July 18, 2018

Are We Ready? Recovering from 2017 Disasters and Preparing for the 2018 Hurricane Season

Subcommittee on Economic Development, Public Buildings, and Emergency Management, Committee on Transportation & Infrastructure, United States House, One Hundred Fifteenth Congress, Second Session

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Chairman Lou Barletta (R-PA)
Subcommittee on Economic Development, Public Buildings, and Emergency Management
Opening Statement
(Remarks as Prepared)

From hurricanes to floods and wildfires, no region of our country was completely immune from the impacts of disaster in 2017.

Last year, we saw 10 hurricanes in the Atlantic region alone, including Hurricanes Harvey, Irma, and Maria which devastated parts of Texas, Florida, Puerto Rico, and the U.S. Virgin Islands. We also had one of the worst wildfire seasons with over 66,000 wildfires that burned nearly 10 million acres of land. The 2017 disasters caused an estimated $370 billion in damages.

The purpose of today's hearing is to determine where we are in recovering from these devastating disasters, what challenges there are to recovery, and suggestions on how we can overcome those challenges. We also want to understand state, local, and federal efforts to prepare for the 2018 hurricane season which began on June 1. We also want to examine the reforms that are needed to incentivize and encourage mitigation and the reduction of disaster costs and losses across the country.

The 2017 disaster season not only devastated many communities, but highlighted challenges in how we respond to and recover from disasters. We have a ways to go in rebuilding, especially in Puerto Rico and the U.S. Virgin Islands, and it is critical we do what we can to help communities rebuild smarter and better.

In November, we introduced bipartisan legislation, the Disaster Recovery Reform Act (DRRA), which would ensure communities could rebuild in a way that would minimize future disaster costs and save lives.

This legislation includes reforms that will change FEMA's disaster recovery programs to make them more effective and efficient and encourage and facilitate mitigation projects that reduce disaster risk and increase resiliency against disasters.

This legislation has now overwhelmingly passed the House twice, including on H.R. 4, the FAA Reauthorization Act, which has yet to be taken up by the Senate.

There are communities impacted by the 2017 disasters, and preparing for future disasters, that would benefit today by the reforms in DRRA. Some reforms were enacted as part of the Bipartisan Budget Act of 2018; those reforms allow FEMA to create incentives for state and local governments to implement mitigation. But we need the other critical reforms, including key wildfire mitigation provisions and additional resources to state and local governments for cost effective mitigation projects.

Various studies – by federal agencies, academia and the private sector – have shown that for every one dollar of federal investment in mitigation, there is a four to eight dollar return in avoided disaster damages. Mitigation projects, particularly pre-disaster, are a wise investment of federal dollars and the only way we, as a nation, will be able to change the direction of rising disaster costs and losses. It makes no sense for us to continue to rebuild the same way disaster after disaster.

I look forward to hearing from our witnesses today on where we are in the recovery from the 2017 disaster season, where we are in preparing for the 2018 hurricane season, and the recommendations for changes that need to be made to make our communities stronger and better able to recover from disasters of any kind.

STATEMENT

OF

JEFFREY BYARD
ASSOCIATE ADMINISTRATOR FOR THE OFFICE OF RESPONSE AND RECOVERY
FEDERAL EMERGENCY MANAGEMENT AGENCY
U.S. DEPARTMENT OF HOMELAND SECURITY

BEFORE
THE

TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
SUBCOMMITTEE ON ECONOMIC DEVELOPMENT, PUBLIC BUILDINGS, AND EMERGENCY MANAGEMENT
UNITED STATES HOUSE OF REPRESENTATIVES
WASHINGTON, D.C.

"Are We Ready? Recovering from the 2017 Disasters and Preparing for the 2018 Hurricane Season"

Submitted
By
Federal Emergency Management Agency
500 C Street SW
Washington, D.C. 20472

July 18, 2018

Introduction

Good morning, Chairman Barletta, Ranking Member Titus, and Members of the subcommittee. My name is Jeff Byard, and I am the Associate Administrator for the Office of Response and Recovery for the Federal Emergency Management Agency (FEMA). On behalf of U.S. Department of Homeland Security Secretary Nielsen and FEMA Administrator Long, I'd like to thank you for the opportunity to discuss the lessons learned from the 2017 historic hurricane season and the ongoing progress made under FEMA's strategic plan, including our preparations for the 2018 hurricane season.

I am proud to continue to be part of an agency that, every day, helps communities before, during and after disasters. Last year's historic hurricane season was a true test of the Nation's ability to respond to and recover from multiple concurrent disasters.

More than ten months later, FEMA remains steadfast in its commitment to support the needs of survivors of these disasters. We continue to work tirelessly to support state, local, tribal and territorial (SLTT) partners to respond to and recover from disasters, and to mitigate against future disasters. We overcame many challenges and we have gained invaluable knowledge which we have incorporated into our strategy going forward, but we are not finished. We will continue to adapt and expand our understanding of emergency management to ensure that we can best support our partners' ability to build more resilient communities, lessen the impacts of disasters, and ultimately help individuals get back on their feet quickly.

2017 Hurricane Season: Key Themes & Lessons Learned

Hurricanes Harvey, Irma, and Maria caused a combined $265 billion in damage and were each, individually, among the top five costliest hurricanes on record. In response, FEMA coordinated large deployments of federal personnel, both before and after the hurricanes' landfalls, to support response and initial recovery efforts across 270,000 square miles. These deployments included more than 17,000 FEMA and federal Surge Capacity Force personnel, and nearly 14,000 personnel from various offices of the Department of Defense. FEMA facilitated logistics missions that moved more than $2 billion worth of commodities across several states and territories, using multiple modes of transportation. FEMA Urban Search and Rescue Task Forces, comprised of state and local emergency responders, saved or assisted nearly 9,500 lives across the three hurricanes. In total, the hurricanes and California wildfires affected more than 47 million people—nearly 15 percent of the nation's population. FEMA registered nearly 4.8 million households for assistance.

The unprecedented scale, scope, and impacts of the complex combination of disasters, tested the improved capabilities that were developed and as a result of lessons learned from Hurricanes Katrina and Sandy.

Following the 2017 hurricanes, FEMA thoroughly reviewed preparations for the immediate response, and initial recovery operations with the goal of identifying lessons learned which collectively benefit future operations undertaken by FEMA, the emergency management community, and the nation. Key themes which emerged include:

- **Sustained Whole Community Logistics Operations:** The scale and duration of life-saving and sustainment operations showed that FEMA must be ready to support logistics missions that span weeks or months, particularly in remote locations where commodities and equipment are transported by non-traditional methods. Plans and procedures for resource movement and transportation logistics, including the last mile of delivery, must be effectively coordinated with other government agencies, non-profit organizations, and the private sector supply chain.

- **Federally Supported, State Managed, Locally Executed**: FEMA's ability to provide support in disasters builds on, and is subject to, the capacity of SLTT governments. If these governments are well resourced, well trained, and well organized, the effectiveness of FEMA's assistance is enhanced. If the SLTT government's ability to respond--for example, the ability to provide law enforcement, medical support, or commodity distribution—is diminished, then FEMA and its partners must find ways to deliver and support these critical services. FEMA is not traditionally a first responder but had to play a more direct response role following Hurricane Maria.

- **Staffing for Concurrent, Complex Incidents:** When Hurricane Harvey made landfall in Texas, FEMA had staff deployed to 32 presidentially declared disasters across 19 field offices. By the time Maria made landfall, following Harvey and Irma, decisions regarding personnel made in support of one incident had impact to ongoing disaster operations. FEMA and our federal government partners rapidly surged and deployed personnel to support immediate response operations. FEMA also relied on mission assignments and the Surge Capacity Force to supplement our existing disaster workforce, pulling resources and personnel from across federal government departments and agencies.

- **Survivable and Redundant Communications:** Following Hurricane Maria, Puerto Rico's communications infrastructure was so completely devastated that assessing the needs and the capability of the Commonwealth and its municipalities proved extremely difficult. FEMA provided satellite phones to each of the 78 municipalities in Puerto Rico to gather information on municipality impacts and critical needs. However, this short term solution had limited success in addressing overall communications challenges. The private sector played a key role in restoring communications, including cell towers and allowing open roaming services, and remains a critical partner for restoration of communications.

- **Responding during Long-Term Infrastructure Outages:** Too often, we assume the loss of power, communications, and water infrastructure following disasters will be limited in duration. The extreme degradation of critical infrastructure in Puerto Rico and the U.S. Virgin Islands created significant challenges. We need to be prepared for long-term outages of these critical systems, while our SLTT and private sector partners work to mitigate future damages to these vital systems.

