KATRINA: THE STORM WE'VE ALWAYS FEARED

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CATASTROPHIC

STORM SURGE SWAMPS 9TH WARD, ST. BERNARD

LAKEVIEW LEVEE BREACH THREATENS TO INUNDATE CITY

STAFF PHOTO BY ALEX BRANDON

NINTH WARD: An elderly resident is rescued from chest-high floodwaters by two New Orleans police officers.

By Bruce Nolan
Staff writer

Hurricane Katrina struck metropolitan New Orleans on Monday with a staggering blow, far surpassing Hurricane Betsy, the landmark disaster of an earlier generation. The storm flooded huge swaths of the city, as well as Slidell on the north shore of Lake Pontchartrain, in a process that appeared to be spreading even as night fell.

A powerful storm surge pushed huge waves ahead of the hurricane, flooding much of St. Bernard Parish and New Orleans' Lower 9th Ward, just as Betsy 40 years ago. But this time the flooding was more extensive, spreading upriver as well to cover parts of the Bywater, Marigny and Treme neighborhoods.

As with Betsy, people scrambled into their attics or atop their roofs, pleading for help from the few passers-by.

The powerful Category 4 storm crossed the coast near the mouth of the Pearl River shortly after daybreak with winds of 135 mph. Naval Air Station-Joint Reserve Base in Belle Chasse reported an early morning gust of 105 mph.

With the power out throughout the area and fierce winds raging throughout the day, officials barely began Monday to assess the full damage of the monstrous storm, which was expected to leave thousands homeless and many more coping with damage from the wind and water.

Meantime, 5 miles to the west, engineers worked to close a breach along the New Orleans side of the 17th Street Canal.

Huge drainage pumps ordinarily can drive millions of gallons of rainwater uphill through

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Flooding wipes out two communities

By Brian Thevenot and Manuel Torres
Staff writers

As Jerry Rayes piloted his boat down St. Claude Avenue, just past the Industrial Canal, the eerie screams that could barely be heard from the roadway grew louder as, one by one, faces of desperate families appeared on rooftops, on balconies and in windows, some of them waving white flags.

The scene wouldn't change for the next three hours, as Rayes and his son and nephew boated down St. Claude Avenue and deep into St. Bernard Parish, where water smothered two-story houses, people and animals. The men had to duck to miss streetlights that towered over Judge Perez Drive, the parish's main thoroughfare.

The people Rayes rescued all told the same story, already written on their stunned and shivering

See **FLOOD,** *A-6*

INSIDE

PHOTO BY A.J. SISCO

DOWNTOWN: The damage to the Hyatt Regency on Poydras Street shows that vertical evacuation is no solution to the dangers of a Category 4 hurricane. **See story, A-15**

After the mighty storm came the rising water

By Doug MacCash and James O'Byrne
Staff writers

A large section of the vital 17th Street Canal levee, where it connects to the brand new 'hurricane proof' Old Hammond Highway bridge, gave way late Monday morning in Bucktown after Katrina's fiercest winds were well north. The breach sent a churning sea of water from Lake Pontchartrain coursing across Lakeview and into Mid-City, Carrollton, Gentilly, City Park and neighborhoods farther south and east.

As night fell on a devastated region, the water was still rising in the city, and nobody was willing to predict when it would stop. After the destruction already apparent in the wake of Katrina, the American Red Cross was mobilizing for what regional officials were calling the largest recovery operation in the organization's history.

Police officers, firefighters and private citizens, hampered by a lack of even rudimentary communication capabilities, continued a desperate and impromptu boat-borne rescue operation across Lakeview well after dark. Coast Guard helicopters with searchlights criss-crossed the skies.

Officers working on the scene said virtually every home and business between the 17th Street Canal and the Marconi Canal, and between Robert E. Lee Boulevard and City Park Avenue, had water in it. Nobody had confirmed any fatalities as a result of the levee breach, but they conceded that hundreds of homes had not been checked.

As the sun set over a still-roiling Lake Pontchartrain, the smoldering ruins of the Southern Yacht Club were still burning, and smoke streamed out over

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New Orleans,
August 30, 2005

"Hurricane Pam": Warning Flag for Katrina

On the day after Hurricane Katrina made landfall, the New Orleans *Times-Picayune* front-page banner said it all: "KATRINA: THE STORM WE'VE ALWAYS FEARED."[1]

Hurricanes are a fixture of life on the Louisiana Coast. Years before Katrina, all levels of government knew that a large, slow-moving catastrophic hurricane was likely to hit New Orleans, flood the city, and claim thousands of lives, overwhelming state and local agencies' ability to respond effectively and requiring assistance from the federal government to respond to the disaster.[2]

This understanding prompted efforts in 1999 to secure federal support to develop a comprehensive plan to respond to a catastrophic hurricane in New Orleans. Following nearly five years of delays, in 2004 the Federal Emergency Management Agency (FEMA) provided funding to begin that development.[3] The project, "Southeast Louisiana Catastrophic Hurricane Plan," confirmed the limitations of the state and local agencies. It used an exercise scenario known as "Hurricane Pam" that incorporated well-founded assumptions about the impact of a slow-moving Category 3 hurricane on New Orleans. Based on scientific research and dozens of emergency-management studies, the Hurricane Pam scenario predicted:

