DEPARTMENT OF THE ARMY

WRITTEN STATEMENT
OF

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U.S. ARMY CORPS OF ENGINEERS

BEFORE

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UNITED STATES SENATE

ON

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

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Introduction
Chairman Carper, Ranking Member Capito, and members of the committee. I am Colonel Stephen Murphy, commander of the U.S. Army Corps of Engineers New Orleans District. On behalf of me and my team, I thank you for the opportunity to meet with you today.

On August 29th, Hurricane Ida made landfall near Port Fourchon, Louisiana, approximately 60 miles southwest of the greater New Orleans Area, as one of the strongest storms to ever impact the Louisiana coast. For nearly four hours after landfall, the storm remained a Category 4 storm and then sustained Category 3 winds for an additional four hours. By the time the storm completed its slow crawl through Louisiana, 25 of the state's 64 parishes would be eligible for federal disaster assistance Addressing the needs of this important region will require the continued shared efforts of all local, state, tribal and federal partners.

The men and women of the U.S. Army Corps of Engineers (Corps), New Orleans District are residents of South Louisiana. Their friends and families live here; they maintain active roles in their communities. During a storm, they endure the same impacts as their neighbors. For them, working with our partners to ensure a promising future in coastal Louisiana is not just a professional responsibility; it is a personal commitment.

Greater New Orleans Hurricane and Storm Damage Risk Reduction System
Preparations and readiness for Hurricane Ida began with identifying and applying the lessons learned 16 years prior during Hurricane Katrina. The application of these lessons would be foundation on which we constructed the Greater New Orleans Hurricane and Storm Damage Risk Reduction System.

First, we understood that each storm is unique. Hurricane systems prior to Katrina were designed to defend against the Standard Project Hurricane, a storm scenario with a specified intensity, path and rate of movement. However, each storm has a unique set of characteristics that define the storm and its potential impacts. To construct a system designed to defend against a variety of scenarios, we identified 350 points around the system, then calculated the one-percent – commonly called '100-year' – surge levels and levee elevations needed for that specific location.

We also advanced the idea of a perimeter system. The pre-Katrina system was designed to line the many waterways, canals and lakefronts with levees and floodwalls. This parallel approach consisted of approximately 200 miles. of levees and floodwalls. With the perimeter approach, we reduced the miles of front-line levees to 133 while pushing these levees as far away from the densely populated areas as geography would allow.

To ensure this perimeter system would be effective for up to a one-percent storm surge for its design life, we incorporated subsidence and sea-level rise into the elevations of our hardened structures such as floodwall and closure structures. While earthen levees are constructed to the elevation needed today, our floodwalls are built to the elevations that we estimate for the one-percent storm surge in the year 2057.

Equally important, we incorporated the concept of resilience into the design of the system. We understood that no matter how big or how large we build, inevitably there will be a storm that will overtop the system. Designed to be overtopped without breaching, earthen levees were constructed with more stringent materials and selectively armored, while any perimeter floodwall was built using the more robust T-wall designs. Any structure, such as the West Closure Complex, which requires operation throughout an event, were constructed completely independent of the power grid or any other structure. Many local pump stations were either storm-proofed or have safehouses so crews can safely work throughout the storm.

Applying the lessons and best practices we learned from Hurricane Katrina has resulted in the most robust and resilient risk reduction system in the Nation. However, without the national support for rebuilding provided 16 years ago, this system would likely not be in place today.

As a result of incorporating the lessons learned, the greater New Orleans area now has the most robust and resilient hurricane risk reduction system in its history. Although there are never any true victories against Mother Nature, the system did perform as designed and prevented flooding from reaching inside the system. As we remain in hurricane season, I am happy to note that initial reports are that the system experienced very minimal damage during the event and can be counted on to perform again should we face another storm this season.

Hurricane Ida Response and Recovery

Overall, none of the region's federal levee systems overtopped during the storm. However, some of the area's non-federal levee systems did require unwatering. As the Corps received mission assignments from the Federal Emergency Management Agency, we worked closely with the State of Louisiana Coastal Protection and Restoration Authority, the Louisiana National Guard, and the U.S. Navy to get pumps into the critical areas by way of truck, barge or helicopter. We installed temporary pumps in Jefferson, Lafourche, Plaquemines and St. Bernard parishes. Twelve temporary pumps have been demobilized while eleven will remain on site in the event they are needed as we move deeper into hurricane season.