- **Land Use Planning:** In Texas, we saw the importance of land use planning and local building codes. New development should be built away from high-hazard areas and

existing structures should be relocated to safer areas when possible to minimize impacts from hazards. It's both how we build and where we build that affect local and regional risk. Land use regulations are a vital resilience tool for local governments and FEMA encourages regional coordination to help make decisions that best reduce risk. Codes and standards are also only as good as the mechanisms in place to enforce them.

- **Disaster Sheltering and Housing:** Providing housing for survivors following the 2017 hurricanes was a challenge, especially when a disaster devastates a community that already had limited affordable housing. Regardless of the readiness of an SLTT government, when dealing with the displacement of tens of thousands of survivors from their homes, there is no easy or one-size-fits-all solution. FEMA has authorities to provide sheltering options including the Transitional Sheltering Assistance (TSA) program that provides assistance to SLTT governments for survivors to stay in hotel rooms, as well as a program that provides for basic and temporary home repairs to make a home safe and habitable while the survivor makes arrangements for more permanent repairs.

  Any sheltering option is, by design, a temporary, short-term solution, designed to be a bridge to middle- and longer-term solutions. We have other programs and authorities that assist with housing, including rental assistance, repair assistance, multi-family lease and repair program, and manufactured housing units. With all of these options, we partner with our SLTT stakeholders to identify the sheltering and housing solutions that make the most sense for each state, each event, each community, and each survivor.

  The State of Texas, for example, is taking a very hands-on approach to managing housing solutions for their residents after Hurricane Harvey. States have a much better familiarity with the needs of their residents, the local laws and ordinances that can impact some of the FEMA housing options, and are better situated to design and administer to the survivors in their communities. Regardless of the tools we are able to provide, however, permanent housing solutions and full recovery needs are best addressed by insurance. FEMA assistance programs are not designed to return a survivor's home to its pre-disaster condition. As we know, though, there are too many people in our nation that are underinsured or not insured at all.

FEMA's 2018-2022 Strategic Plan

Incorporating the knowledge gained from last hurricane season, FEMA's new strategic plan builds on existing best practices and identifies new initiatives geared toward achieving three overarching goals. The three main goals of the FEMA's Strategic Plan are to: 1) Build a Culture of Preparedness; 2) Ready the Nation for Catastrophic Disasters; and 3) Reduce the Complexity of FEMA.

<u>Build a Culture of Preparedness</u>

FEMA is just one part of the team. During a disaster, citizens in the impacted communities also become the first responders. Do they know how to shut off water and gas? Do they check on their neighbors? Do they know CPR? Are they financially prepared to deal with the impacts of disasters in their communities, including having the right insurance for the specific threats they

face, including flooding, earthquakes, and tornadoes? Do they have some modest level of savings to allow them to miss a few days of work without ending up in financial ruin? We need to empower individuals with life skills to help speed the response and recovery efforts.

Developing resilient communities before an incident occurs reduces loss of life and economic disruption. When communities are impacted, they should ensure that they rebuild infrastructure better, tougher, and stronger to protect taxpayer investment and promote economic stability. FEMA is exploring ways to encourage additional investments in mitigation that reduce risk, including pre-disaster mitigation, to help reduce disaster costs at all levels.

While we will never be able to eliminate all risk, we must mitigate the known risks as much as possible. FEMA will work with communities and insurers to close the insurance gap across the nation. Managing risk through insurance, including the National Flood Insurance Program, helps communities to recover faster following disasters and reduces overall costs for taxpayers.

Ready the Nation for Catastrophic Disasters

As this past year has shown, communities must increase their capacity to respond to smaller-scale disasters on a local level. We continue to work with our SLTT partners to increase their capacities to respond to and recover from smaller-scale disasters so FEMA and its federal partners can focus more on readiness and support for catastrophic events.

No level of government can continue to plan, train and exercise for what is easy. We need to prepare for catastrophic events that stress our capabilities. Last year, Administrator Long announced his intent to embed FEMA staff within SLTT partner offices to help provide a continuous and more coordinated FEMA presence to improve customer service and provide targeted technical assistance to help build capacity and address capability gaps. The first FEMA Integration Team was placed in North Carolina this year and the scalable, flexible concept will continue to roll out to other states to help meet their resiliency goals.

As part of FEMA's initiative to ready the nation for catastrophic events, FEMA is emphasizing the stabilization of critical lifelines and coordination across critical infrastructure sectors. Lifelines provide indispensable services that enable the continuous operation of critical business and government functions, and that would risk health and safety or national economic security if not promptly restored. Solutions to stabilize lifelines do not fit within a single construct (i.e. an Emergency Support Function [ESF] or Recovery Support Function), so we must provide cross-sector coordination to effectively stabilize critical lifelines. For example, the critical lifeline of food, water, and sheltering crosses many agencies, community partners, and ESFs, but must be addressed holistically in order to support a community's recovery. Focusing on these lifelines and related impacts will allow decision-makers to move rapidly and will allow better utilization of limited resources to target towards the restoration of critical functions.

Reduce the Complexity of FEMA

FEMA is committed to simplifying our processes and putting survivors first. We are looking at ways we can streamline our assistance programs to make FEMA's programs as clear and easy as possible for survivors and grantees to navigate.

Reducing administrative and bureaucratic burdens will allow survivors and communities to receive federal assistance quicker. Throughout the federal government, there are a number of programs that offer assistance to survivors. We are working with our partners to improve some of these activities to ensure survivors can better navigate these various programs. For example, FEMA is consolidating and updating all FEMA Individual Assistance (IA) policies and program guidance to simplify and streamline information about IA programs.

FEMA employees must have transparency and clarity in the processes and resources they deal with. We cannot implement any of these priorities and initiatives without ensuring that they meet the needs of our survivors. We also need to make sure that we continue to capture lessons learned by FEMA and our partners to meet the needs of survivors with disabilities and others with access and functional needs.

These are the priorities and vision of this Agency. As we examine and further develop these initiatives, we will find that some can be accomplished by existing authorities Congress has already provided to us. There will be some challenges that cannot be solved by administrative action alone. As we identify these challenges, we will work with this subcommittee and the rest of Congress to ensure we move forward in close partnership. I look forward to working with you on our shared goal to help people before, during, and after disasters.

Preparing for the 2018 Hurricane Season & Ongoing Initiatives

As we continue with recovery operations, FEMA is also focused on making sure we are as prepared as possible for the upcoming hurricane season. Combining the lessons learned from 2017, as well as the goals outlined in FEMA's Strategic Plan, the Agency has already taken immediate actions to prepare for the 2018 hurricane season. These steps include:

- ***Updating Plans*** - FEMA has updated hurricane plans, annexes, and procedures for the states and territories.

- ***Staff Movement Prior to & During Responses*** – To improve staffing for incidents, FEMA created Standard Operating Procedures for a Personnel Mobilization Center (PMC), a central location for equipping and training staff prior to disaster deployments. To support the PMC, FEMA is also establishing three permanent PMC core teams in its Field Operations Directorate, and training regional personnel on PMC operations.

- ***Logistical Improvements*** - FEMA made improvements in logistics operations in preparation for the 2018 hurricane season, including increasing planning factors and disaster supplies for the Caribbean such as meals, water, tarps, sheeting, cots, blankets, infant and toddler kits, durable medical kits, consumable medical kits, and generators. FEMA is also adding 300 new emergency generators to the inventory.

- ***National Level Contracts*** - FEMA updated high priority national level contracts, including the National Evacuation Contract, Caribbean Transportation Contract, and National Ambulance Contract.

- ***Disaster Communications*** - FEMA disaster communications is refining tactical and long haul communications, from land mobile radios to satellite communications.

- ***Housing Inspection Process*** - FEMA will modernize housing inspections to improve the survivor experience and streamline the process to lessen the inspection burden for the disaster survivor and better leverage similar efforts across the federal government.

- ***Exercises and Training*** - In May, FEMA sponsored National Level Exercise (NLE) 2018, based on a scenario of a Category 4 hurricane on the mid-Atlantic coast. This exercise brought together more than 12,000 individuals across the whole community to examine the ability of all levels of government, private industry, and non-governmental organizations while testing and validating plans and initial lessons learned from last year. FEMA also coordinated with the Commonwealth of Puerto Rico on a series of workshops, seminars, and functional exercises in June to prepare for this hurricane season.

Conclusion

The 2017 hurricane and wildfire season was and is historic, and continues to shape the future of FEMA and emergency management. By utilizing best practices, adopting new response concepts, and planning and training all emergency management partners to the same standards, we can achieve the goals of building a culture of preparedness and readying the nation for catastrophic disasters. Thank you for the opportunity to testify, and I look forward to any questions you may have.