- Widespread flooding throughout the city
- 67,000 dead
- 200,000 to 300,000 in need of evacuation after landfall
- Hundreds of thousands displaced
- Sheltering and evacuation needs exceeding state and local governments' capabilities
- Hospitals overcrowded with special-needs patients, with backup generators running out of fuel or failing before patients could be moved elsewhere
- Incapacitated first responders and parish resources
- Compromised situational awareness[4]

Despite the comprehensive foreknowledge of the consequences of a catastrophic hurricane hitting New Orleans, underscored and amplified by the Hurricane Pam exercise, emergency-management officials were not prepared when Katrina struck. They did, however, recognize that Katrina would have many of the consequences anticipated by the Pam exercise. As Katrina approached the Gulf Coast on August 27, two days before landfall, FEMA produced slides indicating that the impact of this storm could be worse than Pam's predictions. A 9 a.m. FEMA briefing document said, "Exercise projection [Pam] is exceeded by Hurricane Katrina real life impacts."[5]

Hurricane Pam was only the most recent study predicting consequences of a catastrophic hurricane. To varying degrees, federal, state, and local governments have long been sounding alarms about virtually every problem that became reality with Katrina – for example, evacuation, sheltering, law and order, search and rescue, and a need for leadership.

The exercise addressed their concerns and resulted in an improved response to Hurricane Katrina. However, the response could have been far better had Hurricane Pam been completed earlier.[6] This section details the significance of Pam and its influence on the Katrina response. Most important, though, it demonstrates that Katrina was not an unpredictable catastrophe, but in fact was predicted.

Hurricane Pam: In the Beginning

The threat of a catastrophic hurricane hitting New Orleans has long been contemplated by scientists, planners, emergency-management personnel, and managers. In what was often called the "New Orleans Scenario," the worst-case event was imagined as a Category 3 or higher hurricane hitting the New Orleans metropolitan area with catastrophic impact.[7] This would be "worst case," primarily because the storm surge would cause devastating flooding in an area that is below sea level and whose protective levees would trap the floodwater.[8] The flooding, coupled with an immobile population of 100,000 or more, would contribute to a situation that would quickly exceed the response capabilities of both local and state resources and would require the assistance of federal resources on a scale never before seen.[9]

In late September 1998, Hurricane Georges wreaked havoc in the Caribbean before heading across southern Florida on a direct path to Louisiana. At the last moment, the hurricane veered away, sparing New Orleans from what could have been a devastating blow.[10] The near miss prompted emergency planners to take stock again of how ill-prepared the region was for a major hurricane.[11]

Planners took their first steps in response to Hurricane Georges in the fall of 1999. Colonel Michael Brown – no relation to the Michael Brown who directed FEMA as Katrina struck – then Assistant Director of the Louisiana Office of Emergency Preparedness, organized a meeting with officials from FEMA Region VI (the region with emergency-management responsibilities over Louisiana), the Army Corps of Engineers, other state agencies, parishes, and his own office to explore the effect of Hurricane Georges had it not turned and gone north.[12]

To develop the planning scenario, the group sought input from experts from such institutions as Louisiana State University (LSU) and the Hurricane Prediction Center.[13] The group quickly realized that a slow-moving Category 3 hurricane was sufficient to cause catastrophic damage.[14]

Over the course of several meetings in the succeeding months, the planning committee put together a Statement of Work (SOW, also known as work plan), to be submitted to FEMA in support of a request to fund the development of a "working plan for the search and rescue, evacuation, sheltering, provisioning, and infrastructure restoration for the greater New Orleans area."[15] On August 14, 2000, Col. Brown requested funding from FEMA. FEMA did not respond to the funding request at that time.[16]

Shortly after taking office, President Bush appointed Joe Allbaugh to be the Director of FEMA. Allbaugh visited New Orleans in the spring of 2001 and expressed surprise that there was no federal plan to respond to a catastrophic hurricane in the region.[17] According to one report, Allbaugh pledged to support development of a plan and in August 2001, asked the Louisiana Office of Emergency Preparedness and FEMA Region VI officials to write up a proposal.[18]

That August, Region VI Director Ron Castleman reiterated to FEMA headquarters the urgent need for catastrophic planning, emphasizing that a catastrophic hurricane in the

New Orleans area "could affect a wide area of Louisiana and neighboring states and would present serious response and recovery problems that could exceed collective capabilities."[19] Castleman asserted that the planning proposal "could save many lives."[20]

The proposal anticipated massive impacts from a major hurricane, including over 1 million people evacuating New Orleans, 300,000 to 500,000 people trapped in flood areas, a storm surge of over 18 feet overflowing levees and leaving New Orleans under 14 to 17 feet of water, rescue operations impeded, hospitals overcrowded with special-needs patients and backup generators running out of fuel or failing before patients could be moved.[21]

Objectives for the work included: (1) plan for direction and control of the response; (2) plan for maximizing evacuation; (3) plan for transporting people, supplies, and equipment; and (4) plan for rescue and relocation of stranded citizens, hospital patients, and other special populations. The proposal foresaw the importance of having a plan that took into account the thousands that would be unable to leave the area on their own accord, thus it recommended that the future contractor assess existing evacuation plans; recommend changes; identify pick up points for people without transportation; identify resources, facilities, and services for pre-storm evacuation; and identify additional transportation assets needed.[22]

