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EMERGENCY RESPONSE AND RECOVERY: CENTRAL TAKEAWAYS FROM THE UNPRECEDENTED 2017 HURRICANE SEASON

(115–29)

HEARING

BEFORE THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE HOUSE OF REPRESENTATIVES

ONE HUNDRED FIFTEENTH CONGRESS

FIRST SESSION

NOVEMBER 2, 2017

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BRENDA L. LAWRENCE, Michigan
MARK DESAULNIER, California

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[1] Panel 1 witnesses did not submit prepared statements for the record.

ADDITIONS TO THE RECORD

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

Bill Shuster
Chairman
Matthew M. Sturges
Staff Director

Peter A. DeFazio
Ranking Member
Katherine W. Dedrick
Democratic Staff Director

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

EMERGENCY RESPONSE AND RECOVERY: CENTRAL TAKEAWAYS FROM THE UNPRECEDENTED 2017 HURRICANE SEASON

THURSDAY, NOVEMBER 2, 2017

HOUSE OF REPRESENTATIVES,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
WASHINGTON, DC.

The committee met, pursuant to notice, at 10:06 a.m. in room 2167, Rayburn House Office Building, Hon. Bill Shuster (Chairman of the committee) presiding.

Mr. SHUSTER. The committee will come to order. Without objection, the Chair is authorized to declare a recess at any time today.

Today's hearing is focused on the 2017 hurricane season, specifically Hurricanes Harvey, Irma, and Maria. And some of the facts are really staggering. In 2017 there were 10 back-to-back hurricanes, and that hasn't occurred since 1893 in this country. So a season that was just jam-packed with hurricanes—again, something we haven't seen in over 100 years.

Estimates are that it is going to be the most expensive hurricane season on record, ranging anywhere from $200 billion to $290 billion. So again, this was a horrific year in regard to hurricanes, and our thoughts and prayers go out to all those who have been affected and continue to be impacted by the storms, as well as their fellow Americans working to restore the vital services in those communities.

These storms, as I said, wreaked havoc upon large sections of the continental United States, the U.S. Virgin Islands, and Puerto Rico. They were nothing short of devastating. But thankfully, due to the efforts of the Federal agencies before us today, Americans are recovering and rebuilding.

As the committee with primary jurisdiction over FEMA, the U.S. Coast Guard, the U.S. Army Corps of Engineers, and the Environmental Protection Agency, it is our duty to hear from those Federal entities directly about the disaster response and recovery.

When a major disaster strikes, FEMA is responsible for coordinating the Federal agency's response and ensuring the necessary Federal capabilities are deployed. Oftentimes the U.S. Coast Guard is one of the first agencies on the scene, conducting search-and-rescue missions, reopening ports, and responding to oil spills. Post-disaster, the Army Corps of Engineers' expertise is drawn upon for emergency repairs, debris management, temporary reroofing of housing, and critical infrastructure reestablishment. The EPA assists in the assessment of Superfund sites, oil sites, critical drink-

ing water and wastewater facilities, and the coordination of storm debris management.

This hearing is the first step in reexamining the authorities of those Federal partners to ensure they have the tools necessary to help communities recover from disasters. Indeed, we owe it to those who have lost so much and endured so much suffering to identify and act upon lessons learned from this historic hurricane season.

This committee has done so before in a bipartisan fashion, be it post-Hurricane Katrina or Superstorm Sandy. Our discussions here will help us identify solutions that will help reduce future loss of life, while lowering the costs of disasters, and speed recovery.

I want to thank subcommittee chairmen Mr. Barletta, Mr. Hunter, and Mr. Graves for their leadership and for laying the groundwork on many of these issues. Our subcommittees have already done a lot of work focusing on how we can respond and rebuild smarter, and today we hope to hear from our witnesses what can be done to ensure each agency has the tools needed to do so.

I want to thank Homeland Security Committee Chairman Mike McCaul for being here today to inform us about the needs of Texas and his community. I also want to thank and welcome Representative Gene Green of Texas, and Representatives Rutherford and Lawson of Florida.

And our Delegate from the Virgin Islands and Resident Commissioner from Puerto Rico are not here yet, Miss Jenniffer González-Colón, and Ms. Plaskett. They are both on their way, and we will again look forward to hearing from them and get their input on what has happened, how it is going. And there is no better way, I think, than hearing directly from our colleagues who represent those States and those constituencies, and again look forward to hearing about what those communities and regions may need in their recovery.

I also want to thank FEMA Administrator Brock Long, Vice Admiral Schultz of the Coast Guard, Major General Jackson of the Corps, and EPA Regional Administrator Lopez. They are critical partners in this effort, and I look forward to their testimony and their ideas for improving on how the country can prepare to respond and work to prevent large-scale disasters.

Again, I thank all of you for being here. And with that, I recognize Ranking Member DeFazio for a statement.

Mr. DEFAZIO. Thank you, Mr. Chairman. I guess I won't repeat much of what you said. But in particular I am hoping that both our congressional witnesses and other members of the subsequent panel can talk about where we are at today, a status report.

