reducing risks, but they are expensive to build, require the acquisition of additional lands, and may entail negative aesthetic and environmental consequences.

As of May 2005, the Lake Pontchartrain and Vicinity project included about 125 miles of levees, major floodwalls, flood-proofed bridges, and a mitigation dike on the lake's west shore. Progress on the project varied by area: 90 percent complete in Orleans Parish, 70 percent complete in Jefferson Parish, 90 percent complete in the Chalmette area, and 60 percent complete in St. Charles Parish. The estimated completion date for the entire project was 2015. In recent years, questions were raised about the ability of the project to withstand hurricanes with intensities greater than those assumed for the original design. In 2002, a pre-feasibility study on whether to strengthen hurricane protection along the Louisiana coast was completed. A full feasibility study was estimated to take 5 years to complete.

Katrina

The hurricane protection system, outlined on the map in Figure 2, includes approximately 350 miles of protective structures, 56 miles of which are floodwalls. The majority of the floodwalls are I-walls with some sections of T-walls and a small amount of L-walls. Figure 3 provides a schematic of the basic geometry of these structures. The elevation of the current hurricane protection structures are significantly below the originally authorized heights in part from errors in initial constructed elevations and in part from rapid subsidence. Figure 4 provides a general map of the New Orleans metropolitan area and the features of the hurricane protection system that were factors in the system performance during Katrina.

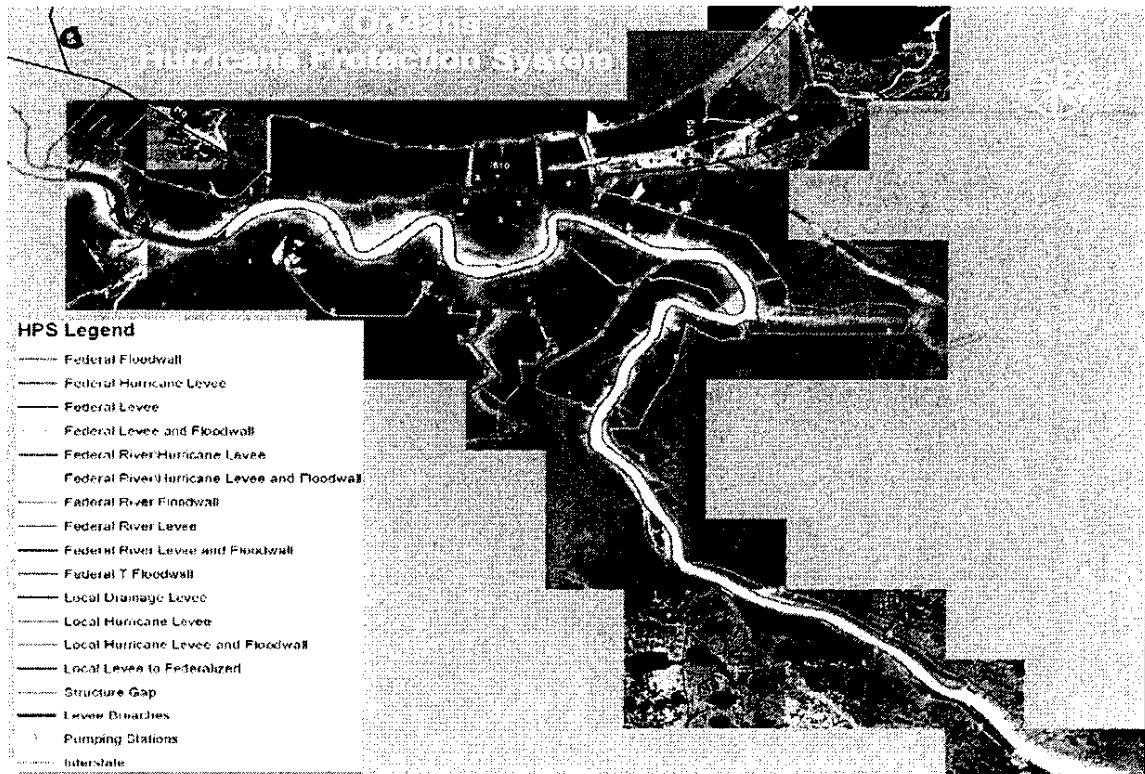


Figure 2. Outline of the New Orleans and Southeast Louisiana Hurricane Protection System

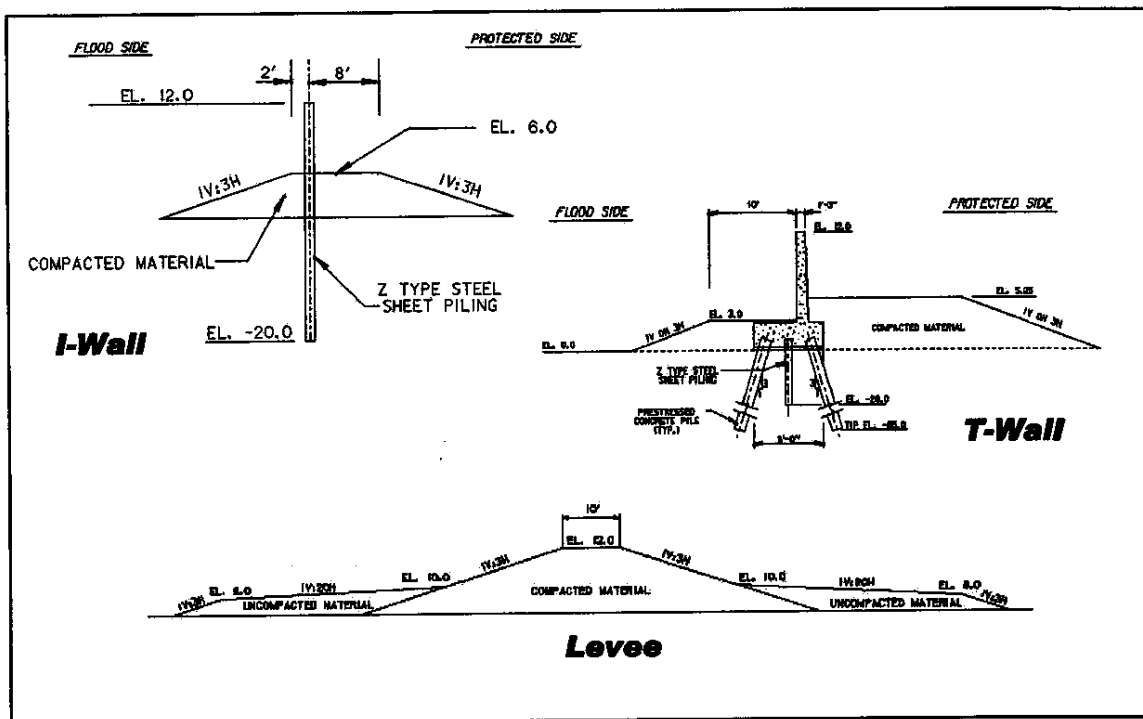


Figure 3. General schematic of major hurricane protection structures used in New Orleans and vicinity

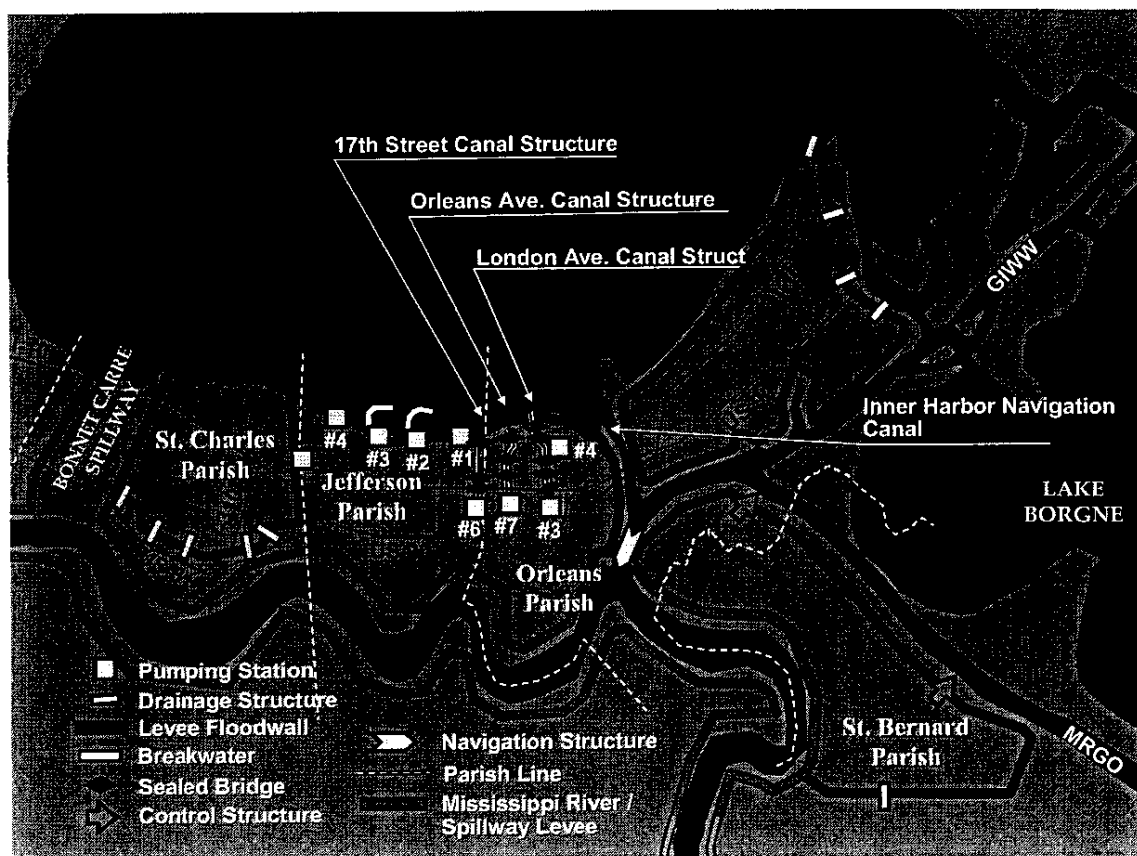


Figure 4. Map showing detailed geometry and features of the New Orleans metropolitan area

The path followed by Hurricane Katrina, shown in Figure 5, caused severe surge and wave conditions on the east side of the hurricane protection system, from Lake Pontchartrain to southern Plaquemines Parish. It struck early on the morning of 29 August 2005, after building up water levels to the east of New Orleans for several days. Katrina was a Category 5 storm with up to 175-mph winds until it was approximately 170 miles from landfall. When it reached landfall at Buras, LA, around 0630 hr, wind speeds were at 127 mph, but the long path through the Gulf had built up record levels of surge and waves, larger than any previous storm to strike the area, or the North American continent.

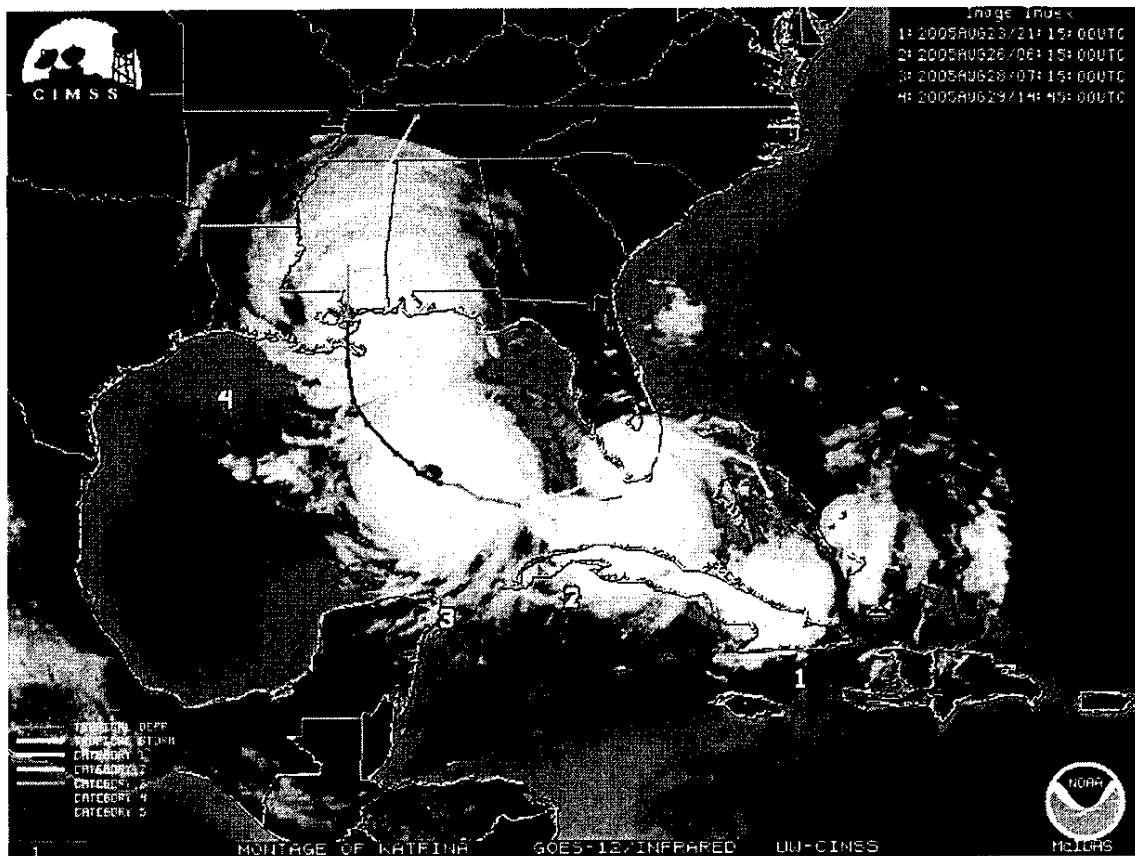


Figure 5. Hurricane Katrina path and intensity history

Katrina (a Category 3 storm at landfall) generated substantially higher surges than Camille (a Category 5 storm at landfall) in the area where they both made a direct hit. Whereas the Saffir-Simpson scale is a good predictor of wind damage from hurricanes, it is not a particularly good predictor of the surge and wave generation potential for these storms. Hurricane Katrina had much greater wave and storm surge generation potential than the Standard Project Hurricane storms used to design the hurricane protection system.

Katrina swept through the New Orleans area rapidly, making a second landfall at Pearl River, MS, around 0945 hr with wind speeds still around 121 mph. With it came record rainfall as shown in Figure 6. Over a 24-hr period sections of New Orleans near the intersection of Lake Pontchartrain and the IHNC received over 14 in. of rainfall. The previous record was from Hurricane Betsy which dumped up to 7 in. in the same time frame. This rainfall was to become at least 20 percent of the total volume of water that flooded the New Orleans Metropolitan area. The east and south facing levees of New Orleans East, St. Bernard and Plaquemines Parishes absorbed the brunt of the storm, experiencing surge and waves significantly beyond their design levels. Overtopping was common and would persist in some areas for hours.

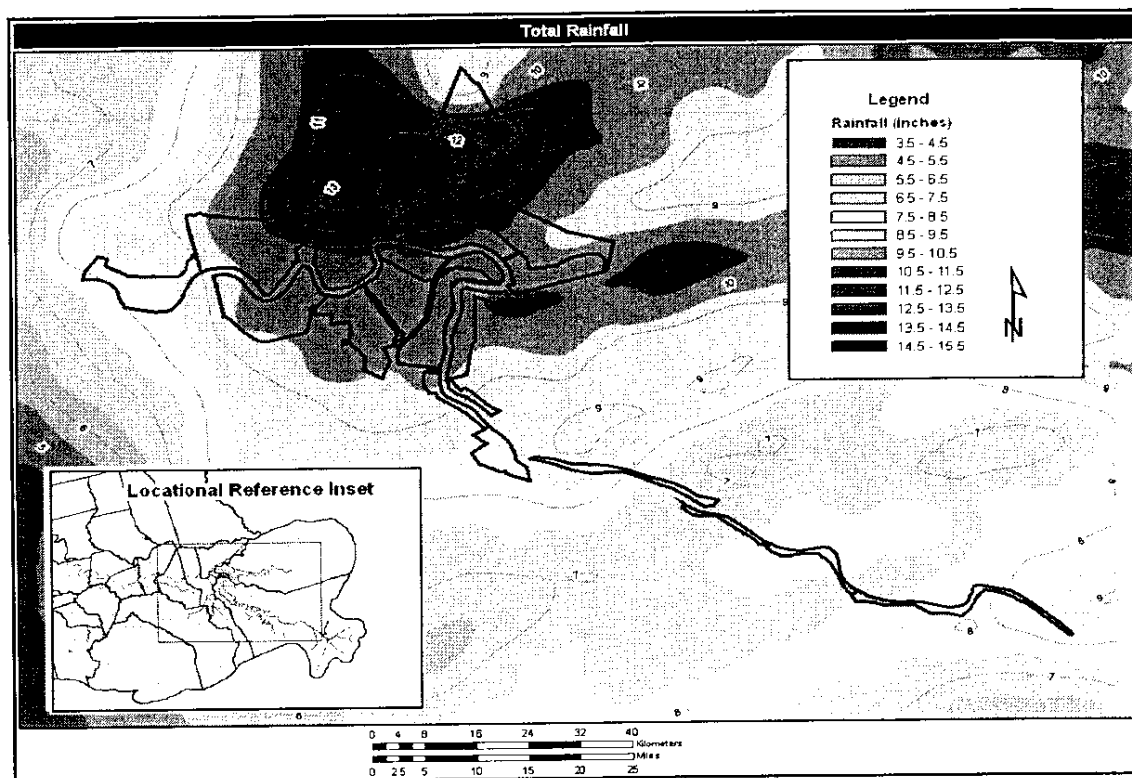


Figure 6. Hurricane Katrina rainfall totals

Literally all of the gauging instruments to measure water conditions were destroyed by Katrina. Other than high-water marks, and the devastation, there were few measurements to confirm the actual water level time histories resulting from the storm. The IPET used the ADCIRC model with a very high-resolution computational grid to model the storm and predict the time history of the surge levels that occurred at different locations around the region. Figure 7 shows the maximum surge levels predicted for Katrina. The high water marks were used to confirm the accuracy of the model results, and in most cases they agree to within a foot. Surge levels ranged from in the neighborhood of 10-12 ft along the south shore of Lake Pontchartrain to 20 ft along the Plaquemines levees. Even enclosed areas such as the IHNC experienced water levels above 14 ft, not including waves.

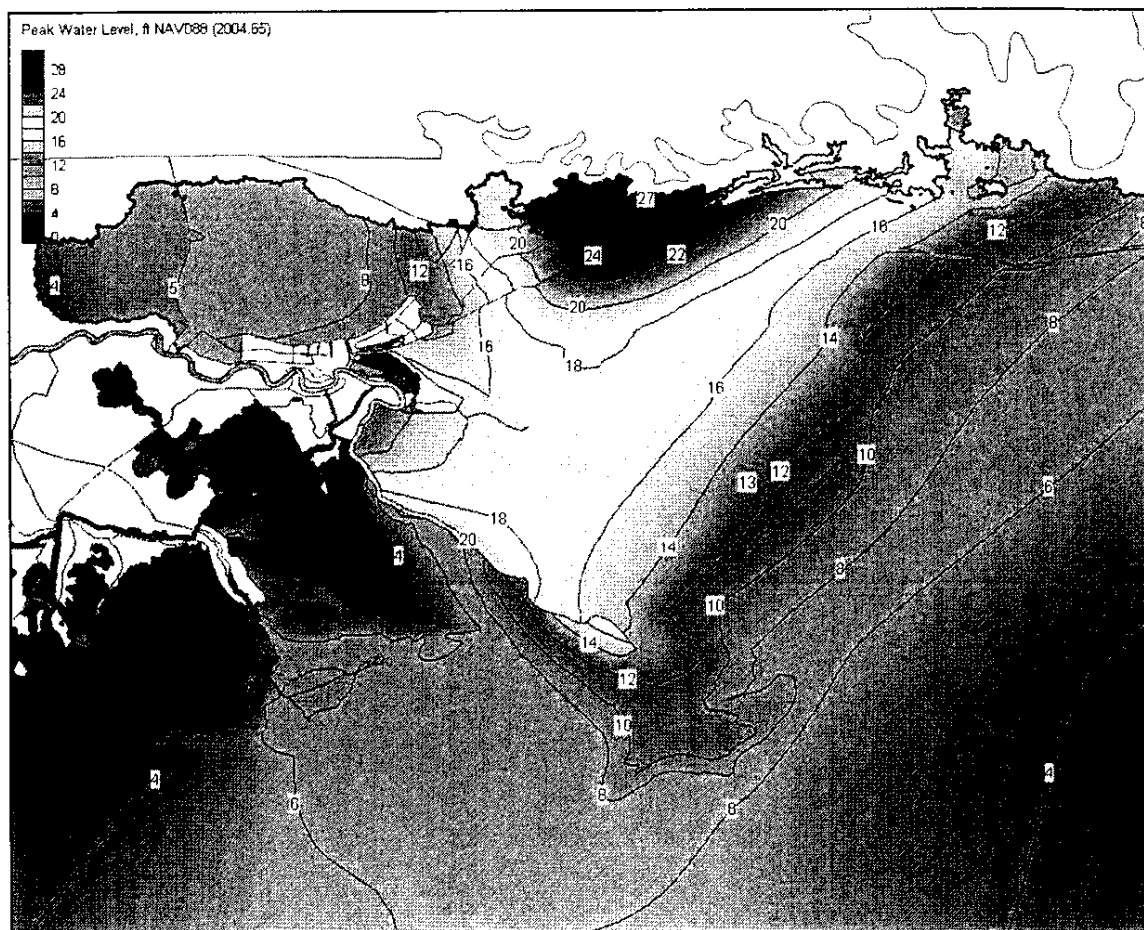


Figure 7. Maximum computed storm water level using the ADCIRC model, Mississippi to Louisiana region, water levels in feet, NAVD88 (2004.65).

Winds from Katrina generated a record-wave environment. Again, the lack of measurements caused the IPET to model the wind-generated waves to determine the conditions created by the storm. IPET used a nested approach that used the WAM model to generate wind wave fields for the entire Gulf, and STWAVE to model nearshore waves in and around New Orleans. The resulting wave heights and wave periods are shown in Figures 8-11. They demonstrate that the Katrina-generated wave environment was severe. The most significant finding was that the waves along the GIWW, St. Bernard, and Plaquemines levees were ocean-generated waves, with a wave period in the 16-sec range, much more capable of runup and overtopping structures.