An updated SOW was developed in August 2001. Its stated purpose was to enhance "Federal Response Planning activities by focusing on specific catastrophic disasters: those disasters that by definition will immediately overwhelm the existing disaster response capabilities of local, state, and federal governments." It further stated that the "initial area of focus will be New Orleans, Louisiana . . . to improve federal, state, local-government, and private-sector ability to respond to a worst-case catastrophic hurricane in the Greater New Orleans Metropolitan Area in order to prevent loss of life; minimize the number of injuries; house, feed, and protect up to a million survivors and evacuees; and begin long-term recovery in the affected area."[23]

This work plan stipulated that the contractor's work should support eventual development of an introductory general plan and sub-plans that would constitute a comprehensive "New Orleans Metropolitan Area Catastrophic Hurricane Plan." The top-priority area of analysis was identifying the number and location of potential evacuees and assessing existing evacuation plans.[24]

URS Corporation, a large firm specializing in homeland security, was selected as contractor for the project in September 2001, and in October, FEMA paid URS $97,000 to gather information to build a thorough understanding of the nature and magnitude of the hurricane problem.[25] On December 18 and 19, 2001, the project leadership team of state and federal representatives held a kickoff meeting.[26] One of several issues discussed was the recognition that a hurricane could strand 250,000 to 350,000 people in the New Orleans area, 10 percent of whom would likely be people with special needs. The team also noted that hospitals would probably have difficulty getting people out of the city, and that the Louisiana Office of Emergency Preparedness (LOEP) had plans for stranded people to gather on dry stretches of levees or interstate highways where boats or barges could reach them.[27]

The team emphasized that "the final product should be a hurricane operations plan – not a mitigation plan." In essence, it should "[lay] out what the local government can do, what the state can do, what the state cannot do, and what the federal government needs to do" in response to a catastrophic hurricane.[28] This operations plan was distinguished from the routine response by the federal government in which the government comes in after-the-fact with a checkbook to pay for damage caused by the storm and the state and locals accept the check with the intent of using it to lessen the impact of future storms.[29]

The project moved in "starts and stops" for a year because of budget problems, reassignment of FEMA staff to homeland-security issues, difficulties in negotiating a subcontract with LSU and disagreements between LOEP and FEMA over the scope of work.[30] Meanwhile, FEMA collected information from other sources regarding the threat potentially facing New Orleans.

In May 2002, FEMA Region VI published a summary of a Bi-State Evacuation Study that unequivocally stated that the metropolitan New Orleans area had very limited evacuation routes, and that approximately 100,000 people were without transportation.[31] In slides dated June 19, 2003, FEMA recognized that a major hurricane striking the New Orleans area "would be a disaster of cataclysmic proportion," and that 250,000 to 350,000 people would be stranded. Minutes of a June 2003 meeting regarding the New Orleans scenario at FEMA headquarters with FEMA contractors state "that massive federal assistance would be expected for this type of event [catastrophic hurricane]. Louisiana won't be able to deal with this. Responders and their families may be the victims themselves."[32]

By late July 2003, URS Corporation had made progress on its catastrophic planning work for FEMA and the Louisiana Office of Homeland Security and Emergency Preparedness (LOHSEP), which was the successor agency to the Louisiana Office of Emergency Preparedness (LOEP). The Corporation finalized maps showing inundation, elevation and water depth. In the fall, URS drafted a white paper on long-term sheltering.[33] The premise of the paper was that 600,000 people would evacuate New Orleans in the event of a catastrophic hurricane, and that long-term shelter could be needed for perhaps 90 percent of the evacuees because de-watering of the city could take up to a year.[34] These documents completed URS Corporation's contractual obligation to FEMA and LOHSEP.[35]

In November 2003, the White House Deputy National Security Adviser, General John A. Gordon, went to New Orleans to receive a briefing on catastrophic hurricane planning efforts for the region. During the comprehensive, detailed briefing, he learned about the catastrophic consequences of a Category 3 hurricane hitting New Orleans.[36] General Gordon reported to the White House about this meeting.[37] About this same time, FEMA Headquarters informed officials of Region VI and LOHSEP's Chief Planner, Sean Fontenot, that an unspecified amount of funding had become available.[38] Fontenot was uncertain about how they received the funding, but recalled that the money was approved in March 2004 and had to be spent by September 30, 2004.[39]

The Work Begins

Working with staff from Region VI, Fontenot developed a proposal for an exercise that encompassed 14 elements ranging from pre-landfall evacuation, to emergency response, to post-response recovery, and rebuilding matters. While the customary practice in emergency planning was to develop a plan, then to test it with an exercise, the planners concluded that the six short weeks that they had been given were insufficient to proceed in a traditional manner. Thus, the sequence was reversed: they designed an exercise from which to create the plan.[40]

At a meeting in early April 2004, FEMA officials deemed the proposal too costly, causing LOHSEP officials to trim pre-landfall evacuation and five other issues. Witnesses stated that pre-landfall evacuation was deleted from the Hurricane Pam exercise because the issue had been examined by other studies, as well as state and local plans.[41] On the other hand, post-landfall response planning had received very little attention, so, according to FEMA witnesses, the limited FEMA funds would be best applied to post-landfall planning.[42]

In late May 2004, FEMA notified the state that it had selected Innovative Emergency Management, Inc. (IEM), as contractor for this newer phase of the project, which sought the actual development of a catastrophic hurricane plan for southeast Louisiana.[43] As distinct from the information-gathering process conducted by URS, this phase sought to develop the actual plan.[44]

