

**DEPARTMENT OF THE ARMY**

**WRITTEN STATEMENT  
OF**

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DEPUTY COMMANDING GENERAL, CIVIL & EMERGENCY  
OPERATIONS**

**U.S. ARMY CORPS OF ENGINEERS**

**BEFORE  
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS  
UNITED STATES SENATE**

**ON  
THE U.S. ARMY CORPS OF ENGINEERS EMERGENCY  
RESPONSE TO HURRICANE IDA**

**OCTOBER 6, 2021**

Chairman Carper, Ranking Member Capito and distinguished members of the Committee, thank you for the opportunity to testify before you today to discuss the U.S. Army Corps of Engineers (Corps) emergency response to Hurricane Ida.

I am Major General Butch Graham, the Deputy Commanding General for Civil and Emergency Operations. I am pleased to be joined by Brigadier General Tom Tickner, the commander of the North Atlantic Division, headquartered in New York City, and Colonel Steve Murphy, the district engineer of our New Orleans district.

First, I would like to start by extending our sincere condolences to the families of those who lost their loved ones during Hurricane Ida. Our thoughts and prayers are with all those who have been, and continue to be, adversely impacted by this devastating storm.

Next, I want to express how proud I am of the work the Corps has been providing since Hurricane Ida made landfall almost 40 days ago. When Ida made landfall as a category 4 storm on August 29, the storm immediately began to draw comparisons to Hurricane Katrina, especially in the city of New Orleans.

The size and scope of Ida proved to be significantly different in the way it moved through the country. We saw damages caused by the storm from the Gulf Coast all the way up into Pennsylvania, New York and New Jersey.

### **Preparation**

While Katrina and Ida share some of the same characteristics; both large, catastrophic storms that hit the Louisiana coast 16 years apart – to the day – it's important to remember that each storm has a unique set of characteristics such as speed, track and pressure, and each storm presents its own operational challenges.

Following Hurricane Katrina, which resulted in devastating flooding in New Orleans, the Nation invested \$14.5 billion to reduce the future flood risk in New Orleans and some of the surrounding areas, which included full up-front funding for construction of the Greater New Orleans Hurricane and Storm Damage Risk Reduction System. This system consists of approximately 200 miles of levees and floodwalls, 73 non-Federal pumping stations, four canal closure structures with massive pumps and three gated outlets.

The system was constructed to elevations that defend against surge levels that have a 1-percent chance of occurring in any given year, informally referred to as a "100-year storm surge." Additionally, by armoring the earthen levees and transition points, the Hurricane Storm Damage Risk Reduction System is designed to be resilient to storms with greater than a 1-percent surge – to withstand overtopping without washing away. The system is a state-of-the-art design, and an outstanding example of what

engineering research and development, combined with prudent investments in infrastructure, can accomplish.

During Hurricane Ida, the system performed exactly as it was designed to.

In addition, it's important to highlight the partnership aspect of preparations for a storm. In a flood, hurricane, or other natural disaster, the Corps works with others, as part of a team. We contribute to and rely heavily on their efforts, at every echelon, from local, regional, state, and tribal partnerships, all the way up to the federal government. The partnerships we have with the Federal Emergency Management Agency (FEMA), state and local government agencies, as well as our contractors, are crucial during emergency response situations.

The Corps conducts its emergency response and recovery activities under two basic authorities: the Stafford Disaster and Emergency Assistance Act (Stafford Act); and Public Law 84-99, as amended (PL 84-99), 33 U.S.C. § 701n. Under the Stafford Act, we and other Federal agencies work under the direction of the Federal Emergency Management Agency (FEMA). PL 84-99 provides a separate source of authority for the Corps to prepare for and respond to floods, hurricanes, and other natural disasters, and to support emergency operations in response to such disasters.

Under the Stafford Act:

- As provided in the National Response Framework, the Corps serves as the lead Federal coordinating agency for Emergency Support Function 3 (ESF-3) (Public Works and Engineering); and
- As provided in National Disaster Recovery Framework, the Corps serves as the lead Federal coordinating agency for Recovery Support Function (RSF) – Infrastructure Systems.

In both of these capacities, the Corps assists the overall Federal effort, working with other Federal agencies as directed by FEMA.

When a major storm, such as IDA, is imminent, the Corps begins to identify and pre-position available resources to enable a timely and efficient response to potential requirements. The Corps coordinates with state, territorial, tribal, and local partners to ensure we are ready to provide support as soon as possible after receiving a FEMA mission assignment. In the case of IDA, we had teams positioned for response four days ahead of landfall. Our guidance from FEMA Administrator Criswell was clear: Lean forward.

## **Response**

As I said, when disaster strikes, the Corps can conduct emergency response activities under two basic authorities – the Stafford Act and Public Law 84-99.

Under the Stafford Act, the Corps serves as the lead agency for Emergency Support Function #3 - Public Works and Engineering. In this capacity, the Corps responds with infrastructure response and recovery activities when missions are assigned by FEMA. Through this authority we provide services such as temporary power, temporary roofing, debris removal, and infrastructure assessments.

Public Law 84-99, Emergency Response to Natural Disasters, which is a separate source of Corps' authority, enables the Corps to provide certain kinds of assistance for emergency activities in support of state and local governments at their request. Under this authority, the Corps can provide both emergency technical and direct assistance in response to flood and coastal storms, and disaster preparedness services and advanced planning measures designed to reduce the amount of damage caused by an impending disaster.

