



Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington DC 20515

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October 30, 2017

SUMMARY OF SUBJECT MATTER

TO: Members, Committee on Transportation and Infrastructure
FROM: Staff, Committee on Transportation and Infrastructure
RE: Hearing on “Emergency Response and Recovery: Central Takeaways from the Unprecedented 2017 Hurricane Season”

PURPOSE

The Committee on Transportation and Infrastructure will meet on Thursday, November 2, 2017, at 10:00 a.m. in 2167 Rayburn House Office Building, for a hearing titled “Emergency Response and Recovery: Central Takeaways from the Unprecedented 2017 Hurricane Season.” The purpose of the hearing is to explore initial lessons learned from the 2017 hurricanes, and identify key challenges and obstacles that may remain in the way of recovery. These discussions will inform long-term solutions and legislative proposals that will help speed smart recovery in the impacted communities. The Committee will receive testimony from Members of Congress who represent states impacted by these storms. The second panel of witnesses will include the Federal Emergency Management Agency (FEMA), the United States Coast Guard (Coast Guard or Service), the Army Corp of Engineers (Corps), and the Environmental Protection Agency (EPA) who have been actively involved in hurricane response and recovery.

BACKGROUND

The 2017 hurricane season saw an unprecedented number of major hurricanes that caused hundreds of billions of dollars of damage; recovery from which in some areas will take years. Ongoing response and recovery operations require careful and extensive coordination of key federal partners in order to save lives and prevent further property devastation and then help rebuild.

Hurricane Season Basics

The National Weather Service defines a hurricane as “an intense tropical weather system with well-defined circulation and sustained winds of 74 mph (64 knots) or higher.”¹ The Atlantic hurricane season runs from June 1 to November 30. The areas covered include the North Atlantic Ocean, Gulf of Mexico, and the Caribbean Sea. The Saffir-Simpson Hurricane Wind Scale rates hurricanes according to intensity. This scale estimates potential property damage based on wind speed and other factors and rates them in Categories 1 through 5, with Category 5 being the most intense. Hurricanes reaching Category 3 and higher are considered major hurricanes because of their potential for significant loss of life and damage.

The 2017 Hurricane Season

On August 9, 2017, the National Oceanic and Atmospheric Administration (NOAA) raised its forecast prediction to 14-19 named tropical systems, up from the 11-17, which they released in May. NOAA’s forecasters predicted the “season has the potential to be extremely active, and could be the most active since 2010.”²

The 2017 hurricane season saw 10 hurricanes back-to-back, something that has not occurred since 1893. Three of the hurricanes that made landfall in the United States were Category 4 and 5 storms - Harvey, Irma, and Maria.

Hurricane Harvey, August 17-30, 2017

Hurricane Harvey made landfall on August 25, 2017, between Port Aransas and Port O'Connor, Texas, as a Category 4 storm with winds of 130 mph. Harvey was the first Category 4 hurricane to make landfall in the United States since Hurricane Charley in 2004.

For the next three to four days, Harvey stalled over land causing extreme flooding over South Texas and then made a second landfall in Louisiana. The death toll from Harvey was 82 people. Harvey dumped an estimated 27 trillion gallons of rain over Texas and Louisiana during a six-day period, and also set a record for the most rainfall ever from a tropical cyclone in the continental United States at 51 inches of rain. Estimates put eventual total losses between \$70-90 billion.

Hurricane Irma, August 30-September 11, 2017

On September 6, 2017, Hurricane Irma hit the U.S. Virgin Islands and Puerto Rico as a Category 5 storm causing major damage and devastation there and to many of the islands in the Caribbean. From September 6 through September 9, at least 44 deaths were attributed to Irma in the Caribbean. On September 10, the Florida Keys experienced a direct hit from Irma as a Category 4 storm. Initial estimates are that 25 percent of houses in the Keys are destroyed, and 65 percent have major damage. Irma moved on to hit Marco Island, Florida as a Category 3 storm, then traveled up the Gulf of

¹ See National Hurricane Center, National Oceanic and Atmospheric Administration, *Tropical Cyclone Climatology*.