Between late May and mid-July 2004, LOHSEP worked with FEMA Region VI staff, consultants from IEM, Mark Levitan, Ph.D., of the LSU Hurricane Center, and others to flesh out the details of the exercise. Concluding that it was unreasonable to expect to complete a plan in the initial series of workshops, they designed the exercise with the expectation that they would ask FEMA to support a series of follow-on meetings.[45]

The initial Hurricane Pam workshops took place from July 16 until July 23, 2004. Attendance included over 300 participants from 15 federal agencies, 20 state agencies, 13 parishes, five volunteer agencies, LOHSEP, FEMA Region VI, FEMA HQ and IEM.[46] The participants focused on issues relating to schools, search and rescue, sheltering, temporary housing, temporary medical care, and debris removal.[47] IEM compiled the notes from each workshop into a draft plan. On August 6, 2004, IEM produced a 120-page draft "Southeast Louisiana Catastrophic Hurricane Functional Plan."[48]

Shortly after the July sessions, LOHSEP asked FEMA for funding for additional workshops. Again, obtaining funding was difficult.[49] A follow-on session set for September 2004 had to be postponed when FEMA could not come up with $15,000 to pay travel expenses for participants.[50] FEMA officials frequently cited "DHS taxes" as the reason for funding challenges that delayed the planned additional exercise sessions.[51]

Eric Tolbert, FEMA's former Director of Response, recalled many difficulties in funding the scenario and follow-on sessions.[52] The turning point, he said, was when FEMA Director Brown returned from Asia after the disastrous, earthquake-driven tsunami of December 2004. Tolbert described Brown as being "obsessed with catastrophic events." Tolbert told Brown that a large hurricane hitting New Orleans might produce a higher death toll than the tsunami.[53] Brown expressed support for funding catastrophic planning. Meanwhile, IEM consolidated and published the draft plans from the July 2004 portions of the exercise in January 2005.[54]

Follow-up Sessions[55]

Two follow-up workshops were eventually held: "Transportation, Staging and Distribution" in late July 2005, and "Temporary Medical" just days before Katrina struck.[56] Notes from the transportation session reveal that while the workshop was supposed to deal with issues of commodity logistics, participants focused specifically on the need for buses to transport rescued people to shelters.[57] The notes also emphasized the importance of marshalling these buses before landfall so that, following the storm, they would be immediately available to evacuate those stranded in the area. Notably, the participants also reported that planning for distribution of commodities was complete, but was "less than 10% done with transportation planning when you consider the buses and the people."[58]

In the same transportation session, New Orleans Office of Emergency Preparedness Chief Joseph Matthews told the working group at Pam that the city could not execute a massive post-landfall evacuation for two main reasons: (1) they had reserved local transit buses and school buses, but lacked drivers qualified to participate in evacuations; and (2) city officials had not completed negotiations with other transportation companies.[59]

"Pam" come true, New Orleans
Clarence Williams/Iris Photocollective photo

Consequently, with recognition of the need to transport many tens of thousands of people after landfall, participants in the exercise developed a timeline that called on the agencies to "Pre-Stage buses and drivers" 50 hours before landfall by providing "600 buses (Local/State/Federal) and 1,200 drivers (Local/State/Federal/Volunteers)."[60]

The shelter chapter of the draft plan that arose from the Hurricane Pam exercise is slightly more detailed on the issue of transportation, and includes references to pre-landfall evacuation. It assumes that while the primary means of pre-landfall evacuation would be personal vehicles, "school and municipal buses and, where available, specialized vehicles will be used to transport those hurricane evacuees who do not have transportation."[61] Federal, state, and local government representatives were keenly aware of the critical need for buses and the corresponding need for sheltering, yet no level of government followed through with arranging for the buses and additional shelters to aid post-landfall evacuation.[62]

On August 23 and 24, 2005, the Southeast Louisiana Catastrophic Hurricane Temporary Medical Care Supplementary Planning Workshop was held. From this workshop, the Temporary Medical Care section was updated. Emergency planners refined some of the medical support techniques eventually used during Hurricane Katrina, such as the use of centralized, medical triage centers (known as TMOSAs or Temporary Medical Operations Staging Areas) to provide medical screening and care for Katrina survivors. However, as discussed in greater detail in Chapter 24: Medical Assistance, the Hurricane Pam exercise failed to identify solutions to key medical problems it had anticipated, including the need to evacuate patients from hospitals and nursing homes trapped by rising floodwaters.[63]

On August 27, 2005, two days before landfall, IEM hastily published and delivered to FEMA a draft transportation plan based on the "Transportation, Staging and Distribution" workshops held July 25 through 29, 2005.