You know, we are distant from the places that have been impacted. I am certain there is still tremendous displacement in southern Florida and Texas.

And mostly these days in the news we are hearing about the problems, ongoing problems in Puerto Rico, where 20 percent of the people still don't have access to safe drinking water. Many of the plants are still offline for lack of power. Twenty-nine percent of Puerto Ricans have power, is the estimate. And this is definitely not something that I would rate as a 10-plus, as the President has rated our response. And I want to find out what the issues are that

are delaying actions in Puerto Rico, whether they are budgetary or logistical, in what form they take.

Obviously, many of us were concerned when we saw the award of a $300 million no-bid contract to Whitefish Energy Holdings with two employees which is going to be paying linemen $2,500 a day as subcontractors to restore power. I hear that is going to be cancelled. I want to be assured by FEMA that there will be no Federal reimbursement.

You know, I am quite familiar with the Federal reimbursement process, and these—we don't do no-bid dubious contracts at outrageous prices and give Federal reimbursement to local entities who enter into such contracts.

And then finally, I hope, once and for all, to put to rest the idea that somehow the Jones Act is inhibiting the recovery of Puerto Rico. We have had more than 20,000 containers delivered. The problem has been the logistics of getting those out of the port to the remote parts of the island. I want to hear more about the infrastructure problems that are inhibiting the distribution, and what we can do about that in the short and the long term.

I also hope to hear that we are going to be emphasizing, in all of these communities, resilience, as we rebuild, and that whatever the Federal Government can do in terms of its reimbursement to encourage resilient rebuilding so that we won't be paying again and again and again for subsequent floods in Houston or for things that are destructed by wind in Florida and in Puerto Rico. Hopefully, we can learn from this and we can build in such a way that they will better serve their citizens in future events like this, which are becoming all too frequent.

With that, I look forward to hearing from our witnesses. Thank you, Mr. Chairman.

Mr. SHUSTER. Thank you very much, Mr. DeFazio. And just a point to make, Ranking Member DeFazio and myself will be, this weekend, traveling down to Florida, Puerto Rico, and the Virgin Islands. I have been to Texas before with Chairman McCaul to see the effects of the storms there, and also to Florida one other time.

So again, I think it is important that we see it firsthand. But that is why it is so important for you folks to be here, because you are living in those communities, you are talking to those people every day. So I really appreciate you, the Members that are here, taking the time to talk to us today.

And with that, I will recognize Chairman McCaul for his statement.

TESTIMONY OF HON. MICHAEL T. MCCAUL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS, CHAIRMAN, COMMITTEE ON HOMELAND SECURITY; HON. GENE GREEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS; HON. JOHN H. RUTHERFORD, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA; HON. AL LAWSON, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA; HON. JENNIFFER GONZÁLEZ-COLÓN, RESIDENT COMMISSIONER IN CONGRESS FROM THE TERRITORY OF PUERTO RICO; AND HON. STACEY E. PLASKETT, A DELEGATE IN CONGRESS FROM THE TERRITORY OF THE U.S. VIRGIN ISLANDS

Mr. MCCAUL. Thank you, Chairman Shuster, Ranking Member DeFazio, I appreciate the opportunity to be here today. I would be remiss if I didn't say how about those Astros last night? Being from my home State of Texas, we are proud of that.

But this hurricane unleashed a fury on my home State and devastated many homes and communities in and around the district. After the storm I toured much of the wreckage. Some of the images were absolutely horrifying. Roads were flooded, homes were destroyed. And sadly, many people lost their lives.

[Slide]

Mr. MCCAUL. I think this image says it all. It is kind of like the Iwo Jima of Harvey. You have a department of public safety, a Marine, Coast Guard, and a Texas guardsman all in this vessel saving lives.

My grandfather survived the 1900 Galveston hurricane; 10,000 people were killed. In this event we saved 20,000 lives. So that is—I guess if there is any good news out of this story, it was the lives that were saved and how the community came together.

Our first responders answered countless calls, sprung to action, saving, again, 20,000 lives. Volunteers from churches, shelters, other civic groups became heroes during this grave time. And Texans from all walks of life came together to help their fellow Texans.

[Slide]

Mr. MCCAUL. One other, I think, image: this is Katy High School in my district. That became a forward operating base for the Texas Guard and Active Duty in service who rescued the lives in the Greater Houston area and then sprung into action into Beaumont and other parts of my State.

As the waters receded, the extent of our damage to our community became crystal clear. I remain grateful to Administrator Long and the men and women of FEMA for working with our Governor, our first responders to coordinate the extensive Federal response. The district I represent and the surrounding area has experienced three major floods in the last 2 years. More specifically, the flooding has become a major problem around the Cypress Creek and Addicks and Barker Reservoirs.

Chairman Shuster, I know you accompanied me down to Texas, and I appreciate you coming down to see firsthand the effects of this devastating hurricane.