Additionally, in Plaquemines Parish, we initiated engineered levee cuts to expedite the removal of water in the lower portions of the parish. Once these areas no longer benefitted from the cuts, we closed and armored the sections so that they can again provide risk reduction in the event we face additional storms this season. Overall, we expect to be complete with the unwatering mission this week.

One of the Corps oldest civil works missions is to ensure safe and reliable navigation along our Nation's waterways. In south Louisiana, this includes the Nation's busiest and third business navigation routes, the Lower Mississippi River and the Gulf Intracoastal Waterway respectively. Impacts such as obstructions, debris, and shoaling were extensive along these waterways as well as Bayou Lafourche and Barataria Waterway. Working with the U.S. Coast Guard, the U.S. Navy and industry, we focused our attention to returning these waterways to service.

We have completed one section of dredging to address shoaling along the Gulf Intracoastal Waterway and are in the process of clearing shoals in the remaining section. With regards to obstructions, nearly 200 have been identified along Bayou Lafourche and the Barataria Bay Waterway. Working closely with the U.S. Navy, we have removed 158 of these obstructions.

Regional Flood Risk Management Path Forward

The Corps fully understands the importance of recovery efforts after a storm, and is committed to leveraging its resources and capabilities to assist in these efforts. But, we also understand the role of risk reduction efforts ahead of a disaster.

To the west of the Hurricane and Storm Damage Risk Reduction System, we continue to work on the West Shore Lake Pontchartrain risk reduction system. The construction of this system was fully funded by the Bipartisan Budget Act of 2018 and once completed in 2024, it will provide portions of St. Charles, St. John the Baptist and St. James parish with the same level of risk reduction now delivered by the New Orleans hurricane system.

South of the system, we continue to make progress in delivering the New Orleans to Venice project that reduces risk for portions Plaquemines Parish. For this project, we are either building new or replacing existing non-federal levees with a system built to the federal standard. During Hurricane Ida, the portions of this system already constructed did not overtop and performed as designed. However, we still have a lot of work ahead of us. I am happy to report that we just recently advertised a contract for building a 9-mile reach that will provide the historic communities of Ironton and Myrtle Grove with levees that range from 10.5 to 14 feet in elevation.

Closing

My testimony today focused largely on the lessons that allowed us to build the system that we have in place today. However, I would be remiss if I did not also mention that we learned more than just how to build a better system. We have and will continue to incorporate lessons learned from every storm to improve how we do business - not only in design and construction, but also in our operational and contingency planning.

For example, in partnership with federal, state and local leaders, we conduct annual structural assessments of the system. Prior to the start of each hurricane season, the Corps and its partners operationally test all major structures and conduct joint hurricane exercises here in New Orleans as well as at our division headquarters in Vicksburg, Mississippi. The purpose of the exercises is to test the well-planned command and control procedures, our technical steps for responding to the next storm, the procedures for closing and reopening major structures, as well as the partnership and synchronized efforts among federal, state and local agencies. Our partners in these extensive planning efforts include the U.S. Coast Guard, the Coastal Protection and Restoration Authority Board, the Governor’s Office of Homeland Security and Emergency Preparedness, the Southeast Louisiana Flood Protection Authorities and their supporting districts and the Louisiana Department of Transportation and Development.

Just as we work with our partners to buy down residual risk, we further these efforts by engaging communities through a frank and honest discussion regarding risk, residual risk, and individual responsibility. Residents have a role and it is our job to provide them the necessary information so that they can make their own risk-informed decisions. With each passing storm, this open and transparent communication becomes more and more important because complacency among the residents could become the system's greatest vulnerability.

Above all, we remain dedicated to supporting the citizens of southeast Louisiana. We accomplish this by sharing responsibility and working collaboratively, relying heavily on our non-federal partners and on extensive communication with the general public. I must emphasize that the Corps could not have done this work on its own – this was absolutely a team effort – federal, state, local government, tribal, levee authorities, levee boards, academia, industry, non-governmental organizations, peer reviewers and other stakeholders.

Mr. Chairman, thank you for allowing me to speak to you this morning. I will be happy to answer any questions you may have.