Hurricane Pam in Action

Hurricane Pam 2004 was more than an exercise. It was a unique planning endeavor that resulted in functional plans that were considered for and actually put to use in real-life situations before, during, and after Hurricane Katrina. Most exercise participants agreed that many of the plans were useful even though they were not final. Though they needed some cleaning up, the resulting drafts were "fightable," that is, "detailed enough to be implemented and to guide response and recovery operations."[64]

IEM President and CEO Madhu Beriwal echoed this view, saying, "though the plan was not finished, many elements of Hurricane Pam still proved to be highly useful in response and recovery to Hurricane Katrina days, weeks, and months after the massive storm struck the Gulf Coast."[65] Senior FEMA officials requested, reviewed, or referred to Hurricane Pam materials to gauge the potential impact of Hurricane Katrina and to plan response actions. According to Brown, "The Hurricane Pam book was flying everywhere. It was all over FEMA; it was everywhere."[66]

Slides dated 9 a.m., August 27, 2005, at FEMA headquarters stated, "Current projected path takes storm directly over New Orleans." They also cited the Pam exercise prediction of 60,000 fatalities and 1 million-plus persons displaced, predicting that Pam's estimates would be "exceeded by Hurricane Katrina real life impacts."[67] Also on August 27, Patrick Rhode, FEMA's Acting Deputy Director, was seeking a copy of the Hurricane Pam plan; he learned that numerous copies of the plan were being made for distribution to FEMA employees.[68] The primary Federal Coordinating Officer in charge of response operations in Louisiana, William Lokey, actually embedded IEM employees in the National Response Coordination Center (NRCC) and the State's Emergency Operations Center (EOC) during the response to Hurricane Katrina to use their Hurricane Pam and emergency-management expertise.[69]

The night manager of the National Response Coordination Center (NRCC), the federal hub for situation information management, sent an e-mail to her director saying that she and others had scoured the Pam plan during their overnight shift on August 28 and found that the Hurricane Pam plan had identified a number of tasks for federal entities. It further revealed that a number of these assigned tasks had not been addressed thus far in the federal response.[70]

In particular, during Hurricane Katrina, a "lily-pad" type of search-and-rescue operation was implemented.[71] By using this methodology, victims were rescued and transported to a safe area of high ground. The idea was that from there another group would transport them to a Temporary Medical Operations Staging Area (TMOSA). There, the rescued would undergo a medical-triage screening process to determine individuals' medical-care needs.[72]

During Hurricane Katrina, search-and-rescue crews successfully retrieved thousands of people from harm's way and deposited them on dry land. In some cases, the rescued individuals were deposited at two of the three TMOSAs envisioned during the Hurricane Pam planning workshops.[73] Unfortunately, the Hurricane Pam concept was only half successful because many people rescued by the search-and-rescue teams were transported to dry ground where there was no system to support them and no ground transportation to take them to a better place for days. In other words, they were taken to veritable "islands," only to be left there without food, water, and other critical necessities.[74]

By late August 2005, FEMA had committed more than $1.5 million to developing the Hurricane Pam exercise.[75] Because some officials took the initiative to press for significant funding and overcome bureaucratic delays, some important lessons from Hurricane Pam were available and were put to good use in responding to Katrina – only a few of which were noted above. On the other hand, it is unfortunate that Louisiana allowed relatively small funding shortfalls – such as FEMA's inability to fund $15,000 in travel expenses in September 2004 – to delay progress in further plan development. Given the importance to the state of the exercise, Louisiana should have considered using its own funds to fill these gaps in federal funding.

In any event, far too many of the Hurricane Pam lessons were not applied. Despite this being "the storm we've always feared," despite awareness of the impact of such a storm on New Orleans, and despite the fact that federal, state, and local agencies came together in July 2004

to do a "live rehearsal" of a response in such a circumstance as Katrina – over a year before it made landfall – too little was done to act on the plans resulting from Hurricane Pam.

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1 Bruce Nolan, "Katrina: The Storm We've Always Feared," New Orleans *Times-Picayune*, Aug. 30, 2005, p. A-1.

2 Committee staff interview of Eric Tolbert, former Director, Response Division, Federal Emergency Management Agency (FEMA), conducted on Dec. 1, 2005, transcript p. 70 ("In the hurricane business in emergency management, all of us have known for years and years about the New Orleans scenario. That's what we refer to it as, the New Orleans scenario, which was either the overwash or the failure of the dock system, the levee system. Literally, anybody in this business that studied hurricanes, if you flew into New Orleans all you were looking for was the levee system. You wanted to see it because you had heard so much about it. The risk was uniformly known by the emergency management professionals."). Ed Buikema, Acting Director of Response during Katrina, said that a large hurricane hitting New Orleans was considered by FEMA to be one of the worst catastrophes that could ever occur in the United States. Committee staff interview of Edward Buikema, Acting Director, Response Division, FEMA, conducted on Nov. 21, 2005, transcript p. 234.

3 Committee staff interview of Sean Fontenot, former Chief, Preparedness Division, Louisiana Office of Homeland Security and Emergency Preparedness (LOHSEP), conducted on Jan. 10, 2006, transcript pp. 42-43, 71.

4 LOHSEP, Hurricane Pam and Related Docs (18). Provided to Committee.

5 FEMA, Tropical Storm Katrina, briefing slides, Aug. 27, 2006, 9 a.m. Provided to Committee; filed as Bates no. DHS-FEMA-0055-0002140.