[Slide]

Mr. MCCAUL. And as you can see from this map, I think this map really says it all about where we are with infrastructure in

the United States and in my home State. In 1940 the Army Corps built the Barker and Addicks Reservoirs. That is what you saw, the controlled spillage that then went into Buffalo Bayou and then into downtown Houston. But where the whole thing emanated was in Cypress Creek that is outlined in red in my district. That levee, unfortunately, was never built by the Army Corps. Had it been built, we may have had a different situation that day.

I am proposing that—the building of a reservoir. I think this is preventative infrastructure that can stop this kind of flooding in the future, and I think that is what this committee is all about and, I think, committed to. These investments will minimize risks that we would otherwise have to face down the road, ultimately saving taxpayer dollars.

And that is why I am working with FEMA and my Governor and local officials and colleagues to identify options for flood mitigation to protect the Greater Houston area from future disasters.

Two ways I think Congress can help in these efforts would be to harmonize the approximately 40 types of mitigation and recovery assistance, and work to address duplication of project issues so States like mine can utilize Federal assistance most efficiently and effectively.

As it stands, States would benefit from a congressional waiver of existing law that would allow Federal entities the ability to provide funding to local governments for projects that are receiving other sources of Federal funding in order to expedite critical disaster recovery projects.

When communities are dealing with disaster recovery, the Federal Government should not be an obstacle to overcome, but a resource to help people put their lives back together. It is extremely important that we review the lessons learned from local, State, and Federal coordination when it comes to response efforts in the wake of these disasters. But we must also discuss our most pressing infrastructure needs so we can minimize unnecessary damage or loss of life when the next disaster strikes. We cannot afford to wait.

I cannot afford to wait 10 years to have the Army Corps of Engineers build this reservoir. Study upon study upon study. So Chairman Shuster, Ranking Member DeFazio, I look forward to working with you and the members of this committee to have a more expedited process that makes sense to help rebuild Texas to make sure this never happens again.

And with that, I yield back.

Mr. SHUSTER. I thank the gentleman.

I now recognize Mr. Green.

Mr. GREEN. Thank you, Mr. Chairman, both you and Ranking Member DeFazio, for allowing me to testify. I first have to say Congresswoman Eddie Bernice Johnson and I started our political careers in 1973 as young State legislators in the Texas Legislature. So Eddie B and I, she has watched when I was newly married and with my children, and now she sees my grandchildren growing up.

So the 29th District that I represent includes northeast and southeast Houston and Harris County, a very urban area and one of the most highly impacted districts by Hurricane Harvey. We have 10 Members of Congress who represent the upper Texas coast, from Corpus Christi up to the Sabine border with Louisiana.

One of the biggest issues in our district, in Houston and Harris County, is the delay in Federal Emergency Management Agency, FEMA, handling of disaster assistance. Two months after Harvey's landfall there still is significant backlog of disaster survivors waiting for inspectors to verify the damage to their homes and property. Recent reports indicate that the average wait for a home inspection is over 1 month, far exceeding the wait time for inspections following Tropical Storm Allison and Hurricane Ike that also hit our areas.

Constituents have registered frustrations regarding the FEMA telephone help line. In the weeks following the flood, impacted individuals sometimes spent hours on hold before reaching a representative, and many experienced repeated disconnections. While we appreciate FEMA's prompt response to our office when we make inquiries on behalf of our constituents, individuals should not have to contact their Member of Congress to obtain FEMA assistance, but we ask them to.

It is our office's experience that FEMA's individual assistance program is not administered uniformly. We have seen neighboring properties in our community with similar damage receiving vastly different amounts of Federal aid, subject to inspectors with varying levels of experience and knowledge. We ask that the Transportation and Infrastructure Committee ensure that FEMA's individual assistance program is administered fairly and uniformly.

Our most concerning constituent requests are a growing number of senior citizens and low-income families who lived in special flood areas and could not afford flood insurance. Many of these seniors in low-income households who have the greatest need for aid are prohibited from receiving assistance because they could not afford flood insurance premiums. In some parts of Houston, Harris County, flood insurance premiums are in excess of $4,000 annually for a modest home.

Our office is currently working on legislation to create an exemption for seniors and low-income households who could not afford flood insurance to be eligible for Federal disaster assistance.

And I also ask the T&I Committee to consider ways to provide immediate help for low-income disaster survivors to receive Federal aid they desperately need. The current prohibition treats our families simply as numbers and not as the law-abiding, hard-working Americans that they are, and who may completely be wiped out if their Government refuses to help them.

At the same time, many communities face these same barriers when coming to preventing the next flooding disaster. All $8.7 billion has been requested for flood prevention projects for our [inaudible] when it comes to approval for these projects, Harris County Flood Control District, partnering with the Army Corps, is required to do a feasibility study that takes into account the cost of the project against the value of the homes protected.

I live in a blue collar district where home values are not as high as they are on the east coast, or even other parts of Houston, Harris County. Oftentimes the Harris County Flood Control District has trouble getting projects green lighted for our district because the price level of homes are not—are being protected. These homes

are not wealthy homes, so they say the cost-benefit analysis doesn't work.

But these folks got flooded three times in the last few years. This puts families in an incredibly tough place, because your house faces the potential to flood every major storm. You basically are stuck in a high-risk area. It is tough to sell the house, and flood insurance simply is not in their means to afford it.