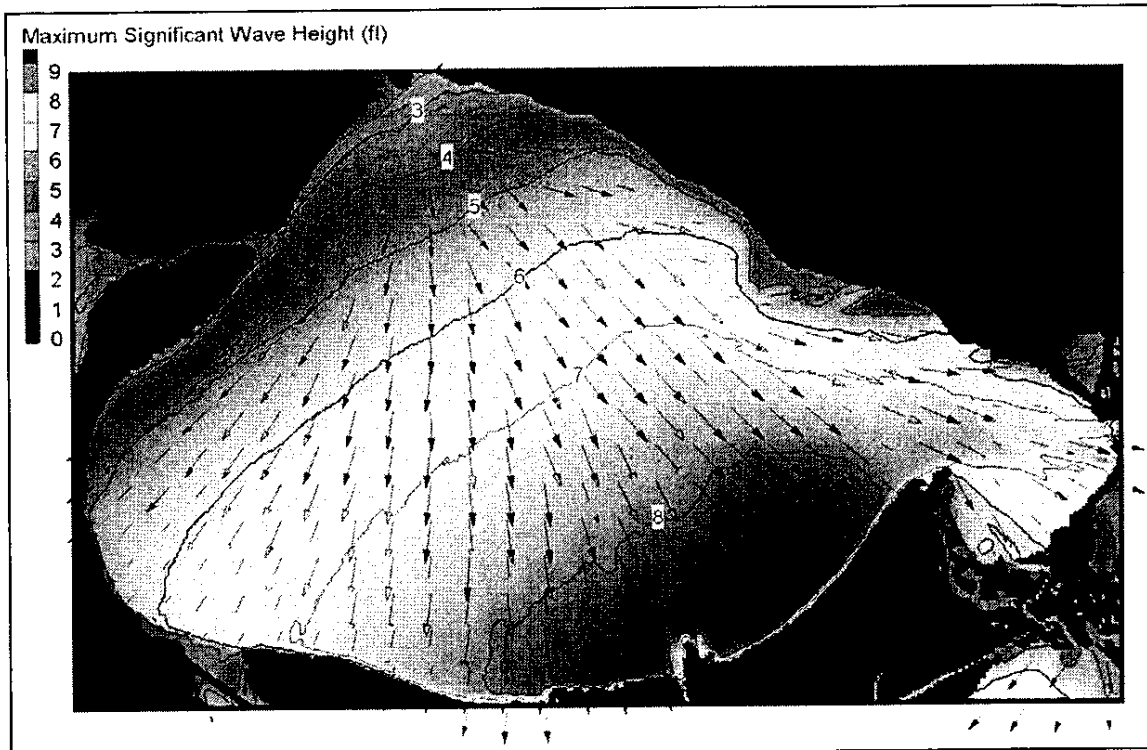


Figure 8. Lake Pontchartrain maximum modeled significant wave height and corresponding mean direction (wave heights in feet)

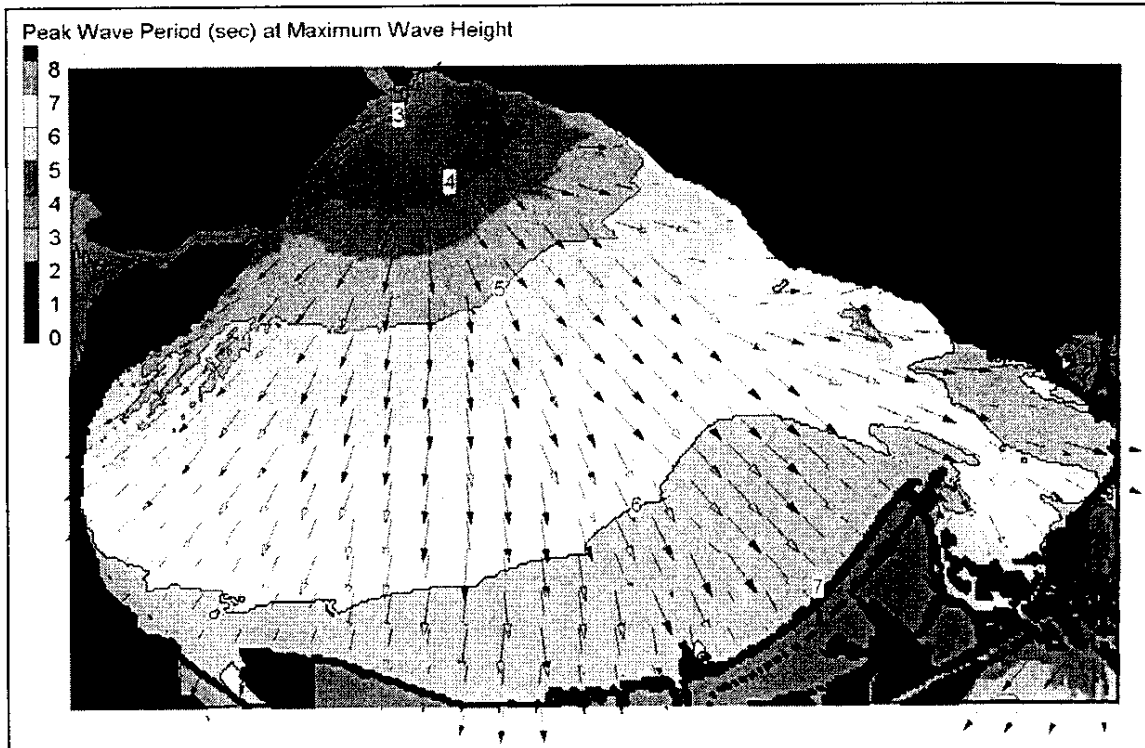


Figure 9. Lake Pontchartrain modeled peak wave period corresponding to the maximum wave height (periods in sec)

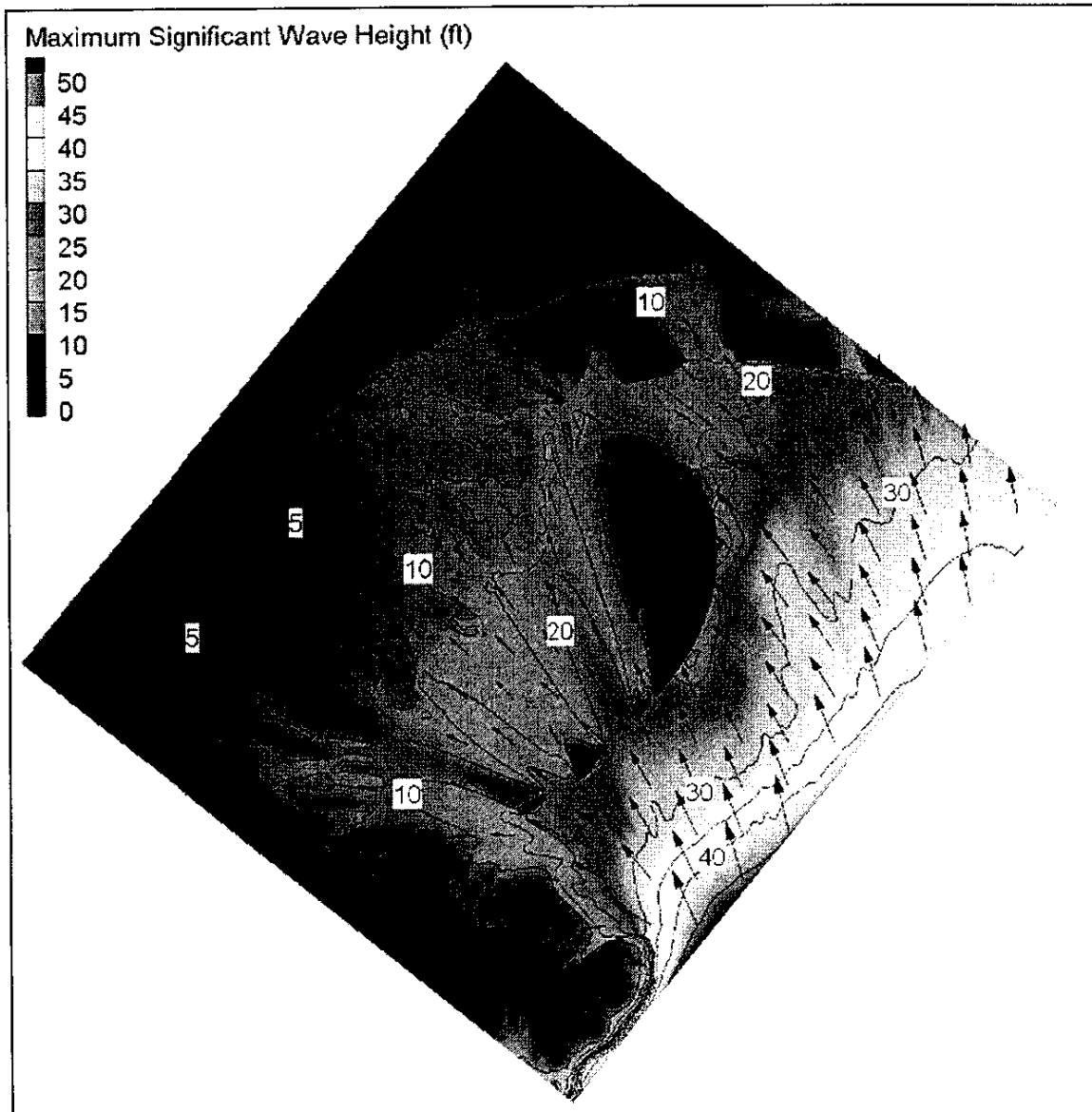


Figure 10. Southeast Louisiana maximum modeled wave height (wave heights in feet)

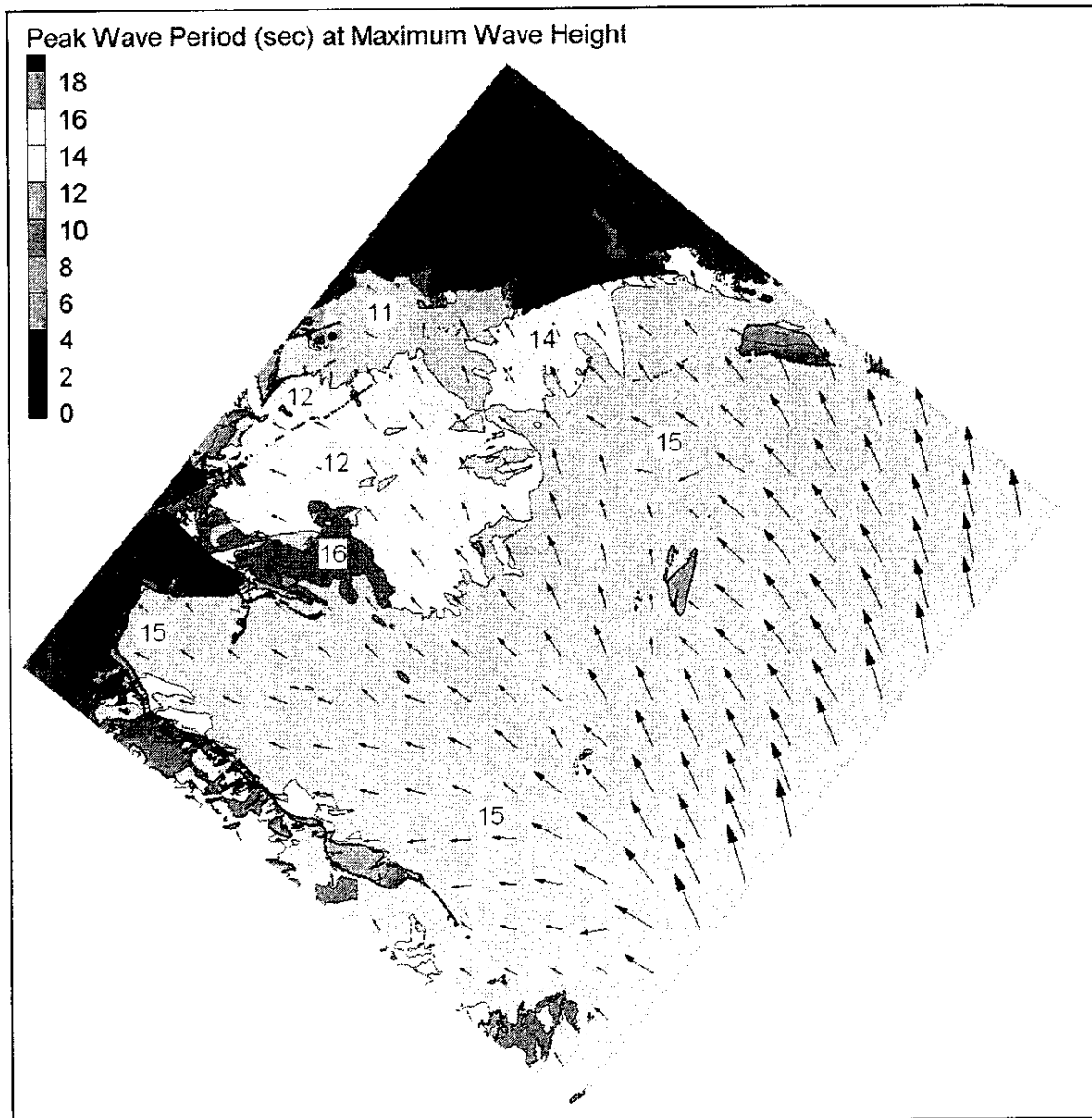


Figure 11. Southeast Louisiana modeled peak wave period corresponding to the maximum wave height (periods in sec)

Figure 12 shows the locations of the most severe damage to the hurricane protection system. Approximately 169 miles of the protective structures were significantly damaged by Katrina-generated surge and waves, as well as 34 of 71 pumping stations. A total of 41 miles of structures was judged to be severely damaged. There were a total of 50 major breaches, areas where the structures failed, causing a dramatic reduction in protective elevation and losing the ability to prevent the inflow of external water. Of the 50 major breaches, four were caused by foundation-induced failures and the remainder from a combination of overtopping and scour. Three of the four foundation breaches occurred in the outfall canals and one in the IHNC. I-wall

structures were particularly vulnerable as were levee sections created from hydraulic fill and transitions where either elevation or strength differences occurred from changes in structure type or capability.

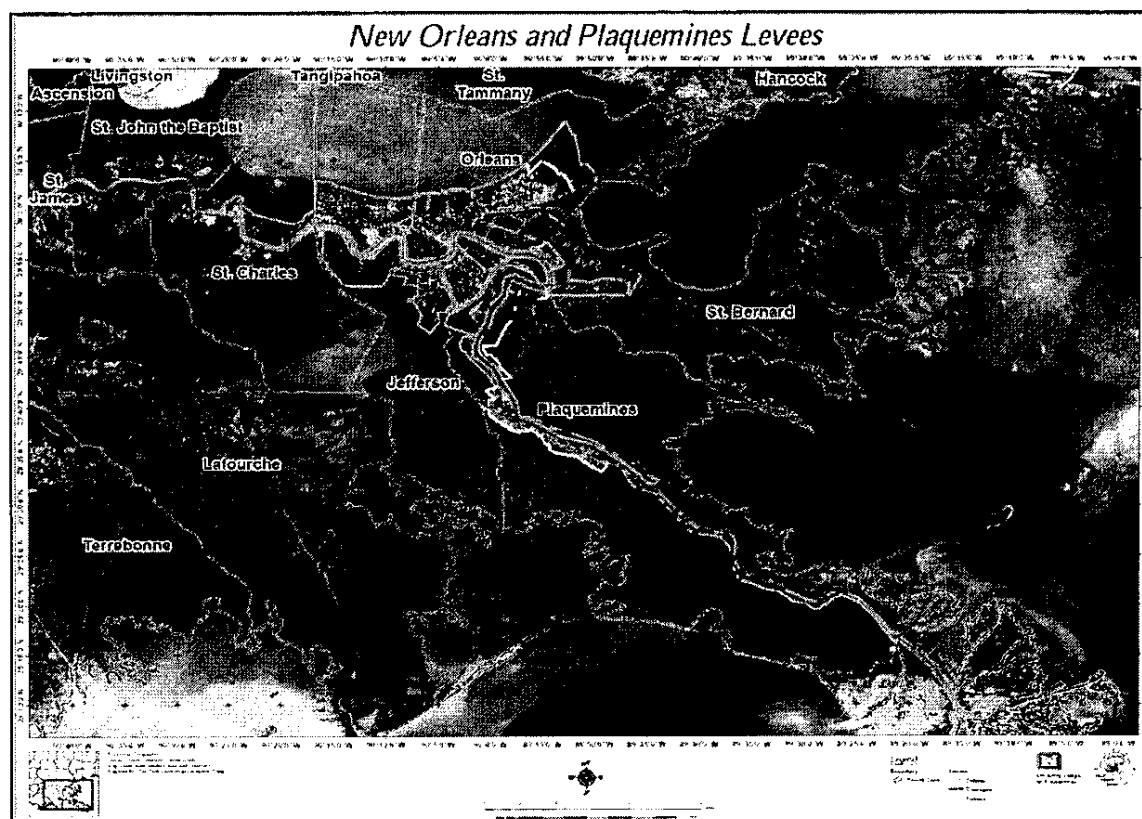


Figure 12. Locations (in red) of severe damage to hurricane protection structures resulting from Katrina

The storm surge and waves first attacked the Plaquemines levees well before Katrina's landfall, causing significant overtopping and erosion before dawn. The MRGO levees were soon hit with similar conditions and eventually both Plaquemines and St. Bernard levees would be overtopped by both high surge and high, long-period waves. The persistent east to west winds had also built up a significant surge level at the convergence of the GIWW and the IHNC. Wind-generated waves reached at least 4 ft in the IHNC, contributing to very high water and dynamic loading on structures. The surge and waves had a devastating effect on the sections of the levees along the GIWW (Figure 13) and MRGO (Figure 14) that were constructed with hydraulic fill. The overtopping waves created very high water velocities down the back sides of the levees, reaching 10 to 15 ft/sec. These velocities were two to three times those experienced on the water side of the levees. The potential for erosion being related to the cube of velocity, it is no wonder that the back sides of the levees, especially where they were comprised of erodible materials, were scoured away leading to, in many cases, complete breaching. Figure 15 shows the close correlation between the degree of breaching from overtopping and erosion and the types of

materials, In this example for New Orleans East, the correspondence of breaching and hydraulic fill constructed levees is obvious.

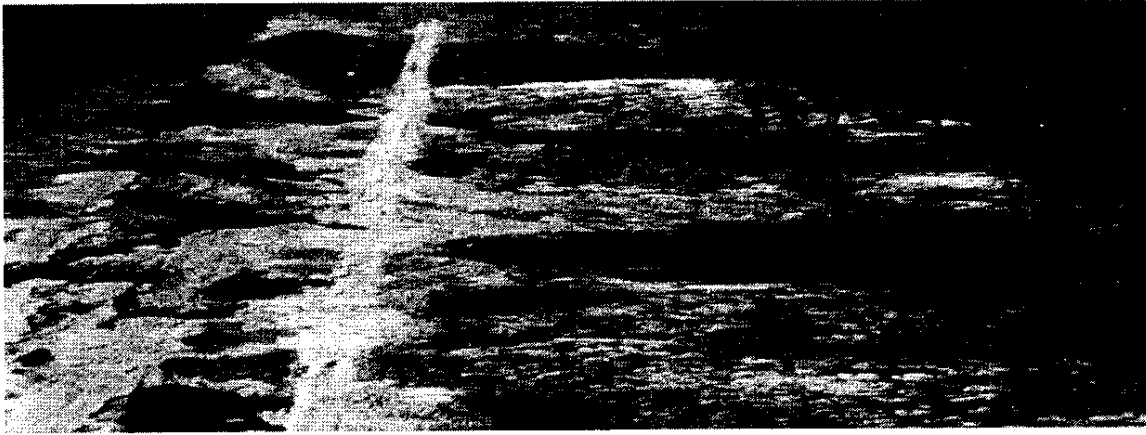


Figure 13. Example of levee along New Orleans East, GIWW, breaching from overtopping and scour of erodible materials



Figure 14. Example of levee breach along MRGO from overtopping and scour of erodible materials

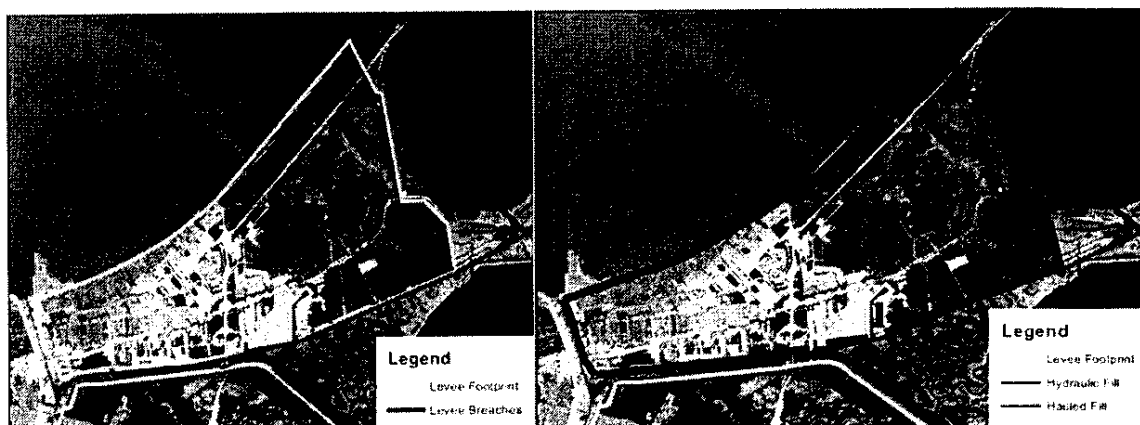


Figure 15. Correlation of levee breaching with type of levee materials for New Orleans East

Four I-wall failures that resulted in breaches and very significant flooding occurred on the morning of August 29th.

At about 5:00 AM, the Lower Ninth Ward was flooded by a breach in the I-wall on the east side of the IHNC. The failure occurred when the water elevation in the IHNC was 10.5 ft, about 2.0 ft below the top of the wall. The failure was caused by instability in the foundation soils beneath the I-wall and the levee. The failure was aggravated by deflection of the I-wall as the water rose in the canal. This movement of the I-wall caused separation of the wall from the levee fill soil on the canal side of the wall, and formation of a gap extending down to the bottom of the wall. Water entering this crack subjected the wall to high water pressures and greatly increased loads, leading to gross instability and a breach through the wall as the water continued to rise.

At about 6:30 AM, with water at elevation 7.0 ft in the 17th Street Canal, the I-wall on the east side of the canal was breached, flooding the adjacent neighborhoods. The mechanism of failure was the same as at the IHNC – development of a gap between the I-wall and the levee fill, which resulted in increased water load on the wall. The design of the wall at this location had not recognized lower strength beneath the toe of the levee than beneath the crest, and this fact resulted in an I-wall with less capacity than would otherwise have been the case.

At about 7:00 AM a breach occurred on the London Avenue Canal near Mirabeau Avenue. About an hour later a second breach occurred on the London Avenue Canal, near Robert E. Lee Boulevard. Like the 17th Street Canal and the IHNC breaches that occurred earlier, the London Avenue Canal breaches involved formation of a gap between the wall and the levee fill on the canal side of the wall (Figure 16). At the London Avenue Canal, an additional effect of the gaps was that water flowed down through the gaps into the underlying sand. High water pressures in the sand uplifted the marsh layer on the landside of the levee, resulting in concentrated flow and erosion, removing material and reducing support for the floodwall, which failed catastrophically.



Figure 16. Example of I-wall breach on London Avenue Outfall Canal (north breach) resulting from formation of a crack along the water side of the floodwall, introducing high pore pressures under the levee and causing uplift and failure

The I-wall failure mechanisms at the IHNC, 17th Street Canal, and London Avenue were investigated by field explorations, laboratory tests to measure soil properties, limit equilibrium analyses of stability, finite element analyses of seepage and soil-structure interaction, and centrifuge model tests. These numerical analyses and physical tests all showed that the formation of gaps behind the walls was a key element in the failure (Figure 17).

After the I-wall failure that resulted in the breach at the IHNC, the water level in the canal continued to rise (Figure 18). At 9:00 AM, the water reached elevation 14.2 ft, 1.7 ft above the tops of the levees and floodwalls. Water flowing over the walls when they were overtopped eroded trenches on the protected side of the walls as it cascaded onto the levee fill. Soil that was providing support for the walls was removed by this erosion, making the walls less stable, resulting in two additional floodwall breaches, one on the east side of the IHNC, south of the first breach, and one on the west side. A fourth IHNC breach occurred when an overtopped levee on the west side was eroded away when it was overtopped.

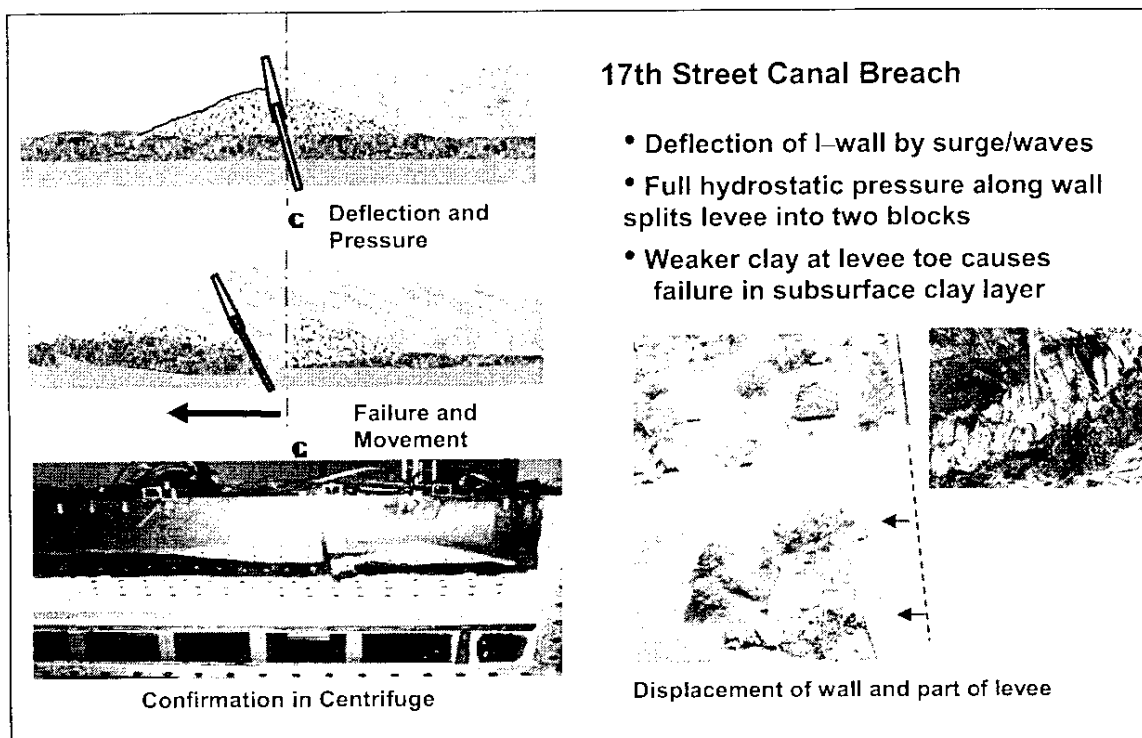


Figure 17. Depiction of failure mechanism for 17th Street and IHNC foundation failures. A crack forming along the front of the I-wall introduced high forces down the face of the sheetpile, resulting in lateral movement of the floodwall along a shear plane in the weak clay foundation

The flooding resulting from the overtopping and breaching was catastrophic. Figure 19 shows the extent and depth of flooding for the metropolitan area where almost 80 percent was inundated. Pumping stations were for the most part not operating due to prior evacuation of operators, loss of power, or loss of cooling water for the pumps. An evaluation of the pumping performance as a percentage of the total capacity is given in Figure 20. The pump stations in New Orleans were simply not designed to operate during major storms. A few stations, notably in Orleans Parish, may have continued to operate if the flooding had not been so extensive. Had the pumps been able to operate, the extent of flooding may not have been impacted greatly, but the duration of flooding could have been reduced. Using temporary pumps and slowly bringing the permanent pumps on line after Katrina required 53 days to unwater the city.