DEPARTMENT OF THE ARMY CORPS OF ENGINEERS

COMPLETE STATEMENT OF

CHARLES R. ALEXANDER, JR.

DIRECTOR, CONTINGENCY OPERATIONS AND HOMELAND SECURITY

BEFORE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

SUBCOMMITTEE ON ECONOMIC DEVELOPMENT, PUBLIC BUILDINGS AND EMERGENCY MANAGEMENT

UNITED STATES HOUSE OF REPRESENTATIVES

Are We Ready? Recovering from the 2017 Disasters and Preparing for the 2018 Hurricane Season

JULY 18, 2018

Chairman Barletta, Ranking Member Titus and distinguished members of the Subcommittee:

I am honored to testify before you today to discuss the authorities and responsibilities of the U.S. Army Corps of Engineers (Corps) during disaster response and recovery operations and lessons learned during the 2017 disasters. I am Ray Alexander, Director of Contingency Operations and Homeland Security, U.S. Army Corps of Engineers (Corps).

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.

ESF-3 provides temporary emergency power, debris management, and emergency infrastructure assessment. The Corps is also positioned to support other Emergency Support Functions with temporary housing, temporary roofs (Blue Roof program), critical public facility restoration as well as structural specialists to support Urban Search and Rescue missions. The Infrastructure Systems RSF works to efficiently facilitate the restoration of infrastructure systems and services to support a viable, sustainable community and improves resilience to and protection from future hazards.

Under PL 84-99, we prepare for flood, hurricane, and other natural disasters through planning, coordination, and training with local, state, Federal partners. The Corps can also assist state and local entities at their request in flood fight operations or through implementation of advance measures to prevent/reduce storm incident damages. After a major flood, PL 84-99 authorizes the Corps to repair damage to authorized Corps projects, and work with states/municipalities to rehabilitate and restore eligible non-Federal flood infrastructure to pre-storm conditions.

When disasters occur, Corps teams are able to mobilize from across the country to assist the local Corps districts that are responding to the incident. As part of this mission, the Corps has more than 50 specially trained response teams, supported by emergency contracts, to perform the wide range of public works and engineering-related support missions I just described. Additionally, the Corps uses pre-awarded contracts that can be quickly activated for missions such as debris removal, temporary roofing, generator installation, and dredging.

2017 Hurricane Season - The 2017 Hurricane Season was historic and the Corps continues to identify lessons learned in an effort to sustain and improve its emergency response performance.

Hurricanes Irma and Maria - Category 5 Hurricane Irma made landfall over the U.S. Virgin Islands on September 6, 2017, while also impacting Puerto Rico with Category 2 winds, 12 foot storm surge and up to 20 inches of rain. Hurricane Irma made landfall in southern Florida/Florida Keys on September 9, 2017. Soon thereafter, Category 5 Hurricane Maria made landfall over Puerto Rico on September 20, 2017, causing major damage to critical infrastructure and homes. The historic nature of the impacts of Hurricanes Irma and Maria on the U.S. Virgin Islands and Puerto Rico, in addition to affecting states within the continental U.S, resulted in an unprecedented response by FEMA and the family of Federal responders. FEMA identified 49 mission assignments for the Corps to assist in Hurricanes Irma and Maria response and recovery, totaling $3.34 billion for Puerto Rico and the U.S. Virgin Islands. The Corps deployed thousands of dedicated civil servant and military personnel to support the people of Puerto Rico and the U.S. Virgin Islands and still has 369 employees engaged executing recovery operations today. Additionally, the Corps received 43 mission assignments in Florida and in Georgia, for a total of $45 million.

Debris Management: Across the areas impacted by these two storms, these missions resulted in over 5.03 million cubic yards of debris removed, allowing for the freedom of movement by responders and the people impacted by these storms. In Florida and Georgia, the Corps debris subject matter experts also provided technical assistance to many counties.

Temporary Emergency Power: Our temporary power teams installed over 1,350 generators providing emergency power to critical life preserving services like water, medical, energy, communications, and public safety sectors.

Temporary Roofing: Across U.S. Virgin Islands and Puerto Rico, Corps teams installed over 63,000 temporary roofing systems “Blue Roofs” allowing the impacted people the opportunity to leave emergency shelters and return to their homes. The Corps completed over 13,000 blue roof installations in Florida.

Power Mission: The Corps assembled a team of Corps employees, who volunteered to assist in the repair of segments of the Puerto Rico power grid. Working with the Department of Energy, FEMA, the Puerto Rico Electric Power Authority (PREPA), the

Edison Electric Institute, and industry utility companies, they were part of a multi-agency team, which has now, based on PREPA's reporting, restored power in Puerto Rico to 99.93% of the 1,471,960 customers who had power before the storms.

Hurricane Harvey – Hurricane Harvey made landfall along the central Texas gulf coast near Rockport, Texas as a Category-4 hurricane on August 25, 2017. Harvey delivered an unprecedented amount of rain across the greater Houston metropolitan area and southeast Texas, with upwards of 60 inches of rain in some areas resulting in record flooding. During the week of August 25, 2017, the Corps increased the stockpile of flood fight materials in south Texas in anticipation of Tropical Storm Harvey being upgraded to Hurricane Harvey – from 500,000 to 2 million sandbags and 1,500 feet HESCO barriers. The Corps provided over one million of these sandbags to local/state government.

FEMA identified 23 mission assignments totaling $140 million for the Corps to assist in Hurricane Harvey response and recovery. Nearly 1,000 Corps personnel deployed to support response and recovery efforts. Currently, 40 Corps employees are deployed supporting 11 active recovery mission assignments.

In the Bipartisan Budget Act of 2018, Congress appropriated over $17 billion for the Corps to repair and rehabilitate projects across the Nation damaged by natural disasters, to construct flood and storm damage reduction projects, and to complete flood and coastal storm damage reduction studies in multiple states and territories. The Corps has identified specific projects that will receive those supplemental funds and is working to move as quickly as possible to complete the planned work.

California Wildfires and Other Disasters – In response to October 2017 wildfires across northern California, FEMA issued seven mission assignments to the Corps totaling $1.2 billion ESF-3 coordination, debris management and technical assistance missions. Additionally, wildfires in late December 2017 in Ventura and Santa Barbara counties led to an altered and denuded watershed. Rainstorms and flash flooding in the first week of January precipitated into deadly mudslides in Santa Barbara County. In response to those disasters, FEMA issued two additional Corps mission assignments totaling $110 million for the removal of mudslide debris from 11 debris basins and 11 natural channels.

Debris Management: The Direct Federal Assistance (DFA) Debris Mission was the most costly in California history ($956,000,000).The Corps engaged contractors to execute Private Property Debris Removal (PPDR) across Sonoma, Napa, Mendocino and Lake Counties. Because of the requirement to remove foundations due to excessive heat and coupled with environmental ash hazards and contaminated soil, the emergency response was complex and incorporated the expertise of several Federal and State partners, including the Environmental Protection Agency and State of California emergency management and environmental agencies. Debris removal operations began November 2017 and physically ended in early June 2018. Over 2.2 million tons

of debris were removed from over 4,500 properties so that homeowners could rebuild safely.

Temporary Housing: The Corps provided access and use of the Corps Kyen Campground in Mendocino County in order for FEMA to provide wildfire survivors with temporary housing (RVs). Over 900 civilian from the Corps and partnering agencies (such as the Department of Interior's Bureau of Reclamation) volunteered to perform Quality Assurance of debris removal.

Other Disasters – The Corps responded in total to 32 events in 2017. Events outside of the hurricane and wildfire response include the Central U.S. Blizzard, the Bighorn River Ice Jam, numerous flooding events throughout the Nation as well as Lake Ontario High Water and other severe weather events.

Preparing for the 2018 Hurricane Season

The Corps continues with 2017 Hurricane Season recovery operations in Texas, Florida, the U.S. Virgin Islands and Puerto Rico as we focus on making sure we will be able to respond in the upcoming hurricane season and any other natural disasters. Combining the lessons learned and best practices from 2017, the Corps has already taken immediate actions to prepare for the 2018 hurricane season to include:

- Exercises – the Corps has completed hurricane exercises along with its Federal, state, local and territory partners for the gulf and east coasts as well as Puerto Rico. The exercise for the USVI is occurring at this time (July 17-20).

- Real Life Drill – Tropical Storm Beryl provided an opportunity for real life planning and preparations as the Corps postured teams and resources for potential impacts.

