

## Chapter 1

### INTRODUCTION

In the early morning of Monday, August 29, 2005, Hurricane Katrina came ashore in southern Louisiana, changing American history.<sup>1</sup> Since September 11, 2001, when two American cities suffered devastating attacks, the United States had been working to better protect itself. Almost four years and billions of dollars later, Katrina destroyed an entire region, killing more than 1,500, leaving hundreds of thousands homeless, and ravaging one of America's most storied cities.

Katrina revealed that this country remains ill-prepared to respond to a catastrophe. More should have been done to prepare before the storm and to mitigate the suffering that followed: More to save lives; more to evacuate the most vulnerable citizens; more to move the victims to safety earlier; more to get aid to affected areas sooner.

Before the storm, government planning was incomplete and preparation was often ineffective, inadequate, or both. Afterward, government responses were often tentative, bureaucratic, or inert. These failures resulted in unnecessary suffering.

Katrina's damage unnerved even hardened search-and-rescue professionals. "Federal Urban Search and Rescue teams that had been to earthquakes in California, 9/11, Oklahoma City, I mean, extremely knowledgeable professionals, and even they said they hadn't seen a disaster area that large," Jim Brinson of the Mississippi Office of Homeland Security recalled. "9/11 was blocks. [Here] we were talking miles after miles after miles of complete devastation."

Hurricane Katrina laid waste to 90,000 square miles of land, an area the size of the United Kingdom. At its fiercest, the storm extended for 460 miles, nearly the distance from Kansas City to Dallas. As the Mississippi Gulf Coast's *Sun-Herald* pointed out, "the world's fastest river rapids move at about 10 to 12 feet per second," challenging even experienced athletes protected by kayaks and life jackets. At about only a third of its strength, Katrina's storm surge – the swell of water snowballed by a storm approaching shore – "could have been moving as fast as 16 feet per second."

Though Katrina made landfall as a Category 3 storm (on the 1-5 Saffir-Simpson scale), it had begun driving storm surge in the Gulf of Mexico, when it had been a Category 5. As a result, Katrina brought ashore surge that reached as high as 27 feet above normal sea levels in Mississippi and between 18 and 25 feet in Louisiana. By contrast, New Orleans had no levees or flood walls higher than 17 feet. Though levees had begun to breach as early as landfall, overtopping of the levees may have caused an equal amount of damage.

Citizens and government officials alike knew that it was only a matter of time before a hurricane inundated the Gulf Coast – especially New Orleans, which lies as much as 10 feet below sea level, and continues to sink an inch every three years. (Meanwhile, wave-

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<sup>1</sup> The bulk of the information in this introduction is sourced elsewhere in the report.

slowing marshlands and barrier islands in coastal Louisiana erode by 10 square miles a year – losing the area of a football field every 30 minutes – due to flood-control constraints on the Mississippi River, which prevent it from depositing sediments to replenish the subsiding soils.)

For years, meteorologists and emergency-management and government officials had referred to it, simply, as the “New Orleans scenario.” In 1965, Hurricane Betsy, also a Category 3, had provided a preview of Katrina when, in the memorable words of Louisiana’s then-U.S. Senator Russell Long, it “picked up the lake [Pontchartrain]... and put it inside New Orleans and Jefferson Parish.” When Hurricane Andrew leveled parts of south Florida in 1992, Dr. Robert Sheets, then the head of the National Weather Service, reminded Congressional investigators that the country had actually been lucky – for a while afterward, the storm looked like it was making way for New Orleans.

“People think Andrew was the big one,” he told the Committee on Governmental Affairs, as it was then named, in 1993. Andrew had come “within a gnat’s eyelash of being our nightmare and the big one,” he went on. Dr. Sheets displayed a computer projection of what Andrew’s storm surge would have done had the hurricane’s track shifted slightly and hit New Orleans directly. It showed the hurricane whipping the waters of Lake Borgne, on the eastern side of the city, and Lake Pontchartrain, on the northern edge of the city, over the city’s levees. Katrina would follow this very pattern 12 years later. “The city will be under 20 feet of water,” Dr. Sheets predicted.

In 1998, Hurricane Georges narrowly missed New Orleans, striking Mississippi and Alabama instead. Roused by the close call, local emergency-management planners began to seek federal funding for a massive exercise to consider the potential impact of a direct strike on New Orleans by a slow-moving – and, therefore, more damaging, by virtue of its longer duration – Category 3 hurricane. That funding did not arrive for five years. The effort, known as the Hurricane Pam exercise, finally began in 2004, and tried to address the consequences of a Katrina-like hurricane as developed by government scientists and emergency-management officials and contractors: Widespread flooding; 67,000 dead; 200,000 to 300,000 in need of evacuation after landfall, and hundreds of thousands displaced in need of shelter, exceeding state and local capabilities; hospitals and nursing homes overcrowded and short on critical resources; and incapacitated first responders. Sadly, Katrina proved many of these predictions true.

Katrina formed on August 23, 2005, 200 miles southeast of the Bahamas. Within 24 hours, it had been designated Tropical Storm Katrina by the National Hurricane Center. Two days later, it became a Category 1 hurricane, just two hours before striking the Florida coast between Fort Lauderdale and Miami. By early afternoon on Friday, August 26, Max Mayfield, the director of the National Hurricane Center, and fellow forecasters in the Miami headquarters and regional offices throughout the Gulf Coast believed Katrina might be heading toward New Orleans.

