DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

COMPLETE STATEMENT

OF

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BEFORE

COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS
SUBCOMMITTEE ON DISASTER RECOVERY
UNITED STATES SENATE

ON

After Action: A Review of the Combined Federal, State, and Local Activities to Respond and Recover from Hurricanes Gustav and Ike

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Good morning Madam Chair and Members of the Subcommittee. I am Ed Hecker, the Chief of Homeland Security, U.S. Army Corps of Engineers (Corps). I welcome the opportunity to present testimony today about lessons learned relative to response to both Hurricanes Gustav and Ike. My testimony will focus on our preparedness and response roles relative to our support of the National Response Framework, as well as responding to the mission requirements that fall under our own authorities. Nearly 1,000 Corps of Engineer employees are currently engaged in hurricane emergency response to support missions in areas recently affected by both Hurricanes Gustav and Ike.

Background

The Corps' top three priorities in any disaster are to:

- Support immediate emergency response priorities;
- Sustain lives with critical commodities, temporary emergency power and other needs; and,
- Set conditions for recovery by assessing and restoring coastal protection and navigation infrastructure.

Under the National Response Framework and in support of the Federal Emergency Management Agency (FEMA) and the impacted States, the Corps has installed over 190 generators in the States of Texas, Louisiana and Mississippi to provide temporary power to critical public facilities such as Police and Fire stations, Medical Centers, Wastewater Treatment Plants, Water Treatment Facilities and Shelters until commercial power is restored. To demonstrate the success of the improvements we have developed with FEMA since 2005, we were able to begin installing these generators the same day that Hurricane Ike made landfall in Texas. This was the result of the cooperative Corps/FEMA effort to have the right generators in place to meet anticipated requirements. A few days prior to landfall there were only 4 generators above 450KW in the state. The FEMA/Corps team looked at the specific threat of this particular storm and pre-staged over 150 generators in the state of Texas before landfall.

The Corps is also working with local, state and federal agencies, particularly FEMA, to develop a phased approach to debris management for rapid cleanup. For example, in support of the Texas Department of Transportation, the Corps' debris mission began with emergency clearance operations on Galveston Island. The Corps has contracted 24 crews to help clear the way for first responders and recovery teams to enter the city to assess impacts to infrastructure and to begin restoring essential public services and facilities.

For both Gustav and Ike, the Corps supplemented the states of Texas' and Louisiana's efforts to provide drinking water and ice. Working with FEMA, sufficient supplies were on hand to initiate provision of life-sustaining commodities such as bottled water very shortly after landfall. The Corps is also supporting important missions to meet the public's needs for temporary roofing and housing in support of FEMA. Roofing is an important mission for FEMA since it protects property and in many cases allows people

to re-enter and live in their homes. In Louisiana alone, we have provided temporary roofing to over 3,000 homes.

One of the Corps' highest priorities following any hurricane landfall is to rapidly survey Federal channels and ports in order to quickly open up the nation's ports and waterways, including the Federal channels. For instance, the Corps worked in partnership with the U.S. Coast Guard (USCG), the National Oceanic and Atmospheric Administration, the Gulf Intracoastal Canal Association, and the shipping industry as part of the Texas Joint Hurricane Response Team to survey and open the ports and coastal waterways. Surveys were performed to determine the channel depth and to locate any sunken objects in the channel. Aerial imagery was also collected to determine the impacts of storm surge and winds on ports. The significance of the navigation restoration effort at the Houston Ship Channel and the Calcasieu River is a key example. In that regard, the closure of Calcasieu had impacts on the oil refinery industry. The Corps and Navy cooperated using six Corps vessels, one Navy vessel and one Navy Helicopter. They began work on September 14, and within three days the waterways were surveyed. This survey data was delivered to the USCG to make decisions on opening the waterways within three days. In addition, channel obstructions, to include sunken vessels, were identified, and marked for removal.

The USCG is the responsible agency for making decisions on whether ports are open or closed, and for establishing channel depth restrictions. The Corps has lead responsibility for conducting and reporting channel condition surveys, removing sunken vessels in Federal channels and performing maintenance dredging. There was seamless coordination between these agencies on survey results enabling the Captain of the Port of the USCG to issue Marine Safety Information Bulletins to reopen the channels and establish depth or other restrictions. The Corps used the Navy's expertise in the removal of sunken objects from the Gulf Intracoastal Waterway and Houston Ship Channel. Corps and Navy collaboration led to the use of a Navy helicopter and equipment to determine the presence of submerged objects that could be hazards to navigation. This equipment, which could operate in sea conditions that were unsafe for traditional survey vessels, allowed critical ships of crude oil to be delivered just ahead of a major refinery shutdown at Lake Charles, Louisiana. Critical surveys and coordination at Pascagoula, Mississippi, resulted in the opening of the deep draft channel and delivery of crude oil to a major refinery in that port facility. Daily (or more frequent) conference calls were conducted with these government agencies and navigation stakeholders, including port officials, bar pilots, refineries, etc. to keep all parties informed of progress and issues. As another focus of our critical infrastructure mission, we partnered with the U.S. Environmental Protection Agency (EPA) in Louisiana following Hurricane Gustav to assess requirements for response to damaged water and wastewater treatment facilities.