- National Level Exercise – the Corps participated in FEMA's intergovernmental and private sector National Level Exercise 2018. This exercise focused on a hypothetical major hurricane scenario, making landfall near Hampton Roads, Virginia.

- Plans – the Corps has updated its hurricane plans, annexes and standard operating procedures.

- Workshops – the Corps conducted workshops to prepare for its ESF-3 responsibilities for temporary emergency power, debris and infrastructure assessments as well as ESF-6 support responsibilities for temporary housing and temporary roofing.

- Pre-scripted Mission Assignments - the Corps worked with FEMA to update and refine 34 ESF-3 Corps Pre-scripted Mission Assignments from 2017 lessons learned, including three newly created ones for Logistic Support, Command and Control Integration and Planning Cells.

• Acquisition Center of Expertise - the Corps is developing an Acquisition Center of Expertise to create a robust, rapid and agile contracting capability to support large, complex missions that involve debris, temporary power, and roofing as well as non-standard contingency support requirements.

• Adjustments to Teams and Resources - the Corps is refitting and resetting teams and personnel (all volunteers) that have deployed extensively over the past 11 months with emphasis on ensuring that it has a ready reserve of personnel ready and trained to respond as necessary.

The Corps also remains fully committed and capable of executing its other Civil Works activities across the Nation – our commercial navigation, flood and coastal storm damage reduction, and aquatic ecosystem restoration missions – in addition to our involvement in these and future response and recovery missions. This concludes my testimony and I look forward to answering any questions you might have. Thank you.

Mr. Patrick Sheehan

Director, Tennessee Emergency Management Agency

STATEMENT FOR THE RECORD

On behalf of the
National Emergency Management Association

Submitted to the House Transportation & Infrastructure Committee
Subcommittee on Economic Development, Public Buildings, and Emergency Management

"Are we ready? Recovering from the 2017 Disasters and Preparing for the 2018 Hurricane Season"

July 18, 2018

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Introduction

Thank you, Chairman Barletta, Ranking Member Titus, and distinguished members of the Committee for allowing me to testify before you today.

I am Patrick Sheehan, Director of the Tennessee Emergency Management Agency, and am proud to be here today representing the National Emergency Management Association (NEMA) where I serve on the Board of Directors as the Vice-President for the southeastern states. NEMA represents the state emergency management directors of all 50 states, territories, and the District of Columbia. On behalf of my colleagues in state emergency management, we thank you for holding a positive discussion on the 2017 disaster season while also looking forward to preparedness for 2018 and beyond.

Even though Tennessee did not experience impacts of the same severity from the disasters of last year, every state, whether directly or indirectly, is involved in the response and recovery efforts related to hurricanes, flooding, wildfires and other events across the country in 2017 and we are eager to discuss how this experience can inform next steps.

The 2017 Disaster Season

While the 2017 disaster season ended with headline-grabbing events, the year began with many states still recovering from disasters that struck in 2016, including extreme drought and a series of fires that caused tremendous damage and losses in eastern Tennessee. Shortly after my June 2016 appointment a direct the Tennessee Emergency Management Agency, an extreme drought began and hundreds of fires, some small and some large, started burning throughout much of the state. Tennessee ended up receiving four Fire Management Assistance Grants (FMAG) for some of the most complex and damaging of those fires, Tennessee's first FMAGs in more than 15 years, and including the most notable fire that began on the Chimney Tops are of the Great Smoky Mountains National Park on Wednesday, November 23. By Monday, November 28, winds of 80 miles per hour pushed the fires into the Sevier County and into the cities of Gatlinburg and Pigeon Forge. The winds pushed the flames down the mountains, creating created various spot-fires miles away and snapped power poles and power lines causing additional fires. Entire subdivisions were destroyed, pumping stations were burned causing hydrants to dry out, and the 911 system in Gatlinburg was overloaded. Ultimately, 14 people died, 134 were injured, 17,904 acres of land were burned, and 2,600 buildings were destroyed. These Great Smoky Mountains wildfires were considered the deadliest wildfires in the Eastern United States since 1947.

This disaster, however, presented numerous opportunities for TEMA to work with other departments and organizations and to engage with non-traditional partners. Utilizing Geographic Information System (GIS) Mapping Technology and damage analysis we more efficiently assessed the damage of the affected areas of southeast Tennessee. We used the geospatial analysis to determine how many residential and commercial buildings were destroyed, and how to classify the buildings as well. We, local, state, and federal agencies, released our data on Sevier County to the public in the form of an interactive map that citizens could use to seek information about the damage in their communities.

One lesson from this disaster was learning how to better engage with partner agencies and organizations. This was crucial to gaining the GIS information, but also for our agency's response in general. From the

U.S. National Parks Service to the Tennessee Housing Development Agency, we sought support from dozens of federal and state entities. So, whether a massive hurricane sailing through the Gulf of Mexico, or fires cascading from the hills of Tennessee and California, each disaster provides a new glimpse into how we respond to these hazards of Mother Nature.

Emergency managers judge the size and scope of a disaster season based on the numbers of disaster and extent of the damage. By those metrics, 2017 was a significant year for us. Overall, emergency managers dealt with 59 major disaster declarations, 15 emergency declarations, and 63 fire management assistance declarations last year. These disasters impacted 33 states and two territories, bringing the overall total to 137 declarations, the most since 2011.

According to the National Oceanic and Atmospheric Administration (NOAA), the U.S. had 16 disasters last year with damage exceeding a billion dollars. Hurricane Harvey was the strongest hurricane to hit the coast since Hurricane Wilma in 2005 and the fiercest to strike southeast Texas since 1961. According to NOAA, the nation spent $125 billion on Harvey, second only to Hurricane Katrina of 2005. Just a few weeks later, Hurricane Irma, the most intense Atlantic storm since Katrina, impacted Florida and many islands in the Caribbean, including Puerto Rico and the U.S. Virgin Islands. This storm ranked third on the list of most expensive hurricanes, costing the nation $90 billion, according to NOAA. Weeks after Irma, Hurricane Maria delivered a devastating second punch to Puerto Rico, the Virgin Islands, and elsewhere. Ranking fifth on the all-time list, the estimated cost was $50 billion, as stated in NOAA's "Billion-Dollar Weather and Climate Disasters: Overview."

The year also brought more than a dozen western wildfires, which ravaged tens of thousands of acres across Northern California. In December, the massive Thomas fire in Southern California ranked as the state's largest-ever wildfire, scorching more than 280,000 acres, or 440 square miles. These wildfires added $18 billion in damage, triple the previous wildfire record in the United States.

To top off the year, 2017 was also the third hottest year for the lower 48 states in U.S. records, which date back to 1895. Only 2012 and 2016 recorded higher temperatures. This was the third straight year that all 50 states had above average temperatures for the year. Five states, including Arizona, Georgia, North Carolina, South Carolina and New Mexico, had their warmest year ever.

After every disaster and every year, we embrace the opportunity to reflect on what went well and those areas requiring improvement. As you look across the disaster landscape in 2017, overall the system worked, but some obstacles, some familiar and some new, had to be overcome:

- **Setting Expectations.** Citizens across the country as well as political leadership must understand the roles and responsibilities in responding to and recovering from disasters. The Federal Emergency Management Agency (FEMA) is not a first responder, and the Governor maintains ultimate authority over managing the disaster, but without robust local emergency management, the execution of programs and projects will falter. Furthermore, we must set expectations in what federal programs can, cannot, should, and should not be able to accomplish.
- **Alerts & Warnings.** In addition to the physical disasters which swept the nation, we saw several examples of missteps in utilizing alert and warning systems. The management of these systems,

however, varies from state to state, so Congress should carefully consider any broad, sweeping changes as any issues may be isolated to specific instances.

- **Ensuring Public Certainty.** One of the most sensitive issues post-disaster is managing housing programs. In 2017 we saw states such as Texas take bold steps in managing their own housing programs. Unfortunately, we also saw some areas for improvements in national housing programs and sheltering. Even if the programs are found to be satisfactory, we must consider how best to communicate and manage the relocation of thousands of citizens, and also carefully explain the intent of assistance programs which aim for ultimate repatriation.

Empowering States to Assist One Another

A critical part of response and recovery to disasters is the Emergency Management Assistance Compact (EMAC). Through EMAC states share resources with one another for all hazards and all disciplines – leveraging federal grant dollars invested into building capabilities by utilizing them for national response efforts and taking those experiences back home to improve their own plans and procedures.

Since EMAC's ratification by Congress in 1996 (Public Law 104-321), the Compact has grown to include all 50 states, the District of Columbia, the U.S. Virgin Islands, Puerto Rico, and Guam. States rely on EMAC for swift response during emergencies and disasters, using pre-established plans and procedures to implement the system.