Figure 18. Example of breach along IHNC (east side) from overtopping and scour (top) and scour behind adjacent section that did not fail (bottom)

New Orleans: Maximum Flooding Depth

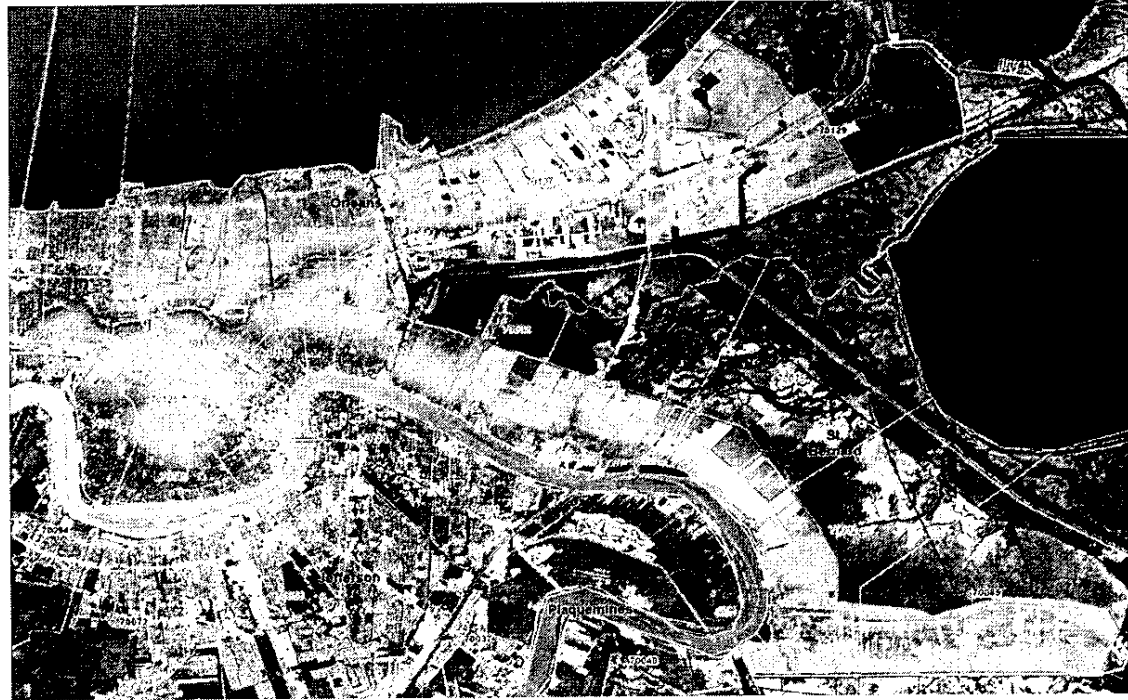


Figure 19. Map of maximum depths of flooding from Katrina

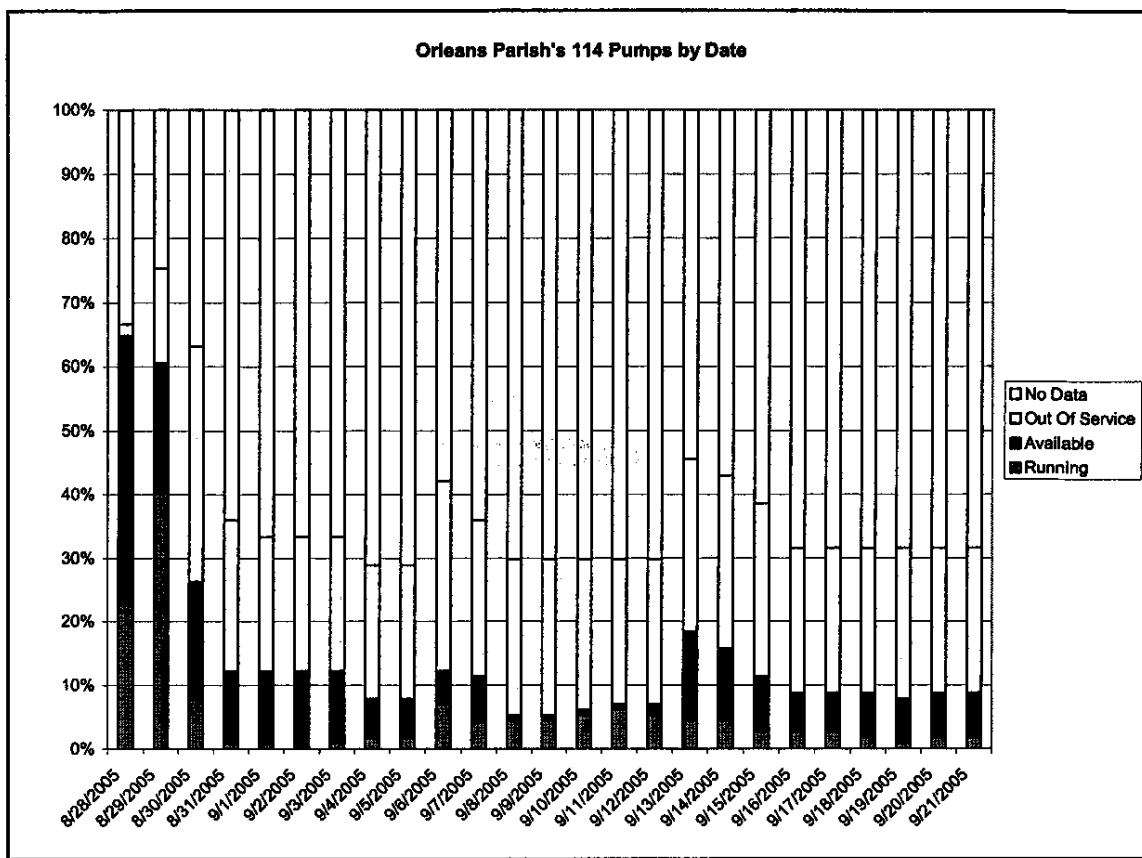


Figure 20. Example of pumping performance during Katrina

Scenarios run for the hypothetical situation of no levee or floodwall breaching, and assuming full pumping capacity, demonstrated that rainfall and overtopping would have caused extensive flooding, but that flooding in some areas, may be as little as one-third of that experienced during Katrina. Figure 21 is one example of that analysis for Orleans East.

The consequences of the flooding were enormous, dwarfing the losses from previous disasters. Figure 22 shows the distribution, by census block, of the percentage of the direct property losses (loss/value) that occurred in the metropolitan area. This graphic correlates primarily to elevation (depth of flooding) and concentration of assets. When coupled with the approximately \$4.5 to \$5.6 billion in public infrastructure damages, the total direct property losses for New Orleans alone reach nearly \$25 billion. In contrast, Figure 23 shows the hypothetical percentage loss for the scenario of having no breaching (just overtopping) and full pumping capacity. While this scenario is not realistic for the time of Katrina, when added to the relationship shown in Figure 20, it is a testimony to the value of having a resilient hurricane protection system.

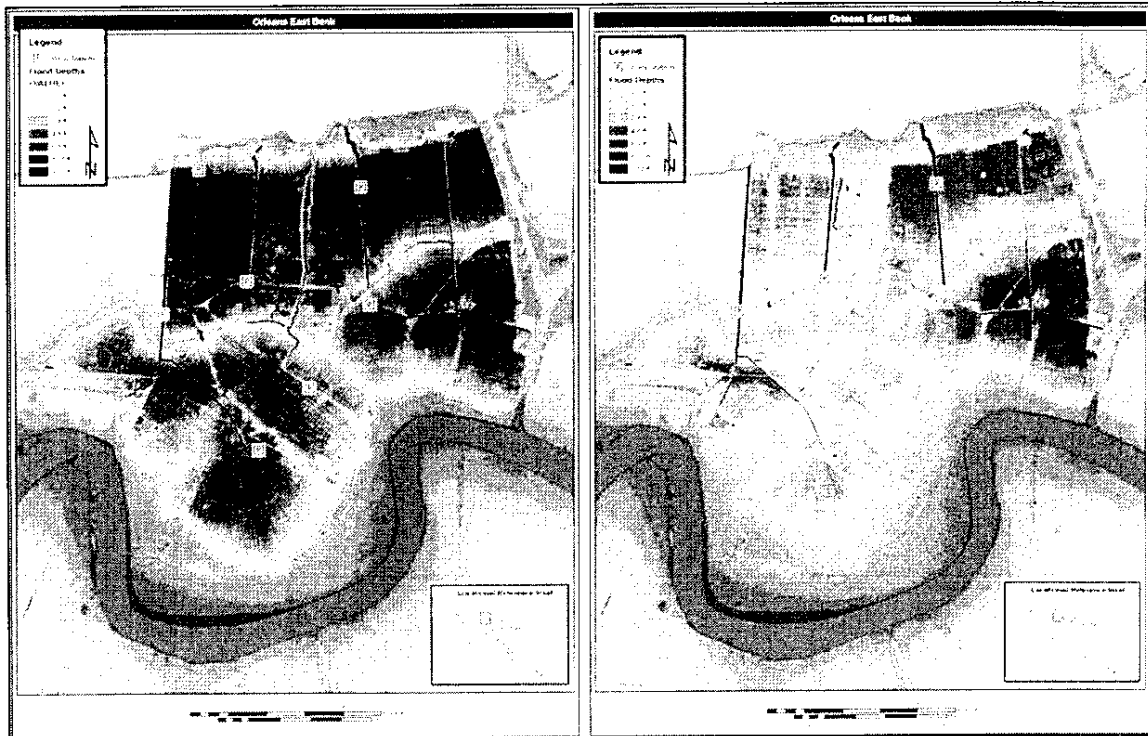


Figure 21. Comparison of flooding from Katrina (left) to hypothetical condition of no breaching and full pumping capacity (right) for Orleans East Bank

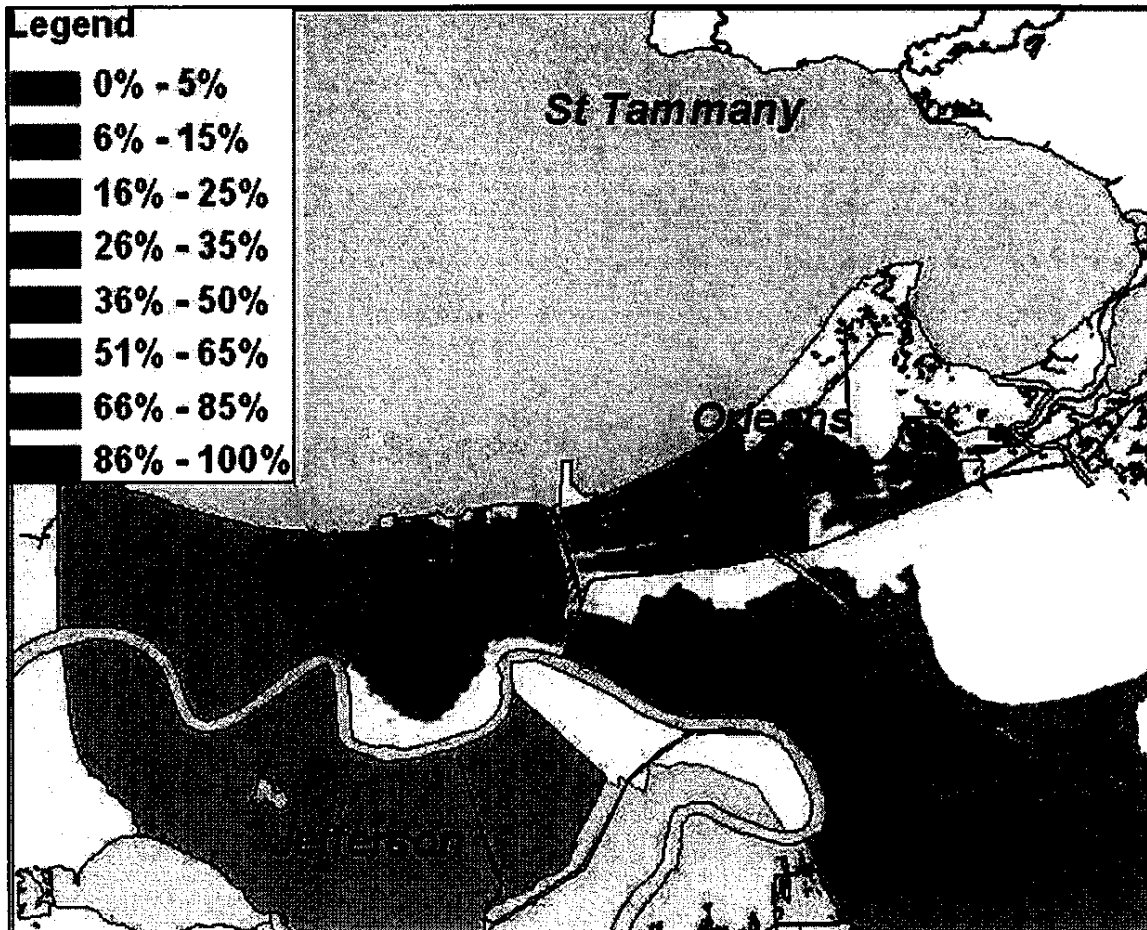


Figure 22. Distribution, by census block, of percent property damage (damage/value) from Katrina

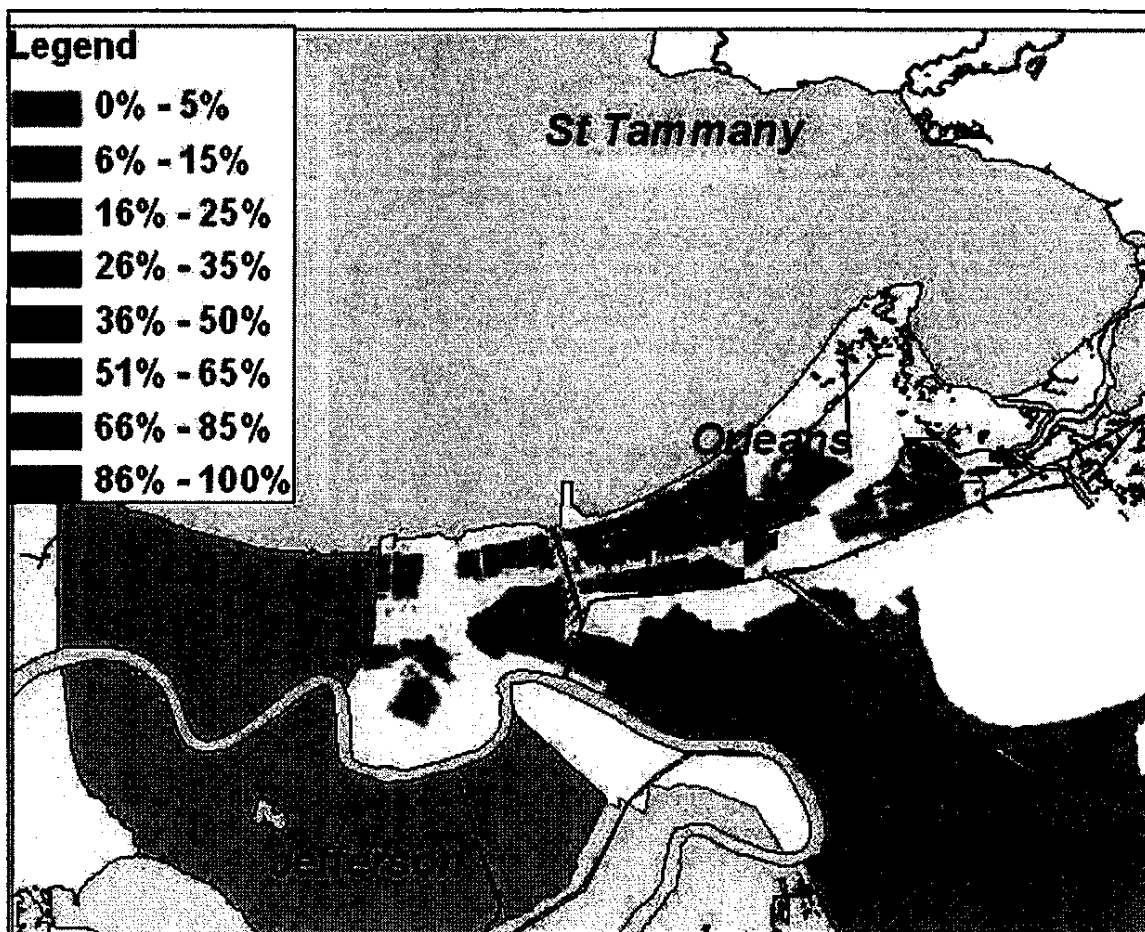


Figure 23. Hypothetical percent property damage (damage/value) for scenario of no breaching and full pumping capacity

The regional and long-term impacts are greater and have yet to be quantified. Loss of life was staggering with almost 1600 fatalities accounted for and another 400 missing and presumed dead. Loss of life was highly associated with evacuation. Of those who remained, the elderly were particularly vulnerable with three of every four persons who died being over 60 years old. In fact, the flooding in general was disproportionately cruel to the poor, the elderly, and the disabled, groups least likely to be able to care for themselves in a disaster.

The flooding and resultant prolonged loss of services caused what has become more of a migration than an evacuation, casting long shadows on the region's ability to recover. Only 8 of 73 neighborhoods did not flood, while 34 were completely inundated. Residential property losses were a staggering 78 percent of the total. Commercial property losses were approximately 11 percent of the total while industrial losses were under 2 percent. Clearly, the people of New Orleans suffered the most direct losses and these losses represent perhaps the greatest challenge to recovery, not just in terms of property damages. The extensive flooding caused a breakdown in the area's social and cultural structure, significantly complicating recovery and

redevelopment. Critical social institutions such as schools and hospitals have been very slow to reopen.

Figure 24 shows an example of the pre-Katrina and post-Katrina (1 June 06) direct economic damage - elevation relationships developed for each subbasin. Similar relationships were developed for elevation and loss-of-life using Katrina data and the LifeSim model. Together these relationships provide a fundamental input to the risk and reliability analysis. The dramatic change in the curves from pre-Katrina to Post Katrina conditions represents the change in the value of the property from losses due to Katrina. Even if the probability of flooding remained the same, the risk (product of probability of flooding at a given level and level of consequences) for this subbasin would be decreased because of the reduced exposure for economic loss.

The risk prior to Katrina was significant, in part because New Orleans is mostly below sea level, in part because the hurricane protection system had not been completed, in part because it had not been tested, and in part because portions were just not up to the test. The gap component of the foundation failure mechanisms was not considered in the design of those structures and they had never experienced water levels above approximately 5 ft (compared to 8-10 ft in the outfall canals and over 14 ft in IHNC during Katrina). Levee sections created with hydraulic fill and capped with thin clay had never experienced design water levels, not to mention overtopping. Both components of risk were significant. The probability of a failure of floodwalls and some sections of levees were high, and there was a great potential for serious consequences because of the large population and extensive property being protected by the structures. The repairs since Katrina have been formidable and those sections of the system are no doubt the strongest. The temporary gates at the outfall canals will dramatically reduce the forces that the floodwalls along the canal experience. Replacing I-wall sections with stronger and higher T-wall sections along the IHNC will also significantly reduce risk, as will armor behind floodwall sections deemed vulnerable to overtopping and erosion. Rebuilding levee sections higher and with high quality clays will dramatically increase their resilience to overtopping. It is the other 40 percent that represent the greatest risk until additional measures can be taken to raise and strengthen them.

Given the ability to achieve an equal level of protection around the entire system, some areas will at least, in a relative sense, continue to harbor the greatest risk, those having elevations the most below sea level and those directly exposed to the full surge and wave environments that large storms can create. Given any overtopping, water will first inundate the lowest area. Coupled with rainfall, the performance (and therefore resilience) of the pumping stations will become the first line of defense. Given breaching, most likely where surge and wave environments can be most severe, the lowest areas again will flood first and flood the most. This risk assessment does not require the sophisticated model developed by the IPET, and it points out that there are rules of thumb that cannot be avoided. A risk model, however, gives planners and the public a common framework for quantifying their relative levels of vulnerability and understanding its source. That is a smart way to begin the process of reducing risk where it is most practical and will provide the most significant benefits.

There were numerous media reports of wide spread water contamination in and around New Orleans. Samples from bottom sediments in Lake Pontchartrain, and the marshes in St. Bernard

as well as numerical modeling of surface water contaminant transport did not support these reports. Figure 25 shows the results of one of the modeling efforts, in this case to examine maximum surface water concentrations of arsenic (As) in Lake Pontchartrain. All of these investigations, which included other contaminants such as lead and coliform bacteria, showed that the floodwater contaminant impacts on the region were marginal and typically, did not exceed EPA standards. While there were localized contamination events, in general the New Orleans area did seem to have escaped wide spread pollutant contamination. The impact of salt water flooding of wetlands and marshes was significant and represents the most serious environmental damage sustained from Katrina.

Katrina is truly a disaster from which this nation must seek and apply lessons learned to prevent reoccurrence.

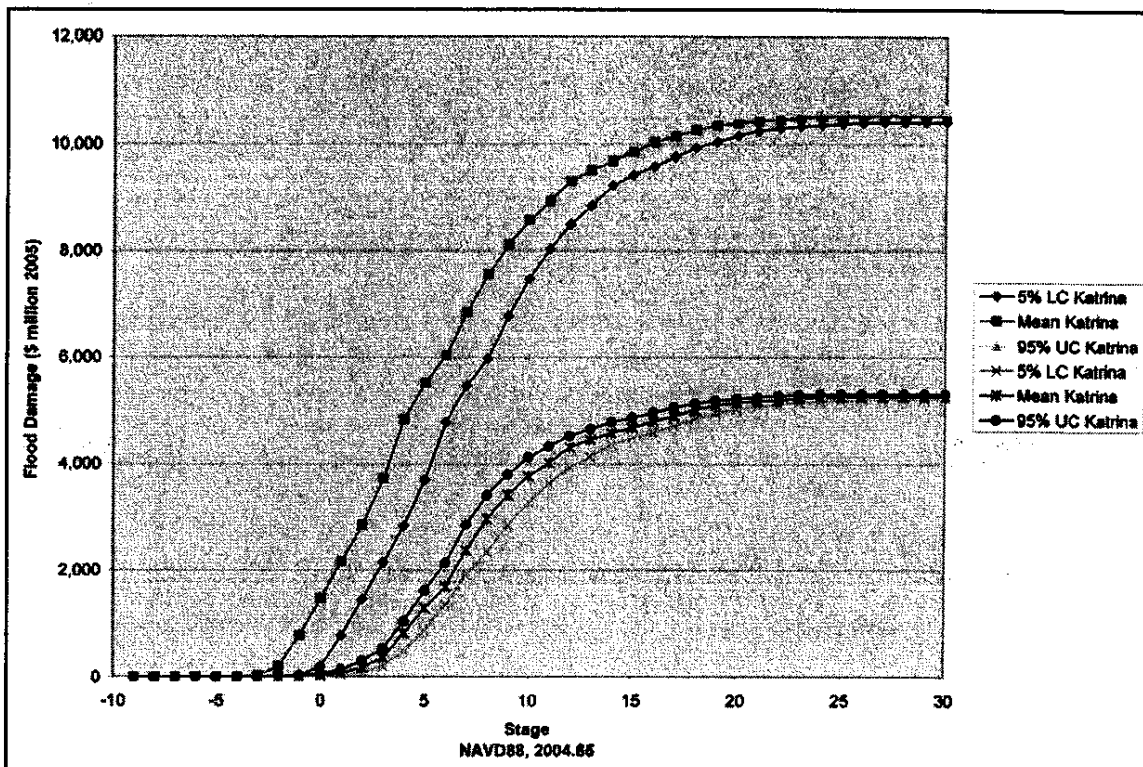


Figure 24. Comparison of flood damage – elevation relationships for pre- and post-Katrina scenarios for Orleans subbasin 5

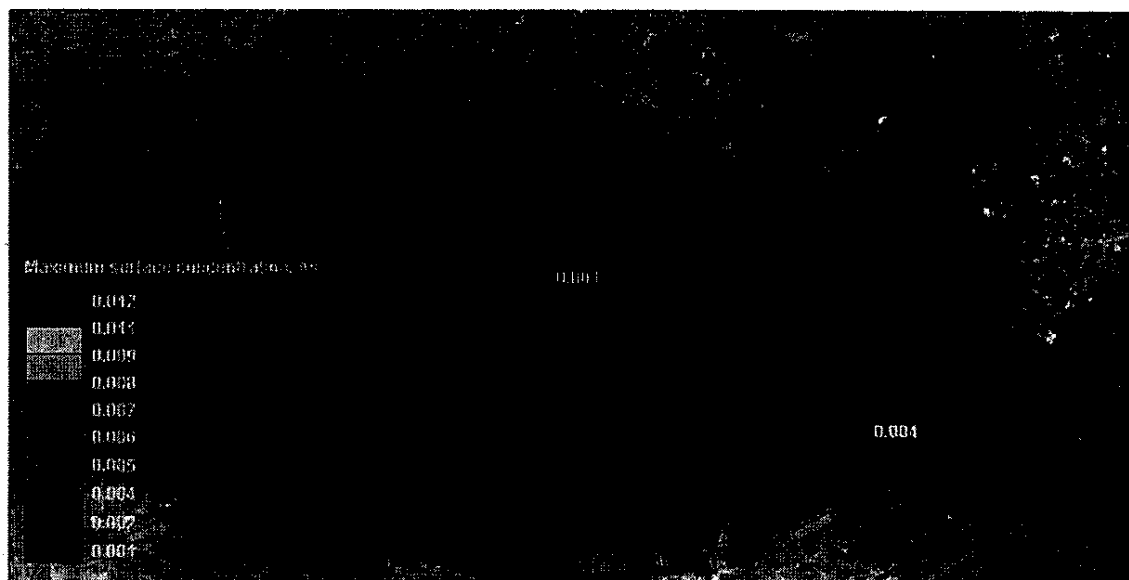


Figure 25. Maximum As water surface concentrations (mg/l total) in Lake Pontchartrain after Katrina

Interagency Performance Evaluation Task Force

IPET was established by the Chief of Engineers to determine the facts concerning the performance of the New Orleans Hurricane Protection System (HPS) in response to Hurricane Katrina. IPET has over 150 experts from 50 organizations conducting in-depth analyses that include understanding the surge and wave levels resulting from the storm; determining the forces experienced by the HPS; understanding the design, as-built, and as-maintained character of the HPS; determining the most likely causes and mechanisms for observed behavior (failure and success); characterizing the extent and consequences of flooding to include the influence of the pumping stations; and performing a risk and reliability assessment of the HPS. Appendix 1 provides the IPET principal leaders, their roles in IPET, and their affiliations and a list of the organizational affiliations of individuals serving on IPET teams. At the request of the Chief of Engineers, the American Society of Civil Engineers (ASCE) set up an External Review Panel to provide continuous review of the work of the IPET. The panel is comprised of experts from industry, academia, and government with a broad range of experience and expertise in each of the principal areas of analysis. At the request of the Secretary of Defense, the National Research Council established the Committee on New Orleans Regional Hurricane Protection Projects to provide strategic oversight of the IPET and to make recommendations concerning hurricane protection in New Orleans. Appendix 2 lists the members of the ASCE External Review Panel and their affiliations. Appendix 3 lists the members of the NRC Committee on New Orleans Regional Hurricane Protection Projects. Appendix 4 summarizes the IPET contributions to Task Force Guardian, the Corps organization responsible for the repair of the hurricane protection system.