Harris County Flood Control District, along with the Governor, has also requested $800 million for a buy-out program that had been successful in Houston. This allows the city and the county to buy many of the more flood-prone properties, which greatly reduces the future financial burden on the system. Most people are willing to be bought out immediately after a bad flood. It is imperative we get this money as quickly as possible, so local entities can move quickly while there is demand. This is one situation we simply can't afford to wait.

I also represent part of the Port of Houston in our district, and I share it with Congressman Brian Babin, who is on the committee. The silt has drastically limited maneuverability and depth. The port has recently completed dredging to 45 feet, allowing for much larger ships to come in from the Panama Canal.

Many of the ships can no longer get through the channel, due to the hurricane damage. The port currently estimates that the first phase of recovery from the storm could cost an estimated $457 million. The ship channel is the life blood of Houston. Most of the industry in the city is in the same way connected to the port. It is absolutely essential in our district that we adequately find Corps projects that get the port back at its normal capacity.

And on the national significance, we have five refineries in east Harris County, and you saw that—after what happened with Hurricane Harvey, the refineries shut down. They don't turn them off and on with a switch; it takes time to get them up. And we were paying 25 to 30 percent—30 cents more per gallon in our fuel because of the refineries that were shut down because of Hurricane Harvey.

I want to thank the T&I Committee for the opportunity to speak this morning, and I will be happy to answer questions if the committee have any.

Thank you, Mr. Chairman.

Mr. SHUSTER. I thank the gentleman. I appreciate you being here again.

And now I recognize Representative Rutherford for a statement.

Mr. RUTHERFORD. Chairman Shuster, Ranking Member DeFazio——

Mr. SHUSTER. Can you pull that mic a little closer to you?

Mr. RUTHERFORD. Is that better?

Mr. SHUSTER. I think, yes.

Mr. RUTHERFORD. OK. Thank you for the opportunity to be here today. And, as you know, last month Hurricane Irma touched almost every corner of Florida.

In my district in northeast Florida, a combination of a nor'easter, high tides, and the torrential rains caused by Hurricane Irma caused flooding in the city of Jacksonville not seen in 150 years.

Downtown was literally under water. Power was out for many days. Homes and businesses were shuttered.

However, because of the quick Federal response, the leadership of our Governor, and the planning and coordination of local emergency management officials and first responders, as in Texas, lives were truly saved, and our community was back up and running.

Florida now faces a long road to full recovery. But for the purpose of this hearing today, I would like to focus on two areas of hurricane response and recovery that are under the jurisdiction of this committee. One is the importance of shore protection projects, and the second is the importance of maintaining the Jones Act. And I think Ranking Member DeFazio spoke a little bit about that. And I am going to talk more about that in just a moment.

[Slide]

Mr. RUTHERFORD. But first, on shore protection, you can see on the screens here, for coastal communities like mine, beaches and sand dunes and other shoreline infrastructure provide the first line of defense against that storm surge. New Jersey saw it 5 years ago with Superstorm Sandy. And Florida saw it last year with Hurricanes Hermine and Matthew, and then again this September with Hurricane Irma.

[Slide]

Mr. RUTHERFORD. A great example of what happens when the shorelines are not protected properly can be seen on the screens here in the room. That home that you see in the sand is in a region of my district that was hit by Hurricane Matthew last October, but where the beach had not yet been rebuilt and renourished. And now, after Irma, that home is gone.

And it may be difficult to see here, but the 10 homes going south from that location are really on a precipice. They are right about to fall in, as this home already has.

Shore protection is very personal to coastal districts like mine. However, I want to emphasize that shore protection projects should be important to more than just coastal communities. Fifty percent of the U.S. population lives within 1 hour of the seashore. Beaches help generate $225 billion for the national economy, and contribute $25 billion in Federal tax revenue. They also contribute to a $26 billion trade surplus in tourism in my State, not to mention that when local, State, and Federal agencies invest in shore protection projects before a storm, less funding is needed for rebuilding roads, utilities, businesses, and homes after a storm hits.

When we look back at Hurricane Matthew last October, studies show that beach renourishment can save billions of dollars in infrastructure damages. And that is a matter of safety, but it is also a matter of fiscal common sense.

And, Mr. Chairman, I want to commend your work over the last few years, moving water resource bills on time and with strong bipartisan support. It was great to see the WRDA 2018 process last week in my home State. Water resource projects like the pending beach renourishment project in my district that would rebuild northeast Florida's beaches hit by Hurricane Matthew and now Irma, these projects cannot move forward without the important work done in this committee.

Now, second I would like to highlight the importance of the Jones Act not only to my district, but also to the recovery of Puerto Rico. And I think Ranking Member DeFazio was absolutely correct. The Jones Act has not added difficulties to the recovery in Puerto Rico and the Virgin Islands. The goods getting to the port were not the problem; it was the distribution from the port into the country where the need was at, that was the difficulty.