Finally, we were fully prepared to address the potential impacts of both Gustav and Ike on the New Orleans Hurricane and Flood Damage Reduction system. As you know, significant improvements have been made to strengthen that system following Katrina. We completed the repair and restoration of 220 miles of floodwalls and levees by June

1, 2006. The New Orleans area now has the best flood protection in its history and with every new improvement, we are working to reduce risk. Significant hurricane protection measures include:

- Floodwalls reinforced at numerous locations.
- I-walls replaced by stronger T-walls at breach sites.
- Floodwalls armored and transition points strengthened between flood walls and levees
- Interior pump stations repaired and improved.

Temporary pumps and flood gates completed at the three outfall canals. Pumps in place at the three outfall canals have a total pumping capacity of about 16,000 cubic feet per second. The Corps is committed to providing 100-year level flood protection to the New Orleans area in 2011. It is noted that the system withstood the surge forces associated with Hurricane Gustav with only minor damage at 26 sites. We were able to complete interim repairs to 22 of those sites prior to Hurricane Ike, and the system was capable of performing to the same level as before Gustav. In both hurricanes, the gates and pumping facilities were put to the test and worked flawlessly. Again, I need to emphasize that we are part of a very effective integrated Federal, State and local Team that knows the emergency procedures and has exercised those procedures frequently. I believe that the performance of both the system and the team during these two events, combined with the highly successful evacuation process, speaks to the success of our efforts to be ready for flood and hurricane events.

I will next address our very essential preparedness program, as this really governs our success in disaster response and recovery missions. Readiness to respond to any natural disaster or terrorist act in support of State and local agencies is always an extremely high priority mission of the Corps. As part of the Federal Response Team carrying out missions under the Department of Homeland Security, National Response Framework, the Corps has been the lead Federal agency for FEMA to provide engineering and public works mission support. Common Corps activities include provisions for temporary emergency power, ice, water, debris removal, temporary housing, infrastructure assessment, and critical public facilities. The Corps also provided structural specialists in support of the urban search and rescue mission. In addition to FEMA assigned missions, the Corps has the authority to provide rapid flood fighting, technical assistance, and rehabilitation activities under Public law 84-99. Further the Corps also provides emergency clearing and dredging of those Federal channels that have been impacted by a disaster.

Lessons Learned

We have continually worked to improve our teams, tools and performance over the past several years. One key point relates to our investment in Readiness and the Remedial Action Program that we have developed over the years with FEMA. This effort has paid huge dividends by improving response operations. In addition, this collaboration has built strong partnerships with FEMA, EPA, the Department of the Interior and the USCG

to mention a few. Further, we have developed pre-scripted mission assignments for all of our primary missions to include mission timelines, etc. To compliment the pre-scripted mission assignments, we have developed standard operating procedures (SOPs) for every mission that can also be used by State and Local agencies. Our response organizations located throughout the country continually emphasize our strong technical assistance and training support to state and local governments. The goal is to enable State and local operations to greatest extent possible.

We have taken advantage of the latest flood fight technologies, as well as technologies developed for our military operations support mission. Working with our local, State and Federal partners we have conducted training sessions and exercises that have focused on utilizing a "unified command" approach to adjudicate resource requirements in a disaster zone. This very concept was used in both Gustav and Ike to distribute food, water and ice to citizens that were impacted by the disasters from points of distribution designated by the local governments. This "intergovernmental/interagency" approach provided for operational adaptability and flexibility which was required in order to alleviate the human suffering and discomfort being experienced by the general populace. As this operation was ongoing, the Corps further supplemented its resources on the ground by providing trained Local Governmental Liaisons (LGL) to assist the local, State and Federal partners. These LGLs assisted FEMA in setting priorities in order to meet the needs of the citizenry. This process helped to reduce the level of stress, while providing for effective management of resources.

Our modeling technology and our Advance Contracting Initiative (ACI) also afforded us the opportunity to have 24 debris teams mobilized and operational within hours to begin emergency debris clearance upon request. Both aerial and ground surveillance of the impacted area was performed by utilizing Automated Route Reconnaissance Kit to provide quick snapshots of damaged areas after both Gustav and Ike. This tool provided an immediate assessment of conditions on the ground which had been missing from previous disasters. Additionally, the Corps utilized the 249th Engineer Prime Power Battalion to assess temporary power requirements, relative to bringing the oil industry back online quickly. Our Field Force Engineering teams, that are typically used to support the global war on terrorism, were also available to supplement our civil resources in infrastructure assessments.

Turning to our flood fight efforts associated with impacts from Gustav, the Corps quickly implemented a temporary levee fix on Grand Isle, Louisiana in preparation for the expected surge from Hurricane Ike. This temporary, sacrificial, levee fix was needed to reduce the impacts from Hurricane Ike and any additional damage to the Grand Isle project. This type of flood fight activity will assist us in future operations while reducing flood damages.

As Hurricane Ike went inland, the Intracoastal Waterway channels as well as the major federal channels to Houston's Ship Channel, Texas City, Galveston's ports and others, had to be quickly surveyed, cleared and opened in order to minimize impacts to the oil

industry. Improved coordination with both the USCG and the Navy enabled the Corps of Engineers to open key channels in three days or less.

Madam Chair, all-in-all, by conducting preparedness training sessions, exercises and other forums and meeting with our local, State and Federal partners there has been a clear improvement in the understanding of the issues, response times and expectations prior to an event. This has helped to achieve accelerated response operations while helping local impacted communities such as Galveston, Texas understand and manage expectations. This concludes my statement. I would be happy to answer any questions you or other members may have.