... "to provide credible and objective scientific and engineering answers to fundamental questions about the performance of the hurricane protection and flood damage reduction system in the New Orleans metropolitan area."

LTC Carl A. Strock, Chief of Engineers, 10 Oct 2005

The IPET analysis is assisting the Corps and other responsible agencies in understanding why various components of the hurricane protection system performed as they did during Katrina, providing input to all of the ongoing efforts to reconstitute the hurricane protection system. This includes support to the three main efforts to fully achieve the current authorized levels of protection: 1) repair of the areas seriously damaged by Hurricane Katrina, 2) the design and construction efforts to restore the hurricane protection system to authorized elevations of protection, and 3) the design and construction for the completion of the previously authorized hurricane protection system (not yet completed because of lack of funds). The goal is to be able to use these lessons learned to reconstitute a more resilient and capable hurricane protection system than that which existed prior to Katrina. The extensive information repository, analytical tools, and analysis results also provide a significant new body of knowledge and analytical capability from which the Corps can begin evaluation of alternative approaches to providing higher levels of protection in the future. It is also hoped that the findings of the IPET efforts, coupled with the insights and interpretations of the ASCE External Review Panel and the NRC

Committee on New Orleans Regional Hurricane Protection Projects, will contribute to positive changes in engineering practice and water resources policy for the future.

During the conduct of the IPET studies, there has been continuous interaction with the Corps of Engineers entities in New Orleans responsible for the repair and reconstitution of hurricane protection in the region. These organizations, Task Force Hope, Task Force Guardian, and the New Orleans District, have representatives embedded in the IPET Teams, providing an effective two-way conduit for information and rapid transfer of results and lessons learned. It was imperative that the knowledge gained by the IPET and others be immediately made available to those responsible for repair and reconstruction.

IPET Objective

The objective of the IPET was to develop factual answers to the following questions:

- **Hurricane Protection System:** What were the design criteria for the pre-Katrina hurricane protection system, and did the design, as-built construction, and maintained condition meet these criteria?
- **Storm:** What were the storm surges and waves used as the basis of design, and how do these compare to the storm surges and waves generated by Hurricane Katrina?
- **Performance:** How did the floodwalls, levees, pumping stations, and drainage canals, individually and acting as an integrated system, perform in response to Hurricane Katrina, and why?
- **Consequences:** What have been the societal-related consequences of the Katrina-related damage?
- **Risk:** Following the immediate repairs, what will be the quantifiable risk to New Orleans and vicinity from future hurricanes and tropical storms?

A parallel objective was to share, as they were determined, the information, findings, and lessons learned from answering these questions with the personnel and organizations engaged in the repair and reconstitution of the hurricane protection system, and with the public. The goal was to inform decisions on the design and construction of repairs to the significantly damaged sections and the assessment of the condition and integrity of the undamaged sections prior to the next hurricane season. Secondary objectives were to provide information and analytical capabilities that would support the evaluation of alternative means to provide higher levels of protection in the future and to provide insights into the types of changes in engineering practice and policy that would facilitate more effective hurricane protection.

Prior Reports

IPET efforts are documented in three major reports, including this final report. All are available on the IPET public Web site, <https://IPET.wes.army.mil>. An uncommon element to this study is that the majority of the findings and lessons learned were transferred to those responsible for the repair and reconstitution of the hurricane protection system, as learned and prior to the publication of these reports. This was one of the most important objectives of the IPET, to positively impact the repair activities while ongoing and to provide capabilities needed to reconstitute long-term effective protection for the area.

Report 1: IPET Report 1, Performance Evaluation Plan and Interim Status, published as a draft on 10 January, 2006, documented the IPET scope of work and analysis methods that resulted from significant interaction with the individual experts and the collective body of the External Review Panel. ASCE provided their formal review of IPET Report 1 in a letter report to the Chief of Engineers on 20 February 2006, available on the ASCE Web site. The National Research Council Committee published their comments and review of the IPET activities and Report 1 in a letter report to the Assistant Secretary of the Army for Civil Works on 21 February 2006, available on the National Academies of Engineering Web site.

IPET Report 1 also provided a status report of the analysis in the various task comprising the IPET plan with a limited number of example products, mostly related to the initial storm surge and wave modeling. It included significant background information concerning the organization of the IPET activities, the participants and their affiliations, information sources and management, and the general approach for accomplishing the scopes of work.

Report 2: Report 2, Performance Evaluation and Interim Results, published as a draft on 10 March 2006, provided a synopsis of the analyses to date and presented significant interim results. A secondary objective was to provide at least a full prototype of the analysis that was ongoing for all of the IPET tasks to allow the ERP and NRC reviewers a greater opportunity to provide feedback and advice to enhance the ultimate impact and value of the IPET efforts.

Report 2 was structured around the five major questions that comprise the IPET mission. It presented some significant results of analysis that formed the basis for the findings in this report. The results ranged from the relatively complete products of some aspects of the performance evaluation to prototypes of products for other tasks. The geodetic vertical and water level datum and the storm surge and wave condition analyses are examples of areas where significant results were presented. In other areas a partial analysis was presented, for example the structural performance analysis of the 17th Street drainage canal breach, lacking only the numerical stability analysis component of the work. The information for other tasks, for example the risk and reliability analysis, represented prototypes for the final products under development. The intent for these areas was to document and describe how these products are being developed and what they will look like when published in the final report. Report 2 was provided to the ASCE External Review Panel on 9-10 March 2006 in Vicksburg, MS, and to the NRC Committee on New Orleans Regional Hurricane Protection Projects on 20 March 2006 in New Orleans, LA. The External Review Panel's feedback to the Chief of Engineers on that meeting is available on the ASCE Web site.

The IPET met with the ERP for the forth time 3-5 May 2006 in New Orleans. The objective of the meeting was to provide detailed information and receive feedback on the analyses that were being completed for the final report. On 15 May 2006, the IPET met with the NRC Committee in New Orleans to provide a status report on the analyses and preparation of the draft final report. Insights gained from those meetings are included in this report. Final comments from both the ERP and NRC Committee, after their review of the draft final report, will be incorporated into this report prior to its final publication and release.

Draft Final Report

This report is the final report on the IPET performance evaluation of the New Orleans and Southeast Louisiana Hurricane Protection System. It comprises nine volumes that document the work conducted by the IPET teams and the results of that work. The general content of each volume and how the results are being applied are described below:

Volume I: Executive Summary and Overview. Volume I provides an executive summary and overview of the IPET study and its principal findings and lessons learned. It is a big picture summary of the in-depth analysis and results presented in Volumes II to VIII.

Volume II: Geodetic Vertical and Water Level Datums. Because of the complex and variable subsidence in Southeast Louisiana, establishing an accurate vertical reference for measurements has been a constant challenge. By accelerating efforts already under way by the Corps of Engineers and the NOAA National Geodetic Survey (NGS), accurate elevations were established for the reference points within the region using modern global positioning system technology. The relationship of local mean sea level to the geodetic datum was also established to provide a complete reference system for all analysis, repair, and planning activities. Additional surveys were accomplished to accurately determine the elevation of all critical features and structures that comprise the hurricane protection system as well as perishable data such as high-water marks resulting from Katrina.

The elevations for the reference points for the geodetic vertical datum have been provided to the Corps of Engineers directly and to other agencies and the public through NOAA/NGS channels. All surveyed elevations for levees, floodwalls, pump stations, other structures, and high-water marks are being transitioned to the Corps and made available through the IPET Web site, <https://IPET.wes.army.mil>. Digital elevation data obtained by a variety of methods to include airborne LIDAR have been corrected to the geodetic datum and will be available through the IPET Web site. This information provided a common foundation for IPET analyses as well as the application of the results in the hurricane protection system repairs. By accurately defining the elevations of the current structures, these data provide a clear definition of the changes needed to achieve authorized protection elevations for the system as well as ultimately achieving 100-year or higher levels of protection. Guidance has been provided to update agency criteria and methods for managing the reference datums in areas of rapid and variable subsidence.

Volume III: The Hurricane Protection System. The hurricane protection system is comprised of three individual authorized projects. What is in place has been designed and constructed in steps over time, starting in 1965 and continuing today. This volume provides a

detailed description of the hurricane protection system. It focuses on the character of the hurricane protection system starting with the definition of the hazard, defined by the Standard Project Hurricane (SPH), translation of the SPH into authorized levels of protection, the general methods and assumptions for the design of the floodwalls and levees to provide that protection, the as-built character following construction, and the maintained condition of the structures. It includes documentation of the geotechnical information available and used for the design and construction and provides references for the detailed information. To augment this information an annotated chronology of the significant decisions and communications that led to the constructed structures on the outfall canals is included. This provides significant insights as to what was built and the design intent. This is the first step in understanding and examining the performance of the entire hurricane protection system and providing a platform for the performance analysis of individual sites to better understand breaching.

The comprehensive description of the hurricane protection system has been a platform for the majority of the IPET analysis. It was essential to understanding the intent of the designers and the character of the built structures. It provided the fundamental information for the levee and floodwall performance analysis from geotechnical information on the subsurface conditions to the design assumptions and analyses used to develop the sheetpile depths, floodwall heights, and the levee geometry. The same information was a basic input to the characterization of the system for the risk assessment. The annotated chronology on the design and construction of the outfall canals was input to the Corps' companion forensic study examining why specific decisions were made in the evolution of those projects.

Volume IV: The Storm: Volume IV deals with characterization of Hurricane Katrina and the hydrodynamic environment it created. This involves two major components, a regional analysis of surge and waves generated by Katrina and high-resolution modeling of the surge and waves to better understand the time history of the static and dynamic forces that impacted the levees and floodwalls. The regional modeling provided a time history of the surge and wave environments for all locations around the hurricane protection system. This employed advanced computer codes using a very high resolution representation of the geospatial character of the nearshore environment and the hurricane protection system. The high resolution hydrodynamic modeling created a more detailed time history of water levels and forces in the confined spaces of the outfall canals, the IHNC, and the GIWW as well as the interaction of surge and waves with structures such as overtopping of levees along St. Bernard and Plaquemines Parishes. A time history of Katrina-generated forces, by location around the hurricane protection system, was essential to conducting a credible performance analysis, allowing the appropriate level of forces, based on the established timing of events to be used in the evaluation. The time line of events was developed by combining eyewitness interviews with a wide variety of physical information and evidence. The time line established when overtopping, breaching, and flooding occurred in the individual drainage basins and along the various reaches of the hurricane protection system. This was an essential input to the structural performance analysis, allowing accurate determination of the time history and character of the storm-generated forces to which structures were subjected at the time of overtopping or breaching. The wave, surge, and velocity information was provided directly to the Corps' Task Force Guardian for use in designing levee and floodwall repairs.

A special study was made to examine the impact of the MRGO channel on the storm surge levels in the IHNC. The ADCIRC model was run with the MRGO channel in its pre-Katrina condition and again assuming the channel did not exist. The results demonstrated that, for larger storms, the MRGO channel has little impact on the water levels in the IHNC.

Volume V: The Performance - Levees and Floodwalls. Volume V documents the structural performance analysis of the levees and floodwalls. The analysis addresses the floodwall breach sites on 17th Street and London Avenue Outfall Canals and the IHNC individually, describing the field investigations, computer modeling, and physical modeling used to determine the most likely failure mechanism. Sophisticated numerical models for stability and seepage, along with detailed field investigations, were used to determine the most likely failure mechanisms for each site. Centrifuge testing at both the Rensselaer Polytechnic Institute and the Engineer Research and Development Center was used to confirm these mechanisms and develop a complete picture of the processes. It also describes the analysis of Orleans Outfall Canal, which provided un-breached analogs for both the 17th Street and London Avenue sites. A broad analysis of the impact of overtopping and scour on the St. Bernard and Plaquemines levees is provided to understand the massive breaching that occurred in those parishes in terms of the types of materials used in the levees and the forces to which they were exposed.

The failure mechanisms determined for the I-wall breach sites, coupled with the knowledge gained by studying the Orleans non-breach analog sites, were used to develop criteria for investigating the remaining undamaged I-wall sections for performance integrity and to develop approaches to strengthen I-wall sections as necessary. Analysis for levee breaching was used to determine the primary causes of breaching and specify repair and rebuilding strategies that would be more robust. The knowledge gained is also being used to develop operating rules for managing water in the outfall canals after the temporary surge gates and pumps are installed and operating, as well as input to Corps Headquarters assessments of changes needed in engineering guidelines and design criteria.

Volume VI: The Performance - Interior Drainage and Pump Stations. Volume VI describes the second major component of the performance analysis of the physical system, interior drainage and pump stations. This volume describes the character of pump stations in each parish, documents their performance during and after Katrina, and provides performance information for each station. The performance curves, including those describing back flow, were critical inputs to the drainage models that were used to assess flooding. The development of interior drainage models is described along with their application to compute and map the extent of flooding from Katrina and to examine how different performance scenarios would have impacted flooding. The interior drainage modeling includes characterization of the impact of pump station performance and the relative impacts of breaching and overtopping (with no breaching) on flooding. The pumping and interior drainage information was a critical input to both the consequence and risk assessments.

Hypothetical scenarios were examined using the interior drainage and pumping modeling capability to explore a number of important questions for the future. These included potential differences in the extent of flooding if no breaching (levee or floodwall) occurred or if only the foundation failures occurred (no levee breaching), and the potential difference in flooding if the

pumping stations could maintain full capacity during hurricanes. Together, these also provide an opportunity to examine the value of a totally resilient system, i.e., structures that can all survive overtopping and maintain full pumping capacity during a major hurricane.

Volume VII: Consequences. Volume VII describes the IPET efforts to define the losses that occurred because of Katrina and to consider the potential losses from future hurricanes. The consequences from Hurricane Katrina flooding have been characterized in economic, human health and safety, social and cultural, and environmental terms. The assessment of flood consequences has several purposes integral to understanding the dimensions of the Hurricane Katrina event as well as other possible hurricane and storm events. For example, consequences are one of the dimensions of risk necessary to understand the level of safety provided by the hurricane protection system. To achieve these objectives, a number of hypothetical scenarios were examined as well as the consequences of the Katrina event:

- **Actual:** Katrina with actual system performance—representing the actual flooding in greater New Orleans resulting from Hurricane Katrina.
- **Hypothetical:** Katrina with various levee and floodwall failure conditions—representing the estimated level of flooding in greater New Orleans that would have resulted from Hurricane Katrina had there been no failure of levees and floodwalls, foundation failure induced breaching only and considering different efficiency levels of interior pumping (Katrina pumping and full capacity pumping).
- **Risk:** Probabilistic risk scenarios modeled by the Risk and Reliability Assessment Team—representing residual hurricane-related flood risks in greater New Orleans as of August 2005 before the arrival of Hurricane Katrina, as well as flood risks as of June 2006 following repair of damages to the hurricane protection system caused by Hurricane Katrina.

The methods used and the specific consequences determined in terms of economic (direct and indirect), human safety and health, cultural and historical, and environmental losses are documented. Direct property damages represent monetary damages to residential, commercial, industrial, public buildings, vehicles, and infrastructure. Indirect economic consequence was focused on estimating local and regional economic impacts and examining possible changes in the structure of the regional economy from pre-Katrina levels into the future. Indirect economic consequences are represented in terms of possible repopulation of the area, capital stock formation, and employment levels. A limited scope economic forecast of population, employment, and local investment based on two “what if” simulations was developed as limiting control scenarios.

The types of human health and safety consequences considered varied by event scenario. For the actual Katrina scenario, the effects considered include recorded mortality as well as actual and potential morbidity, including both physical and mental health impacts. For the hypothetical Katrina scenario (without system failure), the assessment of human health effects focused only on potential mortality. The development of the loss of life – elevation relationships and direct economic damage – elevation relationships by sub-basin for the risk assessment is described, as

well as developing similar relationships for the hypothetical scenarios to assist in the examination of potential consequences of future hurricane events.

The social and cultural consequences assessment considered social, cultural, and historical indicators as expressed in both quantitative and qualitative terms. These include indicators of populations, neighborhoods, communities, institutions and geographic points and locales, at local, regional, and national scales. For the actual Katrina scenario, these indicators were used to assess social and cultural changes from pre-Katrina levels. The environmental consequences assessment considered quantitative measures of contamination and loss of significant ecological resources. The specific ecological resources addressed include ecological support, fisheries, wildlife, pests, and special status species. For the actual and hypothetical Katrina scenarios, post-Katrina ecological resource conditions were compared against pre-Katrina conditions for those resources.

The consequence information generated by the IPET was a direct input to the risk and reliability assessment and is being transferred to the Corps for application in the Louisiana Coastal Protection and Restoration Study. Consequence information for the lower sections of Plaquemines Parish is currently being assembled and will be provided in the final report scheduled for release in September 2006.

Volume VIII: Risk and Reliability. Volume VIII documents the risk and reliability methodology being conducted to provide a system-wide assessment of performance. It includes the risk methodology used, the characterization of the individual drainage subbasins and the features that impact hurricane protection, characterization of the expected performance (reliability) and uncertainty of the performance of individual features and reaches of the system, and the development of a comprehensive joint probability analysis of the hurricane hazard threat. System reliability is described by fragility curves that characterize the expected performance of individual reaches or structures as a function of storm water levels. The fragility curves were generated from a detailed evaluation of the subsurface conditions, the character of the structures, and understanding the relevant failure mechanisms (defined previously or from the IPET performance analysis). Approximately 2000 hypothetical storms were run through the ADCIRC model and a tailored wave estimation procedure to generate detailed information on the probability of different water (wave and surge) levels occurring at different locations around the hurricane protection system. This ensemble of storms represents the full range of storms that may hit New Orleans and provides a joint probability model for defining the hazard that each reach might experience in the future.

This work offers the opportunity to examine risk at the census block level or aggregated to subbasins, basins (parishes), or system-wide levels. It also allows examination of the impact of changes in the character of the protection for a given reach, providing a systems approach to examine how alternative protection measures can reduce risk. This can include relatively simple to very sophisticated measures. Simple measures might include armoring existing structures, elevating levees, and use of erosion-resistant materials, seepage berms, or relief wells. More sophisticated approaches could include replacing I-walls with T-walls and adding surge gates at the ends of the outfall canals. With limited modification, the analysis could include different types of approaches such as large surge barriers between Lake Pontchartrain and Lake Borgne.

Risk products are not presented in this draft report. The risk methodology is being validated and risk products will be subjected to a rigorous peer review and validation prior to their release. The risk assessment will contrast relative risk levels by subbasin prior to Katrina to those after repairs are complete (effectively 1 June 2006). The Risk and Reliability model and associated information will be transitioned to the Louisiana Comprehensive Protection and Restoration Study as a tool for evaluating alternative approaches for higher levels of protection.

Volume IX: General Appendices: Volume IX provides information considered important background for the overall IPET study and the analyses presented in the other volumes. It includes appendices on the Information Repository developed to support analyses, information on the Web site developed to provide a means to quickly share IPET analysis and results with the public, the IPET Project Management Plan, a summary of the contributions to Task Force Guardian, the official documents concerning IPET, the IPET Communications Plan, and the IPET management model.

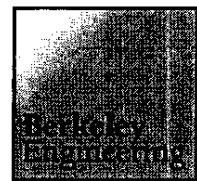
Investigation of the Performance of the New Orleans Flood Protection Systems in Hurricane Katrina on August 29, 2005

Volume I: Main Text and Executive Summary

by

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**Final Report
July 31, 2006**



EXECUTIVE SUMMARY

This report presents the results of an investigation of the performance of the New Orleans regional flood protection system during and after Hurricane Katrina, which struck the New Orleans region on August 29, 2005. This event resulted in the single most costly catastrophic failure of an engineered system in history. Current damage estimates at the time of this writing are on the order of \$100 to \$200 billion in the greater New Orleans area, and the official death count in New Orleans and southern Louisiana at the time of this writing stands at 1,293, with an additional 306 deaths in nearby southern Mississippi. An additional approximately 300 people are currently still listed as "missing"; it is expected that some of these missing were temporarily lost in the shuffle of the regional evacuation, but some of these are expected to have been carried out into the swamps and the Gulf of Mexico by the storm's floodwaters, and some are expected to be recovered in the ongoing sifting through the debris of wrecked homes and businesses, so the current overall regional death count of 1,599 is expected to continue to rise a bit further. More than 450,000 people were initially displaced by this catastrophe, and at the time of this writing more than 200,000 residents of the greater New Orleans metropolitan area continue to be displaced from their homes by the floodwater damages from this storm event.

This investigation has targeted three main questions as follow: (1) What happened?, (2) Why?, and (3) What types of changes are necessary to prevent recurrence of a disaster of this scale again in the future?

To address these questions, this investigation has involved: (1) an initial field reconnaissance, forensic study and data gathering effort performed quickly after the arrival of Hurricanes Katrina (August 29, 2005) and Rita (September 24, 2005), (2) a review of the history of the regional flood protection system and its development, (3) a review of the challenging regional geology, (4) detailed studies of the events during Hurricanes Katrina and Rita, as well as the causes and mechanisms of the principal failures, (4) studies of the organizational and institutional issues affecting the performance of the flood protection system, (5) observations regarding the emergency repair and ongoing interim levee reconstruction efforts, and (6) development of findings and preliminary recommendations regarding changes that appear warranted in order to prevent recurrence of this type of catastrophe in the future.

In the end, it is concluded that many things went wrong with the New Orleans flood protection system during Hurricane Katrina, and that the resulting catastrophe had its roots in three main causes: (1) a major natural disaster (the Hurricane itself), (2) the poor performance of the flood protection system, due to localized engineering failures, questionable judgments, errors, etc. involved in the detailed design, construction, operation and maintenance of the system, and (3) more global "organizational" and institutional problems associated with the governmental and local organizations responsible for the design, construction, operation, maintenance and funding of the overall flood protection system.

After eight months of detailed study, a much clearer picture has now emerged regarding the causes and mechanisms of this catastrophe. Many of the findings of this study represent a different view of key elements of this event than has been publicly presented to date.

Hurricane Katrina was a large hurricane, and its arrival at New Orleans represented the root cause of a natural disaster. This disaster grew to a full blown catastrophe, however, principally due to the massive and repeated failure of the regional flood protection system and the consequent flooding of approximately 85% of the greater metropolitan area of New Orleans.

As Hurricane Katrina initially approached the coast, the resulting storm surge and waves rose over the levees protecting much of a narrow strip of land on both sides of the lower Mississippi River extending from the southern edge of New Orleans to the Gulf of Mexico. Most of this narrow protected zone, Plaquemines Parish, was massively inundated by the waters of the Gulf.

The eye of the storm next proceeded to the north, on a path that would take it just slightly to the east of New Orleans.

Hurricane Katrina has been widely reported to have overwhelmed the eastern side of the New Orleans flood protection system with storm surge and wave loading that exceeded the levels used for design of the system in that area. That is a true statement, but it is also an incomplete view. The storm surge and wave loading at the eastern flank of the New Orleans flood protection system was not vastly greater than design levels, and the carnage that resulted owed much to the inadequacies of the system as it existed at the time of Katrina's arrival. Some overtopping of levees along the eastern flank of the system (along the northeastern frontage of the St. Bernard and Ninth Ward protected basin, and at the southeast corner of the New Orleans East protected basin), and also in central areas (along the GIWW channel and the IHNC channel) was inevitable given the design levels authorized by Congress and the surge levels produced in these areas by the actual storm. It does not follow, however, that this overtopping had to result in catastrophic failures and breaching of major portions of the levees protecting these areas, nor the ensuing catastrophic flooding of these populous areas.

The northeast flank of the St. Bernard/Ninth Ward basin's protecting "ring" of levees and floodwalls was incomplete at the time of Katrina's arrival. The critical 11 mile long levee section fronting "Lake" Borgne (which is actually a Bay, connected directly to the Gulf of Mexico) was being constructed in stages, and funding appropriation for the final stage had long been requested by the U.S. Army Corps of Engineers (USACE), but this did not arrive before Katrina struck; as a result large portions of this critical levee frontage were several feet below final design grade. In addition, an unfortunate decision had been made to use local dredge spoils from the excavation of the adjacent MRGO channel for construction of major portions of the

levees along this frontage. The result was that major portions of these levees were comprised of highly erodeable sand and lightweight shell sand fill.

When the storm surge arrived, massive portions of these levees eroded catastrophically and the storm surge passed through this frontage while still on the rise, crossed an open swamp area that should have safely absorbed most of the overtopping flow from the outer levees (if they had not catastrophically eroded), and it then crossed easily over a secondary levee of lesser height that had not been intended to face a storm surge largely undiminished by the minimal interference of the too rapidly eroded outer levees fronting Lake Borgne. The resulting carnage in St. Bernard Parish was devastating, as the storm surge rapidly filled the protected basin to an elevation of approximately +12 feet above sea level; deeply inundating even neighborhoods with ground elevations well above sea level in this area.