Under this authority, the Corps has used \$2.5 million of its Flood Control and Coastal Emergencies (FCCE) funds to prepare for and respond to Hurricane Ida.

In support of our navigation mission on the Mississippi River and the Gulf Intercoastal Water Way, ongoing activities to restore navigation include surveying the state of the federal channels, and excavating, dredging and removing obstructions to reopen these critical lines of commerce.

In response to Hurricane Ida, up to 408 individuals were deployed to the field, and up to 471 individuals were engaged to provide response support, coordinating with local, state, and federal partners in the affected areas.

To date, the Corps has received 24 FEMA Mission Assignments including temporary power, temporary roofing, temporary housing planning and design, infrastructure assessment planning, debris removal oversight, and unwatering. To date, mission assignments to the Corps from FEMA have totaled over \$223 million.

I would like to take this opportunity to highlight two of those missions, temporary power and temporary roofing.

### **Temporary Roofing Mission**

Operation Blue Roof is a priority mission managed by the Corps on behalf of FEMA. The goal of the Blue Roof program is to provide homeowners in disaster areas with fiber-reinforced, industrial-strength sheeting to protect storm-damaged roofs until homeowners can make permanent repairs.

This program is a no-cost service for homeowners. Operation Blue Roof is designed to protect property, reduces temporary housing costs, and allow residents to stay in their

homes while having repairs done. This program provides real results on the ground to people who have been impacted by a disaster.

Each one of the roofs that we install goes onto the home of a person or family who is experiencing a devastating and traumatic event. For Hurricane Ida, Operation Blue Roof began September 1, just three days after the storm made landfall. The first blue roof was installed one week later on September 8.

Since the program started on September 1, the Corps has received 37,217 valid requests and completed 9,800 installs across 25 of Louisiana's parishes. To put this in context – last year for both Hurricanes Laura and Delta combined, the Corps installed 12,977 blue roofs. This threefold increase in requests for blue roof installations also provides a perspective on how widespread the size and scope of the damage from IDA has been.

As this mission continues, the Corps is working closely with FEMA and prioritizing installs to provide the maximum amount of help to the maximum number of people as quickly as possible. The program registration period was extended to allow residents in the designated parishes to sign up through October 15.

### **Temporary Power Mission**

Another of our response mission areas is providing temporary power to critical infrastructure such as water and wastewater treatment plants and pumping stations, medical facilities, communications facilities, and public safety facilities. These public facilities enable communities to function in the immediate aftermath of the storm.

The Corps executes this mission with our contractors and the U.S. Army's only prime power battalion.

In response to Hurricane Ida, one of the first installed generators was at the Southeast Louisiana Veterans Home in Reserve, Louisiana. As Governor Edward's top priority, the generator was installed on August 31 at the 156-bed facility, which prevented the residents of that home from having to move.

All total, the Corps completed 221 requested assessments and 82 generator installations.

### **Lessons Learned**

After any event, we evaluate our processes to see where there are opportunities to do as much good as possible. While we are still in the process of responding to IDA, the Corps is already working with FEMA to see how we can improve our processes for the next storm.

So far, we have identified a few areas where we can better lean forward. For the Temporary Power mission, we are going to bring forward additional leadership, contracting, and program management support to assist in identifying quickly where temporary power is most needed. We also plan to better incorporate our contractors into that effort, fully leveraging their skills and expertise.

For the Temporary Roofing mission, we are looking for ways to get started sooner by speeding up the process of getting roofing work orders to our contractors, and perhaps by bringing in the contractors early, pre-landfall, so they are staged and ready to go.

### **Future Outlook**

Looking more broadly, as we continue to see record setting severe weather events throughout much of the country, the challenge for our engineers is designing, building and operating our infrastructure to account for these significant severe swings in weather patterns. Last year, we responded to 28 different disasters including 10 hurricanes, nine major floods, and three major wildfires.

One of the ways we are preparing for the future is by incorporating climate change resiliency into the project planning process and incorporating natural and nature-based solutions, where feasible, in our Flood Risk Management and Coastal Storm Risk Management projects.

Building climate change resiliency into our designs and considering the large-scale effects of climate change challenges how the Corps has historically planned and designed our risk reduction projects. A broader, often regional, approach to planning for potential future events is necessary and we are starting to see the benefits of this approach in some of our studies.

Building climate change resiliency into our planning processes provides some challenges as well. The Corps understands that in planning for resiliency, it is important to comprehensively evaluate, analyze, and document project costs as well as the economic, environmental, and safety, benefits.

The Corps is working to help the Nation become more climate resilient. Our overall approach to water resources management considers a wide range of alternatives and their multiple benefits – not just a project’s benefit-cost ratio. We are working to ensure the sustainability of the projects that we recommend, and to encourage the use of natural and nature-based features.

### **Closing**

The Corps is committed to being as prepared as possible when the next storm hits. We will continue to apply lessons learned from past storms, work closely with our government and industry partners, and remain focused on delivering engineering solutions for the Nation’s toughest challenges.

Thank you again for the opportunity to speak here today and I look forward to answering any questions you might have.