When Hurricane Harvey hit Texas, the state emergency management agency, responsible for implementing EMAC in each Member State on behalf of their Governor, brought in 4,895 personnel from a variety of disciplines to assist. My own state, Tennessee, sent Search and Rescue and animal response resources. Other states sent incident management teams, volunteer and donations management specialists, public health and medical resources, search and rescue and law enforcement. Alabama, Arizona, Arkansas, Colorado, Delaware, Georgia, Iowa, Kentucky, Louisiana, Massachusetts, Michigan, Minnesota, Mississippi, New Jersey, New Mexico, Nebraska, Nevada, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Utah, and Vermont and Virginia deployed National Guard though EMAC for critical support of search and rescue, evacuation, transportation, shelter support and hazmat response.

Even when managing the response to a disaster the size of Harvey, Texas found a way to find innovative solutions to existing processes. To ensure assisting states received reimbursement quickly, Texas took a bold step in managing EMAC reimbursements by offering a 75 percent advance of reimbursement to the assisting state. This significantly shortened the length of time assisting states waited to receive reimbursement. Texas' pre-planning and preparedness put the state on a strong footing for the event as they had pre-identified the resources needed and the states that would provide the resources for immediate response.

Weeks later when Hurricane Irma caused billions of dollars of damage to Florida and the U.S. Virgin Islands, states again sent resources from a multitude of disciplines providing assistance through EMAC. In addition to the types of resources deployed for Hurricane Harvey, Florida received Water and Wastewater Agency Response Network assets from South Carolina, Tennessee, and North Carolina to restore water lines destroyed in the Florida Keys. Pennsylvania provided public assistance expertise. Georgia and South Carolina who had received EMAC teams prior to the storm based upon the predictions

turned into assisting states, providing incident management teams, telecommunications personnel, public health and nursing support for shelters, and National Guard assets. A total of 5,631 personnel with equipment mobilized in response to Hurricane Irma.

While the response was initially delayed due to communications and the initial logistics of moving resources across an ocean, states provided a robust response through EMAC to support resource requests from the U.S. Virgin Islands and Puerto Rico. Illinois deployed National Guard teams to be self-sufficient with sleeping bags and MRE rations knowing the inhospitable environment in which they were deploying. While missions are still ongoing today in the U.S Virgin Islands with the deployment of EMS from Arkansas and the joint deployment of a mobile medical hospital between North Carolina and New Jersey, in total, states sent 359 personnel and equipment to the U.S. Virgin Islands and 5,706 personnel and equipment to Puerto Rico in response to Hurricane Maria. New York leads the Puerto Rico response with the deployment of over 2,800 personnel and equipment.

States also sent teams to FEMA's National Response Coordination Center and the Regional Response Coordination Centers to coordinate the state response through EMAC with the federal response. The first team to stand up the EMAC liaison desk was from the District of Columbia. These teams worked with FEMA to garner critical support for transportation to both the U.S. Virgin Islands and Puerto Rico as well as housing for first responders.

At the same time states were responding to Hurricane Harvey, Irma, and Maria they also sent resources to Oregon, Montana, Nevada, California, Virginia, Kansas and Colorado in support of cyber-response, wildfires, the Las Vegas shooter incident and other events. Today, states are currently supporting lava events in Hawaii and flooding in Maryland.

In total, 19,196 personnel deployed through the EMAC from August 2017 to July 2018. Of those, 16,606 were in response to the 2017 Hurricanes. The stories coming out of these events are truly humbling. Teams sleeping in hotels without hot water or electricity so they can help to bring in resources. Law enforcement working long shifts to maintaining order. A team deployed into Puerto Rico with the ability to identify a critical agriculture issue and write an application that would yield a $12 million grant to Puerto Rico from the United States Department of Agriculture (USDA). Medical, public health, and EMS personnel deployed into challenging situations able to overcome obstacles to save lives. Search and rescue resources conducted house-to-house operations to save lives.

EMAC is a testament to states helping states and the successes of continual improvements to plans and procedures. In May, NEMA conducted an after-action conference from the EMAC events of 2017. While the report is still being drafted, we will share a copy to the Committee as soon as it becomes available which we expect to be in the next month or so. Even though the report is not yet done, as we move into the 2018 hurricane season, states continue integrating lessons learned into future planning and preparing to help one another once again when the need arises.

Building Capacity for 2018 and Beyond

When considering how best to prepare for the next disaster season, any changes to policy, statute, or processes must be done with an eye toward comprehensive solutions. For example, efforts such as the Disaster Recovery Reform Act (DRRA), introduced by this Committee, and now passed twice by the

House of Representatives, presents a clear roadmap of reforms to strengthen the emergency management community. Several key provisions of the DRRA stand-out in helping emergency managers take the next step in ensuring resilience.

- **Management Costs.** The legislation raises the amount currently available for management costs from 3.34 percent to 12 percent. This critical increase will allow states and locals to take on more responsibility, but as that shift occurs, the roles and responsibilities between federal, state, and local emergency managers must be well-defined. Furthermore, for this shift toward collaborative disaster management to be truly effective, FEMA should conduct a rulemaking to allow for management costs to roll-over from one disaster to another.
- **Pre-disaster Mitigation.** The commitment to pre-disaster mitigation in the DRRA is encouraging. By allowing six percent of disaster costs to go toward pre-disaster mitigation through the National Public Infrastructure Pre-disaster Hazard Mitigation Program, this nation will fundamentally shift the preparedness paradigm and drive down the long-term costs of disasters. Especially when coupled with the new finding that mitigation saved $6 for every $1 of investment, this provision will have long-lasting impacts.
- **Mitigation for Wildfire Prevention.** Since first included in the FY15 Appropriations bill, NEMA remains supportive of allowing FEMA to award Hazard Mitigation Grant Program (HMGP) funds to Fire Management Assistance Grant awards.

We appreciate the time and effort Members of the Committee and their staff dedicate to working with us in making small changes to some provisions as well, and look forward to finalizing those as the bill continues moving through conference this summer.

While we embrace much of what the DRRA offers, Members of Congress can also point to existing programs as ways in which the nation supports a culture of preparedness. Preparedness capabilities are critical to state, local, and tribal level emergency management systems. The inclusion of "preparedness" as a goal in the FEMA strategic plan is promising but does not match with the Administration's budget proposal to cut grants to states and locals that would aid in building preparedness capabilities.

Beyond the 2017 federally declared disasters, 22,552 events required state assets, while local assets supported 12,557 additional local and tribal events. FEMA is not a first responder during disasters, so without a thriving state and local emergency management system, many of these 35,109 events would likely have required costly federal support. Furthermore, strong capacity at the state and local levels allows FEMA to achieve the stated goal of disasters being "locally executed, state managed, and federally supported."

One of the key ways in which emergency managers build capacity is through programs such as the Emergency Management Performance Grant (EMPG). With a one-to-one matching requirement at the local and state levels, this program represents one of the best values in federal spending. EMPG continues as a critical driver of progress and success made across the country in preparing for, responding to, and recovering from all hazards. The program's success is shared by all levels of government and relies heavily on the continued, and decades-long, commitment of Congress.

In 2017, the federal investment in EMPG was $350 million — a little more than $1 per citizen — and with the match requirement and additional state and local investment, the return on investment exceeded

$700 million and was felt in communities from Maine to California. Every investment the federal government makes is matched dollar-for-dollar and, in most cases, states, locals, and tribes match even more, illustrating that any cuts to EMPG funding will have far-reaching and long-term impacts on readiness. In almost every category of positive community impacts the EMPG creates, emergency managers at the state and local level report improvements since last year's programmatic data.

For these reasons in FY19, NEMA joined with colleagues of the International Association of Emergency Managers (IAEM), representing local emergency management, in requesting a modest five percent inflationary increase for EMPG to $368 million. Given the matching requirement of EMPG, many of which states and locals far exceed, this $18 million increase will have a combined impact totaling at least $36 million nationwide. Few other federal programs can demonstrate that rate of return. While Congress did not act on this request in the FY18 Omnibus, we continue to emphasize the importance of this program and the need for additional funding in FY19.

While we will continue to advocate for an increase in this important program, small changes can also be made through regulation to allow states and locals to build more emergency management capacity.

When managing disaster declarations, states and locals coordinate billions of dollars in Federal grants through FEMA. To help offset administrative requirements of these grants, FEMA regulations allow recipients to utilize a percentage for management costs. These management costs, however, are limited to each specific disaster and regulations do not allow grantees to economize by managing workloads across all open disasters. FEMA should allow grantees to utilize management costs across all open disasters which will ensure the building recovery and mitigation capacity; incentivize disaster close-out; and drive down the costs of disasters.