The storm surge swelled waters of Lake Borgne also passed over and then through a length of levees at the southeast corner of the New Orleans East protected basin. Here too, the levees fronting Lake Borgne had been constructed primarily using materials dredged from the excavation of an adjacent channel (the GIWW channel), and these levees also contained major volumes of highly erodeable sands and lightweight shell sands. These levees were also massively eroded, and produced the principal source of flooding that eventually inundated the New Orleans East protected area. Here again there was an area of undeveloped swampland behind the outer levees that might have absorbed the brunt of any overtopping flow, and a secondary levee of lesser height was in place behind this swampland that might then have prevented catastrophic flooding of the populous areas of New Orleans East. This secondary levee was not able to resist the massive flows resulting from the catastrophic erosion of the highly erodeable section of the Lake Borgne frontage levee, however, and the floodwaters passed over the secondary levee and began the filling of the New Orleans East protected basin.

The catastrophic erosion of these two critical levee frontages need not have occurred. These frontages could instead have been constructed using well compacted clay fill with good resistance to erosion, and they could have been further armored in anticipation of the storm surge and wave loading from Lake Borgne. The levee at the northeast edge of St. Bernard Parish could have been completed in a more timely manner. The result would have been some overtopping, but not catastrophic erosion and uncontrolled breaching of these critical frontages. Some flooding and damage would have been expected, but it need not have been catastrophic.

The storm surge swollen waters of Lake Borgne next passed laterally along the east-west trending GIWW/MRGO channel to its intersection at a "T" with the north-south oriented IHNC channel, overtopping levees along both banks to a limited degree. This produced an additional breach of a composite earthen levee and concrete floodwall section along the southern edge of New Orleans East, adding additional uncontrolled inflow to this protected basin. This failure could have been prevented at little incremental cost if erosion protection (e.g. a concrete splash pad, or similar) had been emplaced along the back side of the concrete floodwall at the levee crest, but the USACE

felt that this was precluded by Federal rules and regulations regarding authorized levels of protection.

The surge next raised the water levels within the IHNC channel, and produced a number of failures on both the east and west banks. Two major failures occurred on the east side of the IHNC, at the west edge of the Ninth Ward. Overtopping occurred at both of these locations, but this was not the principal cause of either of these failures. Both failures were principally due to underseepage flows that passed beneath the sheetpile curtains supporting the concrete floodwalls at the crests of the levees. Like many sections of the flood protection system, these sheetpiles were too shallow to adequately cut off, and thus reduce, these underseepage flows. The result was two massive breaches that devastated the adjacent Ninth Ward neighborhood, and then pushed east to meet with the floodwaters already rapidly approaching from the east from St. Bernard Parish as a result of the earlier catastrophic erosion of the Lake Borgne frontage levees.

Several additional breaches also occurred farther north on the east side of the IHNC fronting the west side of New Orleans East, but these were relatively small features and they just added further to the uncontrolled flows that were now progressively filling this protected basin. These breaches occurred mainly at junctures between adjoining, dissimilar levee and floodwall sections, and represented good examples of widespread failure to adequately engineer these "transitions" between sections of the regional flood protection system.

Several breaches occurred on the west side of the IHNC, and these represented the first failures to admit uncontrolled floodwaters into the main metropolitan (downtown) protected area of New Orleans. These features did not scour and erode a path below sea level, however, so they admitted floodwaters for a number of hours and then these inflows ceased as the storm surge in the IHNC eventually subsided. Only 10% to 20% of the floodwaters that eventually inundated a majority of the main (downtown) New Orleans protected basin entered through these features.

These failures and breaches on the west side of the IHNC all appear to have been preventable. One failure was the result of overtopping of an I-wall, with the overtopping flow then eroding a trench in the earthen levee crest at the inboard side of the floodwall. This removal of lateral support unbraced the floodwall, and it was pushed over laterally by the water pressures from the storm surge on the outboard side. Here again the installation of erosional protection (e.g. concrete splash pads or similar) might have prevented the failure.

The other failures in this area occurred at "transitions" between disparate levee and floodwall sections, and/or at sections where unsuitable and highly erodible lightweight shell sand fills had been used to construct levee embankments. Here, again, these failures were as much the result of design choices and/or engineering and oversight issues as the storm surge itself.

As the eye of the hurricane next passed to the northeast of New Orleans, the counterclockwise swirl of the storm winds produced a storm surge against the southern edge of Lake Pontchartrain. This produced additional temporary overtopping of a long section of levee and floodwall at the west end of the lakefront levees of New Orleans east, behind the old airport, adding further to the flows that were progressively filling this protected basin.

The surge against the southern edge of Lake Pontchartrain also elevated the water levels within three drainage canals at the northern edge of the main metropolitan (downtown) New Orleans protected basin, and this would produce the final, and most damaging, failures and flooding of the overall event.

The three drainage canals should not have been accessible to the storm surge. The USACE had tried for many years to obtain authorization to install floodgates at the north ends of the three drainage canals that could be closed to prevent storm surges from raising the water levels within the canals. That would have been the superior technical solution. Dysfunctional interaction between the local Levee Board (who were responsible for levees and floodwalls, etc.) and the local Water and Sewerage Board (who were responsible for pumping water from the city via the drainage canals) prevented the installation of these gates, however, and as a result many miles of the sides of these three canals had instead to be lined with levees and floodwalls.

The lining of these canals with levees topped with concrete floodwalls was rendered very challenging due to (a) the difficult local geology of the foundation soils, and (b) the narrow right of way (or available "footprint") for these levees. As a result of the decision not to install the floodgates, the three canals represented potentially vulnerable "daggers" pointed at the heart of the main metropolitan New Orleans protected basin. Three major breaches would occur on these canals; two on the London Avenue Canal and one on the 17th Street Canal. All three of these breaches eroded and scoured rapidly to well below sea level, and these three major breaches were the source of approximately 80% of the floodwaters that then flowed into the main (downtown) protected basin over the next three days, finally equilibrating with the still slightly elevated waters of Lake Pontchartrain on Thursday, September 1.

The central canal of the three, the Orleans Canal, did not suffer breaching, but a section of floodwall topping the earthen levee approximately 300 feet in length near the south end of the canal had been left incomplete, again as a result of dysfunctional interaction between the local levee board and the water and sewerage board. This effectively reduced the level of protection for this canal from about +12 to +13 feet above sea level (the height of the tops of the floodwalls lining the many miles of the canal) to an elevation of about +6 to +7 feet above sea level (the height of the earthen levee crest along the 300 foot length where the floodwall that should have topped this levee was omitted). As a result of the missing floodwall section, flow passed through this "hole" and began filling the heart of the main New Orleans protected basin. This flow eventually ceased as the storm surge subsided, and so was locally damaging but not catastrophic.

The three breaches on the 17th Street and London Avenue canals were catastrophic. None of these failures were the result of overtopping; surge levels in all three drainage canals were well below the design levels, and well below the tops of the floodwalls. Two of these breaches were the result of stability failures of the foundation soils underlying the earthen levees and their floodwalls, and the third was the result of underseepage passing beneath the sheetpile curtain and resultant catastrophic erosion near the inboard toe of the levee that eventually undermined the levee and floodwall.

A large number of engineering errors and poor judgements contributed to these three catastrophic design failures, as detailed in Chapter 8. In addition, a number of these same problems appear to be somewhat pervasive, and call into question the integrity and reliability of other sections of the flood protection system that did not fail during this event. Indeed, additional levee and floodwall sections appear to have been potentially heading towards failure when they were “saved” by the occurrence of the three large breaches (which rapidly drew down the canal water levels and thus reduced the loading on nearby levee and floodwall sections.)

The New Orleans regional flood protection system failed at many locations during Hurricane Katrina, and by many different modes and mechanisms. This unacceptable performance was to a large degree the result of more global underlying “organizational” and institutional problems associated with the governmental and local organizations jointly responsible for the design, construction, operation, and maintenance of the flood protection system, including provision of timely funding and other critical resources.

Our findings to date indicate that no one group or organization had a monopoly on responsibility for the catastrophic failure of this regional flood protection system. Many groups, organizations and even individuals had a hand in the numerous failures and shortcomings that proved so catastrophic on August 29th. It is a complex situation, without simple answers.

It is not without answers and potential solutions, however, just not simple ones. There is a need to change the process by which these types of large and critical protective systems are created and maintained. It will not be feasible to provide an assured level of protection for this large metropolitan region without first making significant changes in the organizational structure and interactions of the national and more local governmental bodies and agencies jointly responsible for this effort. Significant changes are also needed in the engineering approaches and procedures used for many aspects of this work, and there is a need for interactive and independent expert technical oversight and review as well. In numerous cases, it appears that such review would have likely caught and challenged errors and poor judgements (both in engineering, and in policy and funding) that led to failures during Hurricane Katrina.


Simply updating engineering procedures and design manuals will not provide the needed level of assurance of safety of the population and properties of this major metropolitan region. Design procedures and standards employed for many elements of

the flood protection system can be traced back to initial development and use for design and construction of levees intended for protection of largely unpopulated agrarian land, not a major urban region. Design levels of safety and reliability were nowhere near those generally used for major dams; largely because dams are considered to pose a potential risk to large populations. There are few U.S. dams that pose risk to populations as large as the greater New Orleans region, however, and it is one of the recommendations of this study that standards and policies much like those used for “dams” should be adopted for levee systems protecting such regions.

Simply addressing engineering design standards and procedures is unlikely to be sufficient to provide a suitably reliable level of protection. There is also a need to resolve dysfunctional relationships between federal and more local government, and the federal and local agencies responsible for the actual design, construction and maintenance of such flood protection systems. Some of these groups need to enhance their technical capabilities; a long-term expense that would clearly represent a prudent investment at both the national and local level, given the stakes as demonstrated by the losses in this recent event. Steady commitment and reliable funding, shorter design and construction timeframes, clear lines of authority and responsibility, and improved overall coordination of disparate system elements and functions are all needed as well.

And there is some urgency to all of this. The greater New Orleans regional flood protection system was significantly upgraded in response to flooding produced by Hurricane Betsy in 1965. The improved flood protection system was intended to be completed in 2017, fully 52 years after Betsy’s calamitous passage. The system was incomplete when Katrina arrived. As a nation, we must manage to dedicate the resources necessary to complete projects with such clear and obvious ramifications for public safety in a more timely manner.

New Orleans has now been flooded by hurricanes six times over the past century; in 1915, 1940, 1947, 1965, 1969 and 2005. It should not be allowed to happen again.


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 EASTERN DISTRICT OF LA
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 CLERK

UNITED STATES DISTRICT COURT
 EASTERN DISTRICT OF LOUISIANA

COLLEEN BERTHELOT, ET AL.	*	CIVIL ACTION NO. 05-4182
	*	
Plaintiffs	*	SECTION "K"
	*	
VERSUS	*	
	*	JUDGE DUVAL
BOH BROTHERS CONSTRUCTION CO.,	*	
L.L.C., ET AL.	*	
	*	MAGISTRATE NO. 2
Defendants	*	
	*	
THIS DOCUMENT RELATES TO:	*	MAGISTRATE WILKINSON
05-4181, 05-4182, 05-5237, 05-6073, 05-6314,	*	
05-6324, 05-6327, 06-0020, 06-225, 06-886,	*	
06-2278, 06-2287, 06-2545, 06-2346	*	A JURY IS DEMANDED

GOVERNMENT DEFENDANTS', THE BOARD OF COMMISSIONERS OF THE
ORLEANS LEVEE DISTRICT AND THE SEWERAGE AND WATER BOARD OF NEW
ORLEANS, FED. R. CIV. P. 12(B)(6) JOINT MOTION TO DISMISS

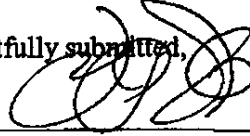
NOW INTO COURT, through undersigned counsel, come government defendants, The Board of Commissioners for the Orleans Levee District (hereinafter sometimes referred to as "defendant" or "Orleans Levee District") and The Sewerage and Water Board of New Orleans (hereinafter sometimes referred to as "SWBNO"), and as more fully discussed in the accompanying Memorandum in Support, which defendants incorporate herein, respectfully pray for an Order granting their Fed. R. Civ. P. 12(b)(6) Motion to Dismiss plaintiffs' claims, with prejudice, for failing to state a claim upon which relief can be granted. Defendants are statutorily

Fee _____
 Process _____
 X Dkt'd _____
 CtRmDep _____
 Doc. No. _____

immune from any and all lawsuits arising out of its emergency preparedness activities in accordance with La. R.S. 29:735. Because Louisiana law bars plaintiffs from instituting the subject actions, defendants are entitled to an Order granting their Fed. R. Civ. P. 12(b)(6) Motion to Dismiss.

WHEREFORE, government defendants, The Board of Commissioners for the Orleans Levee District and The Sewerage and Water Board of New Orleans, pray for an Order granting their Fed. R. Civ. P. 12(b)(6) Motion to dismiss, with prejudice.

Respectfully submitted,



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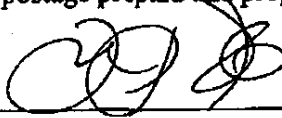
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ATTORNEYS FOR THE SEWERAGE AND
WATER BOARD OF NEW ORLEANS**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the above and foregoing pleading has been served upon all counsel of record by placing same in the U.S. Mail, postage prepaid and properly addressed this 15th day of June, 2006.



UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA

COLLEEN BERTHELOT, ET AL.	*	CIVIL ACTION NO. 05-4182
	*	
Plaintiffs	*	SECTION "K"
	*	
VERSUS	*	
	*	JUDGE DUVAL
BOH BROTHERS CONSTRUCTION CO., L.L.C., ET AL.	*	
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Defendants	*	MAGISTRATE NO. 2
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06-2278, 06-2287, 06-2545, 06-2346	*	A JURY IS DEMANDED
	*	

**MEMORANDUM IN SUPPORT OF GOVERNMENT DEFENDANTS', THE BOARD OF
COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT AND THE SEWERAGE
AND WATER BOARD OF NEW ORLEANS, FED. R. CIV. P. 12(B)(6) JOINT MOTION
TO DISMISS**

MAY IT PLEASE THE COURT:

The Orleans Levee District and the SWBNO respectfully submit this Fed. R. Civ. P.

12(b)(6) Motion, seeking dismissal, with prejudice, from these consolidated actions based upon
the statutorily mandated immunity provision of La. R.S. 29: 735.¹

¹At the Court's request, the Orleans Levee District and the S&WB, both "government defendants," are jointly filing the instant Motion to Dismiss, although different factual

A. THE ORLEANS LEVEE DISTRICT'S MOTION TO DISMISS

I. FACTUAL BACKGROUND

Fourteen putative class action lawsuits seeking recovery from the Orleans Levee District for flooding and other property damage due to breaches in levees following Hurricane Katrina serve as the basis of this consolidated litigation. The allegations of liability plaintiffs advance against the Orleans Levee District can be categorized in the following fashion:

1. Failing to test and/or inspect whether the design, construction, composition, and maintenance of the 17th Street, London Avenue and Industrial Canal Levees was adequate, proper and within standards, resulting in both negligence and "strict liability" in accordance with La. C.C. arts. 2317 and 2317.1;²
2. Failing to ensure the adequacy of the design, construction, composition and maintenance of the 17th Street, London Avenue and Industrial Canals, resulting in both negligence and "strict liability" in accordance with La. C.C. arts. 2317 and

circumstances exist for the relief each party is requesting herein. In addition, although liaison counsel for plaintiffs has indicated discovery will be necessary in connection with this Motion, these government defendants have elected to file the Motion at this time.

²*Berthelot*, 05-4182, Second Supplemental and Amending Complaint, ¶36(D)(3); *Kirsch*, 05-6073, Class Action Complaint, ¶36(D)(3); *Ezell*, 05-6314, Class Action Complaint, ¶36(D)(3); *Brown*, 05-6324, Class Action Complaint, ¶36(D)(3); *Leblanc*, 05-6327, Complaint for Damages- Class Action, ¶ VI(A)(4)(c); *Tauzin*, 06-0020, Class Action Complaint, ¶¶ 44-55; *Bradley*, 06-225, Class Action Petition for Damages, ¶¶11-12; *Finney*, 06-886, Class Action Complaint, ¶36(D)(3); *Christenberry*, 06-2278, Petition for Damages- Class Action, ¶30; *Sanchez*, 06-2287, Class Action Complaint, ¶XXXIII(D)(3); and *Marcello* 06-2545, Class Action Petition, ¶¶12(F)(1)-(9); *Fitzmorris*, 06-2346, Complaint, ¶¶ 36-56.

2317.1;³

3. Failing to repair Floodgate W-30 after settling a lawsuit the Orleans Levee District filed against the New Orleans Public Belt Railroad after one of its railcars damaged the floodgate.⁴

II. LAW AND ARGUMENT

A. Fed. R. Civ. P. 12(b)(6) Standard

To decide a Motion to Dismiss for failure to state a claim under Fed. R. Civ. P. 12(b)(6), the court must accept all well-pleaded facts as true and view the facts in a light most favorable to plaintiffs.⁵ Dismissal is warranted if it appears certain that plaintiffs cannot prove any set of facts

³*Berthelot*, 05-4182, Second Supplemental and Amending Complaint, ¶36(D)(3); *Kirsch*, 05-6073, Class Action Complaint, ¶36(D)(5); *Ezell*, 05-6314, Class Action Complaint, ¶36(D)(5); *Brown*, 05-6324, Class Action Complaint, ¶36(D)(5); *Leblanc*, 05-6327, Complaint for Damages- Class Action, ¶ VI(A)(4)(e); *Tauzin*, 06-0020, Class Action Complaint, ¶¶ 44-55; *Bradley*, 06-225, Class Action Petition for Damages, ¶¶11-12; *Finney*, 06-886, Class Action Complaint, ¶36(D)(5); *Christenberry*, 06-2278, Petition for Damages- Class Action, ¶30; *Sanchez*, 06-2287, Class Action Complaint, ¶XXXIII(D)(5); *Marcello* 06-2545, Class Action Petition, ¶¶12(F)(1)-(9); and *Fitzmorris*, 06-2346, Complaint, ¶¶ 36-56. Plaintiffs in *O'Dwyer* make a conclusory allegation of intentional conduct on the part of the Orleans Levee District, but fail to provide any rational factual support for this allegation. These allegations are discussed in great detail in Section II(D), *infra*.

⁴*Berthelot*, 05-4182, Second Supplemental and Amending Complaint, ¶¶36(D)(6)-(11); *Kirsch*, 05-6073, Class Action Complaint, ¶36(D)(6)-(11); *Ezell*, 05-6314, Class Action Complaint, ¶36(D)(6)-(11); *Brown*, 05-6324, Class Action Complaint, ¶36(D)(6)-(11); *Leblanc*, 05-6327, Complaint for Damages- Class Action, ¶ VI(A)(3)(c)-(g); *Tauzin*, 06-0020, Class Action Complaint, ¶¶ 39-40; *Finney*, 06-886, Class Action Complaint, ¶¶36(D)(6)-(11); *Sanchez*, 06-2287, Class Action Complaint, ¶XXXIII(D)(6)-(11); *Fitzmorris*, 06-2346, Complaint, ¶¶ 52-56.

⁵*Cousin v. Small*, 2001 W.L. 617455 (E.D.L.A. 6/4/2001), citing *Baker v. Putnal*, 75 F. 3rd 190, 196 (5th Cir. 1996).

in support of their claim that would entitle them to relief.⁶ In deciding whether dismissal is warranted, however, “conclusory allegations or legal conclusions masquerading as factual conclusions will not suffice to prevent a motion to dismiss.”⁷ While the Court reviewing a Fed. R. Civ. P. 12(b)(6) motion is generally constrained to the allegations within the pleadings, the “court may take judicial notice of the contents of public records....”⁸

B. The Erie Doctrine

The law on Erie is well settled. When a state’s highest court has not squarely addressed an issue of state law, the federal court must make an “Erie guess.”⁹ The Fifth Circuit has instructed: “[i]f the Louisiana Supreme Court has not ruled on this issue, then this Court must make an ‘Erie guess’ and ‘determine as best it can’ what the Louisiana Supreme Court would decide.”¹⁰ “In making an Erie guess, this Court may look to the decisions of intermediate appellate courts for guidance.”¹¹ Decisions of intermediate appellate courts in Louisiana “are a datum for ascertaining state law which is not to be disregarded by a federal court unless it is

⁶*Id.*, citing Piotrowski v. City of Houston, 51 F. 3rd 512, 514 (5th Cir. 1995).

⁷Jefferson v. Lead Industries, Inc., 106 F.3d 1245 (5th Cir. 1997).

⁸*Id.* at 1250.

⁹Howe Ex Rel Howe v. Scottsdale Ins. Co., 204 F.3d 624, 627 (5th Cir. 2000); Powers v. Vista Chemical Co., 109 F.3d 1089, 1093 (5th Cir. 1997); Rogers v. Corrosion Products, Inc., 42 F.3d 292, 295 (5th Cir. 1995); Kirkland v. Franco, 92 F.Supp.2d 578, 581 (E.D. La. 2000); Bauer v. GEICO, 61 F.Supp.2d 514, 517 (E.D. La. 1999).

¹⁰Howe Ex Rel Howe, 204 F.3d at 627.

¹¹Kirkland, 92 F.Supp.2d at 581, citing Matheny v. Glen Falls Ins. Co., 152 F.3d 348, 354 (5th Cir. 1998).

convinced by other persuasive data that the highest court of the state would decide otherwise.”¹²

The Fifth Circuit has also noted: “[a]lthough the refusal to grant a writ has no precedential effect, such a refusal does provide ‘persuasive’ evidence that the Louisiana Supreme Court approves of the legal conclusions reached by the appellate court.”¹³

C. **Immunity Pursuant to The Louisiana Homeland Security and Emergency Assistance and Disaster Act**

In 1993, by Acts 1993 No. 800 § 1, the Louisiana Legislature enacted the “Louisiana Homeland Security and Emergency Assistance and Disaster Act” (hereinafter, “the Act”).¹⁴ The Legislature found the Act necessary:

Because of the existing possibility of the occurrence of emergencies and disasters of **unprecedented size and destructiveness** resulting from terrorist events, enemy attack, sabotage, or other hostile action, or from fire, **flood, earthquake, or other natural or man-made causes** * * * (and) to reduce vulnerability of people and communities of this state to damage, injury and loss of life and property resulting from natural and man-made catastrophes ¹⁵

In addition to empowering the Governor, Parish Presidents and others within the Executive branch of government to enact procedures to prepare for such natural and man-made disasters, the Legislature also granted immunity to the State’s political subdivisions and their employees,

¹²Howe Ex Rel Howe, 204 F.3d at 627.

¹³Blair v. Sealift, Inc., 91 F.3d 755, 762 (5th Cir. 1996), *citing*, Colonial Pipeline Co. v. Agerton, 289 So.2d 93, 96 (La. 1974), *aff’d*, 421 U.S. 100, 95 S.Ct. 1538 (1975).

¹⁴La. R.S. 29:721 to 29:736.

¹⁵La. R.S. 29:722(A) and (A)(4)(Emphasis added).

providing as follows:

Neither the state nor any political subdivision thereof, nor other agencies, nor, except in the case of willful misconduct, the agents' employees, or representatives of any of them, engaged in any homeland security and emergency preparedness activities, while complying with or attempting to comply with this Chapter or any rule or regulation promulgated pursuant to the provisions of this Chapter shall be liable for the death of or any injury to persons, or damage to property, as a result of such activity.¹⁶

Critical to an understanding of this mandatory, non-discretionary immunity provision is the definition of "emergency preparedness." La. R.S. 29:723(3) defines emergency preparedness as: "the mitigation of, preparation for, response to, and the recovery from emergencies or disasters."¹⁷ As defined in the Act, disaster means:

(T)he result of a natural or man-made event which causes loss of life, injury, and property damage, including but not limited to natural disasters such as hurricane, tornado, storm, flood, high winds, and other weather related events...and man-made disasters....¹⁸

¹⁶La. R.S. 29:735(A)(Emphasis added).

¹⁷Although the Act does not require State or Federal officials to declare a disaster area or state of emergency in order for its provisions to take effect, both President George W. Bush and Governor Kathleen B. Blanco declared states of emergency within the State of Louisiana immediately preceding landfall of Hurricane Katrina. See, Exhibit "A," Proclamation No. 48 KBB 2005, "State of Emergency - Hurricane Katrina," dated August 26, 2005, and Exhibit "B," "Statement of Federal Emergency Assistance for Louisiana," dated August 27, 2005. The Court may take judicial notice of undisputed public records, such as these, on a Rule 12(b)(6) Motion. See, Jefferson v. Lead Industries Assoc. Inc., 106 F.3d 1245 (5th Cir. 1997), and Fed. R. Evidence 201.

¹⁸La. R.S. 29:723(1).

The Orleans Levee District is a political subdivision of the State of Louisiana.¹⁹ La. R.S. 38:325 empowers each levee board within the state to engage in any activities related to flood protection and the construction and maintenance of levees.