² National Oceanic and Atmospheric Administration (NOAA), Department of Commerce, “Early-season storms one indicator of active Atlantic hurricane season ahead,” Release, August 9, 2017.

Mexico to Naples, Florida. Irma was downgraded to a tropical storm in north Florida and to a tropical depression when its wind gusts hit Atlanta, causing power outages and downed trees. At least 73 deaths in the United States have been attributed to Irma. Estimates put eventual total losses between \$45-65 billion.

Hurricane Maria, September 16-26, 2017

Hurricane Maria made landfall on the U.S. Virgin Islands as a Category 4 hurricane on September 20, 2017. This was the second of two back-to-back storms that devastated the U.S. Virgin Islands, where at least one person died. Hurricane Maria then made landfall near Yabucoa in Puerto Rico. It was the strongest storm to hit Puerto Rico in 85 years. The energy grid was heavily damaged, with an island-wide power outage. According to government officials, restoring electricity in some areas may take months.

On September 22, the National Weather Service ordered the evacuation of about 70,000 people living near the Guajataca River in northwest Puerto Rico because a dam was in danger of failing. By September 25, only a few medical centers on the island had working generators and at least three hospitals lacked running water. Forty-eight deaths in Puerto Rico have been attributed to Hurricane Maria.

Initial Damage Estimates

Some experts say this will be the most expensive hurricane season on record in the United States, a distinction that currently belongs to 2005, when Hurricane Katrina and three other major hurricanes caused more than \$143.5 billion of damage in the country. This year, AccuWeather estimated that Hurricanes Harvey and Irma might cost a combined \$290 billion: two storms producing double the economic damage of four storms in 2005.³ Early estimates of damage for Hurricane Maria are \$30-40 billion.

The Role of the Federal Government in Disaster Response and Recovery

FEMA Disaster Response and Recovery Authorities

FEMA is the federal government's lead agency in preparing for, mitigating against, responding to, and recovering from disasters and emergencies related to all hazards – whether natural or man-made. FEMA's primary authority in carrying out these functions stems from the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (Stafford Act, Pub. L. 100-707). When state and local resources are overwhelmed and the "disaster is of such severity and magnitude that effective response is beyond the capabilities of the state and the affected local governments,"⁴ the Governor of the affected state may request that the President declare a major disaster.

If the President issues a declaration, federal resources are deployed in support of state and local response efforts. By law, the President, acting through FEMA, appoints a

³ AccuWeather Release, September 11, 2017

⁴ Quoting (in part) 42 U.S.C. §5170(a).

Federal Coordinating Officer (FCO) to lead the federal response to major disasters and emergencies. FEMA is responsible for coordinating federal agency response and ensuring the necessary federal capabilities are deployed at the appropriate place and time. In addition, FEMA provides direct support and financial assistance to states, tribes, and local governments and individuals as authorized under the Stafford Act. This includes, directing any federal agency, with or without reimbursement, to assist state, tribal, and local governments and protect life and property.

United States Coast Guard Disaster Response and Recovery Authorities

As has been the case in the wake of major storms for over two centuries, the Coast Guard was one of the first governmental entities on scene in Texas, Florida, Puerto Rico, and the Virgin Islands in the aftermath of the recent hurricanes. The Coast Guard's multi-mission character and broad statutory authorities were critical to the Service's ability to play a large role in response to these storms:

- The Coast Guard exercised its search and rescue authority under 14 U.S.C. §88 in conducting extensive search and rescue operations, saving 11,209 lives;
- The broad Captain of the Port authorities entrusted to the Coast Guard under the Ports and Waterways Safety Act (33 U.S.C. § 1221 et seq.) facilitated the opening of ports and re-established all affected aids to navigation to allow the continuation of commerce;
- The Coast Guard responded to discharges of oil and hazardous substances into navigable waters of the United States impacted by the storms under authority of the Ports and Waterways Safety Act (33 U.S.C. § 1221 et seq.); and
- More broadly, the Coast Guard's unique character as a United States Armed Force (14 U.S.C. § 1), a law enforcement agency (14 U.S.C. § 89), and a regulatory agency with broad authorities, including assistance authority under 14 U.S.C. § 141, was critical to its ability to work closely with other agencies to provide critical supplies to inaccessible areas.