In June, NEMA and IAEM came together and submitted a proposal to FEMA on implementing this change, a copy of which is being included with this statement for the record. While this could be done administratively, Congressional persuasion often goes a long way toward affecting change, so we would appreciate any such support the Committee would be willing to provide.

Conclusion

On behalf of the state emergency managers, thank you again for holding this hearing and drawing attention to the needs of our community. Often in the wake of a major disaster or series of disasters; judgment is cast on federal programs and perceived successes or failures sometimes even before the flood waters retreat. As you examine the response to events such as those in 2017 and look to make changes to federal programs, before criticizing the response to an event, remember we are all in positions of trust, placed here by the people we serve. While it may be convenient to look to FEMA and heap praise or condemnation, even when they are not actively responding to a disaster, state and local emergency managers are still recovering from the last event and conducting the planning, building the capacity, and setting the stage for the next storm to approach, all while working diligently to implement and manage complicated federal programs.

Written Statement for the Record

Mistie Gardner, CEM
Emergency Management Coordinator
City of Richardson, Texas

On behalf of the U.S. Council of the
International Association of Emergency Managers (IAEM)

For the hearing:
"Are We Ready? Recovering from the 2017 Disasters and
Preparing for the 2018 Hurricane Season"

Before the Committee on Transportation and Infrastructure's
Subcommittee on Economic Development, Public Buildings, and Emergency Management
U.S. House of Representatives

July 18, 2018
Washington, D.C.

Thank you, Chairman Barletta, Ranking Member Johnson, and members of the U.S. House of Representatives' Committee on Transportation and Infrastructure's Subcommittee on Economic Development, Public Buildings, and Emergency Management for this opportunity to testify on lessons learned from the historic 2017 disaster season to help guide our readiness for 2018 and into the future.

My name is Mistie Gardner, Emergency Management Coordinator for the City of Richardson, Texas. I have worked in public safety for 23 years, and I have been a Certified Emergency Manager for 10 years. I appear before you today as a representative of the U.S. Council of the International Association of Emergency Managers.

The International Association of Emergency Managers (IAEM), comprised of more than 6,000 emergency management professionals worldwide, is a non-profit educational organization dedicated to promoting the "Principles of Emergency Management" and representing THE profession dedicated to protecting America's local communities from all hazards and threats, natural and man-made.

Local governments serve as our nation's first line of defense when disasters strike. Immediately following a disaster, local responders, including emergency managers, are first on the scene and play a key role in coordinating local response and recovery efforts, working to mitigate further damage from disasters. In the aftermath of disasters, we coordinate and help fund clean-up, recovery, and rebuilding so our residents can return to their lives as quickly as possible. All disasters begin and end locally.

But, the most consequential work of local emergency managers actually happens BEFORE a disaster strikes. Emergency managers wake up every day thinking about and planning for the next disaster because hurricanes, public health emergencies, earthquakes, active shooters, floods, tornadoes, and technological hazards are going to happen, and usually with little-to-no notice. During times when we aren't responding to an emergency, emergency managers are hard at work behind the scenes, every day and in all levels of government and in all sectors of the nation, to help our communities become better prepared.

The 2018 hurricane season is already upon us, and numerous disasters have already struck the nation. I want to take a moment to look back at lessons learned during last year's epic hurricane season. I hope to contribute to the discussions Congress and FEMA are having about reforming our Nation's systems of disaster recovery. Ultimately, it is the hope of IAEM that Congress will pass the Disaster Recovery Reform Act (DRRA) as a demonstration of the federal government's commitment to supporting pre-disaster mitigation and helping to develop a culture of preparedness in which we are all more resilient to the impacts of disaster.

From August through October 2017, in response to Hurricane Harvey, I worked on a variety of different missions. On my first deployment, I served as the Emergency Operations Center Manager for the City of Dallas to help coordinate the sheltering of approximately 5,000 evacuees. During my second deployment, as a member of the Texas Emergency Management

Assistance Team (TEMAT), I worked in the State Operations Center to coordinate Public Works resources from around the State including 188 personnel to 28 impacted locations. I also helped process 450+ Memoranda of Understanding (MOUs) for response personnel statewide including 60 emergency management personnel deploying to 16 impacted jurisdictions. And, finally, I was deployed to the Victoria Disaster District as part of a Recovery Assistance Team supporting the recovery needs of 7 jurisdictions, including help with Public Assistance, Debris Management, and Damage Assessment. Based on my experiences, I offer the following thoughts to help provide context to the Subcommittee's deliberations and for the good of all emergency management stakeholders.

Information Sharing During a Disaster

Several information-sharing challenges have presented themselves from prior disasters and were again experienced during Hurricane Harvey. The "right to know" clause in many of the overarching policies needs to automatically include emergency management personnel. For instance,

- Local jurisdictions are responsible for providing safety for patrons at a public shelter. However, if jurisdictions utilize non-governmental assistance such as the American Red Cross (ARC), the assisting organization cannot share the registration information with the local government. Thus, the local law enforcement agency does not have adequate information by which to check criminal history, warrant information, or even the sex offender database of those staying in shelters meaning there is no visibility for local officials to protect shelter residents from violent offenders.
- Granting the Federal Emergency Management Agency (FEMA) flexibility to provide information to local governments related to the programs FEMA is offering in assistance and housing programs would alleviate a lot of confusion and frustration. Due to Federal Privacy Act (1974) restrictions, FEMA is not allowed to provide information to local jurisdictions about FEMA applicants unless a written consent is given. While this waiver could be obtained, it isn't routinely done resulting in FEMA staff who are not afforded the latitude to share this information with local emergency managers. Without knowledge of services FEMA is providing, emergency managers have NO ground truth about the remaining impacts on our citizens and what services that local governments COULD provide to address the gaps in FEMA assistance.
- No requirement exists for communication service providers to share information with local governments for the sole purpose of emergency/disaster warning communications. While many jurisdictions have systems in place to warn the public and provide emergency information, the only information we can ascertain directly is "land line" information. This does not include cellular telephone numbers, satellite or Voice Over Internet Protocol products. The existing laws allowing the sharing of emergency number information has not kept up with the technology. In my jurisdiction alone, we

are losing 1,000 numbers per year on average due to citizens' migration from the "land line" service, to virtual and cell service only options. We do not have a way to access this data directly and most service providers see it as proprietary. As a result, citizens must register their numbers with us in order to receive life-saving emergency information. We work to educate the public regarding this fact but competing messaging and systems cause confusion for the public. While the Integrated Public Alert and Warning System (IPAWS) specifically fills a gap for widespread disasters and provides life-saving information of its own, the extensive nature of how warnings are distributed through the system causes confusion for the public because IPAWS messages cannot be limited to a geographic area. Thus, local governments cannot use IPAWS for localized warning information and especially for pre-disaster or preemptive messaging. In this context, if a local government uses IPAWS for a localized emergency it can easily cause citizen confusion, frustration as well as the unintended consequence of warning apathy. Truth be known, depending in which state one resides, many local governments do not have the authority or mechanism to directly activate IPAWS due to these limiting factors. All the while, IPAWS public service announcements rightly promote the use of the system for public warning and reference local governments' ability to activate the system for this purpose. The result, citizens are confused about the need to register for local notification systems. In the end, systems which are all meant to serve the public are inadvertently working against one another. We could mitigate these challenges if emergency managers are afforded direct access to public communication information for emergency messaging purposes.

FEMA Intermittent and Contract Recovery Employees:

Because of the intermittent nature of disasters requiring FEMA disaster recovery assistance, FEMA utilizes personnel who are temporary employees or contracted employees. These FEMA representatives sometimes provide misinformation to local governments contradicting the published Public Assistance guidance requirements. In prior disasters, locals have paid the price for taking guidance/instructions from the federal and state contract personnel who are sent to them as "experts." This has resulted in attempts to recover funds from a local jurisdiction that were applied for in good faith and on the guidance of good-intentioned contract staff. A change in the Stafford Act could remedy this unexpected hardship on locals from recoupment of funds if the jurisdiction were allowed to provide written evidence of erroneous guidance provided by contracted recovery staff.

Adequate Shelter Facility:

Local jurisdictions who are inland that support coastal evacuations do not have essential resources to shelter evacuees in a timely manner. A mechanism to improve this condition would be allowing local governments to utilize mitigation funds to build shelter capacity inland. Revision to the Stafford Act to allow local jurisdictions to house evacuees in all available shelter options is necessary. Currently, we are prohibited by federal statute from housing evacuees in

anything other than congregate shelters. Allowing the flexibility to house in church camps, dorms, camping cabins and other private or semi-private locations and still be eligible for Public Assistance reimbursement would build shelter capacity significantly.