6 Testimony of Madhu Beriwal, President and CEO, IEM, Inc., before the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on Preparing for a Catastrophe: The Hurricane Pam Exercise, Jan. 24, 2006. Beriwal suggested that the response to Hurricane Katrina could have been greater had the exercise been completed earlier: "When Hurricane Katrina struck, the Hurricane Pam planning was not complete. No training or exercises had occurred using this planning document. The first test was Hurricane Katrina. … However […] even though the plans and planning were incomplete, Hurricane Pam helped save lives and reduce suffering after the massive catastrophe of Hurricane Katrina." Written Statement of Beriwal, Senate Committee hearing, Jan. 24, 2006, p. 8. According to Eric Tolbert, "The [Pam] exercise was just last year, and then they get hit this year. It takes time to continue developing plans and procedures. Thankfully, we had that exercise last year so that at least federal, state and local had gone through the process and had thought about the consequences and had begun drafting plans or it would not have even gone as well as it did." Tolbert interview, Dec. 1, 2005, p. 76.

7 Louisiana Office of Emergency Preparedness (LOEP), Southeast Louisiana Hurricane Evacuation and Sheltering Plan, Jan. 2000, Part I, A, Summary.

8 Tolbert interview, Dec. 1, 2005, p. 70.

9 FEMA, Task Order #125, Statement of Work: Catastrophic Hurricane Planning, New Orleans Metropolitan Area, Aug. 22, 2001. Provided to Committee; filed as Bates no. URS 0000053 [hereinafter FEMA, Statement of Work, Aug. 22, 2001].

10 Mark Fischetti, "Drowning New Orleans," Scientific American, Oct. 2001, pp. 78, 84 ("New Orleans is a disaster waiting to happen.").

11 Fontenot interview, Jan. 10, 2006, pp. 42-43.

12 Committee staff interview of Matt Farlow, Information Technology Division Chief, LOHSEP, conducted on Dec. 1, 2005, transcript p. 11.

13 Committee staff interview of Wayne Fairley, Response Operations Branch Chief, FEMA, conducted on Jan. 18, 2006, transcript p. 7.

14 Fairley interview, Jan. 18, 2006, p. 7.

15 *See generally*: LOHSEP, Hurricane Pam and Related Docs (18). Provided to Committee. The FEMA Statement of Work described a scenario of catastrophic consequences from a Category 3, 4, or 5 hurricane:

- The City of New Orleans is flooded with 14' to 17' of water
- The metro area is without power, food, water, medicine and transportation
- 250,000 to 350,000 people remain in stranded conditions with limited self rescue capability
- Up to 50,000 persons are stranded in the surrounding river parishes
- Possible 5,000 dead and 15,000 injured within the city
- Shelters are overcrowded and people stranded throughout the rest of the state
- Hazardous materials released throughout the city
- No or limited traditional access to all area

- All pumping stations inoperable
- Hospitals overcrowded with special needs patients and family members
- Hospitals have no or limited power

16 Farlow interview, Dec. 1, 2005, p. 11-16.

17 Fontenot interview, Jan. 10, 2006, p. 59.

18 Scott Wells, e-mail to Mark Wallace R6, Gary Jones, Chuck Gregg, Ron Castleman and Brenda Black, Mar. 18, 2004, 7:51 a.m. Provided to Committee; filed as Bates nos. DHS-FEMA-0058-0000025 through 0000027.

19 Ron Castleman, memorandum to Lacy Suiter, Aug. 8, 2001. Provided to Committee; filed as Bates no. DHS-FEMA-0074-0000025.

20 Castleman, memorandum to Suiter, Aug. 8, 2001; Mr. Fairley stated in his staff interview that a draft of the proposal was first sent to Region VI, which returned it with directions to eliminate items outside the scope of FEMA funding. Fairley interview, Jan. 18, 2006, pp. 49-50.

21 FEMA and LOEP, Proposal for Development of a New Orleans Metropolitan Area Catastrophic Hurricane Plan, Aug. 2001. Provided to Committee; filed as Bates nos. DHS-FEMA-0074-0000027 through 0000028.

22 FEMA, Statement of Work, Aug. 22, 2001, Bates no. URS 0000055.

23 FEMA, Statement of Work, Aug. 22, 2001, Bates no. URS 0000052.

24 FEMA, Statement of Work, Aug. 22, 2001, Bates no. URS 0000055.

25 Scott Wells, e-mail to Mark Wallace R6, Gary Jones, Chuck Gregg, Ron Castleman and Brenda J. Black, Mar. 18, 2004, 7:51 a.m. Provided to Committee; filed as Bates nos. DHS-FEMA-0058-0000025 through 0000027.

26 Fontenot interview, Jan. 10, 2006, p. 60. According to Fontenot, there was a short delay from the time of contract award to URS to the date of the kickoff meeting due to the 9/11 attack and resulting circumstances.

27 New Orleans Hurricane Preparedness Project, Meeting of Organizing Committee, Dec. 2001. Provided to Committee; filed as Bates nos. DHS-FEMA-0058-0001506 through 0001514.

28 New Orleans Hurricane Preparedness Project, Meeting of Organizing Committee, Dec. 2001. Provided to Committee; filed as Bates no. DHS-FEMA-0058-0001579.

29 Committee staff interview of Sandy Coachman, Federal Coordinating Officer, FEMA, conducted on Nov. 16, 2005, transcript p. 92.

30 Scott Wells, e-mail to Mark Wallace R6, Gary Jones, Chuck Gregg, Ron Castleman and Brenda J. Black, Mar.18, 2004, 7:51 a.m. Provided to Committee; filed as Bates nos. DHS-FEMA-0058-0000025 through 0000027.

31 FEMA, Bi-State Hurricane Evacuation Study, May 2, 2002. Provided to Committee; filed as Bates no. DHS-FEMA-0058-0001607.