Dr. Mayfield called his friend Dr. Walter Maestri, the emergency-preparedness director of Jefferson Parish, on the western edge of New Orleans. ““This is it,”” Maestri recalled

Mayfield saying. ““This is what we’ve been talking about all of these years. It’s a 30-90 storm,” Maestri said Mayfield told him. “That’s the longitude and latitude of the city of New Orleans,” Maestri explained. Beginning with that phone call, Dr. Mayfield and other forecasters embarked on a round of urgent communications with local, state, and federal officials to alert them to the encroaching threat.

Ordinary citizens, as well as their leaders in local, state, and federal government knew that Katrina was coming. But few could imagine the impact. By the time Katrina subsided, it had taken with it the Gulf Coast as its 9.5 million residents knew it.

“[Y]ou could easily identify what building east of you was [floating] by,” recalled D. J. Zeigler, the Gulfport, Mississippi, harbormaster, who weathered the storm at a parking garage not far from shore. “You could see church pews and knew what church it was and you could see doors from the motels with room numbers on it.”

Katrina carried away not only police cruisers and homes, but also the instruments of daily life. “All our medical records, all the legal documents,” Lynn Christiansen, a housewife in St. Bernard Parish, recounted. “My safety deposit was under water for three weeks.” As Jim Brinson, of the Mississippi Office of Homeland Security, traveled toward the coast from his headquarters in Jackson shortly after the storm, he encountered scenes of near-apocalyptic destruction and bewilderment. “Going down [Route] 49 and seeing all these people just dazed and confused – you know, I’ve been to bad areas all over the world in the military; I’ve seen, you know, entire cities that have been bombed out... and these folks are just dazed. . . . They’re trying to get anything and everything they possibly can. . . . The further south we went, the worse and worse it got.”

Katrina turned first responders – police, medical personnel, etc. – into some of the storm’s first victims. As the storm pummeled New Orleans, some 80 police officers – 5 percent of the city’s force – were stranded at home, according to New Orleans Police Department (NOPD) Superintendent Warren Riley. In New Orleans East, Riley said, an officer named Chris Abbott moved to the attic of his home to avoid the rising water, but it continued to climb. Abbott tried to break his way out, but couldn’t. In desperation, he attempted to raise colleagues on his police radio even though the storm had knocked out most of the region’s communications network.

Abbott lucked out, eventually reaching Captain Jimmy Scott, one of the city’s eight district commanders. Captain Scott asked if Abbott had his service weapon and advised him to fire rounds through the base of the attic vent until he could knock it out. Abbott agreed to try, but then communication ceased. Officers listening in on the conversation called for him, but there was no reply. Finally, five minutes later, Abbott’s voice broke through the air: “I’m halfway out, and I’m going to make it!” The water had been chest-high when he finally scrambled onto his roof, where he was rescued.

Even headquarters could do little. At 7 a.m. on Monday, August 29, just 50 minutes after the storm had made landfall in Plaquemines Parish, southeast of New Orleans, then-Deputy Superintendent Riley visited the communication section of the department’s

emergency operations center. “Almost every dispatcher and 911 operator was crying,” he recalled. “I did not know that only moments earlier, the Industrial Street Canal levee breached and had an almost 200-yard opening and water was now pouring into the Lower Ninth Ward. ... It went from nothing to as high as 14 feet within 23 minutes. We had 600 911 calls within the first 23 minutes... But [the 911 dispatchers and operators] were powerless to assist. ... We still had sustained winds in excess of 100 miles per hour.”

Similar calls were arriving at the fire department office in St. Bernard Parish, in eastern New Orleans, from where Larry Ingargiola, the parish director of Homeland Security and Emergency Preparedness, was operating a makeshift response center with his wife and his secretary. “I am in the attic, I have my child with me in my attic, I need somebody to come get me out,” he recalled a typical plea. “And they are crying. Let me tell you, it got to the point where my secretary and wife couldn't answer the phones anymore. ... We knew that the majority of these people we are talking to now were going to die and we were the last people they were talking to. There was nothing we could do. Nothing physically possible for us to do.”

Most of the people in the area, civilians and officials alike, could talk to no one at all. Telephone lines were down. Switching stations were flooded. Radio and cell-phone towers had been knocked out. Some emergency personnel had to rely on runners to relay messages. As Mississippi Governor Haley Barbour described it, “My head of the National Guard might as well been a Civil War general for the first two or three days, because he could only find out what was going on by sending somebody.”

On Saturday, a day before New Orleans Mayor Ray Nagin would order the first mandatory evacuation of New Orleans in the city's history, city residents had begun to evacuate using a system known as contraflow, which converts incoming highway lanes to outbound to expedite evacuation. More than a million residents of southeastern Louisiana left the area in just over 24 hours, a marked improvement over the 12-15 hour bottlenecks that stalled the evacuation before Hurricane Ivan in 2004. Those delays, coupled with the fact that Ivan – initially a Category 5 storm that came within 135 miles of New Orleans – banked eastward at the last moment, persuaded some to remain behind this time.