Environmental and Historic Preservation (EHP) Process:

While this process is valuable and beneficial, the current method of use is ineffective and wasteful. Local, state, and federal staff waste time and money due to the extent to which these are currently required. For example, once we complete the next grant project, we will have completed 6 EHPs for the same location, our local Emergency Operations Center (EOC). The first one was obviously important when we were building the facility and grant dollars were going toward the capabilities within the structure. However, once a structure is built, thought should be given to limiting the types of work that require an EHP. We have had to do full EHPs for things such as installing a replacement display on an existing wall and installing an AV component into an existing AV Rack within a server room. I do not believe the intent of this policy was to require this type of review, but the interpretation of the policy is forcing this issue. Thus, updates and clarifications of policy can prevent this type of over-use and would be helpful, saving time and money at all levels of government.

Public Assistance vs. Mitigation Projects:

Public Assistance allows for a damaged structure to be repaired to "pre-disaster" condition, taking into consideration current building code requirements. Then, the jurisdiction may apply for Section 406 funding to take sustained actions to reduce or eliminate long-term risk to human life/property from a hazard event. While it is allowable to combine the two, it typically adds significant delays to the repair of a critical facility. If the process could be streamlined for 406 mitigation funds to work more efficiently with general PA projects, this issue could be alleviated and the rebuilding process would be more efficient for the locals as well as the State and FEMA who are trying to administer the funds. Additionally, it would make significant impacts toward local mitigation efforts if part of the Program Delivery Manager's scope was to provide clear guidance on the benefits and best way to leverage 404 versus 406 Mitigation funds. Opportunities are not fully realized if locals are not aware of the potential for mitigation projects. This would save money in the future by preventing duplication of efforts and allow more strategic use of funding to shorten timelines to create resiliency and positively impact mitigation efforts.

Cost/Benefit Analysis:

The current Cost/Benefit Analysis (CBA) does not evaluate to the extent needed, impacts to either environmental or social areas. These areas, admittedly difficult to measure, play an important part in both mitigation and recovery. FEMA has a precedent for including multiple factors to determine assistance, such as the factors for Individual Assistance. A similar process could be employed beyond a limiting numeric measure with the CBA. The integration of a multi-criteria benefit analysis could help to identify a broader range of potential mitigation

measures and look beyond the CBA to other factors to positively impact an areas' ability to protect against future hazards and threats. As a start, a provision in 406 and PDM to allow for a preference for multi-jurisdictional hazard reduction regardless of the CBA would be helpful. For instance, a flood control project spanning an entire stream over multiple jurisdictions versus a single larger, more populated jurisdiction making improvements to only one small section of that same stream has farther-reaching improvements even though the CBA may not be as high.

Increase in Pre-Disaster Mitigation Grants: Congress should increase its commitment to disaster readiness and resiliency by authorizing and appropriating more funding for pre-disaster mitigation as well as by increasing the range of projects in which jurisdictions can apply and use that mitigation funding. The more jurisdictions are able to do ahead of a disaster, the stronger the resiliency after a disaster. To compare, in 2017 PDM for the **Nation** was $90 million. For Harvey alone, the State of **Texas** has been allocated $1 billion, with $500 million up front. Given Harvey's unprecedented nature, the post disaster mitigation funding is crucial without a doubt. However, if Congress would increase pre-disaster mitigation funding each year, the cost of disaster mitigation funding after the fact would undoubtedly be lessened. Jurisdictions typically know the appropriate and most cost-effective pre-disaster projects to undertake. These projects could have exponential mitigation benefits ahead of a disaster with more time to plan and implement protection elements before citizens are hurt by disaster. Unfortunately, with the currently limited nature of pre-disaster mitigation funding, they often must wait for post disaster funding to support completion of these projects.

In closing, I sincerely appreciate your giving me the opportunity to share my thoughts about the response to Hurricane Harvey. Some of the suggestions I provided may not be directly applicable to the work you are doing in drafting the Disaster Recovery Reform Act, but I hope my testimony will help foster a discussion among all emergency management stakeholders as we all strive to improve the way we, as a Nation, respond to disasters. It is my hope that we will learn from the lessons of 2017 in order to make our communities safer and more resilient in 2018 and beyond.

Thank you, Chairman Barletta, Ranking Member DeFazio, and to all members of this Subcommittee.

Written Testimony of Robert David Paulison

Former Administrator, Federal Emergency Management Agency

On behalf of

The BuildStrong Coalition

before the

U.S. House of Representatives Committee on Transportation & Infrastructure
Subcommittee on Economic Development, Public Buildings, and Emergency Management

Wednesday, July 18, 2018, 10:00 AM

2167 Rayburn House Office Building

Chairman Barletta, Ranking Member Titus, and distinguished members of the Committee, I would like to thank you for holding this important hearing today assessing the recovery from last year's litany of disasters and preparing for the upcoming Atlantic Hurricane Season. I continue to be grateful for the leadership demonstrated by the Chairman and Ranking Member and for the opportunity to share my expertise with the Committee on behalf of the BuildStrong Coalition.

I have over 40 years of experience dealing with natural disasters at the federal, state, and local levels. During my career, I served as Administrator of FEMA from 2005 to 2009, Administrator of the U.S. Fire Administration from 2001 to 2005, Director of Preparedness at FEMA from 2003 to 2004, and Fire Chief of the Miami-Dade Fire and Rescue Department from 1992 to 2001. I spent the 21 years prior to that rising through the ranks of the Miami-Dade Fire Department, beginning my career as a rescue firefighter in 1971. I have a deep appreciation for the tremendous service of our nation's first responders and emergency management officials.

I have previously shared with members of this Committee my experience with the devastation caused by major hurricanes like Andrew in 1992 and Katrina in 2005. These experiences I provided me with a unique understanding of the inherent problems with our nation's disaster preparedness and response system and how we can better position FEMA to respond when a disaster strikes. Last year was a particularly devastating one for disasters, with seventeen named storms during the Atlantic hurricane season totaling over $200B in damages and a death toll in the thousands according to some estimates.

I would like to congratulate FEMA on their performance in 2017 in response to these disasters. Having sat in the Administrator's chair, I know well the challenge Administrator Long and his entire team faced. In total, the hurricanes and California wildfires affected more than 47 million people — almost 15 percent of the nation's population. FEMA registered nearly 4.8 million households for assistance, an impressive performance. I also know that disaster recovery, no matter how well executed, is only part of the solution.

These are astounding numbers, and our focus should remain on helping those who have lost so much. But it is beyond time to give serious consideration to why we continue to leave lives, homes, and communities vulnerable. The evidence is overwhelming. Better land use, modern science applied to home construction, and increased mitigation measures can dramatically reduce the devastation brought by these disasters. We must find a way to incentivize and reward with the appropriate level of funding communities who invest in resiliency and stronger building codes, and who make smart pre-disaster mitigation efforts.

The cost-share provision included in the Bipartisan Budget Reform Act signed into law by President Trump earlier this year — as part of the Disaster Recovery Reform Act passed by this very committee — represents a major step forward in creating these incentives. However, this measure should only be the beginning.

With another busier-than-expected hurricane season ahead, we have our work cut out for us. Looking ahead, members of Congress should have a great deal of urgency in getting the entire Disaster Recovery Reform Act, include the helpful measures not passed into law, to the

President's desk. Also before us, however, is FEMA's task in effectively and efficiently implementing the aforementioned cost share adjustment provision passed into law.

Let me make clear that I applaud FEMA for their serious consideration of this measure and their willingness to embrace challenging task in ensuring its implementation. With that in mind, I believe it is important for those in charge to weigh a few key considerations.

While perhaps obvious, the purpose of the cost share incentive — that the extra payment beyond the existing federal cost share should reward states that take measures that will reduce their exposures to vulnerabilities identified in their mitigation plan — should help inform any future decisions.

It will also be important to examine whether the actions taken by states actually had an impact on reducing future disaster losses. After all, if states are to be rewarded with extra disaster funding, the criteria by which they receive those funds must be based on actions that will directly impact disaster losses.

Further, the task of establishing what the actual baseline standard should be for states to receive the minimum 75% cost share from FEMA will be crucial. Any extra funds received as part of the additional 10% outlined in the incentive provision should go to states that take action beyond this agreed-upon base standard.