32 Chuck Gregg, e-mail to John Gambel, Oct. 21, 2005, 3:22 p.m. Provided to Committee; filed as Bates nos. DHS-FEMA-0025-0002597 through 0002598 (the subject is a June 26, 2003 meeting at FEMA headquarters to discuss the Strawman Draft.).

33 FEMA, Task Order Number 125, Work Accomplished February 20, 2004 through March 5, 2004. Provided to Committee, filed as Bates nos. URS 0000115 through 0000116.

34 Long-Term Sheltering Following a Catastrophic Hurricane in Southeast Louisiana, prepared by URS Corporation for FEMA, Jan. 2004. Provided to Committee; filed as Bates nos. URS 0000232 through 0000244.

35 Dale Lehman, letter to Carrie Ouellettee, Mar. 5, 2004. Provided to Committee; filed as Bates no. URS 0000059.

36 Fontenot interview, Jan. 10, 2006, pp. 68-69.

37 Tony Robinson, e-mail to Wayne Fairley and Mark Wallace R6, May 17, 2004, 1:46 p.m. Provided to Committee; filed as Bates nos. DHS-FEMA-0058-0000077 through 0000078.

38 Fontenot interview, Jan. 10, 2006, pp. 71-72.

39 Fontenot interview, Jan. 10, 2006, pp. 71-72.

40 Fontenot interview, Jan. 10, 2006, pp. 72-73.

41 Fontenot interview, Jan. 10, 2006, pp. 88-90; Beriwal, Senate Committee hearing, Jan. 24, 2006.

42 Fontenot interview, Jan. 10, 2006, pp. 88-91; Fairley interview, Jan. 18, 2006, pp. 2, 57-58. During his interview with HSGAC staffers, Fairley explained why pre-landfall evacuation was not part of the Pam planning: "We, over the course a time, working with the state, discussed transportation for evacuation. That's always been something that was recognized as a need. The state, however, felt that they had that segment in hand. The state had a evacuation plan, evacuation routes, evacuation maps." Fairley interview, Jan. 18, 2006, p. 23.

43 Testimony of Sean Fontenot, former Chief, Preparedness Division, LOHSEP, before the U.S. Senate, Committee on Homeland Security and Governmental Affairs, hearing on Preparing for a Catastrophe: The Hurricane Pam Exercise, Jan. 24, 2006.

44 Fontenot interview, Jan. 10, 2006, pp. 87-88; Fontenot, Senate Committee hearing, Jan. 25, 2006.

45 Fontenot interview, Jan. 10, 2006, pp. 78-80.

46 FEMA, Louisiana Catastrophic Hurricane Planning Project, Matrix of Planning Topics and ESFs, Dec. 8, 2004. Provided to Committee; filed as Bates no. DHS-FEMA-0058-0000377; IEM, Inc., 2004 Louisiana Catastrophic Hurricane Planning Exercise, Executive Summary. Provided to Committee; filed as Bates no. IEM/TEC04-081.

47 FEMA and IEM, Inc., Hurricane Pam 2004, Breakout Room Topics. Provided to Committee; filed as Bates no. DHS 0001998.

48 IEM, Inc., Southeast Louisiana Catastrophic Hurricane Functional Plan, Draft, Aug. 6, 2004. Provided to Committee.

49 Tolbert interview, conducted on Dec. 1, 2005, transcript pp. 135-136 ("I think lack of funding contributed significantly. I was under no pressure to continue with it because I didn't have money anyway. … We had a set budget, all the money that we could scrape together out of my operating budget and that was the limit. … Had we had more money, we probably would have expanded it.").

50 Fontenot interview, Jan. 10, 2006, pp. 79-80.

51 Tolbert interview, Dec. 1, 2005, pp. 57-58.

52 Tolbert interview, Dec. 1, 2005, pp. 71-72, 80. Notes of a March 30, 2004 teleconference indicate a concern about moving forward quickly to avoid the hurricane season: "Tolbert: Can timeframe slip? To September 30? Sean Fontenot: Probably not. And unless Contractor for Exercise can be secured by April 12, Exercise likely not happen because of hurricane seasons." LOHSEP, Response No. 8, Mar. 30, 2004 Eric Tolbert Teleconference. Provided to Committee.

53 Tolbert interview, Dec. 1, 2005, pp. 85-86.

54 IEM, Inc., Memorandum, Re: Development of the Southeast Louisiana Catastrophic Hurricane Plan Documentation, Sept. 5, 2005. Provided to Committee.

55 IEM, Inc., Memorandum, Re: Development of the Southeast Louisiana Catastrophic Hurricane Plan Documentation, Sept. 5, 2005. Provided to Committee.

56 IEM, Inc., Memorandum, Re: Development of the Southeast Louisiana Catastrophic Hurricane Plan Documentation, Sept. 5, 2005. Provided to Committee.

57 IEM, Inc., Louisiana Catastrophic Planning Phase 1B: Unified Command Final Briefing Highlights, July 29, 2005. Provided to Committee.

58 IEM, Inc., Louisiana Catastrophic Planning Phase 1B: Unified Command Final Briefing Highlights, July 29, 2005. Provided to Committee. Director Joseph Matthews of the New Orleans Office of Emergency Preparedness also pointed out at this meeting that the City had a problem with the lack of qualified drivers for buses that could be used in an evacuation. Committee staff interview of Joseph Matthews, Director, Office of Emergency Preparedness, City of New Orleans, LA, conducted on Nov. 23, 2005, transcript pp. 67-68.