In carrying out those missions, the Coast Guard expended over \$72 million, while incurring almost \$500 million in direct damages to Coast Guard properties. The Coast Guard's response to three massive storms in a short timeframe was one of the largest undertakings in the organization's history. Over 4,200 Coast Guard personnel, including active duty military members, Coast Guard reservists, civilian employees, and Coast Guard Auxiliarists responded from around the country, and over 290 assets, including cutters, small boats and aircraft responded to the massive challenges in the affected areas.

United States Army Corps of Engineers Disaster Response and Recovery Authorities

The Corps has authority under Public Law 84-99 (33 U.S.C. § 701n) for emergency management activities in response to natural disasters. Under this law, the Corps is authorized to undertake activities including natural disaster preparedness, advance measures, emergency operations, rehabilitation of eligible flood control projects, repair of shore protection projects, and emergency water assistance due to drought or

contaminated sources. These activities are funded through the Corps' Flood Control and Coastal Emergencies (FCCE) appropriations account.

The Corps also responds to disasters at the direction of FEMA under the Stafford Act. Under FEMA's National Response Framework, the Corps is assigned as the Coordinator for Emergency Support Function #3, "Public Works and Engineering." During disasters, the Corps is the primary agency for response activities including infrastructure systems; logistics and supply chain management; environmental response/health and safety; and temporary power. FEMA can assign Corps missions to assist in the execution of these and other recovery efforts to include infrastructure protection and emergency repair; debris management, temporary roofing or housing; critical infrastructure reestablishment; engineering services and construction management; and emergency contracting support for lifesaving and life-sustaining services. Disaster response activities authorized by the Stafford Act, and prescribed by Mission Assignments by FEMA, are funded by FEMA's Disaster Relief Fund.

The Corps coordinates with all federal, state, and tribal partners, and close coordination occurs with appropriate state emergency management offices. The Corps may address permanent solutions to flood and other storm damage risks through other existing authorities or through new Congressional authorizations in future Water Resources Development Acts.

Environmental Protection Agency Disaster Response and Recovery Authorities

EPA's emergency response program responds to oil spills, chemical, biological, radiological, and nuclear incidents, in addition to large-scale national emergencies, including homeland security incidents. The agency provides support when requested, or when state and local first responder capabilities have been exceeded, and conducts removal actions to protect human health and the environment. In carrying out these responsibilities, EPA coordinates with other federal agencies, states, tribes, and local governments.

EPA's response authorities include the Stafford Act, the *Federal Water Pollution Control Act* (33 U.S.C. 1251 et. seq.) and the *Oil Pollution Act of 1990* (P.L. 101-380) (which expanded the National Contingency Plan (NCP) to include response to releases of hazardous substances, as well as oil, to any navigable waters of the United States), and the *Comprehensive Emergency Response, Compensation, and Liability Act* (CERCLA/Superfund) (P.L. 96-510). CERCLA provides for the NCP to apply to releases to any environmental media and to cover releases at hazardous waste sites requiring emergency removal actions.

EPA has assisted state and local governments in the assessment of Superfund sites and oil sites, coordinated the management of storm debris, and conducted sampling and assessments of critical drinking water and wastewater facilities in hurricane-affected regions.

FEMA Disaster Assistance Programs

FEMA's primary Stafford Act programs for disaster response and recovery in the aftermath of a major disaster are in the Public Assistance Program and the Individual Assistance Program. The Public Assistance Program, authorized primarily by sections 403, 406, and 407 of the Stafford Act, reimburses state, tribal, and local emergency response costs and provides grants to state and local governments, as well as certain private non-profits to rebuild facilities. The Public Assistance Program generally does not provide direct services to citizens.

The Individual Assistance Program, also known as the Individuals and Households Program, is primarily authorized by section 408 of the Stafford Act. The program provides assistance to families and individuals impacted by disasters, including housing assistance. Housing assistance includes money for repair, rental assistance, or "direct assistance," such as the provision of temporary housing.