Gulf Coast residents call it “hurricane roulette.” Some who had endured 1969's Category 5 Hurricane Camille, the region's benchmark for catastrophic storms, thought that no other storm could come close. But Katrina ended lifetimes of successful storm-dodging. Jeff Elder, an insurance rep, had ridden out 20 years of hurricanes with his family in a two-story, wood-frame home three miles north of the Biloxi, Mississippi, beachfront and 14 feet above sea level. “The eye of Hurricane Georges passed directly over our home,” he wrote in an e-mail, “and, while the bay [just south of the Elders' home] rose to a level of about ten feet above normal, the water never reached our property. In fact, during Hurricane Camille... the water in Back Bay only rose to a level approximately 12 feet above normal.” By early afternoon on Monday, August 29, the day Katrina made landfall, the Elders had six feet of water in their living room.

As Biloxi city spokesman Vincent Creel said of Camille survivors lulled into a false sense of security, Hurricane Camille killed more people in 2005 than it did in 1969.

In many cases, however, hubris or miscalculation had nothing to do with why some stayed behind. Katrina struck in the very last days of August, when those living check-to-check were running out of their bi-weekly or monthly allotments. Tens of thousands didn't have cars. Even many who did may not have been able to shoulder the costs of evacuation; the average cost for three days for a family of four, including lodging, food, and transportation, could easily exceed a thousand dollars, according to an analysis of Hurricane Ivan prepared for the Federal Emergency Management Agency (FEMA). For the poor of neighborhoods like the Lower Ninth Ward, one of the city's lowest-lying areas, this was an impossible sum, though they had an alternative in the Superdome, the city's "refuge of last resort."

Nearly 100,000 New Orleanians either couldn't or didn't comply with Mayor Nagin's evacuation order. The city had no plan for evacuating them, and the Louisiana Department of Transportation and Development, the state agency responsible for transportation during a disaster, had done nothing by the time of landfall. New Orleans' enterprising health department director, Dr. Kevin Stephens, had begun negotiating agreements with several transportation agencies, but they remained incomplete at the time of landfall. Federal officials, who had participated in the Pam exercise and knew that state and local authorities would need evacuation help, had no plans in place, either.

Bobbie Moreau, a legal secretary in Nairn, a small town in Plaquemines Parish, stayed at home because she didn't have the means to evacuate. She was with her daughter Tasha and Tasha's four-month-old daughter, who was born prematurely and required a heart monitor. Moreau woke up at 4 a.m. on Monday, just as the wind and storm surge preceding Katrina's eye were reaching shore. "The pressure was so bad in the house, I opened a crack in the living room window," she recalled. When she walked into the den, she saw water pouring through the grout in the marble tile that lined a part of the wall. By the time she had climbed to the second floor, the water had risen halfway up the stairs. Moreau could see her living-room furniture floating.

"I shut the door upstairs, I guess thinking I could shut the water out," she said. "From then it was a nightmare. I held the baby at the foot of the bed fanning her. The pressure was awful; we thought the windows were going to pop. We got on our knees and prayed and begged God to save us. Then I felt the water under me on the second floor. ... I got up and walked to the window and the water was right under the window. My legs felt like Jell-O, I staggered. My daughter screamed, 'Mama, what's wrong?' I knew at that moment we were going to die."

But "in an instant, survival kicked in." Moreau tore the canopy from the bed and tied knots so that she and Tasha could hold on to each other. She used a belt to create a makeshift life jacket for the baby. With the water halfway up the bed, they climbed out onto the roof, managing to take along Moreau's three dogs. "The eye of the hurricane was on us," Moreau recalled. "I told my daughter, you will have to swim and get a boat, I

am too weak. She said, 'Mama, I'm scared.' There was dead animals floating by, snakes, debris, oil. I told her, 'We will die if you don't.' She handed me the baby and slipped into the water. ... Then I lost sight of her and called and called because the wind was picking up. And then I knew it was the eye. Nothing but silence. I thought she had drowned. I was crying and praying. And then I heard an outboard motor start up. And I knew she was alive.

"Where she pulled [up] the boat, the power lines to the house was between us," Moreau continued. "I had to drop the baby through the power lines to her and the dogs and then myself. By then, the wind was so hard, we could not control the boat with the motors. ... We came to a stop in the top of some little trees. We huddled under the steering wheel with the baby because a window was broke out of the cabin. We stayed there for about 6-7 hours. The wind would almost turn the boat over and we sang and prayed. ... It was so weird. Felt like we were the only people left in the world, everything covered by water."

Around the same time, at Hancock Medical Center in Bay St. Louis, Mississippi, the first floor was beginning to flood. Patients would have to be moved upstairs. Staffers managed to use the elevator to move a 600-pound, non-ambulatory patient to safety before flood waters damaged the hospital generators. Physicians and service staff carried the remaining patients upstairs on their backs. The first floor quickly filled with three feet of water, disabling and washing away equipment.

The Hancock staff had considered evacuating its 34 patients, but eventually decided to "shelter in place." In the past, patients had deteriorated and even died while languishing in evacuation gridlock, some of it in response to storm warnings that turned out to be false alarms. But few hospitals had the resources to withstand the assault of a storm like Katrina, and, as the Hurricane Pam exercise predicted, became victims themselves. State governments had failed to address the problem prior to the storm. In Louisiana, the Department of Health and Hospitals required nursing homes to have evacuation plans, but did not require the institutions to actually follow them.

On the second floor of Hancock, patients were treated in the hall, as wind and rain prevented the use of patient rooms. Because the water pumps failed, staff had to use buckets of water to flush toilets. Maintenance staff hung multi-colored emergency glow-lights to mark the way down corridors and stairwells. Because communications were down, no one knew whether their loved ones had made it.