The U.S. maritime industry, our first responders in times of emergency like Hurricane Irma and Maria—and Jacksonville is ground zero for getting shipments of much-needed goods to Puerto Rico quickly, reliably, and economically. And I am proud of the work that the American maritime industry has done these last few weeks. They have been working tirelessly around the clock to get shipments of goods to those in need.

Jones Act carriers today have delivered tens of thousands of containers to the island via the Port of San Juan. They have worked closely with Federal emergency responders, customers, and nonprofit organizations to meet the ever-changing and increasing needs of the island. They have proven themselves committed to meeting Puerto Rico's immediate needs, while also supporting the long-term restoration of the island's economy.

And part of the rebuilding effort is also making sure that the hundreds of maritime employees both in San Juan and in Jacksonville are able to keep their jobs. The Jones Act provides stability to these American workers and certainty to industry, which in turn has reinvested more than $1 billion into vessels and infrastructure in the shipping corridor between Jacksonville and San Juan.

As an example, over the last 5 years TOTE Maritime has invested more than $500 million in Puerto Rico trade. This includes the world's two liquified natural gas-powered containerships, and these ships have the fastest transit time in the trade, traveling from Jacksonville to San Juan in 2½ days.

Consistent application of the Jones Act enables TOTE to make these 35-year investments that ensure consistent, on-time deliveries to the people of Puerto Rico, and that ensure cargo shipments back to the mainland to support the island's manufacturing sector. And it is this continuity and certainty that position the U.S. maritime industry in Jacksonville to be so capable to respond to the needs of Puerto Rico as the Coast Guard reopens the port after Maria.

Again, I want to thank the committee for having this panel today. Hurricanes know no political party. We all must work together so that our communities can recover and rebuild stronger than ever.

I yield back.

Mr. SHUSTER. Thank you, Mr. Rutherford. I appreciate you being here today and appreciate your outlook.

With that I recognize Representative Lawson for a statement.

Mr. LAWSON. Thank you, very much, Mr. Chairman and Ranking Member DeFazio and distinguished members of the Transportation and Infrastructure Committee. I appreciate the opportunity to testify on the impact that Hurricane Irma had on my congressional district in Jacksonville.

I also wish to thank Congresswoman Frederica Wilson and Congresswoman Frankel for the opportunity to appear before this committee.

On September the 11th—which is incredible—of this year, Hurricane Irma hit Jacksonville with incredible force, causing record storm surge and massive flooding in several neighborhoods around the city, and power outages for over 260,000 homes, leaving thousands displaced. According to the National Weather Service, water levels for St. Johns River hit a record high of 5.57 feet in downtown Jacksonville and similar dangerous levels in neighborhoods along the river.

These are historic levels of flooding which we haven't seen, as you heard with Congressman Rutherford, in centuries, except for the National Weather Service also reported that the vast amount of water in the St. Johns River will continue to threaten communities in northeast Florida, making the areas more vulnerable every year.

Jacksonville utility officials estimate that Hurricane Irma produced over 200 billion gallons of rainwater to Jacksonville in a matter of days. This water is equivalent to 22 days of waterflow through the St. Johns River.

Hurricane Irma also negatively impacted the Jacksonville economy. Flooding caused extensive damage to Wells Fargo Center, a 37-story office building in downtown Jacksonville, closing the building for 25 days, causing significant damages to the main electrical and air conditioning, elevators and telecommunications system.

The Hyatt Regency Jacksonville Riverfront Hotel, where you have 950 rooms, incurred severe flooding that closed the hotel for 7 weeks. Similar businesses also have struggles to get back on track. Power was lost to more than a dozen pump stations, causing more than 1.5 million gallons of untreated raw sewage to overflow into the river and into the city streets.

Nearly 200,000 gallons of raw sewage spilled into the streets of our scenic community, which we had the opportunity to observe. Total damage. The storm, high water, and strong winds have left 29 city parks and other facilities with limited access or are closed. Most of the closures are of waterfront parks, piers, boardwalks, floating docks, and boat ramps. The damage caused by Irma only adds to the damage caused by October Hurricane Matthew, which is still waiting, as a city, waiting for millions of dollars, something like $26 million in reimbursement, and have left many residents frustrated about the lack of speed and funding following these areas.

During the storm we are glad that our local transportation agency—Jacksonville Transportation Authority—played a critical role in helping transport people to a safe location. The JTA evacuated over 800 citizens and more than 120 people with special needs to shelter. The JTA is integral in assisting Jacksonville electric, water, and sewer utilities by transporting 2,700 mutual aid and other utility workers between hotel and staging areas.

What is important on behalf of Jacksonville for local mitigation strategy, I am specifically requesting 11 flood and storm surge projects costing an estimated $79 million. In addition, I am re-

questing funding for the U.S. Army Corps of Engineers flood study of about $20 million for flood resilience efforts in Jacksonville.

Additionally, I am introducing legislation to appropriate funds for flood control and storm damage reduction projects to be constructed by the United States Army Corps of Engineers in Jacksonville. This will greatly benefit areas in our community that were deeply impacted by flood in the areas of Hurricane Irma and also offer protection for future storms, which the chairman mentioned earlier, by providing quality flood control infrastructure.