59 Matthews interview, Nov. 23, 2005, pp. 196-200.

60 A FEMA official at the workshop suggested to the other participants that 5,000 buses per day would needed. Committee staff interview of Jules Hurst, Transportation Supervisor, Logistics Branch, FEMA, conducted on Dec. 27, 2006, transcript p. 34 ("At first we were told that – I said you got to give me a number to work with here, and when they said how many buses do we need, they said, okay, 75,000 refugees a day – refugees? Evacuees a day for 10 days. And they said, What do you need? And I said 5,000 buses a day.").

61 Southeast Louisiana Catastrophic Hurricane Plan, prepared by IEM, Inc. for FEMA and LOHSEP, Aug. 6, 2005, p. 72 [hereinafter Southeast Louisiana Catastrophic Hurricane Plan, Aug. 6, 2005].

62 Transportation needs are also addressed in the Search and Rescue chapter, albeit in more cursory terms. The section describing the execution of the plan includes the notation that post-landfall operations will include "coordination and evacuation of the rescued persons." While there are general references to the possibility that parishes may be so severely damaged that they are incapable of even asking for support, the text does not specify whether state or federal support for transporting rescued victims will be relied on, stating merely that "ESF-1 [the emergency support function dealing with transportation] will provide transportation of rescued victims." Southeast Louisiana Catastrophic Hurricane Plan, Aug. 6, 2005, pp. 72, 75.

63 Committee staff interview of James Aiken, M.D., Medical Director for Emergency Preparedness, Medical Center of Louisiana, City of New Orleans, LA, conducted on Jan. 11, 2006, transcript pp. 66-68; EST_ESF08, e-mail to Robert Jevec, Jack Beall, and MST-1, Aug. 29, 2005, 5:30 a.m. Provided to Committee; filed as Bates nos. DHS-FEMA-0098-0003758 through 0003759 ("Advanced planning was never completed on how the patients left in the hospital will be evacuated after the event. The use of boats to support the other ESFs has been fairly comprehensive, and ESF #8 has yet to be completed.").

64 FEMA, Louisiana Project, Phase I-B Proposed Schedule, Jan. 25, 2005, p. 5. Provided to Committee; filed as Bates no. DHS-FEMA 0058-0002144. Madhu Beriwal, the president of IEM, told HSGAC staff during a briefing that the premise of the planning workshops was that the participants were developing actual plans and that IEM's role was to simply clean up the products from the workshop, compile and present them in a final formatted plan.

65 Written Statement of Madhu Beriwal, Senate Committee hearing, Jan. 24, 2006, p. 5.

66 Committee staff interview of Michael Brown, former Director, FEMA, conducted on Jan. 23, 2006, transcript p. 215.

67 FEMA, Tropical Storm Katrina, briefing slides, Aug. 27, 2005. Provided to Committee; filed as Bates no. DHS-FEMA-0055-0002140 ("Exercise projections exceeded by Hurricane Katrina real life impacts.").

68 William Lokey, e-mail to Patrick Rhode and David Garratt, Aug. 27, 2005, 9:07 a.m. Provided to Committee; filed as Bates no. DHS-FEMA-0085-0003860.

69 Committee staff interview of William Lokey, FEMA, Federal Coordinating Officer for Hurricane Katrina in Louisiana, conducted on Nov. 4, 2005, transcript p. 185 ("One of the things we did do, the contract planners from IEM-I'm not sure what IEM stands for, but our contractor we have for catastrophic planning-I got them activated on Saturday to embed them, [they] showed up Sunday to help remind people what people had agreed to in the planning process we had done in the Hurricane Pam scenarios.").

70 Richard Harmon, e-mail to EST-DIR [Mary Ann Lyle], Aug. 28, 2005, 4:07 a.m. Provided to Committee; filed as Bates no. DHS-FEMA-0132-0001814.

71 Beriwal, Senate Committee hearing, Jan. 24, 2005.

72 The Temporary Medical Care section detailed the concepts of search and rescue bases of operations (SARBOOs) and temporary medical and operations staging areas (TMOSAs). As stated in Chapter 24, Medical Assistance: "The plan called for search-and-rescue teams to drop people at Search-and-Rescue Bases of Operations (SARBOOs) near the flooded areas, where paramedics would perform initial triage. Rescuees would then be transported to Temporary Medical-and-Operations Staging Areas (TMOSAs), larger areas with temporary medical facilities, for care and triage." In response to Hurricane Katrina, the SARBOO/TMOSA approach proved crucial to being able to provide medical services when hospitals were filled.

73 Committee staff interview of Jimmy Guidry, M.D., Medical Director and State Health Officer, Louisiana Department of Health and Hospitals, conducted on Dec. 20, 2005, transcript pp. 21-22.

74 Committee staff interview of Lt. Col. Keith LaCaze, Assistant Administrator, Law Enforcement Division, Louisiana Department of Wildlife and Fisheries, conducted on Nov. 30, 3005, transcript pp. 55-63.

75 FEMA, Amendment of Solicitation of Contract, Sept. 21, 2004. Provided to Committee; filed as Bates nos. DHS-FEMA-0076-0000038 through 0000043.