Building and maintaining levees and other flood control structures are acts of emergency preparedness entitling a levee district to immunity under La. R.S. 29:735.²⁰ Immunity provisions of the Act apply to both man-made and natural disasters, pretermittting any argument over the cause(s) of the levee failures in the matter at hand. Finally, only evidence of willful misconduct on the part of a political subdivision's employees would preclude the political subdivision from enjoying statutory immunity for engaging in emergency preparedness activities.²¹

C. Argument Regarding Non-O'Dwyer Levee Cases (Docket Nos. 05-4182, 05-5237, 05-6073, 05-6314, 05-6324, 05-6327, 06-0020, 06-225, 06-886, 06-2278, 06-2287, 06-2545, 06-2346): Mandatory Language of La. R.S. 29:735 Entitles the Orleans Levee District to Statutory Immunity

As a matter of law, La. R.S. 29:735 bars plaintiffs' actions against the Orleans Levee District for personal injury and property damage arising out of levee breaches in the wake of Hurricane Katrina. The circumstances of these consolidated cases falls squarely within the

¹⁹La. R.S. 38:291(K), 307, *et seq.*

²⁰Hontex Enterprises, Inc. v. City of Westwego, 02-506 (La. App. 5 Cir. 12/11/2002); 833 So.2d 1234, writ denied, 2003-0505 (La. 9/5/2003); 852 So.2d 1041.

²¹*O'Dwyer* is the only action wherein plaintiffs make vague and perfunctory allegations of willful misconduct on the part of the Orleans Levee District. As discussed elsewhere, in reviewing a 12(b)(6) Motion to Dismiss, the Court must disregard conclusory allegations or legal conclusions masquerading as factual conclusions. Jefferson v. Lead Industries, Inc., 106 F.3d 1245 (5th Cir. 1997).

framework of the Act. Moreover, recognizing the Orleans Levee District's immunity would advance the Act's purpose as articulated in La. R.S. 29:722(A). Any other conclusion would result in legal error.

First, and at the risk of stating the obvious, Hurricane Katrina and the consequences of the subsequent levee failures meet the Act's definition of an unprecedented "disaster." Each of the consolidated complaints alleges facts sufficient to satisfy any fair reading of the term "disaster."²² Both President Bush and Governor Blanco issued formal Proclamations identifying Katrina and its aftermath as both a disaster and an emergency.²³ This element of the Act is clearly satisfied.

Second, constructing, maintaining and inspecting levees are acts of "emergency preparedness" as defined in the Act. It is the statutory mission of the Orleans Levee District (in compliance with specific federal guidelines and assurances, and at the direction of the U.S. Army Corps of Engineers) to "locate, relocate, construct, maintain, extend and improve levees...."²⁴ Levees have but one purpose; namely, to protect residents from flooding.²⁵ The complaints filed herein discuss in great detail how the purpose of the levees was to protect residents in southern

²²E.g., *Berthelot*, 05-4182, Supplemental and Amending Complaint, ¶20, *O'Dwyer*, 05-4181, Original Complaint, Counts V and XV, and *Leblanc*, 05-6327, Complaint for Damages, ¶VI(L).

²³See the Proclamations, attached hereto as exhibits "A" and "B."

²⁴La. R.S. 38:307(A)(1).

²⁵See, 33 U.S.C. 701, *et seq.*, The Flood Control Act, and Board of Com'rs of the Orleans Levee District v. Kelly, 73 So.2d 299 (La. 1954).

Louisiana from flooding.²⁶ Louisiana courts have also recognized the role of levees in "emergency preparedness."²⁷

Plaintiffs in these consolidated cases allege that the Orleans Levee District was negligent and/or strictly liable in failing to: (1) test whether the design, construction and maintenance of the levees were adequate, proper and within standards; (2) ensure the adequacy of the construction, design and maintenance of the levees; and (3) expend funds received in a settlement to repair a levee/floodgate damaged in a railcar accident. Each of these allegations goes to the issue of whether the Orleans Levee District discharged its duty to prepare for an emergency such as Hurricane Katrina. In essence, plaintiffs allege their damages resulted from the Orleans Levee District's being un-prepared for this emergency. According to plaintiffs, the Orleans Levee District was negligent in discharging its duties to design, construct, and maintain the levees in preparation for the emergency Katrina presented.²⁸ Plaintiffs also claim the Orleans Levee District was negligent in preparing for this emergency by failing to fix floodgate W-30 with proceeds of a settlement it had confected with the New Orleans Public Belt Railroad.

Each of these allegations goes to acts of alleged negligence in preparing for any

²⁶E.g., *Berthelot*, 05-4182, Class Action Complaint, ¶XIII, *Tauzin*, 06-0020, Class Action Complain, Introduction and ¶¶44-50 and 59-60, and *Sanchez*, 06-2287, Class Action Complain, ¶12.

²⁷Hontex Enterprises, Inc., *supra*.

²⁸By alleging that the Orleans Levee District is "strictly liable" under La. C.C. arts. 2317 and 2317.1, plaintiffs are essentially advancing what is tantamount to negligence claim, suggesting it either "knew or should have known" of problems with the levees, and failed to exercise reasonable care in correcting the problems.

emergency or disaster potentially caused by a hurricane such as Hurricane Katrina. It is for this reason that La. R.S. 29:735 acts as an absolute bar to plaintiffs' claims against the Orleans Levee District for flooding as a result of the levee failures.

The Act's immunity provision does not end at affording protection to a political subdivision's actions in designing, constructing and maintaining levees. Rather, in very clear terms, La. R.S. 29:723(A)(3) extends the scope of immunity to a political subdivision's "response to, and the recovery from emergencies or disasters." To the extent any complaint suggests, as did plaintiffs in the now-remanded *Vanderbrook* matter, the fault of the Orleans Levee District for breaching: "their duty to Petitioners by failing to correct the break (in the 17th Street Canal Levee) or warn others...of the impending water intrusion, apparently absent from their post," these allegations would also be barred. Such an allegation would rest squarely on the Orleans Levee District's "response to" the "disaster" and emergency caused by Hurricane Katrina. Because the Act grants immunity to a political subdivision for any such action, plaintiffs' claims are barred.

The Louisiana Fifth Circuit recognized the right of a levee district to invoke the Act's immunity provisions in Hontex Enterprises, Inc. v. City of Westwego.²⁹ Plaintiffs in Hontex operated a shrimp processing facility whose central plant was outside of West Jefferson Levee District's hurricane protection levee. Hontex operated its own pump station to remove water from the facility. Water leaking from one of Hontex's pumps spilled onto the property of an

²⁹02-506(La. App. 5 Cir. 12/11/2002); 833 So.2d 1234, writ denied, 2003-0505 (La. 9/5/2003); 852 So.2d 1041.

adjacent landowner. In response, the levee district built a ring levee around the leaking pipe. Plaintiffs claimed that, by building this levee, Hontex's pump station became inoperable, causing the compressors to fail and the facility to flood.

The trial court granted defendants' Motion for Summary Judgment on the issue of immunity, and the Louisiana Fifth Circuit affirmed. In so doing, the court noted that: "defendants have immunity for negligent acts taken to prepare for an emergency under La. R.S. 29: 735." Likewise, the Orleans Levee District is entitled to immunity for any actions taken in preparation for or response to disasters and emergencies, such as flooding caused by levee failures. The *Erie* doctrine, discussed above, calls upon this Court to rely upon the decision of this intermediary court for guidance on an issue of state law. The Louisiana Supreme Court's denial of writs in Hontex is "persuasive" evidence that the Court approves of the legal conclusions reached by the appellate court.³⁰

The only other reported decision discussing La. R.S. 29:735 originates out of the Louisiana Third Circuit. In Castille v. Lafayette City-Parish Consolidated Government,³¹ the Act afforded immunity to the City of Lafayette in a negligence action brought by vehicle occupants allegedly injured as the result of debris City employees left on the roadway during clean up efforts after Hurricane Lili. Affirming the trial court's order granting the City's summary

³⁰Blair v. Sealift, Inc., 91 F.3d 755, 762 (5th Cir. 1996), *citing*, Colonial Pipeline Co. v. Agerton, 289 So.2d 93, 96 (La. 1974), *aff'd*, 421 U.S. 100, 95 S.Ct. 1538 (1975).

³¹04-1569(La. App. 3 Cir. 3/2/2005); 896 So.2d 1261, *writ denied*, 2005-0860(La. 5/13/2005); 902 So.2d 1029.

judgment, the Third Circuit held that “clearing roadways of debris deposited by the hurricane to allow emergency vehicles to pass” constituted emergency preparedness activities, entitling the City and its employees to immunity.³² The Orleans Levee District respectfully submits that this Court is bound to follow the Louisiana Fifth Circuit’s ruling in Hontex and the Louisiana Third Circuit’s ruling in Castille, recognizing its right to statutory immunity under La. R.S. 29:735.

In sum, the Orleans Levee District is immune from any and all negligence claims seeking damages arising out of the flooding in the aftermath of Hurricane Katrina. The Louisiana Legislature framed the Act in mandatory terms, noting that no political subdivision “shall” be held liable for emergency preparedness activities. Any ruling not recognizing the Orleans Levee District’s right to immunity from these consolidated actions would result in legal error.

D. Argument Regarding *O’Dwyer* (Docket No. 05-4181): Conclusory Allegations of Willful Misconduct Are Insufficient to Defeat This Motion

While the allegations in the above cases focus solely on the negligent acts of commission and/or omission of the Orleans Levee District, plaintiffs in *O’Dwyer*, in addition to alleging negligence, claim in a conclusory and perfunctory fashion that the Orleans Levee District intentionally and willfully failed in their duty to ensure an adequate levee system. Plaintiffs in *O’Dwyer* make the following allegations of intentional and willful misconduct on the part of the Orleans Levee District:

³²See also, La. Atty. Gen. Op. No. 05-0381, 2005 WL 3635643 (12/6/2005), wherein the Attorney General advised the President of Plaquemine Parish that La. R.S. 29:735 would provide a legal basis for immunity to Parish employees against lawsuits arising out of the removal of Hurricane damaged vehicles.

(C)ertain of the defendants intentionally, negligently and with malfeasance, misfeasance and non-feasance failed in their duty to ensure competent design of the levee system for the London Avenue Canal and the Seventeenth Street Canal, which were defectively designed, the result being that 80% of "something" was destroyed- not by Hurricane Katrina, but by incompetence on the part of men to whom the citizens of New Orleans entrusted the safety of their lives and property.³³

(C)ertain defendants intentionally, negligently and with malfeasance, misfeasance and non-feasance failed to timely stop the flooding of 80% of "something," which had survived Hurricane KATRINA, but which could not survive the incompetence of government officials at the local, state and federal levels.³⁴

(C)ertain of the defendants intentionally, negligently (including acts which constituted both gross and simple negligence), and with malfeasance, misfeasance and non-feasance, failed in their duty to ensure the competent design, construction, maintenance and inspection of the levee systems of the Industrial Canal, and the Seventeenth Street Canal, which were defectively designed, constructed, maintained and inspected, the result being that a large part of the habitable homes and businesses in the Parish of Orleans and the Parish of Jefferson, State of Louisiana, were destroyed or damaged- not by Hurricane KATRINA, but by incompetence on the part of men to whom the citizens of New Orleans and Metairie, Louisiana entrusted the safety of their lives and property.³⁵

Plaintiffs aver that the acts and omissions by State and local elected and/or appointed officials, complained of herein, constituted willful, outrageous, reckless, and/or flagrant misconduct, so as to deprive those officials of immunity from liability pursuant to the provisions of LSA R.S. 9:2798.1, and, additionally, aver that those officials were in derogation of and violated specific rules and regulations promulgated pursuant to the provisions of LSA R.S. 29:735, so as to deprive those officials of immunity from liability under the provisions of that

³³Original Complaint, ¶VIII, Count 2.

³⁴Original Complaint, ¶VIII, Count 3.

³⁵Plaintiffs' Sixth Supplemental and Amending Complaint in a Class Action Lawsuit, ¶VIII, Count 2.

statute as well.³⁶

The above allegations are the product of one-dozen bites at the apple plaintiffs in *O'Dwyer* have taken to re-frame, recast and restate their "factual" allegations of intentional, reckless and willful actions on behalf of the Orleans Levee District. A cursory reading of these allegations, however, reveal that they are patently conclusory, making them insufficient, as a matter of law, to defeat Defendants' Motion to Dismiss.

As noted above, "Conclusory allegations and unwarranted deductions of fact are not admitted as true" for the purposes of considering a Fed. R. Civ. P. 12(b)(6) Motion to Dismiss.³⁷ This Court has observed: "Courts do not have to accept 'legal conclusions,' 'unsupported conclusions,' 'unwarranted references,' 'or sweeping legal conclusions cast in the form of factual allegations.'"³⁸ In sum, federal courts do not permit plaintiffs to defeat a 12(b)(6) Motion simply by asserting conclusions of law, which if accepted as true, would create a claim upon which relief could be granted.

Plaintiffs here have done just that here by making the "sweeping legal conclusion cast in the form of factual allegations" that the Orleans Levee District: "violated specific rules and regulations promulgated pursuant to the provisions of LSA R.S. 29:735, so as to deprive those

³⁶Plaintiffs' Eleventh Supplemental and Amending Complaint in A Class Action Lawsuit, ¶XIXXI.

³⁷Assoc. Builders, Inc. v. Alabama Power Co., 505 F.2d 97 (5th Cir. 1974).

³⁸Global Marine Shipping (No. 10) v. Finning Intern., Inc., 2002 WL 31246546 (E.D. La. 2002)(Per., J. Duval).

officials of immunity from liability under the provisions of that statute as well.” Nowhere in the twelve Complaints do plaintiffs set forth the specific factual bases for these alleged acts of *intentional conduct*. Simply put, these allegations are nothing more than legal conclusions masquerading as factual conclusions. *Ipse dixit*, conclusory and unsupported allegations of intentional conduct are legally inadequate to defeat the Orleans Levee District’s Fed. R. Civ. P. 12(b)(6) Motion to Dismiss.

The Louisiana Fifth Circuit’s opinion in Hontex adds strong support for the Orleans Levee District’s position. Attempting to defeat defendants’ claim of immunity under La. R.S. 29:735, plaintiffs attached affidavits from two Hontex managers indicating that both employees had warned the West Jefferson Levee District about the flooding which the ring levee would cause. Nevertheless, in spite of these warnings, the Levee District constructed the levee, allegedly causing plaintiffs’ damages. In rejecting this argument, the Fifth Circuit noted: “there is no indication of willful misconduct on the part of the defendants.”³⁹ Hontex stands for the proposition that, for the purposes of La. R.S. 29:735, being aware of potential damages from a particular act of emergency preparation does not impute one with willful misconduct. Here, the *O’Dwyer* plaintiffs have alleged no facts suggesting Orleans Levee District employees intentionally or wilfully caused the levees to fail.

Perhaps the most significant flaw in plaintiffs’ effort to avoid immunity by pleading the willful misconduct of the Orleans Levee District is that the “willful misconduct” exception

³⁹Hontex, 833 So.2d at 1240.

contained in La. R.S. 29:735 applies only to employees or agents of the political subdivision, and not the political subdivision itself. The Louisiana Third Circuit adopted this interpretation in Castille.⁴⁰ Citing the “marked paucity of case law” interpreting the Act, the Court found merit in the City of Lafayette’s argument that:

(T)he immunity provided to a political subdivision such as the Lafayette City-Parish Consolidated Government is not subject to the willful misconduct exception. The limiting phrase ‘except in case of willful misconduct refers only to employees or agents, not to a political subdivision. If the legislature had intended that phrase to apply to political subdivisions, as well as to individual employees, it would have inserted that phrase at the beginning or end of the sentence, rather than in the middle.⁴¹

Accordingly, the Court in Castille rejected plaintiffs’ invitation to apply the willful misconduct exception to a political subdivision. Here, applying the *Erie* doctrine, this Court is bound to accept the Castille court’s reading of La. R.S. 29:735. The *O’Dwyer* plaintiffs’ conclusory allegations of willful misconduct against the Orleans Levee District are legally insufficient to avoid the application of the Act’s clear and unambiguous immunity provisions.

III. CONCLUSION

For the foregoing reasons, defendant, the Board of Commissioners for the Orleans Levee District, prays for an Order granting its Fed. R. Civ. P. 12(b)(6) Motion to Dismiss, recognizing its statutory entitlement to immunity pursuant to La. R.S. 29:735.

⁴⁰Castille, 896 So.2d at 1264.

⁴¹Id. at 1264 (Emphasis added).

B. SEWERAGE & WATER BOARD OF NEW ORLEANS' MOTION TO DISMISS

I. INTRODUCTION

The Sewerage and Water Board of New Orleans (hereafter referred to as "SWBNO") avers that it is entitled to dismissal from the consolidated cases that are named above (except for the *Tauzin* case 06-0020 which does not name the "SWBNO" as a defendant) pursuant to La. R.S. 29:735, based on its statutory immunity.

The "SWBNO" adopts by reference the legal arguments that are presented by the Board of Commissioners for the Orleans Levee District as if presented here *in extensio*.

II. FACTUAL BACKGROUND

The Sewerage and Water Board of New Orleans states the following facts before this Honorable Court:

- (1.) The "SWBNO" is charged with drainage of the City of New Orleans to prevent flooding. (See Article 14, Section 23 of the Louisiana Constitution of 1921, continued in the Louisiana Constitution of 1974 under Article, Section 16, as a statute, La. R.S. 33:4082.1 through 4093.)
- (2.) The purpose of drainage of the City of New Orleans is to prevent flooding from rainfall, storms, and/or hurricanes.
- (3.) The consolidated cases, which are named above, each pertain to the flooding of the City of New Orleans after Hurricane Katrina. If no flooding had occurred, then the cases would not have been filed.
- (4.) In general, the alleged negligence and/or strict liability claims of the plaintiffs in

the consolidated cases vicariously refer to:

- (a) The garde, care, custody and control that the "SWBNO" allegedly has/had over the shores of the canals;
- (b) vices and/or defects that the levees and/or flood walls contained which the "SWBNO" knew or should have known about;
- (c) leaks emanating from the ground adjacent to the levees;
- (d) and the removal of sheet piling that created and/or caused alleged vices and/or defects along the levees and/or floodwalls.⁴²
- (5.) In general, the allegations in the consolidated cases refer to actions that the "SWBNO" took to mitigate, prepare for, respond to, and/or recover from storms, flooding, and/or hurricanes.⁴³
- (6.) There are no allegations against the "SWBNO" for willful misconduct.

⁴²The SWBNO denies the basis of the allegations pertaining to its alleged legal garde of the canals, which is the subject another Rule 12(B) motion to dismiss.

⁴³The allegations contained consolidated petitions are set forth with particularity as follows: *Berthelot*, 05-4182, Second Supplemental and Amending Complaint, ¶36 (F)(1-4); *Vadonovitch*, 05-5237, Second Supplemental and Amending Petition for Damages: Class Action, III, E. 1-4; *Kirsch*, 05-6073, Class Action Complaint, ¶35, 36(F)(1-4); *Ezell*, 05-6314, Class Action Complaint, ¶35, 36(F)(1-4); *Brown*, 05-6324, Class Action Complaint, ¶35, 36(F)(1-4); *Leblanc*, 05-6327, Complaint for Damages-Class Action, ¶VII(4)(a-d); *Bradley*, 06-225, First Amended Class Action Petition for Damages, ¶6, (4)(a-d); *Finney*, 06-886, Class Action Complaint, ¶35, 36(F)(1-4); *Christenberry*, 06-2278, Petition for Damages-Class Action, ¶29, 31; *Sanchez*, 06-2287, Class Action Complaint, ¶XXXIII(F)(1-4); and *Marcello* 06-2545, Class Action Petition, ¶¶12(G)(1-5); *Fitzmorris*, 06-2346, Complaint, ¶¶57-61.

III. LEGAL ARGUMENT

As stated above, the "SWBNO" adopts the legal arguments presented by the Orleans Levee District which pertain to the statutory immunity to which the "SWBNO" is entitled as a political subdivision of the State of Louisiana. The "SWBNO" will not repeat these cogent arguments here, as to do so would be duplicative and unnecessary.

The applicability of the immunity statute is clear on its face, as the plain language of the statute precludes liability for a political subdivision for acts in the prevention of the harms from a natural disaster, including hurricanes, flooding, high winds and other weather related events.

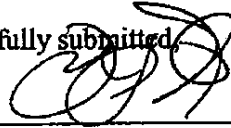
The "SWBNO" also notes that the sum total of its mandate concerning drainage relates directly to preventing flooding from rainfall, storms and hurricanes. This fact is obvious to anyone who has lived in New Orleans and is aware of the geography of the city, sitting below sea level, and the imperative need for drainage.

Moreover, Louisiana's immunity statute (Louisiana Homeland Security and Emergency Assistance Disaster Act) "casts a broad net," including events related to harms from "flooding" and other natural and man-made causes. This statute clearly includes the acts of the "SWBNO" that are related to its mission to drain the City of New Orleans.

IV. CONCLUSION

The Sewerage and Water Board of New Orleans seeks dismissal based on its statutory immunity. The applicability of Louisiana's emergency preparedness statutes prevents legal liability from being imposed on this Defendant. Therefore, the Sewerage and Water Board of New Orleans should be dismissed from the above referenced consolidated cases.

Respectfully submitted,

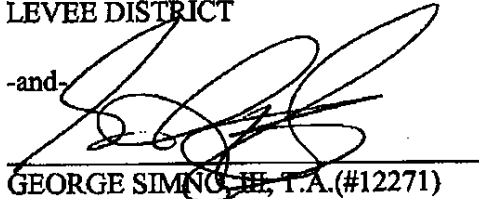


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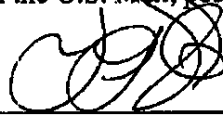
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CERTIFICATE OF SERVICE

I hereby certify that a copy of the above and foregoing pleading has been served upon all counsel of record by email and/or placing same in the U.S. Mail, postage prepaid and properly addressed this 15th day of June, 2006.

A handwritten signature in black ink, appearing to be "C. J. D.", is written over a horizontal line.

State of Louisiana

EXECUTIVE DEPARTMENT

PROCLAMATION NO. 48 KBB 2005

STATE OF EMERGENCY - HURRICANE KATRINA

WHEREAS, the Louisiana Homeland Security and Emergency Assistance and Disaster Act, R.S. 29:721, *et seq.*, confers upon the governor of the state of Louisiana emergency powers to deal with emergencies and disasters, including those caused by fire, flood, earthquake or other natural or man-made causes, in order to ensure that preparations of this state will be adequate to deal with such emergencies or disasters and to preserve the lives and property of the citizens of the state of Louisiana;

WHEREAS, when the governor finds a disaster or emergency has occurred, or the threat thereof is imminent, R.S. 29:724(B)(1) empowers her to declare the state of disaster or emergency by executive order or proclamation, or both; and

WHEREAS, On August 26, 2005, Hurricane Katrina poses an imminent threat to the state of Louisiana, carrying severe storms, high winds, and torrential rain that may cause flooding and damage to private property and public facilities, and threaten the safety and security of the citizens of Louisiana;

NOW THEREFORE I, KATHLEEN BABINEAUX BLANCO, Governor of the state of Louisiana, by virtue of the authority vested by the Constitution and laws of the state of Louisiana, do hereby order and direct as follows:

SECTION 1: Pursuant to the Louisiana Homeland Security and Emergency Assistance and Disaster Act, R.S. 29:721, *et seq.*, a state of emergency is declared to exist in the state of Louisiana as Hurricane Katrina poses an imminent threat, carrying severe storms, high winds, and torrential rain that may cause flooding and damage to private property and public facilities, and threaten the safety and security of the citizens of the state of Louisiana;

SECTION 2: The state of Louisiana's emergency response and recovery program is activated under the command of the director of the state office of Homeland Security and Emergency Preparedness to prepare for and provide emergency support services and/or to minimize the effects of the storm's damage.

SECTION 3: The state of emergency extends from Friday, August 26, 2005, through Sunday, September 25, 2005, unless terminated sooner.

IN WITNESS WHEREOF, I have set my hand officially and caused to be affixed the Great Seal of Louisiana, at the Capitol, in the city of Baton Rouge, on this 26th day of August, 2005.

/s/ Kathleen Babineaux Blanco
GOVERNOR OF LOUISIANA

ATTEST BY
THE GOVERNOR

/s/ Al Ater
SECRETARY OF STATE





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For Immediate Release
Office of the Press Secretary
August 27, 2005

Statement on Federal Emergency Assistance for Louisiana

The President today declared an emergency exists in the State of Louisiana and ordered Federal aid to supplement state and local response efforts in the parishes located in the path of Hurricane Katrina beginning on August 26, 2005, and continuing.

The President's action authorizes the Department of Homeland Security, Federal Emergency Management Agency (FEMA), to coordinate all disaster relief efforts which have the purpose of alleviating the hardship and suffering caused by the emergency on the local population, and to provide appropriate assistance for required emergency measures, authorized under Title V of the Stafford Act, to save lives, protect property and public health and safety, or to lessen or avert the threat of a catastrophe in the parishes of Allen, Avoyelles, Beauregard, Blenville, Bossier, Caddo, Caldwell, Claiborne, Catahoula, Concordia, De Soto, East Baton Rouge, East Carroll, East Feliciana, Evangeline, Franklin, Grant, Jackson, LaSalle, Lincoln, Livingston, Madison, Morehouse, Natchitoches, Pointe Coupee, Ouachita, Rapides, Red River, Richland, Sabine, St. Helena, St. Landry, Tensas, Union, Vernon, Webster, West Carroll, West Feliciana, and Winn.

Specifically, FEMA is authorized to identify, mobilize, and provide at its discretion, equipment and resources necessary to alleviate the impacts of the emergency. Debris removal and emergency protective measures, including direct Federal assistance, will be provided at 75 percent Federal funding.

Representing FEMA, Michael D. Brown, Under Secretary for Emergency Preparedness and Response, Department of Homeland Security, named William Lokey as the Federal Coordinating Officer for Federal recovery operations in the affected area.

FOR FURTHER INFORMATION CONTACT: FEMA (202) 646-4600.

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**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA**

COLLEEN BERTHELOT, ET AL.