Taking these core considerations into account, I would like to offer four specific recommendations that, based on my experience, I believe would be effective in informing FEMA as they work to implement this provision and begin the process of reversing our current backward approach to disaster mitigation.

1. **Establishing a Pilot Program.** The cost share incentive should be established as a FEMA pilot program to ensure maximum flexibility and speed of enactment. This program should not be subject to full federal rule making procedures that will delay its deployment.

   A minimum standard should be established such that, in order to be eligible for enhanced federal cost share, a state must have a statewide building code with an enforcement mechanism. FEMA should develop a score to measure the effectiveness of the code, which states would have to meet at a minimum level. This would exist as a simple "yes" or "no" answer for any consideration of additional funds (i.e. if "yes," then proceed to the next step; if "no," then there will not be any consideration for additional funds).

   While not part of the current measure, I propose consideration that in the future, a "no" answer could lead to a reduction of the 75% baseline share.

2. **Requiring a State Mitigation Plan.** A state must have a working mitigation plan that identifies top vulnerabilities and the steps a state must take to reduce these vulnerabilities. Having such a plan would be in the minimum requirement category and one of the previously-mentioned "yes"/"no" answers for consideration of additional funds.

3. **Taking Action on Loss Reductions.** In order to receive any funding above the 75% minimum amount, states must implement actions identified in their state mitigation plan and building code. These states would have to demonstrate concrete actions taken toward mitigation future disaster losses in order to earn the additional funds, but they would not have to take *all* actions identified in order to achieve added disaster funding. States could earn these funds even if they did not have all aspects of the current recommended code as long as the extra measures adopted are deemed impactful to mitigate against loss of life or property. While it would be encouraged and rewarded for states to take every step available, I understand that only so much is achievable for certain communities. Those unable to do so should not be punished if they are able to hit some milestones but not others.

   Another important caveat is that all extra funds received by a state must be used for mitigation purposes, not for response and/or recovery efforts. Allowing as much would be a regression to the increasingly ineffective system already in place.

   These identified actions would be assigned a weighted system that could use a measure such as the Insurance Service Office (ISO) Build Code Effectiveness Grading Schedule, also known as BCEGS, in addition to other credit calculation tools.

   This overall incentive structure should include the following criteria:

   i. Building Codes: Adoption of the most recent recommended building code and maintaining a model code no older than 6 years; Implementing changes to state and local building codes that address key vulnerabilities identified in a state's mitigation plan.
   ii. Life Safety: Adding life safety code enhancements such as a residential sprinkler requirement, other fire suppression measures, non-flammable standards, and other life safety requirements to building codes. As lives are on the line, we must also provide incentives for states to promote fire sprinklers and insist that that code officials get the nonflammable and seismic standards right and that they are enforced.
   iii. Infrastructure: Assessing the necessary public/private infrastructure protection measures for flammable, seismic, and other resilient and life safety code requirements for pre-disaster prevention and a faster recovery post-disaster, in addition to any steps taken to implement those protections.
   iv. Tax Credits: Providing tax credits or other tax incentive programs to encourage consumers or states to take actions to strengthen property against vulnerabilities identified in a state mitigation plan for both existing properties and new construction.
   v. Education: Educating contractors and consumers on actions they can take to strengthen properties.
   vi. Post-Disaster Assessment: Providing a method for determining how a state will handle an increased need for building code enforcement resources following a disaster.

vii. Public Building Insurance: Insurance coverage for public facilities, assets, and infrastructure.
viii. Building Code Effectiveness Grading Schedule: Local and state participation in the BCEGS standard.

4. **Focusing on Achieving Significant Impact.** Finally, it will be critical to push for incentives offered to be housed in state mitigation plans and building codes that can achieve a significant impact as scored by BCEGS or a similar system as previously mentioned. This would mean the adoption of the most recent recommended code and maintaining a model code no older than the last six years. It would also mean implementing changes to state and local building codes that address key vulnerabilities identified in a state's mitigation plan.

The passage of the cost share adjustment provision in Disaster Recovery Reform Act is a major accomplishment. The work of this Subcommittee — including that of you, Mr. Chairman — as well as the work of other leaders, such as Chairmen Shuster and Denham, should not be overlooked. However, I urge you to continue your tireless efforts on this issue and apply them toward passing the outstanding provisions in that bill, including the measure that would boost the Pre-Disaster Mitigation Fund by 6% of the money doled out through the Disaster Relief Fund. This would be a true game-changer for the future of our disaster policy approach.

It will take us years to recover from the destruction caused during 2017. Some families and communities affected may never make it all the way back. As the 2018 Atlantic Hurricane Season gets underway, time is of the essence to ensure that we do everything we can in this country to protect ourselves against disasters. How different would the damage caused in recent years look if we had the cost share incentive measure included in the Disaster Recovery Reform Act in place? How different could our future look if additional measures, such as the PDM provision, are implemented? These may be difficult questions to ask, but if recent history is any indication, they are certainly deserving of serious consideration.

I encourage the Committee to pursue reforms to federal disaster spending that put pre-disaster mitigation at the forefront and position FEMA on the edge of the effort to rebuild our infrastructure in a way that is fortified against natural disasters.

Chairman Barletta and Ranking Member Titus, thank you for convening this hearing and raising these important issues. I look forward to answering your questions.

Appendix: Recommended Criteria for Cost Share Adjustment Provision on behalf of the BuildStrong Coalition

The following represents the BuildStrong Coalition's suggested criteria in response to the Disaster Recovery Reform Act federal cost share adjustment provision in the Bipartisan Budget Act of 2018 (H.R.1892), which establishes a critical mechanism for the federal government to incentivize states and localities to adopt enhanced mitigation measures.

- **Establishing a Pilot Program.** The cost share incentive should be established as a FEMA pilot program to ensure maximum flexibility and speed of enactment. This program should not be subject to full federal rule making procedures that will delay its deployment. A minimum standard should be established such that, in order to be eligible for enhanced federal cost share, a state must have a statewide building code with an enforcement mechanism. FEMA should develop a score to measure the effectiveness of the code, which states would have to meet at a minimum level. This would exist as a simple "yes" or "no" answer for any consideration of additional funds (i.e. if "yes," then proceed to the next step; if "no," then there will not be any consideration for additional funds). In the future, a "no" answer could lead to a reduction of the 75% baseline share.

- **Requiring a State Mitigation Plan.** A state must have a working mitigation plan that identifies top vulnerabilities and the steps a state must take to reduce these vulnerabilities. Having such a plan would be in the minimum requirement category and one of the previously-mentioned "yes"/"no" answers for consideration of additional funds.

- **Taking Action on Loss Reductions.** In order to receive any funding above the 75% minimum amount, states must implement actions identified in their state mitigation plan and building code. These states would have to demonstrate concrete actions taken toward mitigation future disaster losses in order to earn the additional funds, but they would not have to take *all* actions identified in order to achieve added disaster funding. States could earn these funds even if they did not have all aspects of the current recommended code as long as the extra measures adopted are deemed impactful to mitigate against loss of life or property. All extra funds received by a state must be used for mitigation purposes, not for response and/or recovery efforts. These identified actions would be assigned a weighted system that could use a measure such as the Insurance Service Office (ISO) Build Code Effectiveness Grading Schedule, also known as BCEGS, in addition to other credit calculation tools.

  This overall incentive structure should include the following criteria:

  - Building Codes: Adoption of the most recent recommended building code and maintaining a model code no older than 6 years; Implementing changes to state and local building codes that address key vulnerabilities identified in a state's mitigation plan.
  - Life Safety: Adding life safety code enhancements such as a residential sprinkler requirement, other fire suppression measures, non-flammable standards, and other life safety requirements to building codes.

- Infrastructure: Assessing the necessary public/private infrastructure protection measures for flammable, seismic, and other resilient and life safety code requirements for pre-disaster prevention and a faster recovery post-disaster, in addition to any steps taken to implement those protections.
- Tax Credits: Providing tax credits or other tax incentive programs to encourage consumers or states to take actions to strengthen property against vulnerabilities identified in a state mitigation plan for both existing properties and new construction.
- Education: Educating contractors and consumers on actions they can take to strengthen properties.
- Post-Disaster Assessment: Providing a method for determining how a state will handle an increased need for building code enforcement resources following a disaster.
- Public Building Insurance: Insurance coverage for public facilities, assets, and infrastructure.
- Building Code Effectiveness Grading Schedule: Local and state participation in the BCEGS standard.

- **Focusing on Achieving Significant Impact.** Encourage incentives offered to be housed in state mitigation plans and building codes that can achieve a significant impact as scored by BCEGS or a similar system as previously indicated.