I want to thank this committee. And when I look up there and see Congressman Dan Webster, many years—the effort that—when you were speaker of the house—has really helped out a great deal in Florida, because we have seen significant hurricanes, and money that Mr. Rutherford was talking about for beach nourishment.

We had a hard time one time telling Florida Legislature how important it was to bring resources back to the State of Florida and to help tourism and to recover. So the money that was well spent back then during your era has really stimulated economy in Florida, and I thought it was worth mention.

I look forward to working together to ensure our citizens are safe and healthy following these events, and to enact policy that would lessen the burden during the next devastation of storms.

And, Mr. Chairman, with that I yield back.

Mr. SHUSTER. Thank you very much, Mr. Lawson. I appreciate you being here, appreciate your time today. Thank you.

And with that, I recognize Resident Commissioner González-Colón for her statement.

Miss GONZÁLEZ-COLÓN. Thank you, Chairman Shuster and Ranking Member DeFazio and all members of this committee, for having me here today. This is a great opportunity.

As you may know, I am the——

Mr. SHUSTER. Can you pull that whole box closer? You have got to pull the whole box closer to you.

Miss GONZÁLEZ-COLÓN. Thank you.

Mr. SHUSTER. Thank you.

Miss GONZÁLEZ-COLÓN. As you may know, I am representing 3.4 million American citizens living on the island. So I have a voice, but I don't have a vote. That is the reason this hearing is so important for Puerto Rico.

And in that matter, the help that Puerto Rico received from Congress and the administration after the disaster has made a huge difference. But there is still much left to do, in both short-term remediation as well as long-term rebuilding. From roads to air, seaports, and communication, all aspects of our infrastructure suffered. At the peak of the storm, the whole power grid went offline and communications failed. We still have 70 percent of our island without power, 20 percent without running water, and 20 percent without access to networks.

In Puerto Rico we have lived the scenario of a shutdown of almost all the technological resources in a real catastrophe. That is the reason we are living in a humanitarian crisis in Puerto Rico.

It caused total paralyzation of the economy. Workers and business are still unable to produce, and this is already impacting the Nation. Puerto Rican plants produce 10 percent of the U.S. phar-

maceuticals and medical devices, a $15 billion market. And shortages loom already. Manufacturing represents 42 percent of our economy, 30 percent of it in pharmaceutical medical devices, electronics, among others.

One of the main issues is the numbers of roads and bridges cut off limited response access and communities completely. And that is the reason we need to look beyond immediate response for bridges, power grid, and roof tarps under the Corps of Engineers.

We also need measures that enable rebuilding infrastructure, waiving the cost share requirement for all Federal Highway Administration and FEMA disaster recovery funding, including permanent construction.

Today the situation in Puerto Rico is still challenging: 66 of 68 hospitals are open, but 19 of them still on generation power. Sixty-four thousand temporary roof tarps have been received, 18,000 blue roof installation has been approved, but just 4,000 are being installed. We are really shy in that number. Seventy shelters continue to be open with more than 3,000 people in them, and most of the island still not able to receive regular commodities. That is the reason it has been mentioned that much of the damage we are facing in Puerto Rico is a result of inferior level of infrastructure, construction, and maintenance.

While this could be true in some cases, it must be noted that such is a necessary result of budgetary and funding limitations imposed upon the Territories. Differential treatment in programs of funding, outright exclusion in some cases, be it by law or regulation, results in Territories forced to do the best they can with extremely limited resources available because their political status limits their access to Federal grants and credit backing—benefitted from administrative or legislative measures to provide a more resilient infrastructure.

This also goes to the disparity in funding from healthcare. And we can go on and on. The obstacles in the response process itself keep reminding us of Puerto Rico's separate but unequal condition.

Immediately recovery steps that need to be taken include flexible obligation of NEPA and other regulations to balance the need of environmental protection with the major problem of the cleanup and the debris removal. Flexible application of requirements of housing subsidies, section 8 housing assistance, to take into account that the majority of the housing in Puerto Rico is safe, but simply there is no electric grid running.

Administration approval of access to public assistance categories C–G under FEMA for major disaster declaration. These are the categories that address repairs to infrastructure, roads, bridges, water facilities, buildings and equipment, utilities, parks, recreational areas, and so forth. A comprehensive recovery requires that these be included as the extent of damages in Puerto Rico requires permanent rebuilding, not repair, of our infrastructure.

Additional congressional measures will be necessary to enable the reconstruction of our infrastructure to begin. Action of Congress will be necessary to waive the cost of shared requirement of the Federal Highway Administration emergency relief program for FEMA funds, including permanent repair in both cases. In the case of Puerto Rico it requires 20 percent local match in permanent re-

pair projects, and the Government of Puerto Rico, as you already may know, lacks funds at this time.

Another important step will be to enable Puerto Rico to access funds from the INFRA grant and TIGER grant programs for the permanent rebuilding process. Those programs also need at least 25 percent of funding and require matching funds.