Forty miles away, at Ocean Springs Hospital, physicians struggled with dwindling supplies and an increasing number of patients. "We couldn't sterilize anything because there was no power," said Dr. Bill Passarelli, a cardiologist who was on duty as Katrina came ashore. "There were only like two surgical packets left. So unless somebody was absolutely going to die, you weren't going to surgery."

"It got so hot that the laboratory computers had to be shut down to prevent them from overheating," Dr. Passarelli's colleague and friend Dr. Jeff Bass, an emergency-room doctor, recalled. "We were able to do only extremely basic lab tests. I could not even get

a basic test of kidney function.” The first fatalities arrived at around 5 p.m., before the wind had died down. “A friend who was a police officer told me that every bayou and every waterway had bodies in them, and that they were pulling bodies from the trees. ... Our morgue only holds two people. We had living people to worry about. At about 6 o’clock I wrote on [a wipe board facing the emergency room door] ‘DON’T BRING US ANY MORE DEAD BODIES. WE DON’T HAVE ENOUGH ROOM FOR THE LIVING PEOPLE.’”

“I had always dreamed of working for Doctors Without Borders and going to a Third World country right after a disaster,” Dr. Bass said. “Never in my wildest dreams did I think I would experience that without leaving my home.”

At Hancock, survivors who had injured themselves clinging to trees or breaking out of their attics were also beginning to trickle in, many after walking for miles, others on makeshift stretchers, as ambulances had been washed away. Staff treated 850 new patients during the next 48 hours. Though a Hancock medical specialist had e-mailed the director of the National Disaster Medical System less than 24 hours after landfall that county authorities were “pulling bodies from trees,” a federal Disaster Medical Assistance Team did not arrive until Wednesday evening. It had been pre-staged in Memphis, 350 miles away. Hancock general surgeon Brian Anthony repaired a man’s severed radial artery while a scrub tech held a flashlight overhead. Coast Guard helicopters refueling between rescues airlifted critical patients to fully functional hospitals further inland.

The Coast Guard performed heroically during Katrina, rescuing more than half of the 60,000 survivors who were stranded by the storm. (The Louisiana Department of Wildlife & Fisheries, the state’s lead agency for search-and-rescue, similarly distinguished itself, rescuing much of the rest.) Coast Guard rescue swimmer Sara Faulkner’s first rescue was in East New Orleans: “My first hoist was down to the second story of [an] apartment building. And they handed me their baby like it was nothing, you know. ... And I was so terrified for that baby, of him starting to squirm or wiggle, you know, for not knowing any better. And making it hard for me to hold him because the rescue, the quick strap is too small for him and he didn’t fit, so you just have to hold him in your arms. And I’m already two stories up and I have to go up a hundred feet, you know, on a cable. I was holding on to him so tight, I had to check him to make sure I wasn’t crushing him ‘cause, you know, I was just holding on to him so tight. And, uh, he was fine. I don’t even think he was scared. I think he was too young to be scared. But the flight mech[anic] said when I came out from underneath the roof that he got chills because his son was about that same size, same age, so... . That, uh, that was bad, that one, but then I did three more and they weren’t as bad as that one, but, um, I don’t think I’ll forget that first baby.”

Another typical rescue took place several days later in Gentilly, in north-central New Orleans. Coast Guard rescuer Bill Dunbar was leaving to refuel when an older man flagged him down. “This guy was 86 years old and had climbed up... two 17-rung straight-up ladders after being without water for three or four days,” Dunbar recalled. And he’s laughing, he’s in [a] good mood. I thought he was delirious.” Back at the Coast

Guard station, the man asked Dunbar to call his son Jeff, who was a Marine. “So I dialed the phone number and I asked for Jeff and he says, ‘Yeah, who’s this?’ and I say, ‘Well, my name is Lieutenant Bill Dunbar and I’m calling from the Coast Guard. We just saved your father. We just pulled him off a roof.’ And the guy broke down crying. And I got a little weepy, ‘cause, you know, after that you’re a little tired. He said that every day of ... 26 years in the Marine Corps was worth that one moment knowing that his Dad was alright. So we put a little money in his dad’s wallet, put some food in his pockets, and we flew him out to Armstrong [Airport] and put him with a doctor. And the doctor said that he’d make sure he got to Houston where his son was coming to meet him to take him home.”

But the Coast Guard’s first Katrina rescue, at 2:50 p.m. on the day of landfall, came in response to “a Mayday from a frantic woman saying that her and her daughter ... and her grandchild were stuck on a small boat in the middle of the city of Port Sulphur.” It was Bobbie Moreau, who had managed to use the radio in the boat her daughter had found to summon the Coast Guard. A direct hoist was impossible because the boat was under trees, so rescue swimmer Laurence Nettles was lowered into the water by the side of the boat. A Coast Guard video of the rescue records what happened next:

**Pilot:** You want me to come to the right?  
**Nettles:** No, hold position. ... On deck, picking up slack, waiting for the survivor to get in basket. Hold position. Woman and baby are getting in the basket. Ready for pickup. Picking up slack. Start taking the load. ... Clear vessel, clear back to the left.  
**Pilot:** Okay, I can move it to the right, if I can.  
**Nettles:** Roger, that’s fine. ... Basket’s coming up... basket’s halfway up. ... Roger, she’s got a dog with her, too. [Pause]  
**Pilot:** That’s fine. Let her bring the dog, it’s fine.