Plaintiffs

VERSUS

**BOH BROTHERS CONSTRUCTION CO.,
L.L.C., ET AL.**

Defendants

THIS DOCUMENT RELATES TO:

**05-4181, 05-4182, 05-5237, 05-6073, 05-6314,
05-6324, 05-6327, 06-0020, 06-225, 06-886,
06-2278, 06-2287, 06-2545, 06-2346**

CIVIL ACTION NO. 05-4182

SECTION "K"

JUDGE DUVAL

MAGISTRATE NO. 2

MAGISTRATE WILKINSON

A JURY IS DEMANDED

NOTICE OF HEARING

PLEASE TAKE NOTICE that the undersigned will bring the foregoing *Fed. R. Civ. P.*

Motion to Dismiss before the Honorable Stanwood Duval, Jr. at 500 Poydras Street, New

Orleans, Louisiana, 70130, on July 12, 2006 at 9:30 a.m.

Respectfully submitted,

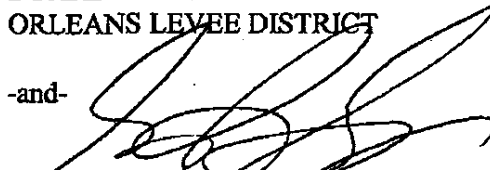


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AND WATER BOARD OF NEW
ORLEANS

CERTIFICATE OF SERVICE

I hereby certify that a copy of the above and foregoing pleading has been served upon all counsel of record by email and/or placing same in the U.S. Mail, postage prepaid and properly addressed this 15th day of June, 2006.



**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA**

**IN RE KATRINA CANAL BREACHES
CONSOLIDATED LITIGATION**

CIVIL ACTION

NO. 05-4182

PERTAINS TO:

SECTION "K"(2)

**05-4181, 05-4182, 05-5237, 05-6073, 05-6314
05-6324, 05-6327, 06-0020, 06-0225, 06-0886,
06-2278, 06-2287, 06-2545, 06-2346**

ORDER AND REASONS

Before the Court is Government Defendants' the Board of Commissioners of the Orleans Levee District ("OLD") and the Sewerage and Water Board of New Orleans ("SWB") Fed. R. Civ. P. 12(b)(6) Joint Motion to Dismiss (Doc. 573) in which defendants seek dismissal of the claims lodged against them in the above-noted cases based on the immunity granted by the State of Louisiana in La. Rev. Stat. 29:735 for any lawsuits arising out of these entities' emergency preparedness activities. Having reviewed the pleadings, memoranda, and the relevant law, the Court will deny this motion.

Background

Fourteen putative class action lawsuits seek recovery from the Orleans Levee District for flooding and other property damage due to breaches in levees following Hurricane Katrina. The allegations of liability plaintiffs advance against the OLD can be categorized as follows:

1. Failing to test and/or inspect whether the design, construction, composition, and maintenance of the 17th Street, London Avenue and Industrial Canal Levees was

adequate, proper and within standards, resulting in both negligence and “strict liability” in accordance with La. C.C. arts. 2317 and 2317.1;¹

2. Failing to ensure the adequacy of the design, construction, composition and maintenance of the 17th Street, London Avenue and Industrial Canals, resulting in both negligence and “strict liability” in accordance with La. C.C. arts. 2317 and 2317.1;²
3. Failing to repair Floodgate W-30 after settling a lawsuit the Orleans Levee District filed against the New Orleans Public Belt Railroad after one of its railcars damaged the floodgate.³

As to the SWB, plaintiffs contend, *inter alia*, that the SWB, has been responsible for drainage since 1896. Plaintiffs allege that the SWB negligently interfered with the Corps with respect to the drainage canals and the installation of tidal gates and pumps at the drainage canal

¹*Berthelot*, 05-4182, Second Supplemental and Amending Complaint, ¶36(D)(3); *Kirsch*, 05-6073, Class Action Complaint, ¶36(D)(3); *Ezell*, 05-6314, Class Action Complaint, ¶36(D)(3); *Brown*, 05-6324, Class Action Complaint, ¶36(D)(3); *Leblanc*, 05-6327, Complaint for Damages- Class Action, ¶ VI(A)(4)(c); *Tauzin*, 06-0020, Class Action Complaint, ¶¶ 44-55; *Bradley*, 06-225, Class Action Petition for Damages, ¶¶11-12; *Finney*, 06-886, Class Action Complaint, ¶36(D)(3); *Christenberry*, 06-2278, Petition for Damages- Class Action, ¶30; *Sanchez*, 06-2287, Class Action Complaint, ¶XXXIII(D)(3); and *Marcello* 06-2545, Class Action Petition, ¶¶12(F)(1)-(9); *Fitzmorris*, 06-2346, Complaint, ¶¶ 36-56.

²*Berthelot*, 05-4182, Second Supplemental and Amending Complaint, ¶36(D)(3); *Kirsch*, 05-6073, Class Action Complaint, ¶36(D)(5); *Ezell*, 05-6314, Class Action Complaint, ¶36(D)(5); *Brown*, 05-6324, Class Action Complaint, ¶36(D)(5); *Leblanc*, 05-6327, Complaint for Damages- Class Action, ¶ VI(A)(4)(e); *Tauzin*, 06-0020, Class Action Complaint, ¶¶ 44-55; *Bradley*, 06-225, Class Action Petition for Damages, ¶¶11-12; *Finney*, 06-886, Class Action Complaint, ¶36(D)(5); *Christenberry*, 06-2278, Petition for Damages- Class Action, ¶30; *Sanchez*, 06-2287, Class Action Complaint, ¶XXXIII(D)(5); *Marcello* 06-2545, Class Action Petition, ¶¶12(F)(1)-(9); and *Fitzmorris*, 06-2346, Complaint, ¶¶ 36-56. Plaintiffs in *O'Dwyer* make a conclusory allegation of intentional conduct on the part of the Orleans Levee District, but fail to provide any rational factual support for this allegation. These allegations are discussed in great detail in Section II(D), *infra*.

³*Berthelot*, 05-4182, Second Supplemental and Amending Complaint, ¶¶36(D)(6)-(11); *Kirsch*, 05-6073, Class Action Complaint, ¶36(D)(6)-(11); *Ezell*, 05-6314, Class Action Complaint, ¶36(D)(6)-(11); *Brown*, 05-6324, Class Action Complaint, ¶36(D)(6)-(11); *Leblanc*, 05-6327, Complaint for Damages- Class Action, ¶ VI(A)(3)(c)-(g); *Tauzin*, 06-0020, Class Action Complaint, ¶¶ 39-40; *Finney*, 06-886, Class Action Complaint, ¶¶36(D)(6)-(11); *Sanchez*, 06-2287, Class Action Complaint, ¶XXXIII(D)(6)-(11); *Fitzmorris*, 06-2346, Complaint, ¶¶ 52-56.

outfalls. They also contend that in 1988 the SWB deepened and widened the 17th St. Canal which allegedly weakened the floodwalls. SWB also allegedly failed to investigate properly the water pooling at the 17th St. Canal and failed to disseminate their knowledge that the pooled water emanated from the canal.

As noted, defendants move to dismiss these claims pursuant to Fed. R. Civ. P. 12(b)(6) based on state law immunity provided by La. Rev. Stat. 29:735.

Standard Under Rule 12(b)(6)

When a defendant attacks the complaint because it fails to state a legally cognizable claim, Rule 12(b)(6) provides the appropriate challenge. The test for determining the sufficiency of a complaint under Rule 12(b)(6) is that “a complaint should not be dismissed for failure to state a claim unless it appears beyond doubt that the plaintiff can prove no set of facts in support of his claim which would entitle him to relief.” *Id. citing Conley v. Gibson*, 355 U.S. 41, 45-46 (1957). The Fifth Circuit explained:

Subsumed within the rigorous standard of the *Conley* test is the requirement that the plaintiff's complaint be stated with enough clarity to enable a court or an opposing party to determine whether a claim is sufficiently alleged. *Elliott v. Foufas*, 867 F.2d 877, 880 (5th Cir. 1989). Further, “the plaintiff's complaint is to be construed in a light most favorable to plaintiff, and the allegations contained therein are to be taken as true.” *Oppenheimer v. Prudential Securities, Inc.* 94 F.3d 189, 194 (5th Cir. 1996). This is consistent with the well-established policy that the plaintiff be given every opportunity to state a claim. *Hitt*, 561 F.2d at 608. In other words, a motion to dismiss an action for failure to state a claim “admits the facts alleged in the complaint, but challenges plaintiff's rights to relief based upon those facts.” *Tel-Phonic Servs., Inc. v. TBS Int'l, Inc.*, 975 F.2d 1134, 1137 (5th Cir. 1992). Finally, when considering a Rule 12(b)(6) motion to dismiss for failure to state a claim, the district court must examine the complaint to determine whether the allegations provide relief on any possible theory. *Cinel v. Connick*, 15 F.3d 1338, 1341 (5th Cir. 1994).

Id. at 161-62.

Analysis

The gravamen of this motion is whether the statutory obligations and/or acts or omissions of defendants as set forth above meet the definition of "emergency preparedness" of La. Rev. Stat. 29:735. The Court notes that the acts or omissions alleged by plaintiffs span many years.

In 1993, by Acts 1993 No. 800 § 1, the Louisiana Legislature enacted the "Louisiana Homeland Security and Emergency Assistance and Disaster Act" (hereinafter, "the Act").⁴ The Legislature found the Act necessary:

Because of the existing possibility of the occurrence of emergencies and **disasters of unprecedented size and destructiveness** resulting from terrorist events, enemy attack, sabotage, or other hostile action, or from fire, **flood, earthquake, or other natural or man-made causes * * *** (and) to reduce vulnerability of people and communities of this state to damage, injury and loss of life and property resulting from natural and man-made catastrophes ⁵

In addition to empowering the Governor, Parish Presidents and others within the Executive branch of government to enact procedures to prepare for such natural and man-made disasters, the Legislature also granted immunity to the State's political subdivisions and their employees, providing as follows:

A. Neither the state nor any political subdivision thereof, nor other agencies, nor, except in the case of willful misconduct, the agents' employees, or representatives of any of them, engaged in any homeland security and emergency preparedness activities, while complying with or attempting to comply with this Chapter or any

⁴La. R.S. 29:721 to 29:736.

⁵La. R.S. 29:722(A) and (A)(4)(Emphasis added).

rule or regulation promulgated pursuant to the provisions of this Chapter shall be liable for the death of or any injury to persons, or damage to property, as a result of such activity.

La. Rev. Stat. 29:735(A).

Section 722 sets forth the purpose of the Act entire act, and in general, the purpose appears to be to designate the Military Department of the state as the homeland security and emergency preparedness agency; and to give the Governor and Parish presidents emergency powers; to prepare plans to meet emergencies, to provide for efficient evacuation, to minimize loss of life, to assist victims and to coordinate among agencies.

Defendants rely on several cases including *Castille v. Lafayette City-Parish Consolidated Government*, 896 So.2d 1261 (La. App. 3rd Cir. 2005) and *Hontex Enterprises, Inc. v. City of Westwego*, 833 So.2d 1234 (La. App. 5th Cir. 2003). *Castille* involved an alleged negligent action which occurred two days after Hurricane Lily struck Lafayette. Moreover it focused on whether the "willful misconduct" exception referred to only employees or agents and not to the political subdivision itself. The court held that the willful misconduct exception only applies to employees or agents. *Hontex* involved the building of an emergency levee because of a flooding condition which had been declared a state of emergency; therefore, the levee was constructed during the state of emergency as a temporary measure.

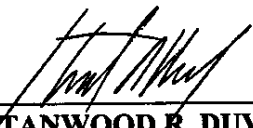
The allegations of plaintiffs which must be accepted as true allege acts and omissions which took place years before any specific emergency, and some of them took place before the Act was passed. Additionally, plaintiffs have alleged that each defendant has statutory duties that are separate and apart from the duties arising from the Act. The acts of defendants complained of here are substantially attenuated from what this Court deems is the purpose of the

Act and the concomitant grant of immunity. In the Court's opinion, the acts complained of herein are not the type of "emergency" actions contemplated under section 735.

Counsel for defendants refer the Court to Magistrate Judge's opinion in *Armstead v. Nagin*, C.A. 05-6438 where in a Report and Recommendation, Magistrate Judge Wilkinson applied La. Rev. Stat. 29: 735 to the duties of the Orleans Levee District vis-a-vis the levees under its control. In adopting Judge Wilkinson's Report and Recommendation, this Court noted, "The Court does not agree with any tangential inference that acts or omissions of the Levee Board performed at times remote from Hurricane Katrina come under the ambit of the immunity statute. La. Rev. Stat. 29:735." This Court also observed that the actions of defendants immediately prior to and subsequent to Hurricane Katrina were the thrust of the complaint in *Armstead*. Thus, *Armstead* is factually distinguishable from the allegations of this case. Accordingly,

IT IS ORDERED that the Government Defendants' the Board of Commissioners of the Orleans Levee District ("OLD") and the Sewerage and Water Board of New Orleans ("SWB") Fed. R. Civ. P. 12(b)(6) Joint Motion to Dismiss (Doc. 573) is **DENIED**.

New Orleans, Louisiana, this 29th day of December, 2006.



STANWOOD R. DUVAL, JR.
UNITED STATES DISTRICT COURT JUDGE

1993 La. Sess. Law Serv. Act 800 (H.B. 2084) (WEST)

LOUISIANA 1993 SESSION LAW SERVICE

1993 Regular Session

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Additions and deletions are not identified in this document.
Vetoed provisions within tabular material are not displayed.

ACT NO. 800

H.B. No. 2084

LOUISIANA EMERGENCY ASSISTANCE AND DISASTER ACT; REPEAL OF LOUISIANA DISASTER
ACT OF 1974

AN ACT to amend and reenact Chapter 6, Title 29 of the Louisiana Revised Statutes of 1950, to be comprised of R.S. 29:721 through 736, and to repeal R.S. 29:701 through 716, relative to civil defense and emergency preparedness; to provide for state and local civil defense and emergency preparedness agencies and the organization, powers, duties, functions, responsibilities, personnel, and funding thereof; and to provide for related matters.

Be It enacted by the Legislature of Louisiana:

Section 1. Chapter 6 of Title 29 of the Louisiana Revised Statutes of 1950, to be comprised of R.S. 29:721 through 736, is hereby amended and reenacted to read as follows:

<< LA Prec. R.S. 29:721 >>

CHAPTER 6. THE LOUISIANA EMERGENCY ASSISTANCE AND DISASTER ACT

<< LA R.S. 29:721 >>

§ 721. Short title

This Chapter shall be cited as the Louisiana Emergency Assistance and Disaster Act.

<< LA R.S. 29:722 >>

§ 722. Purpose

A. Because of the existing possibility of the occurrence of emergencies and disasters of unprecedented size and destructiveness resulting from enemy attack, sabotage, or other hostile action, or from fire, flood, earthquake, or other natural or man-made causes, and in order to ensure that preparations of this state will be adequate to deal with such emergencies or disasters, and generally to preserve the lives and property of the people of the state of Louisiana, it is hereby found and declared to be necessary:

(1) To provide for designation of the Military Department, state of Louisiana, as the state emergency preparedness agency, and to authorize the creation of local organizations for emergency preparedness in the political subdivisions of the state.

(2) To confer upon the governor and upon the parish presidents the emergency powers provided in this Chapter.

(3) That statewide and local plans for emergency preparedness be prepared and approved without further delay and be maintained current to the maximum extent possible.

(4) To reduce vulnerability of people and communities of this state to damage, injury, and loss of life and property resulting from natural or man-made catastrophes, riots, or hostile military or paramilitary action.

(5) To prepare for prompt and efficient evacuation, rescue, care, and treatment of persons victimized or threatened by disasters or emergency.

(6) To provide a setting conducive to the rapid and orderly start of restoration and rehabilitation of persons and property affected by emergencies or disasters.

(7) To authorize and provide for cooperation in emergency or disaster prevention, mitigation, preparedness, response, and recovery.

(8) To authorize and provide for management systems embodied by coordination of activities relating to emergency or disaster prevention, mitigation, preparedness, response, and recovery by agencies and officers of this state, and similar state-local, interstate, and foreign activities in which the state and its political subdivisions may participate.

B. It is further declared to be the purpose of this Chapter and the policy of the state of Louisiana that all emergency preparedness functions of the state be coordinated to the maximum extent possible with the comparable functions of the federal government, other states and localities, and private agencies of every type, to the end that the most effective preparation and use may be made of the resources and facilities available for dealing with any emergency or disaster that may occur.

<< LA R.S. 29:723 >>

§ 723. Definitions

As used in this Chapter:

(1) "Disaster" means the result of a natural or man-made event which causes loss of life, injury, and property damage, including but not limited to natural disasters such as hurricane, tornado, storm, flood, high winds, and other weather related events, forest and marsh fires, and man-made disasters, including but not limited to nuclear power plant incidents, hazardous materials incidents, oil spills, explosion, civil disturbances, public calamity, hostile military action, and other events related thereto.

(2) "Local governmental subdivision" means a parish of the state of Louisiana.

(3) "Emergency" means the actual or threatened condition which has been or may be created by a disaster.

(4) "Emergency preparedness" means the mitigation of, preparation for, response to, and the recovery from emergencies or disasters. The term "emergency preparedness" shall be synonymous with "civil defense", "emergency management", and other related programs of similar name.

(5) "Parish president" means the president of any parish, mayor-president, mayor of New Orleans (Orleans Parish), or police jury president.

<< LA R.S. 29:724 >>

§ 724. Powers of the governor

A. The governor is responsible for meeting the dangers to the state and people presented by emergencies or disasters, and in order to effectuate the provisions of this Chapter, the governor may issue executive orders, proclamations, and regulations and amend or rescind them. Executive orders, proclamations, and regulations so issued shall have the force and effect of law.

B. A disaster or emergency, or both, shall be declared by executive order or proclamation of the governor if he finds a disaster or emergency has occurred or the threat thereof is imminent. The state of disaster or emergency shall continue until the governor finds that the threat of danger has passed or the disaster or emergency has been dealt with to the extent that the emergency conditions no longer exist and terminates the state of disaster or emergency by executive order or proclamation, but no state of disaster or emergency may continue for longer than thirty days unless renewed by the governor. The legislature, by petition signed by a majority of the surviving members of either house, may terminate a state of disaster or emergency at any time. This petition terminating the state of emergency or disaster may establish a period during which no other declaration of emergency or disaster may be issued. Thereupon, the governor shall issue an executive order or proclamation ending the state of disaster or emergency. All executive orders or proclamations issued under this Subsection shall indicate the nature of the disaster or emergency, the area or areas which are or may be affected, and the conditions which have brought it about or which make possible termination of the state of disaster or emergency. An executive order or proclamation shall be disseminated promptly by means calculated to bring its contents to the attention of the general public and unless the circumstances attendant upon the disaster or emergency prevent or impede, promptly filed with the Military Department, state of Louisiana, office of emergency preparedness, and the secretary of state.

C. The declaration of an emergency or disaster by the governor shall activate the state's emergency response and recovery program under the command of the director of the state office of emergency preparedness.

D. In addition to any other powers conferred upon the governor by law, he may do any or all of the following:

(1) Suspend the provisions of any regulatory statute prescribing the procedures for conduct of state business, or the orders, rules, or regulations of any state agency, if strict compliance with the provisions of any statute, order, rule, or regulation would in any way prevent, hinder, or delay necessary action in coping with the emergency.

(2) Utilize all available resources of the state government and of each political subdivision of the state as reasonably necessary to cope with the disaster or emergency.

(3) Transfer the direction, personnel, or functions of state departments and agencies or units thereof for the purpose of performing or facilitating emergency services.

(4) Subject to any applicable requirements for compensation, commandeer or utilize any private property if he finds this necessary to cope with the disaster emergency.

(5) Direct and compel the evacuation of all or part of the population from any stricken or threatened area within the state if he deems this action necessary for the preservation of life or other disaster mitigation, response, or recovery.

(6) Prescribe routes, modes of transportation, and destination in connection with evacuation.

(7) Control ingress and egress to and from a disaster area, the movement of persons within the area, and the occupancy of premises therein.

(8) Suspend or limit the sale, dispensing, or transportation of alcoholic beverages, firearms, explosives, and combustibles.

(9) Make provision for the availability and use of temporary emergency housing.

E. In the event of an emergency declared by the governor pursuant to this Chapter, any person or representative of any firm, partnership, or corporation violating any order, rule, or regulation promulgated pursuant to this Chapter, shall be fined not more than five hundred dollars or confined in the parish jail for not more than six months, or both. No executive order, proclamation, or regulation shall create or define a crime or fix penalties.

F. No organization for emergency preparedness established under this Chapter shall be employed directly or indirectly for political purposes.

<< LA R.S. 29:725 >>

§ 725. State emergency disaster agency; powers of adjutant general

A. The governor is hereby authorized and directed to designate the Military Department, state of Louisiana, as the state emergency preparedness agency under the adjutant general.

B. The office of emergency preparedness is hereby established within the Military Department.

C. The adjutant general shall be the director of the office of emergency preparedness and shall administer the state emergency preparedness agency and the provisions of this Chapter.

D. The adjutant general, as director of the office of emergency preparedness, may adopt and promulgate, pursuant to the Administrative Procedure Act and his authority to promulgate rules and regulations for the National Guard, such rules and regulations as are necessary to implement his authority under the provisions of this Chapter and such authority as the governor shall designate to him pursuant to the provisions of this Chapter.

E. The director may appoint an assistant director of the office of emergency preparedness to administer the provisions of this Chapter. The assistant director shall have and may exercise such powers and duties of the director related thereto as the director shall delegate to him.

F. The director may employ such professional, technical, clerical, stenographic, and other personnel and he shall fix their compensation and may make expenditures from available funds appropriated for the Military Department of the state or other funds made available to him for purposes of emergency preparedness as may be necessary to carry out the purposes of this Chapter. The director and the assistant director, if an assistant director is appointed, shall be provided with necessary and appropriate office space, furniture, equipment, supplies, stationery, and printing. The necessary mileage, office expenses, salaries of personnel, postage, telephone, and expressage shall be chargeable to any funds available for emergency preparedness.

G. The director, subject to the direction and control of the governor, shall be the executive head of

the state emergency preparedness agency and as such shall be responsible to the governor for carrying out the programs for emergency preparedness for the state of Louisiana. He shall coordinate the activities of all organizations for emergency preparedness within the state and shall maintain liaison with and cooperate with emergency preparedness agencies and organizations of other states and of the federal government.

<< LA R.S. 29:726 >>

§ 726. State emergency/disaster agency authorities and responsibilities

A. The Military Department, office of emergency preparedness, under the governor and the adjutant general, shall be responsible for emergency preparedness in the state.

B. The office shall prepare and maintain a state emergency operations plan and keep it current, which plan may include any of the following:

- (1) Prevention and minimization of injury and damage caused by disaster or emergency.
- (2) Prompt and effective response to disaster or emergency.
- (3) Emergency relief.
- (4) Identification of areas particularly vulnerable to disasters or emergency.
- (5) Recommendations for zoning, building, and other land use controls, safety measures for securing mobile homes or other nonpermanent or semipermanent structures, and other preventive and preparedness measures designed to eliminate or reduce disasters or their impact.
- (6) Assistance to local officials in designing local emergency action plans.
- (7) Authorization and procedures for the erection or other construction of temporary works designed to protect against or mitigate danger, damage, or loss from flood, conflagration, or other disaster.
- (8) Preparation and distribution to the appropriate state and local officials of catalogs of federal, state, and private assistance programs.
- (9) Organization of manpower and chains of command.
- (10) Coordination of federal, state, and local disaster or emergency activities.
- (11) Coordination of the state operations plan with the emergency plans of other state agencies, local government, and the federal government.
- (12) All parish hazard plans, hurricane evacuation and shelter plans, hazard mitigation plans, emergency response plans, and such other emergency plans as required.
- (13) Other necessary matters.

C. The office of emergency preparedness shall take an integral part in the development and revision of local and interjurisdictional emergency plans prepared under this Chapter. To this end it shall employ or otherwise secure the services of professional and technical personnel capable of providing expert assistance to political subdivisions, their emergency preparedness agencies, and interjurisdictional planning and emergency preparedness agencies. These personnel shall consult with subdivisions and agencies on a regularly scheduled basis and shall make field examinations of the areas, circumstances, and conditions to which particular local and interjurisdictional disaster plans are intended to apply, and may suggest or require revisions.

D. In preparing and revising the state emergency operations plan, the office shall seek the advice and assistance of local government, business, labor, industry, agriculture, civic and volunteer organizations, and community leaders. In advising local and interjurisdictional agencies, the office shall encourage them also to seek advice from these sources.

E. The office shall:

- (1) Determine requirements of the state and its political subdivisions for food, clothing, and other necessities in the event of an emergency.
- (2) Procure and pre-position supplies, medicines, materials, and equipment.
- (3) Promulgate standards and requirements for local and interjurisdictional disaster plans.
- (4) Periodically review local and interjurisdictional disaster plans.
- (5) Provide for mobile support units.
- (6) Assist political subdivisions, their emergency preparedness agencies, and interjurisdictional emergency preparedness agencies in establishing and operating training programs and programs of information.
- (7) Make surveys of industries, resources, and facilities within the state, both public and private, as are necessary to carry out the purposes of this Chapter.
- (8) Plan and make arrangements for the availability and use of any private facilities, services, and

property and, if necessary and if in fact used, provide for payment for use under terms and conditions agreed upon.

(9) Establish a register of persons with types of training and skills important in emergency mitigation, preparedness, response, and recovery.

(10) Establish a register of mobile and construction equipment and temporary housing available for use in a disaster emergency.

(11) Prepare, for issuance by the governor, executive orders, proclamations, and regulations as necessary or appropriate in coping with disasters or emergencies.

