

COMPLETE STATEMENT OF

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DEPARTMENT OF THE ARMY

BEFORE THE

Committee on Homeland Security and Governmental Affairs

UNITED STATES SENATE

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Introduction

Madam Chair and distinguished members of the Committee, I am Colonel Richard Wagenaar. I am the commander and district engineer of the U.S. Army Corps of Engineers' New Orleans District, one of 45 operating around the world. While the district is small in geographic area, it has the most civil works staff of any district in the Corps today. The primary missions of the district include operating and maintaining navigation on the Mississippi River and other navigable waterways in south Louisiana, constructing flood and storm damage reduction projects, and working with other Federal agencies and the State to restore the aquatic ecosystem of coastal Louisiana. I am honored to be testifying before your Committee today on the roles and responsibilities of the Corps of Engineers related to storm damage reduction in the metropolitan New Orleans area, and our response prior to, during, and following Hurricane Katrina.

My statement covers the following topics:

- The storm damage reduction system for the metropolitan New Orleans area;
- Responsibility for operation, maintenance, and inspection of this system; and,
- The role of the Corps of Engineers New Orleans District in responding to Hurricane Katrina.

Storm Damage Reduction Projects in Metropolitan New Orleans

In the metropolitan New Orleans area, the Corps has constructed two large storm damage reduction projects - the West Bank, Louisiana and Vicinity Hurricane Protection Project and the Lake Pontchartrain and Vicinity, Louisiana Hurricane Protection Project.

The Corps designed the West Bank project to reduce the risk of storm damage on the West Bank of the Mississippi River from storm surges coming from Lakes Cataouatche and Salvador and waterways leading to the Gulf of Mexico. It covers parts of Orleans,

Jefferson and Plaquemines Parishes and includes the Westwego to Harvey Canal (authorized by the Water Resources Development Act (WRDA) of 1986) and the Lake Cataouatche and East of Harvey Canal areas (both authorized by WRDA 1996). These components were combined in WRDA 1999 into a single project under the title West Bank, Louisiana and Vicinity. The Westwego to Harvey canal area includes 22 miles of earthen levee and 2 miles of floodwalls extending from the Harvey Canal down to the V-levee near the Jean Lafitte National Historical Park and back up to the town of Westwego. The Lake Cataouatche area eliminated the west side closure in Westwego, and added about 10 miles of levee and 2 miles of floodwalls to the project. The East of Harvey Canal area includes a sector floodgate in the Harvey Canal just below Lapalco Boulevard and about 25 miles of levee and 5 miles of floodwalls, including enlargement of the Federal levees along the Algiers Canal.

The Corps designed the Lake Pontchartrain and Vicinity Hurricane Protection Project to reduce the risk of storm damage between Lake Pontchartrain and the Mississippi River levee from storm surges coming from Lake Pontchartrain. It covers parts of St. Bernard, Orleans, Jefferson, and St. Charles Parishes. The current project consists of a levee north of Airline Highway (U.S. 61) from the Bonnet Carré Spillway East Guide Levee to the Jefferson-St. Charles Parish boundary; a floodwall along the Jefferson-St. Charles Parish line; a levee along the Jefferson Parish lakefront; a levee along the Orleans Parish lakefront; parallel protection (levees, floodwalls, and flood proofed bridges) along three outfall canals (17th Street, Orleans Avenue, and London Avenue); levees from the New Orleans lakefront to the Gulf Intracoastal Waterway (GIWW); levees along the GIWW and Mississippi River-Gulf Outlet (MR-GO); a levee around the Chalmette Area; and a mitigation dike on the west shore of Lake Pontchartrain.

Responsibility for Operation, Maintenance, and Inspection

In accordance with Title 33, Part 208.10 of the Code of Federal Regulations, operation and maintenance of these two projects is a non-Federal responsibility. For the West Bank and Vicinity project, the Louisiana Department of Transportation and Development is the non-Federal sponsor for construction and the West Jefferson Levee District is the non-Federal sponsor for operations and maintenance. West Jefferson acts as executive agent on behalf of the Transportation Department. For the Lake Pontchartrain and Vicinity project, the Lake Borgne Basin and Levee District, St. Bernard Parish, the Orleans Levee District, the East Jefferson Levee District, and the Pontchartrain Levee District are sponsors for the work in St. Bernard, Orleans, Jefferson, and St. Charles Parishes, respectively.

The levees in the New Orleans area are inspected visually on a regular basis by both the Corps and the local levee district, together and independently. Specifically, the Corps has an annual inspection with the New Orleans District Engineer and with the appropriate design engineers. The local levee districts patrol the system periodically between the annual joint inspections. The Corps also completed a joint inspection of the Orleans area with both the levee district and the State in June 2005.