As for many survivors of Katrina, the rescue hardly brought Moreau’s ordeal to a close. The Coast Guard crew dropped off her and her family at West Jefferson Hospital in Jefferson Parish. “Barefoot, no purse, no money, no shoes,” Moreau recalled. “My daughter went in with the baby. I sat on the curb crying.” Soon, they were moved to a shelter. “There was over 100 people in one room. The heat was incredible, could not go outside with the baby for mosquitoes. We fanned her all night.” Moreau appealed to a National Guardsman, but she said he told her they would be at the shelter for another week. “My daughter said, ‘I am not going to let my baby die. We are going to walk out of here and get help.’”

According to Moreau, Jefferson Police tried to prevent her from leaving, presumably for her safety, but “I said, ‘Do what you want to do, I have nothing left anyway.’” Moreau and her family snuck out when the police were distracted by a scuffle and hitched a ride to Westwego, on the west bank of the Mississippi River, where a friend lived. He had evacuated. “I broke into his house, cooled the baby off, we took a shower and ate can food,” Moreau said. “He had left his truck in the driveway. ... [It] had no gas in it, and



there was nowhere to buy gas, so I siphoned gas out of his boat, two gallons at a time, and put [it] into his truck. I left him a letter with my nephew's phone number [in Arkansas]. The only clothes he had that would fit us was boxer shorts and t-shirt, so that is what we left in. ... We went across the Sunshine Bridge [across the Mississippi River], got to Prairieville, and my nephew picked us up. We had a hard time since then, but we made it.”

In the Lower Ninth Ward, Reverend Leonard Lucas of Light City Church was trying to persuade dazed survivors to leave their homes. Parts of the neighborhood had flooded to the rooftops after weak levees on its west side gave way in two spots to water from Lake Borgne rushing down the Mississippi River Gulf Outlet. “We went house to house telling people they had to leave,” Reverend Lucas recalled. “They kept coming and coming and coming. People were leaving everything and only taking a packed bag and their kids. Some people had pets and wouldn’t leave them. I don’t know how many people told me that their pet ‘was all they had.’ We kept telling everyone to go to Stallings Park in the Upper Ninth [west of the Lower Ninth, across the Industrial Canal]. It was a steady flow of people marching like zombies to the park.” The less fortunate who were stranded on rooftops sometimes remained there for days awaiting rescue.

Some of the rescues were performed by volunteers who came to help in the wake of the storm. The assistance was unorganized and frustrated authorities trying to streamline response. Groups of volunteers in civilian clothes converged, frequently armed and without coordination, on the same areas of a sometimes lawless city, adding to the tension. But they also performed an invaluable service. Among them was Jeohn Favors, an emergency management technician (EMT) from Franklin, an hour west of New Orleans, who joined a group of fellow firefighters and police heading to the city.

“The first five minutes into New Orleans, someone came out and asked for a medic,” he recalled. “[We] rode up to the water’s edge and then waded through water till we got to the boat. A R[egistered] N[urse]... had just finished delivering a baby. The girl was 16 years old, had been taken off her roof, and was having her first child and actually delivered in the boat. The nurse had just cut the umbilical cord, and they handed me the baby to check it out. It was my first delivery.”

Favors’s crew hotwired empty boats, rescuing 350 people from rooftops by the end of the day. By his account, they were the first rescuers in Lakeview, a neighborhood in western New Orleans. They traveled through water riddled with six-foot plumes of flames rising from what must have been gas leaks. Power lines – some still active – hung above the water; beneath, submerged obstructions threatened to puncture the boats.

“The thing I’ll never forget was the look on people’s faces, you know, Could this really happen?” Favors recalled. “People were so happy to see us there...” He mentioned a boat that ran out of gas on its way to a hospital, for a passenger whose blood pressure was dangerously elevated. “We gave them gas and tried to direct them to a hospital... . They had nothing, house destroyed, just wearing cutoffs, nothing left, and they tried to pay us for the gas. We couldn’t believe it. People were so grateful.”

Someone like Favors helped Kemberly Samuels, a teacher who sheltered from the storm with her husband at a housing development in St. Bernard Parish, where he worked. The building flooded. “You know, everyone heard about all the young gang bangers in New Orleans, but you didn’t hear about the young men who came and found us,” she said. “They had to be in their teens or early twenties... . They came... on Tuesday night with boats. They brought us food and drinks. I asked them where they got it from, they said, ‘Don’t worry about that, just eat it.’ They also said the boats were ‘borrowed.’”

The rescuers took Samuels and her husband to Interstate 610, a highway overpass in downtown New Orleans where rescuers had begun depositing survivors. (Local authorities had identified only one official drop-off point, at an intersection of Interstate 10 and the Lake Pontchartrain Causeway known as the Cloverleaf, about two miles away. It was also the only rescue point where they had positioned food, water, and medicine.) “There were people lined up as far as I could see,” Samuels recalled. “I saw one 9-year-old boy try to drag his grandmother up the interstate on a blanket. She was too weak to make it on her own. I tried to get them help, but none of the officials would help them. It was so hot you wouldn’t believe. ... We went for a while without water and when it finally did get there they just started throwing it at the crowd. People were fighting over it and I did not want to get in the middle of that. They did the same thing with the MREs [Meals Ready to Eat],” the military-style rations.