Moving forward, the legislation in favor of small business growth, H.R. 2429 and H.R. 2488 will help stem the troubles of small business activity. Congress should consider creating programs in which dollars assigned to cover unemployment may be used to cover wage incentives for job creation, so that the businesses can have their employees return to work.

There are many other areas that we can continue to emphasize in terms of what are the urgent needs for Puerto Rico and the Territories. And I hope this committee may find it in the written statement.

Thank you, Mr. Chairman.

Mr. SHUSTER. Thank you very much, Resident Commissioner, I appreciate you being here. And I just wanted to tell you again—I don't think—you or Ms. Plaskett weren't here when I said Ranking Member DeFazio and myself and Congressman Garret Graves are going down to Puerto Rico and the Virgin Islands Sunday and Monday with a contingent from the United States Senate.

So again, I appreciate——

[Audio malfunction in hearing room.]

Mr. SHUSTER. Resident Commissioner, thank you very much for being here. And with that I recognize Delegate Plaskett for her statement. Thank you.

Ms. PLASKETT. Thank you very much. Thank you, Chairman Shuster, Ranking Member DeFazio, members of the committee. Thank you for the opportunity to testify on the important matters of disaster response and recovery and transportation and infrastructure.

[Slide]

Ms. PLASKETT. I would also like to direct your attention to the screen, where we have some photos of the actual devastation in the Virgin Islands. That is the hospital that you are seeing right there.

I want to echo the sentiments of my colleague, Jenniffer González-Colón, in that much of the issues that we are facing have much to do with the disparity in funding that the Territories have received before the hurricane occurred.

On September 6, Hurricane Irma wreaked havoc on the islands of St. John and St. Thomas. And 2 weeks later, on September 20th, the island of St. Croix was devastated by Maria, both category 5 hurricanes hitting the U.S. Virgin Islands. The people of the Virgin Islands have lost their homes, possessions. Businesses were lost, along with hospitals, schools, utility systems, and vital infrastructure.

The President and leaders in Congress have committed to Americans in the Territories that they will receive the support they need. The islands were completely cut off from the world until air and sea support could at least resume basic operations to the islands. I will remain hopeful yet vigilant in my work to see that Congress

delivers on the promises to support the Virgin Islands and the Territories.

Disaster legislation passed thus far has provided some necessary support. I am pleased to see $5 billion included in the latest package to provide the Territories with additional liquidity assistance, and the flexibility with local match requirements. There is no substantial revenue being generated in the Virgin Islands right now. With the loss of Hovensa, our oil refinery, and the changes in the American Jobs Creation Act of 2004, our tourism-related economy—now estimated at 50 percent of our GDP—is gone. We will miss this year's season, at least.

For example, Caneel Bay, the largest employer on St. John and one of the top resorts on the island, has estimated it will take at least 2 years for them to rebuild. Much more will be needed.

In terms of FEMA programs, we will need cost-sharing waivers for permanent assistance under categories C through G, especially categories in roads, bridges, and utilities, and a 100-percent Federal share of hazard mitigation. We will also need a temporary waiver of the local match for other needs assistance. We need a suspension on the cap on disaster housing assistance, one to at least double it. Currently, the maximum amount of disaster housing assistance is inadequate in the high-cost, highly damaged areas like the Virgin Islands.

The islands are also in need of other important recovery funding left out of the most recent disaster bill. For example, it did not include economic development programs, additional support for repair of our water infrastructure, seaports, airports, and roadways, all of which had been included in previous disaster relief legislation.

With an economy that primarily relies on tourism, the Virgin Islands depends heavily on infrastructure. Given the catastrophic level of damage suffered, the recovery of our islands will hinge on the level of support from Congress for infrastructure rebuilding. Our two hospitals devastated—Army Corps has condemned them both—eight schools have been destroyed. Furthermore, we will need regulatory relief of our rebuilding. I urge that this committee consider options for prioritizing disaster-affected areas in permitting done by Army Corps, NOAA, and other agencies, so that we may no longer face permitting backlogs that have delayed important projects.

Our needs are great, and it is partly a result of issues that have been longstanding. Our hospitals have been chronically underfunded for decades. Our Medicaid is block granted at an amount that has no relationship to local needs. Our match has been limited to an arbitrarily low 55 percent by Congress, that of the wealthiest States. Our school facilities were already woefully deficient. Congress has not been willing to grant the Department of the Interior requested funding to support maintenance levels for one school. The 2004 JOBS Act overreached in residency, which removed much of the knowledge-based businesses that brought people like myself back home before 2004.

So Congress shares some responsibility for the level of devastation due to chronic neglect, a benign neglect of the Territories. That includes this committee, as well. T&I, the Territories used to be

treated as States under National Highway System programs, with a percentage of funds. But this was changed to move us into a separate allotment, and an amount significantly lower than what we would have previously received.

Federal transportation funding to the islands fell behind other jurisdictions, even though the traffic strains of our infrastructure were greater than our population, due to the high number of visitors. Territorial roads continue to be under stress from inadequate funding, and the Virgin Islands—most of the Federal highways do not meet current standards.