The Role of the Corps of Engineers in Response to a Hurricane

The Corps of Engineers responds in three ways to natural disasters. First, we respond in support of the Federal Emergency Management Agency. We also provide engineering assistance as needed in support of the Department of Defense military forces who are responding to the disaster. Finally, we act under our own civil works mission responsibilities, which, in the area impacted by Katrina, involve principally our storm and flood damage reduction and commercial navigation missions. In all cases, our priorities are to support efforts to save lives and find people, to sustain lives through provision of water and shelter, and to set conditions for recovery, such as cleanup, and restoring infrastructure and navigation.

Support of FEMA

In support of FEMA, we are responsible for Emergency Support Function 3, one of 15 Emergency Support Functions that come together prior to and during an event that falls within the definition of an Incident of National Significance under the National Response Plan. One type of event is a “major disaster” as defined in the Robert T. Stafford Disaster Relief and Recovery Act. The President determined that Hurricane Katrina was a major disaster. Under Emergency Support Function 3, we have missions to provide ice, water, and temporary power. For these pre-scripted missions, we have standing contracts and move these capabilities forward to major mobilization sites prior to landfall. From there, we have operational support areas that are located throughout the disaster area, where commodities flow when they are needed. We also provide temporary roofing and debris removal. On an as-needed basis, we also provide technical assistance at the request of FEMA such as structural surveys or bringing water and sewage treatment plants back into operation.

Each of these missions is performed by groups of Corps of Engineers employees from around the globe who are trained and ready prior to the advent of a disaster and know that when a disaster occurs, they will be called in to respond. We have them standing in various stages of readiness.

Corps of Engineers’ Inherent Mission Responsibilities

In addition to our support of the broader response that FEMA coordinates, the Corps of Engineers has its own responsibilities in flood and storm damage reduction and commercial navigation. For example, we conduct surveys of all the structures in the area, both navigation and flood and storm damage reduction, and then begin to make repairs. We are also working under our P.L. 84-99 authority with the local parishes to repair the levee systems that were damaged during the event. Under this authority, we repair structures built by the Corps, as well as non-Federally built structures that qualify for the Corps Rehabilitation and Inspection program. Following a major disaster, the Corps typically is only authorized to repair and rehabilitate those non-Federally built structures that have qualified under this program. Most of the storm damage reduction system for the metropolitan New Orleans area, including some of the features breached by Hurricane Katrina, is not Corps-owned, though much of the system originally was built by the Corps.

Actions by the District Prior to Hurricane Katrina

I took command of the New Orleans District on July 12, 2005. Prior to my arrival, the District had participated in an annual hurricane preparedness exercise conducted by our regional headquarters, the Mississippi Valley Division. The District also hosted a daylong Hurricane Preparedness Conference on July 25th in which representatives of local, state and federal emergency offices attended. Also prior to Hurricane Katrina, District emergency teams reviewed their crisis information and made preliminary plans for activation, including pre-positioning equipment and supplies.

About a week prior to landfall in Louisiana, I began monitoring the storm as it moved east of Florida. On August 24th, we monitored Hurricane Katrina's projections and I directed that a block of hotel rooms be secured in Vicksburg, Mississippi. As provided in our crisis plan, I coordinated the activation and deployment of the Crisis Management Team. On August 26th I advised my commander, Mississippi Valley Division Commander Brigadier General Robert Crear, that forecasts did not bode well for New Orleans and key decisions would be made from my Emergency Operations Center (EOC) the following day.

After an emergency meeting on August 27th, I issued an evacuation order for the New Orleans District staff under the Department of Defense Alternate Safe Haven plan, with teams deployed to alternate operations sites. I also ordered the main district office building closed for Monday, August 29th. The Crisis Management Team (CMT) established a temporary district headquarters in Vicksburg, Mississippi, the District Reconstitution Team deployed to Baton Rouge, and other emergency teams deployed to various locations with orders to be operational no later than 4 p.m. on the 28th of August.

Soon after my arrival into my district EOC on August 28th, the Division conducted a conference call to discuss and assess preparations. Immediately following the call, my Chief of Emergency Management and I visited the Orleans and Jefferson Parish EOCs and had short meetings with emergency officials. At 8 p.m., I ordered my team to the bunker. Eight district employees and I remained at the district to conduct operations in a bunker designed to withstand a Category 5 hurricane. Our goal was to monitor how the levee system was faring, talking by phone with local parish and city officials, and to provide immediate post-storm assessment to the chain of command.

Actions by the District During Hurricane Katrina

The biggest challenge both during the storm and its aftermath was communications. The Corps and all its partners have redundancies built in to provide backup. However, each time one system failed, it seemed as though everyone moved to the next redundancy and then overloaded it. Throughout the night we received numerous reports of overtopped, failing or breached levees. After a few hours sleep, I was woken up early August 29th (Monday) and was told that water was overtopping a levee or that

there was a levee failure. Many of these reports came from a local radio station. Around that time, we also received a call from a district employee who reported overtopping of the walls along the Inner Harbor Navigation Canal (IHNC). There was little that could be done to investigate at that time, since the worst of the storm was upon us. By about 11 a.m. the winds had decreased some and the weather was beginning to clear. By 2 p.m., we had moved from the bunker and re-established the Emergency Operations Center in the main district office building. Around this time is when I believe we first received a call regarding the breach at the 17th Street Canal.