(12) Cooperate with the federal government and any public or private agency or entity in achieving any purpose of this Chapter and in implementing programs for disaster emergency mitigation, preparation, response, and recovery.

(13) Do other things necessary, incidental, or appropriate for the implementation of this Chapter.

F. The Military Department, state of Louisiana, shall ascertain what means exist for rapid communications in times of disaster emergencies, shall consider the desirability of supplementing these communications resources or of integrating them into a comprehensive state or state-federal telecommunication or other communications system or its several parts, shall evaluate the possibility of multipurpose use thereof for general state and local governmental purposes, and shall make recommendations to the governor as appropriate.

<< LA R.S. 29:727 >>

§ 727. Powers of the parish president; penalties for violations

A. Each political subdivision within this state shall be within the jurisdiction of and served by the Military Department, office of emergency preparedness, for purposes of emergency preparedness and by a parish emergency preparedness agency responsible for emergency or disaster mitigation, preparedness, response, and recovery.

B. Each parish president is hereby authorized and directed to establish an office of emergency preparedness for the respective parish.

C. Each parish president shall maintain an emergency preparedness agency which, except as otherwise provided under this Chapter, has jurisdiction over and serves the entire parish.

D. A local disaster or emergency may be declared only by the parish president. The state of emergency shall continue until the parish president finds that the threat of danger has been dealt with to the extent that emergency conditions no longer exist. The state of emergency may be terminated by executive order or proclamation, but no state of emergency may continue for longer than thirty days unless extended by the parish president. The state of emergency or disaster may be terminated by the governor, a petition signed by a majority of the surviving members of either house of the legislature, or a majority of the surviving members of the parish governing authority. The document terminating the state of emergency or disaster may establish a period during which no other declaration of emergency or disaster may be issued. All executive orders or proclamations issued under this Subsection shall indicate the nature of the emergency, the area or areas which are or may be affected, and the conditions which brought it about. Any order or proclamation declaring, continuing, or terminating a local disaster or emergency shall be given prompt and general publicity and shall be filed promptly with the office of emergency preparedness and the office of the clerk of court.

E. Notwithstanding any other provision of this Chapter, when the parish president declares a local disaster or emergency within such subdivision the parish president shall carry out the provisions of this Chapter. Nothing contained herein shall be construed to confer upon the parish president any authority to control or direct the activities of any state agency. When the disaster or emergency is beyond the capabilities of the local government, the parish president shall request assistance from the state office of emergency preparedness. The declaration of a local emergency will serve to activate the response and recovery program of the local government.

F. In addition to any other powers conferred upon the parish president by the constitution, laws, or by a home rule charter or plan of government, such authority may do any or all of the following:

(1) Suspend the provisions of any regulatory ordinance prescribing the procedures for conduct of local business, or the orders, rules, or regulations of any local agency, if strict compliance with the provisions of any ordinance, order, rule, or regulation would in any way prevent, hinder, or delay necessary action in coping with the emergency.

- (2) Utilize all available resources of the local government as reasonably necessary to cope with the local disaster or emergency.
 - (3) Transfer the direction, personnel, or functions of local departments and agencies or units thereof for the purpose of performing or facilitating emergency services.
 - (4) Subject to any applicable requirements for compensation, commandeer or utilize any private property if he finds this necessary to cope with the local disaster.
 - (5) Direct and compel the evacuation of all or part of the population from any stricken or threatened area within the boundaries of the parish if he deems this action necessary for mitigation, response, or recovery measures.
 - (6) Prescribe routes, modes of transportation, and destinations in connection with evacuation within the local government's jurisdiction.
 - (7) Control ingress and egress to and from the affected area, the movement of persons within the area, and the occupancy of premises therein.
 - (8) Suspend or limit the sale, dispensing, or transportation of alcoholic beverages, firearms, explosives, and combustibles.
- G. In the event of an emergency declared by the parish president pursuant to this Chapter, any person or representative of any firm, partnership, or corporation violating any order, rule, or regulation promulgated pursuant to this Chapter, shall be fined not more than five hundred dollars, or confined in the parish jail for not more than six months, or both.
- H. No organization for emergency preparedness established under this Chapter shall be employed directly or indirectly for political purposes.

<< LA R.S. 29:728 >>

§ 728. Parish emergency/disaster agency

- A. Each parish office of emergency preparedness thus created shall have a director who shall be appointed by the parish president of the parish establishing such organization and each director shall be commissioned by the director of the state office of emergency preparedness. The parish director thus appointed and commissioned shall serve at the pleasure of the parish president.
- B. Nothing in this Section shall be construed to prevent the parish president from serving as the director.
- C. The director of the parish office of emergency preparedness shall have direct responsibility for the organization, administration, and operation of such local organization for emergency preparedness subject to the direction and control of the parish president under the general direction and control of the governor and the state office of emergency preparedness.
- D. The director of the parish office of emergency preparedness shall take and subscribe to the following oath:
- "I _____, do solemnly swear (or affirm) that I will support and defend the Constitution of the United States and the Constitution of the state of Louisiana, and the territory, institutions, and facilities thereof, both public and private, against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; and I take this obligation freely, without any mental reservations or purpose of evasion; and that I will well and faithfully discharge the duties on which I am about to enter and I do further swear (or affirm) that I do not advocate, nor am I a member of any political party organization that advocates, the overthrow of the government of the United States or of this state by force or violence; and that during such time as I am a member of the _____ (parish) office of emergency preparedness, I will not advocate nor become a member of any political party or organization that advocates the overthrow of the government of the United States or of this state by force or violence."
- E. The director may appoint an assistant director to administer the provisions of this Chapter. The assistant director shall have and may exercise such powers and duties of the director related thereto as the director shall delegate to him.
- F. The parish president may authorize the director to employ such professional, technical, clerical, stenographic, and other personnel and he shall fix their compensation and may make expenditures from available funds appropriated or authorized by the state for purposes of emergency preparedness as may be necessary to carry out the purposes of this Chapter. The director and the assistant director, if an assistant director is appointed, shall be provided with necessary and appropriate office space, furniture, equipment, supplies, stationery, and printing. The necessary mileage, office

expenses, salaries of personnel, postage, telephone, and expressage shall be chargeable to any funds available for emergency preparedness.

<< LA R.S. 29:729 >>

§ 729. Parish emergency/disaster agency authorities and responsibilities

A. The parish office of emergency preparedness, under the parish president, shall be responsible for emergency preparedness in the parish.

B. The parish office of emergency preparedness shall prepare and maintain an all hazards emergency operations plan and keep it current, which plan may include any of the following:

- (1) Prevention and minimization of injury and damage caused by disaster or emergency.
- (2) Prompt and effective response to disaster or emergency.
- (3) Emergency relief.
- (4) Identification of areas particularly vulnerable to disasters or emergency.
- (5) Recommendations for zoning, building, and other land use controls, safety measures for securing mobile homes or other nonpermanent or semipermanent structures, and other preventive and preparedness measures designed to eliminate or reduce disasters or their impact.
- (6) Assistance to local officials in designing local emergency action plans.
- (7) Authorization and procedures for the erection or other construction of temporary works designed to protect against or mitigate danger, damage, or loss from flood, conflagration, or other disaster.
- (8) Preparation and distribution to the appropriate state and local officials of catalogs of federal, state, and private assistance programs.
- (9) Organization of manpower and chains of command.
- (10) Coordination of federal, state, and local disaster or emergency activities.
- (11) Coordination of the state operations plan with the emergency plans of other state agencies, local government, and the federal government.
- (12) Other necessary matters.

C. The parish office of emergency preparedness shall take an integral part in the development and revision of local and interjurisdictional emergency plans prepared under this Chapter. To this end, it shall employ or otherwise secure the services of professional and technical personnel capable of providing expert assistance to political subdivisions, their emergency preparedness agencies, and interjurisdictional planning and emergency preparedness agencies. These personnel shall consult with subdivisions and agencies on a regularly scheduled basis and shall make field examinations of the areas, circumstances, and conditions to which particular local and interjurisdictional disaster plans are intended to apply, and may suggest or require revisions.

D. In preparing and revising the plan, the parish office of emergency preparedness shall seek the advice and assistance of government, business, labor, industry, agriculture, civic, and volunteer organizations, and community leaders.

E. The parish office of emergency preparedness shall:

- (1) Determine requirements of the parish and its political subdivisions for food, clothing, and other necessities in event of an emergency.
- (2) Procure and pre-position supplies, medicines, materials, and equipment.
- (3) Promulgate standards and requirements for local and interjurisdictional disaster plans.
- (4) Periodically review local and interjurisdictional disaster plans.
- (5) Provide for mobile support units.
- (6) Assist political subdivisions, their emergency preparedness agencies and interjurisdictional emergency preparedness agencies, in establishing and operating training programs and programs of information.
- (7) Make surveys of industries, resources, and facilities within the parish, both public and private, as are necessary to carry out the purposes of this Chapter.
- (8) Plan and make arrangements for the availability and use of any private facilities, services, and property and, if necessary and if in fact used, provide for payment for use under terms and conditions agreed upon.
- (9) Establish a register of persons with types of training and skills important in emergency mitigation, preparedness, response, and recovery.
- (10) Establish a register of mobile and construction equipment and temporary housing available for use in a disaster emergency.

- (11) Prepare, for issuance by the parish president, executive orders, proclamations, and regulations as necessary or appropriate in coping with disasters or emergencies.
- (12) Cooperate with the state and federal government and any public or private agency or entity in achieving any purpose of this Chapter and in implementing programs for disaster emergency mitigation, preparation, response, and recovery.
- (13) Do other things necessary, incidental, or appropriate for the implementation of this Chapter.

<< LA R.S. 29:730 >>

§ 730. Interjurisdictional emergency preparedness agency

- A. The governing authorities of any two or more parishes may enter into agreements, under which they shall be authorized to establish regional organizations for emergency preparedness. Such agreements shall include plans, programs, administration, personnel, unified operation, allotment of available equipment, and distribution of costs and funds.
- B. Interjurisdictional emergency preparedness agencies shall prepare and distribute to all appropriate officials, in written form, a clear and complete statement of the emergency responsibilities of all local agencies and officials and of the disaster chain of command.
- C. Political subdivisions not participating in interjurisdictional arrangements pursuant to this Chapter nevertheless shall be encouraged and assisted by the Military Department, state of Louisiana, to conclude suitable arrangements for furnishing mutual aid in coping with disasters. The arrangements shall include provision of aid by persons and units in public employ.
- D. No personal services may be compensated by the state or any subdivision or an agency thereof, except pursuant to statute or local ordinance.
- E. Compensation for property shall be paid only if the property was commandeered or otherwise used in coping with a disaster emergency and its use, damage, or destruction was ordered by the governor or a member of the disaster emergency forces of this state.
- F. Any person claiming compensation for the use, damages, loss, or destruction of property under this Chapter shall file a claim therefor with the authority which ordered the use or caused the loss of destruction of the property.
- G. Unless the amount of compensation on account of property damaged, lost, or destroyed is agreed between the claimant and the authority which ordered the use or caused the damage, the amount of compensation shall be calculated in the same manner as compensation due for a taking of property pursuant to the condemnation laws of this state.
- H. Nothing in this Section applies to or authorizes compensation for the destruction or damaging of standing timber or other property in order to provide a fire break, or to the release of waters or the breach of impoundments in order to reduce pressure or other danger from actual or threatened flood.

<< LA R.S. 29:731 >>

§ 731. Financing

- A. It is the intent of the legislature and declared to be the policy of the state that funds to meet disaster emergencies shall always be available.
- B. The disaster emergency funding board is established, composed of the president of the Senate, the speaker of the House of Representatives, and the chairmen of the House Appropriations Committee and the Senate Finance Committee.
- C. It is the intent of the legislature that the first recourse shall be to funds regularly appropriated to state agencies. If the governor finds that the demands placed upon these funds in coping with a particular disaster are unreasonably great, with the concurrence of the disaster emergency funding board, he may make funds available by transferring and expending monies appropriated for other purposes or may borrow for a term not to exceed two years from the United States government or any other public or private source. Action pursuant to this Subsection shall be only with the concurrence of the disaster emergency funding board.
- D. Nothing contained in this Section shall be construed to limit the governor's authority to apply for, administer, and expend any grants, gifts, or payments in aid of disaster prevention, preparedness, response, or recovery.

<< LA R.S. 29:732 >>

§ 732. Price gouging; prohibited

A. During a state of emergency as declared by the governor or as declared by the parish president, the value received for goods and services sold within the designated emergency area may not exceed the prices ordinarily charged for comparable goods and services in the same market area at, or immediately before, the time of the state of emergency. However, the value received may include reasonable expenses and a charge for any attendant business risk, in addition to the cost of the goods and services which necessarily are incurred in procuring the goods and services during the state of emergency.

B. Each sale or offer for sale in violation of this Section constitutes a separate offense.

C. The penalties provided in R.S. 29:734 are in addition to civil remedies provided by law, including attorney's fees.

D. Local governing authorities may adopt appropriate ordinances to implement the provisions of this Section.

<< LA R.S. 29:733 >>

§ 733. Interstate Emergency Preparedness and Disaster Compact

A. This state enacts into law and enters into the Interstate Emergency Preparedness and Disaster Compact with all states, as defined therein, which states have enacted or shall hereafter enact the compact in the form substantially as follows:

B. The Interstate Emergency Preparedness and Disaster Compact, heretofore in force in this state by virtue of execution pursuant to this Chapter, is hereby confirmed and codified. The compact is and shall hereafter be in effect with any and all jurisdictions which have joined or which may hereafter legally join therein in the form substantially as contained in this Section, provided that such other jurisdiction or jurisdictions have signified their joinder with this state by enactment without limitation as to parties or in some other manner sufficient in law to make it clear that joinder has been effected with this state.

C. The contracting states solemnly agree:

Article 1. The purpose of this compact is to provide mutual aid among the states in meeting an emergency or disaster. The prompt, full, and effective utilization of the resources of the respective states, including such resources as may be available from the United States government or any other source, are essential to the safety, care, and welfare of the people thereof, including personnel, equipment, or supplies, shall be incorporated into a plan or plans of mutual aid to be developed among the emergency preparedness agencies or similar bodies of the states that are parties hereto. The directors of emergency preparedness of all party states shall constitute a committee to formulate plans to take all necessary steps for the implementation of this compact.

Article 2. It shall be the duty of each party state to formulate plans and programs for application within such state. There shall be frequent consultation between the representatives of the states and with the United States government and the free exchange of information and plans, including inventories of any materials and equipment available. In carrying out such plans and programs the party states shall, so far as possible, provide and follow uniform standards, practices, and rules and regulations.

Article 3. Any party state requested to render mutual aid shall take such action as is necessary to provide and make available the resources covered by this compact in accordance with the terms hereof; provided that it is understood that the state rendering aid may withhold resources to the extent necessary to provide reasonable protection for such state. Each party state shall extend to the civil defense forces of any other party state, while operating within its state limits under the terms and conditions of this compact, the same powers (except that of arrest unless specifically authorized by the receiving state), duties, rights, privileges, and immunities as if they were performing their duties in the state in which normally employed or rendering services.

Article 4. Whenever any person holds a license, certificate, or other permit issued by any state evidencing the meeting of qualifications for professional, mechanical, or other skills, such person may render aid involving such skill in any party state to meet an emergency or disaster and such state shall give due recognition to such license, certificate, or other permit as if issued in the state in which

aid is rendered.

Article 5. No party state or its officers or employees rendering aid in another state pursuant to this compact shall be liable on account of any act or omission in good faith on the part of such forces while so engaged, or on account of the maintenance or use of any equipment or supplies in connection therewith.

Article 6. Inasmuch as it is probable that the pattern and detail of the machinery for mutual aid among two or more states may differ from that appropriate among other states party hereto, this instrument contains elements of a broad base common to all states, and nothing herein contained shall preclude any state from entering into supplementary agreements with another state or states. Such supplementary agreements may comprehend but shall not be limited to provisions for evacuation and reception of injured and other persons, and the exchange of medical, fire, police, public utility, reconnaissance, welfare, transportation and communications personnel, equipment, and supplies.

Article 7. Each party state shall provide for the payment of compensation and death benefits to injured members of the response forces of that state and the representatives of deceased members of such forces in case such members sustain injuries or are killed while rendering aid pursuant to this compact, in the same manner and on the same terms as if the injury or death were sustained within such state.

Article 8. Any party state rendering aid in another state pursuant to this compact shall be reimbursed by the party state receiving such aid for any loss or damage to, or expense incurred in the operation of any equipment answering a request for aid, and for the cost incurred in connection with such request; however, any aiding party state may assume in whole or in part such loss, damage, expense, or other cost, or may loan such equipment or donate such services to the receiving party state without charge or cost, and any two or more party states may enter into supplementary agreements establishing a different allocation of costs as among those states. The United States government may relieve the party state receiving aid from any liability and reimburse the party state supplying forces for the compensation paid to and the transportation, subsistence, and maintenance expense of such forces during the time of the rendition of such aid or assistance outside the state and may also pay fair and reasonable compensation for the use or utilization of the supplies, materials, equipment, or facilities so utilized or consumed.

Article 9. Plans for the orderly evacuation and reception of the civilian population as the result of an emergency or disaster shall be worked out from time to time between representatives of the party states and the various local areas thereof. Such plans shall include the manner of transporting such evacuees, the number of evacuees to be received in different areas, the manner in which food, clothing, housing, and medical care will be provided, the registration of the evacuees, the providing of facilities for the notification of relatives or friends, and the forwarding of such evacuees to other areas or the bringing in of additional materials and supplies, and all other relevant factors. Such plans shall provide that the party state receiving evacuees shall be reimbursed generally for the out-of-pocket expenses incurred in receiving and caring for such evacuees for expenditures for transportation, food, clothing, medicines and medical care, and like items. Such expenditures shall be reimbursed by the party state of which the evacuees are residents, or by the United States government under plans approved by it. After the termination of the emergency or disaster the party state of which the evacuees are residents shall assume the responsibility for the ultimate support or repatriation of such evacuees.

Article 10. This compact shall be available to any state, territory, or possession of the United States, and the District of Columbia. The term "state" may also include any neighboring foreign country or province or state thereof.

Article 11. The committee established pursuant to Article 1 of this compact may request the Federal Emergency Management Agency to act as an informational and coordinating body under this compact, and representatives of such agency of the United States government may attend meetings of such committee.

Article 12. This compact shall become operative immediately upon its ratification by any state as between it and any other state or states so ratifying and shall be subject to approval by congress unless prior congressional approval has been given. Duly authenticated copies of this compact and of such supplementary agreements as may be entered into shall, at the time of their approval, be deposited with each of the party states and emergency preparedness agency and other appropriate agencies of the United States government.

Article 13. This compact shall continue in force and remain binding on each party state until the

legislature or the governor of such party state takes action to withdraw therefrom. Such action shall not be effective until thirty days after notice thereof has been sent by the governor of the party state desiring to withdraw to the governors of all other party states.

Article 14. This compact shall be constructed to effectuate the purposes stated in Article 1 hereof. If any provision of this compact is declared unconstitutional, or the applicability thereof to any person or circumstance is held invalid, the constitutionality of the remainder of this compact and the applicability of other persons and circumstances shall not be affected thereby.

Article 15. (a) This Article shall be in effect only as among those states which have enacted it into law or in which the governors have adopted it pursuant to constitutional or statutory authority sufficient to give it the force of law as part of this compact or any obligation undertaken by a state pursuant thereto, except that if its terms so provide, a supplementary agreement in implementation of this Article may modify, expand, or add to any such obligation as among the parties to the supplementary agreement.

(b) In addition to the occurrences, circumstances, and subject matter to which preceding Articles of this compact make it applicable, this compact and the authorizations, entitlement, and procedures thereof shall apply to:

(i) Searches for and rescue of persons who are lost, marooned, or otherwise in danger.

(ii) Action useful in coping with emergencies or disasters arising from any cause or designed to increase the capacity to cope with any such emergencies or disasters.

(iii) Incidents, or the imminence thereof, which endanger the health or safety of the public and which require the use of special equipment, trained personnel in larger numbers than are locally available in order to reduce, counteract, or remove the danger.

(iv) The giving and receiving of aid by subdivisions of party states.

(v) Exercises, drills or other training or practice activities designed to aid personnel to prepare for, cope with, or prevent any disaster or other emergency to which this compact applies.

(c) Except as expressly limited by this compact or a supplementary agreement in force pursuant thereto, any aid authorized by this compact or such supplementary agreement may be furnished by any agency of a party state, a subdivision of such state, or by a joint agency providing such aid shall be entitled to reimbursement therefor to the same extent and in the same manner as a state. The personnel of such joint agency, when rendering aid pursuant to this compact shall have the same rights, authority, and immunity as personnel of party states.

(d) Nothing in this Article shall be construed to exclude from the coverage of Articles 1-14 of this compact any matter which, in the absence of this Article, could reasonably be construed to be covered thereby.

<< LA R.S. 29:734 >>

§ 734. Violations; judicial relief; prima facie proof

A. Upon a violation of R.S. 29:732, the attorney general, district attorney, or parish attorney may bring the appropriate judicial action for an order enjoining or restraining commission or continuance of the alleged unlawful acts. In any such proceeding, the court may impose a civil penalty and, where appropriate, order restitution to aggrieved consumers.

B. In any proceeding instituted pursuant to this Section, the following shall constitute prima facie proof of a violation:

(1) Evidence that the amount charged represents a gross disparity between the price of the goods or services which were the subject of the transaction and their value, measured by the price at which such goods or services were sold or offered for sale by the merchant in the usual course of business immediately prior to the onset of the abnormal disruption of the market, and the amount charged by the merchant was not attributable to additional costs imposed by its suppliers.

(2) Evidence that the amount charged grossly exceeded the price at which the same or similar goods or services were readily obtainable by other consumers in the trade area and the amount charged by the merchant was not attributable to additional costs imposed by its suppliers.

C. In addition to the civil penalties provided herein, any person who violates the provisions of R.S. 29:732, which violation is deemed a violation also of R.S. 14:329.6, shall be subject to criminal penalties as provided in R.S. 14:329.7.

<< LA R.S. 29:735 >>

§ 735. Immunity of personnel

A. Neither the state nor any political subdivision thereof, nor other agencies, nor, except in case of willful misconduct, the agents' employees, or representatives of any of them, engaged in any emergency preparedness activities, while complying with or attempting to comply with this Chapter or any rule or regulation promulgated pursuant to the provisions of this Chapter shall be liable for the death of or any injury to persons, or damage to property, as a result of such activity.

B. The provisions of this Section shall not affect the right of any person to receive benefits to which he would otherwise be entitled under this Chapter, or under the worker's compensation law, or under any pension law, nor the right of any such person to receive any benefits or compensation under any act of congress.

<< LA R.S. 29:736 >>

§ 736. Exclusion

A. Nothing herein shall supersede the powers, duties, and authorities of the Department of Environmental Quality, as provided for by R.S. 30:2001 et seq. and regulations issued pursuant thereto.

B. Nothing herein shall supersede the powers, duties, and authority of the Department of Public Safety and Corrections, office of state police, as prescribed by R.S. 30:2376(B).

C. Notwithstanding any other provision of law to the contrary, nothing in this Chapter shall affect the exclusive authority of the Louisiana Oil Spill Coordinator regarding oil spill prevention, planning, response, removal, liability, and the limitations of liability provided for in the Oil Spill Prevention and Response Act, R.S. 30:2451 et seq.

D. Nothing in this Act shall be interpreted to diminish the rights guaranteed to all persons under the Declaration of Rights of the Louisiana Constitution or the Bill of Rights of the United States Constitution. This Act shall not violate Article II (Distribution of Powers), Article III (Legislative Branch), or Article V (Judicial Branch) of the Louisiana Constitution. The courts shall be open, and every person shall have an adequate remedy by due process of law and justice, administered without denial, partiality, or unreasonable delay, for injury to him in his person, property, reputation, or other rights. The orders of all courts shall have their full force and effect. The legislature may call itself into session at any time and shall exercise its powers and duties. Its ability to enact law, appropriate funds, and confirm appointees shall be in full force. The privileges and immunities of legislators shall be respected.

Section 2. This Act shall become effective upon signature by the governor or, if not signed by the governor, upon expiration of the time for bills to become law without signature by the governor, as provided in Article III, Section 18 of the Constitution of Louisiana. If vetoed by the governor and subsequently approved by the legislature, this Act shall become effective on the day following such approval.

<< LA R.S. 29:701, R.S. 29:702, R.S. 29:703, R.S. 29:704, R.S. 29:705, R.S. 29:706, R.S. 29:707, R.S. 29:708, R.S. 29:709, R.S. 29:710, R.S. 29:711, R.S. 29:712, R.S. 29:713, R.S. 29:714, R.S. 29:715, R.S. 29:716 >>

Section 3. R.S. 29:701 through 716 are hereby repealed in their entirety.

Approved June 22, 1993.

LA LEGIS 800 (1993)
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VITA

George Simno is a graduate of Loyola University where he attained a Bachelor of Business Administration degree in 1969. He then attended and graduated from the Loyola School of Law in 1972.

In 1989 he received a Master of Laws, in Energy and Environment, from Tulane University School of Law.

For the past 35 years he has been a member in good standing of the Louisiana State Bar Association along with many other professional organizations. He has dedicated his professional life to representing the public in various positions in city, state, and federal employment.

Currently he serves as General Counsel for the Sewerage and Water Board of New Orleans where he is Chief Counsel handling all post Hurricane Katrina related litigation.

George served in the United States Army Reserve from 1969-1994 retiring with the rank of Lieutenant Colonel.

Married for 34 years to Claire DiRosa, he has two sons, Renny and Jeffrey.

George was honored along with his wife Claire by Loyola University this past year with the Adjutor Hominum Award given annually to outstanding alumni.