Section 404 of the Stafford Act authorizes the Hazard Mitigation Grant Program (HMGP). HMGP provides grants to state, tribal, and local governments to rebuild after a disaster in ways that are cost effective and that reduce the risk of future damage, hardship, and loss from natural hazards. FEMA also provides grants under HMGP to assist families in reducing the risk to their homes from future natural disasters, through such steps as elevating the home or purchasing the home to remove it from the floodplain.

The Committee's Leadership on Disaster Policy Reform

In 2006, the Committee passed and Congress enacted the *Post Katrina Emergency Management Reform Act* (PKEMRA, P.L. 109-295), which addressed some of the potential gaps related to catastrophic disasters. Most of the provisions in this legislation are related to planning and response. PKEMRA provided for additional authority for response activities including: "accelerated federal assistance" which can be provided in the absence of a state request in certain situations during the response to a major disaster or an emergency; expedited payments for debris removal; use of local contractors for federal disaster response contracts; and the rescue, care, and shelter for pets and individuals and households with pets.

In 2013, the Committee took the lead in identifying needed reforms to address recovery challenges in the wake of Hurricane Sandy. The intent of the *Sandy Recovery Improvement Act* (SRIA, P.L. 113-2), enacted January 29, 2013, is to speed up and streamline Hurricane Sandy recovery efforts and reduce costs, and improve the effectiveness of several disaster assistance programs authorized by the Stafford Act, namely the Public Assistance Program, the Individual Assistance Program, and the HMGP. Key provisions of SRIA include:

- Expedited debris removal and public assistance alternative procedures: allows the use of cost estimates and consolidated projects;
- Federal assistance to individuals and households: allows FEMA to make limited repairs, instead of lease payments, for the purpose of providing housing when less expensive;

- Hazard mitigation: expedites hazard mitigation projects by streamlining the environmental review, provides states with advanced hazard mitigation assistance, and provides for state administration of hazard mitigation grants;
- Dispute Resolution Pilot Program: establishes a limited dispute resolution pilot program to resolve disputes over assistance and drive projects to closure and avoid cost overruns;
- Unified federal environmental review: requires the President to establish an expedited review for environmental and historic requirements for rebuilding damaged infrastructure;
- Individual assistance factors: requires FEMA to review and update factors for individual assistance disaster declarations to make them less subjective; and
- Tribal requests for major disaster declarations: provides for disaster declarations for tribal governments.

CONCLUSION

In the 114th and 115th Congress, the Committee has led the policy discussion on how to lower the devastating losses from disasters in terms of lives, property, and costs, how to increase disaster resilience, and how to withstand the next disaster and recover more quickly from disaster impacts. The rebuilding that must be done in the wake of the 2017 hurricane season is an opportunity to encourage smart, resilient rebuilding and cost-effective federal investments. The 2017 hurricane season also may have some lessons to teach about how to strengthen our ability to withstand all types of disasters across the Nation.

WITNESS LIST

Panel I

The Honorable Michael T. McCaul
Chairman, Committee on Homeland Security
Member of Congress (TX-10)
United States House of Representatives

The Honorable Gene Green
Member of Congress (TX-29)
United States House of Representatives

The Honorable John Rutherford
Member of Congress (FL-04)
United States House of Representatives

The Honorable Al Lawson
Member of Congress (FL-05)
United States House of Representatives

The Honorable Jenniffer González-Colón
Resident Commissioner (PR)
United States House of Representatives

The Honorable Stacey Plaskett
Delegate (USVI)
United States House of Representatives

Panel II

The Honorable William Long
Administrator
Federal Emergency Management Agency

Vice Admiral Karl Schultz
Commander
Atlantic Area
United States Coast Guard

Major General Donald E. (Ed) Jackson Jr.
Deputy Commanding General for Civil and Emergency Operations
United States Army Corps of Engineers

The Honorable Pete Lopez
Regional Administrator for Region 2
Environmental Protection Agency