Though the Federal Emergency Management Agency (FEMA) positioned resources in the area before the start of the hurricane season, the food, water, and ice –critical supplies when a disaster has disrupted local services – were insufficient. Mississippi received only a fifth of the water and ice that state officials estimated was necessary; shipments didn’t meet demand until September 9, 12 days after landfall.

FEMA, the federal government’s primary disaster-response agency, had no effective supply-tracking system, so replenishing provisions turned out to be complicated. Planning and coordination were so poor that truck drivers didn’t know where to go, and emergency-management officials didn’t know what was en route, or when it might show up. Phone lines were down, so it was hard to clarify. “We’d find [the trucks] parked along [Highway] 49,” Mike Beeman, FEMA’s liaison to coastal Harrison County in Mississippi, said. “[We’d] go over and find out who he was, what he had in the back end, because... many times [we] knew items were sent to us, but we didn’t know where they were. ... We’d finally find maybe five or six truckloads of water or ice that were sitting off the roadway in some apron at a supermarket. ... Some of them sat sometimes two or three days. I found 25 trucks one day. ... They were just sitting there, waiting for somebody to tell them where to go. ... I have no idea where they came from.”

The situation called for occasionally morbid forms of improvisation. In Bay St. Louis, Mississippi, Bill Carwile, FEMA’s lead representative in Mississippi, and Robert Latham, the head of the state’s emergency-management agency, encountered a funeral home director “in tears. And he says, you know, I have no more room for bodies. ... My funeral home is full and I’m fixing to have to start putting people in the parking lot and on

the sidewalk,” Latham recalled. FEMA had ordered several refrigerator, or reefer, trucks as temporary morgues, but they hadn’t arrived.

Just then, a tractor-trailer pulled up. “I said, What are you hauling?” Latham continued. “[The driver] said, Well, I’m hauling ice. . . . I said, Well, can I rent your truck? . . . We need to use it as a morgue. And he said, No, this is the way I make my living. If I give you that, I won’t ever be able to use that trailer again for hauling ice or anything else refrigerated. I says, can we buy your truck? I’ll buy it. I looked at Bill and I said, Bill, can I do this? He said, Yeah, we’re going to do what we have do.” Carwile and Latham negotiated a price (\$25,000) and started loading bodies. The reefer trucks finally showed up five days later.

Supplies also were stretched at the New Orleans Superdome, the “refuge of last resort” for city residents who did not evacuate. It saved many lives during the hurricane, but at a dismaying cost. Lighting and plumbing failed. As 25,000 evacuees waited in heat and humidity for evacuation buses that wouldn’t arrive for days, the Superdome deteriorated into nightmarish squalor. Though conditions were often worse at spontaneous rescue points like the one where Kemberly Samuels found herself, the Superdome became a center of the crisis, a symbol of the ways in which America failed New Orleans.

Dorothy Stukes rode out the hurricane at 1517 Virginia Marie Place, her home in Gentilly. She didn’t evacuate because her sister, who had recently undergone surgery, was at Charity Hospital, in the Central Business District. After the storm had passed, she went outside and walked for several miles until city police officers picked her up and drove her to the Superdome.

“A female officer searched us before we went inside,” she recalled. “She took some medicine I had, but she also took some insulin from an elderly woman behind me because it was not in its proper box. I don’t know how they expected her to make it without her insulin. When we got in, we found a chair and just sat there. All I could think about was my daughter. The last time I talked to her, water was coming through the walls and roof of her house. I didn’t know if she was dead or alive.

“The Dome was horrible; it was like jail or something,” she went on. “One guy jumped from a balcony and committed suicide. We saw some people having sex under a blanket. There were kids all around. Some kids found where they were hiding the ice and stole some of it and started selling it. Most of the supplies were going to the people [special-needs patients] up in the suites. Some folks found a newborn baby in a trashcan; they ended up taking care of it. People were sleeping in the halls on cardboard boxes in the middle of all that waste. And it stank; it was past stink due to all the urine and feces all over the floor. We just sat there and put our shirts over our face to mask the smell. We used an empty MRE bag and a box to go in. We would try to hide ourselves but you couldn’t really get away. They wouldn’t open any extra doors to let us get fresh air.”

Among Stukes’ fellow refugees was Patricia Morris, a home-care nurse who had passed up the chance to evacuate to Mississippi with her daughter because she wanted to help at

the Superdome. “I kept telling [the] National Guard that I’m a registered nurse, and disaster-certified,” she said. “Finally they got angry with me, and told me, Look, woman, Red Cross didn’t even show,” referring to the Red Cross’ refusal to certify and staff the Superdome because it was in the flood zone. Morris says she offered her help to FEMA medics, as well as representatives of the state health department. “I could not understand with all the need they had how they could refuse help,” she said. (Generally, medical personnel turned away volunteers because there was no way to evaluate their skills.) Meanwhile, Morris had to find ways around the same indignities as Dorothy Stukes. “After the second day I decided that if I didn’t eat, I wouldn’t have to go to the bathroom,” she said.

As conditions at the Superdome deteriorated, officials scrambled to find a way to evacuate the population. Prior to landfall, city authorities had failed to position buses outside the flood zone. The Regional Transit Authority, the city’s transit system, pre-positioned two fleets of buses on high ground within New Orleans, but no level of government attempted to send drivers until three days after landfall.