Actions by the District Following Hurricane Katrina

We departed the main district office building at about 3 p.m. It was apparent as soon as we left the district that New Orleans had suffered catastrophic damage. Due to debris, water, and live electrical wires, it took us an hour-and-a-half to get to the Causeway and I-10 intersection – about three miles from the main district office building. Blocked here, we attempted to travel east to get to the canal and were stopped at the I-10/610 split where the water levels left only tree tops exposed. I didn't know the city all that well, but I knew rainwater didn't cause flooding like this. Based on the water height at that location, it was obvious that significant flooding was occurring.

We also attempted to drive to the canal from another route, but the high water, debris and strong winds kept us from getting through to inspect damage to the levee. We made our way back to the main district office building in the early evening. It was around this time that we heard media reports about how the city had "dodged a bullet," but it was clear to us that conditions were very bad. Soon after this, I submitted a situation report to my Division commander. Due to the extreme conditions outside, we put together a security and escape plan. We continued our attempts to communicate with district teams and local officials. We had difficulty calling out, but people could call us intermittently. Sometime that evening, Rudy St. Germaine, engineer for the New Orleans Sewage and Water Board, joined us. We managed to request a helicopter and last we heard, it was supposed to arrive the next day at 7:30 a.m. We hunkered down for the night.

Immediately the following morning, August 30th, I dispatched two people to the 17th Street Canal who commandeered a boat to inspect the canal. The helicopter arrived at 9:15 a.m. and Mr. St. Germaine and I were able to view the city from above shortly afterwards. I saw the breach at the 17th Street Canal, and then we flew over toward the east side of the city. The bridge spans on Interstate 10 were knocked off their foundations or gone completely. Devastation was widespread, but it was in the Six Flags area in New Orleans East that I first saw hundreds, if not thousands of people on their roofs, waiting to be rescued. When we flew over the Inner Harbor Navigation Canal, we found three breaches. It was at this time that we determined that water was actually draining out of the Lower 9th Ward area, and not into the neighborhood area. After completing an over-flight of the rest of the city, I returned to the main district office building at approximately 2:30 p.m. and attempted to call the CMT in Vicksburg to initiate coordination. At that time I also found two district construction representatives in

my EOC that reported in voluntarily. We immediately put together a plan to initiate operations on the 17th Street Canal in conjunction with the West Jefferson Levee District. Throughout the rest of the day and evening, with intermittent communications, we worked a plan to repair the breach on the canal. The Crisis Management Team in Vicksburg immediately began orchestrating the necessary resources and materials to stem the flow of water. With verbal authorization, Corps contractors responded. Normal transportation routes were impassible, complicating even small tasks. The security, transportation, communication and living conditions at this point were marginal at best. We were working 24 hours a day at this point.

By August 31st, the Corps had begun marshalling resources – contractors, materials, and equipment were arriving at the 17th Street Canal site. By that afternoon, ten large sandbags were dropped into the breach in our first attempt to close the breach. The activities at the site were chaotic as three to four different operations were being executed with multiple agencies involved.

By September 1st, contractors had begun delivering sand, gravel and large rock to areas on the 17th Street Canal, where an access road was being built to reach the breach. Deliveries were also being made to the sandbag staging area in the vicinity of the Coast Guard station where thousands of two- to five-ton sandbags were being prepared.

The next step at the 17th Street Canal, and later the London Avenue Canal, was to cut off flow from Lake Pontchartrain. Contractors drove 150 feet of steel piling across the canal to seal it. Meanwhile, Army Chinook and Black Hawk helicopter crews began placing 7,000-pound sandbags – an average of 600 bags each day – into the breaches. One breach took over 2,000 sandbags before engineers could see the bags under the water surface.

Sandbagging operations ran 24 hours for 10 days, with riggers averaging one to three hookups every two minutes during daylight hours. We stockpiled 1500 bags and even more rock to address future repairs. Crane barges were also used to place sandbags, stone and gravel, especially along breaches on the IHNC, where ground access was non-existent. Expedient repairs were made to two breaches there.

A week to the day after Katrina, the 17th Street Canal breach was closed. For the next week, which included a rescue of one of our employees, I was involved in the formation of Task Force Unwatering under the command of Colonel Duane Gapinski and accompanied the President during his visit. By September 8th, I had turned my attention to the reconstitution of the New Orleans District. Many of our employees in the New Orleans District lost their homes and belongings, the same as their friends and neighbors, but returned to the main district office building to work and to help ensure that their fellow citizens were able to begin the recovery and rebuilding process. I am immensely proud of them for their sense of duty and their selfless service.

This concludes my statement. Again, I appreciate the opportunity to testify today. I would be pleased to answer any questions you may have.