On Monday, the day of landfall, Louisiana Governor Kathleen Blanco had turned to FEMA Director Michael Brown with a request for 500 buses. He promised they would come. For reasons that have never been explained, those buses did not begin to arrive at the Superdome until Wednesday evening. By Katrina’s impossible clock, two and a half days was a lifetime. Waiting, even if because the facts on the ground weren’t clear, was an unconscionable luxury. If ever there was a time to overreact, this was it.

“We kept being told that the buses were coming,” Dorothy Stukes said. “They promised they were coming on Monday, and then Tuesday, and then Wednesday. Thursday they finally got us to line up to load on the buses. At first they said [to] make a single-file line, and then someone said women and children first. Some of the men started snatching kids away from women so they could get on the bus.”

“After we got on the bus they wouldn’t tell us where they were taking us, and they said they forgot to load water for us,” Kemberly Samuels recalled. “Once we got settled we started reading signs and realized we were going to Houston. We found out that there were kids on the bus that had been separated from their parents. There were at least four. I was asked to take care of one of them. Once we got to Houston, I took the kid to a Red Cross official and let them know that the kid had gotten lost. By that time, a lot of people had gotten sick. People were bathing in the sinks. We hadn’t had a bath since Sunday. It was now Friday.”

The Louisiana National Guard troops who developed the Superdome evacuation plan were assisted by members of a 50,000-strong Guard deployment from all 50 states, as well as the District of Columbia, Puerto Rico, the Virgin Islands, and Guam. After initiating the Superdome evacuation on Thursday, they moved on to the Ernest N. Morial Convention Center.

Tuesday evening, Mayor Nagin had opened the Convention Center as an alternate refuge. Before landfall, the city had not intended to use the Convention Center for this purpose, so no food or water had been positioned, and few law enforcement, medical or government personnel were present. Over the next two days, 19,000 people converged on the facility, but all levels of government were slow to grasp the gravity of the unfolding crisis. The first supplies may not have arrived until Thursday. The first media reports of the crowds at the Convention Center appeared Wednesday evening; by the next day there was video of thousands of stranded, desperate victims chanting “We want help.”

The National Guard moved in on Friday, restoring order, distributing provisions, and evacuating the entire population in just over a day. Louisiana National Guard Colonel Jacques Thibodeaux recalled his first encounter with the people inside: “[T]he first time I went into the building... groups of people just lying there immobile, and when I say immobile, they assume that several were deceased because they actually kicked a couple to see if they were, ‘Hey, are you okay?’, just to see, to get an assessment, and they didn’t move.” The people Thibodeaux saw were alive, but so malnourished that they did not respond to physical stimuli.

“They’re hot, they’re tired, they’re hungry,” Wendell Shingler, the head of the Federal Protective Service, who assessed the situation at the Convention Center for the Department of Homeland Security (DHS), recalled. “They had no place to go to the bathroom. They – some of these folks could not walk, so they were relieving themselves in their pants, and they had just lost their sense of humanity, they had lost their sense of dignity, and that was something that you could just see, they were just so distraught. They had now gone from a retired person with a home and probably some income to a homeless person sitting on a sidewalk, owning everything they had in the bag.”

Though initial reports like Colonel Thibodeaux’s suggested that as many as a hundred had died at the Convention Center, the actual toll was far lower. But this was cold comfort. One of Katrina’s most enduring images was that of 91-year-old Ethel Freeman, whose lifeless body, partially covered by a poncho, sat in a wheelchair at the Convention Center for days.

The evacuation of most of the city was complete by Saturday, when 8,800 active-duty ground troops began to arrive. It’s unclear why President Bush waited until Saturday to deploy federal ground troops – whether because of delay in settling command issues with state officials, because of the Defense Department’s doctrine of relying on National Guard units first, because of federal units’ inability to take on law-enforcement duties, or other reasons. The National Response Plan, the document meant to guide federal response to a disaster like Katrina, assigns a supporting role to the Department of Defense, to be called on by FEMA as necessary. On Thursday evening, three and a half days after landfall, FEMA asked the Department of Defense to take over its logistics operation. By that time, the Department had already begun to mobilize a significant amount of its resources, including ships, aircraft, and medical support. Some commanders had seized the initiative to mobilize assets so that they would be ready to deploy when the orders finally came.

Perhaps the most visible among them was Lieutenant General Russel Honoré, Commander of U.S. First Army, based in Atlanta, Georgia. Military commanders have limited authority to deploy their troops without orders from above as part of an “exercise.” A native Louisianan who had assisted FEMA during the 2004 hurricane season, Honoré decided to stage an “exercise” that took his command element to Camp Shelby, Mississippi. Once Katrina subsided, Honoré was ideally positioned to take charge, and was named head of Joint Task Force Katrina by U.S. Northern Command, the headquarters for domestic military operations.

“When you landed here, with everybody walking with these red berets, in 45 minutes everybody's attitude changed,” said Colonel Terry Ebbert, a former Marine who was New Orleans' head of Homeland Security when Katrina struck. “Nothing really changed but their attitude. Everybody, instantaneously, when they saw these guys walking down the street, you know, they're all good-looking, slim, tough guys that walk with a swagger, and it was over. Everybody felt good. Had that response come in on Tuesday,” Colonel Ebbert said, the situation may have improved sooner.

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The Gulf Coast has been trying to find its way back to normalcy. In the days after the storm “the weather was beautiful, ... but you'd smell rotting flesh in the air,” Dr. Bill Passarelli, the cardiologist from Ocean Springs, Mississippi, recalled. “Whether it was animal or human you didn't know, but it was everywhere. The closer you got to water the more intense it was.

“Just the devastation that was seen, it causes extreme – sudden and extreme duress,” Passarelli continued. “And we saw people who had heart attacks just from seeing their houses. One lady in particular, my daughter's Spanish teacher, died that way. She was away for the storm, she survived the storm, and two days after the storm came back and died on her property.”

“Every little detail of life as I knew it here on the Gulf Coast before the storm has changed,” Dr. Jeff Bass, Passarelli's colleague, wrote in an e-mail to friends in late September. “The schools are damaged, most of the local businesses are closed, and almost all of the police cars are from out of state because virtually all of the local cruisers were washed away. On the street, instead of greeting people with, ‘Hi, how are you?’ the greeting is ‘Hi, do you have a home, and is it livable?’

Some 17,000 people lost jobs when the storm wiped out the local off-shore casinos, Bass continued. The destruction of Keesler Air Force Base in Biloxi unemployed 50,000 more, he wrote. “Almost all of the nice local restaurants have been destroyed... along with many of the small Mom and Pop businesses. I doubt that they carried adequate insurance.”

Katrina destroyed or made uninhabitable 300,000 homes and caused as much as \$150 billion in damage. In three Mississippi coastal counties alone, it left behind more debris than the 9/11 attacks and Hurricane Andrew, the most destructive recent hurricane, combined.

At Hancock Medical Center, the storm left three-quarters of the staff homeless. Hal Leftwich, the hospital administrator, and Hank Wheeler, the facilities-services director, spent the first two weeks after the storm on air mattresses in the business office and the next month in patient rooms. The numbers were similar at Ocean Springs. In some cases, the survivors have chosen to rebuild elsewhere. As of late January, half of New Orleans' population had not returned.

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In the days after the magnitude of government's failure to respond became apparent, the Homeland Security and Governmental Affairs Committee initiated an investigation to "thoroughly examine what appears to be breakdowns in preparedness for and responses to" Hurricane Katrina and to "demand answers as to how this immense failure occurred," according to a statement by Senators Susan Collins and Joseph Lieberman, Chairman and Ranking Member, respectively.

For the past seven months, the Committee has worked to discharge this obligation. It has held 21 days of hearings, interviewed close to 400 witnesses, and reviewed in excess of 800,000 pages of documents. It has found failings at all levels of government. Preparations that were adequate in the past and that might have been sufficient had Katrina been a "typical" hurricane proved to be grievously inadequate. The National Response Plan had its first real-world test, revealing shortcomings. Katrina began as a human tragedy, but in the weeks after the storm, the fecklessness of the government response became a story unto itself.

This report is a study of a catastrophe, an "ultra-catastrophe," in the words of DHS Secretary Michael Chertoff. The National Response Plan defines a catastrophe as "any natural or manmade incident, including terrorism, that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions." By definition, they are rare, but the age of terrorism and climate change has ensured that the next occurrence is mainly a question of *how* and *where*, not *when*.

For that reason, the Committee intends this report to serve as a catalyst for constructive reform before the next catastrophe, whatever shape it might take. Ironically, many of this report's findings have an alarming resemblance to the General Accounting Office's analysis of the government's inadequate response to 1992's Hurricane Andrew. The Committee hopes that this report will never become part of a compendium of warnings similarly, and tragically, ignored.

This is why the Committee's report includes not only an analysis of the response at all levels of government, but assessments and recommendations as well. The Committee has found:

- A failure on the part of all levels of government to plan and prepare for the consequences of Katrina.
- A failure to heed the warnings of a looming catastrophe during the weekend preceding the storm, and a failure on the day of landfall to recognize that the worst predictions had come true.
- A failure on the part of government leaders to think "big" before Katrina struck and to challenge existing planning assumptions in the face of what was known to be a "nightmare scenario."
- A failure on the part of all levels of government to plan and provide for the timely and effective evacuation of the elderly, the sick, and the disabled from New Orleans, and the evacuation of tens of thousands of able-bodied residents who did not have personal transportation.
- A failure to act on the lessons of past catastrophes, both man-made and natural, that demonstrated the need for a large, well-equipped, and coordinated law enforcement response to maintain or restore civil order after catastrophic events.
- A failure to plan for and provide in a timely manner mass medical care and temporary shelter for tens of thousands of Katrina victims that all levels of government knew were likely to be impacted by a catastrophic hurricane.

The Committee has not used the power to judge lightly. This investigation has benefited from hindsight, which revealed that, for all the warnings and predictions, there had been too little foresight, after all. Though many understood and acknowledged the risks to the Gulf Coast, it seems few could imagine a major American city destroyed.

The Committee has not assembled the complete record of what happened before, during, and after Hurricane Katrina. Areas for further study and clarification remain. The issues raised by the response to Hurricane Katrina could not be more critical to America's sense of itself in this moment in history, its security, prosperity, and honor.

Revisiting stories like those above recalls that endless week in late August and early September when the entire nation watched with frustration, anger, and despair as the disaster unfolded. It is the hope of this Committee that changes prompted by this report will ensure that the anguish that might have been avoided or relieved sooner in America's response to Hurricane Katrina will never come to pass again.