Again, this was before two category 5 storms. Because the Territories are islands, much of the road construction is more expensive than on the mainland to accommodate supply costs. As a result of inadequate funds, crucial projects have been shelved, leaving only stop-gap repairs to resolve maintenance issues.

After Irma, and especially after Maria, much of our roads and ports, old and lacking upgrades, were destroyed. As the week continued, major roads are impassable. Places like Wintberg, downtown Frederiksted, massive flooding, impassible roads. Charlotte Amalie became a flood zone. The sea took it back over.

I would like to emphasize that this negatively impacts everything, from commerce, emergency response capabilities, to disaster relief. Extreme weather during this hurricane season further demonstrates how fragile our infrastructure already was, and how much we depend on it. We must keep this in mind as we move forward and consider changes to help the U.S. Territories. Thank you for the opportunity to speak on this.

Mr. SHUSTER. Well, again, I thank each and every one of you for being here. I appreciate you taking the time today. And again, as we move down the road on this, we will certainly be checking in with you, talking to you. And again, this, as I said, Sunday, Ranking Member DeFazio and myself will be in the Territories to take a look.

So again, thank you all very much. I appreciate you being here.

And with that, we will take a couple of minutes. Our next panel will make its way here. So everybody sort of be patient. It will be a couple of minutes.

[Pause.]

Mr. SHUSTER. The committee will come back to order. And at this point I would like to thank and welcome our next panel. I really appreciate you four taking the time to come up here. I know how busy you have been, I know how busy you will continue to be. There is a lot of work left to do. And so I can't thank you enough for being here, taking the time to do this. But I think it is important that we hear directly from you.

We just had a panel of Members of Congress representing those various areas that have been hit: Texas, Florida, Puerto Rico, and the Virgin Islands. And so it is important for us to hear from you, the folks that are actually on the ground, doing the work, responding.

And so, again, I want to thank you for taking your valuable, valuable time to be here with us today.

Our next panel has four participants: the Honorable William Brock Long, Administrator, the Federal Emergency Management

Agency; Vice Admiral Karl Schultz, commander of the Atlantic area, United States Coast Guard; Major General Ed Jackson, deputy commanding general for civil and emergency operations, U.S. Army Corps of Engineers; and the Honorable Pete Lopez, the regional administrator for region 2 of the EPA.

Again, I thank each and every one of you for being here today.

Without objection, first of all, I want the witnesses to have their full statements in the record. We ask you to keep it at about 5 minutes. I am sure there is going to be lots of questions afterwards. So again, the—your full statements will be part of the record.

And with that, I recognize Administrator Long.

Would you proceed?

TESTIMONY OF HON. WILLIAM B. LONG, ADMINISTRATOR, FEDERAL EMERGENCY MANAGEMENT AGENCY; VICE ADMIRAL KARL L. SCHULTZ, COMMANDER, ATLANTIC AREA, U.S. COAST GUARD; MAJOR GENERAL ED JACKSON, DEPUTY COMMANDING GENERAL FOR CIVIL AND EMERGENCY OPERATIONS, U.S. ARMY CORPS OF ENGINEERS; AND HON. PETER D. LOPEZ, REGIONAL ADMINISTRATOR FOR REGION 2, ENVIRONMENTAL PROTECTION AGENCY

Mr. LONG. Chairman Shuster, Ranking Member DeFazio, distinguished members of the committee, my name is Brock Long, obviously, a FEMA Administrator. And I am here to testify about the critical role that FEMA has played in the unprecedented number of disasters over the past several months.

I have been in office a total of 134 days. For 72 of those days we have been working around the clock, my dedicated staff has been working around the clock, to try to alleviate the pain and suffering that has taken place as a result of four catastrophic events that have occurred: Harvey, Irma, Maria, and the devastating California wildfires.

We continue to work. In addition to those four major events, my agency is also responding to 25 other disasters across 19 different jurisdictions that many of you represent. This has been the longest activation in FEMA history, and I am extremely proud to continue working with my staff and the members of the national response plan framework that have been going around the clock.

While many improvements have been made to ensure a whole community response, I recognize that there are many challenges, and we have got a long way to go to truly building a resilient Nation. And I will be asking for your assistance to help me do so while I am here in office.

I think we have to look at this as an opportunity to hit the reset button and truly formulate authorities and the way forward to help us mitigate future disasters.

I am also going to use this as an opportunity to acknowledge what FEMA's role is, as granted by Congress through the Stafford Act. An optimal response is designed to be federally supported, State managed, and locally executed, not the other way around. It is my job to coordinate the full firepower of the Federal Government down through Governors to support their response and recovery efforts, not mine. I don't know how to put back your communities better than you do.

Each level of Government has a critical role to play, and has to be well defined. In Puerto Rico, the local and Territorial governments, as you know, were struck by rapid-succession—two major hurricanes that basically overwhelmed not only the staff, but the physical capabilities of the island, thrusting us to be the primary responder, and basically the sole responder for many weeks after the fact. That is not a complaint, that is just the facts. I know that we are working very hard with Puerto Rico, as well as the Virgin Islands, but we are also working hard, as I said, with 20-some other jurisdictions around the clock.

FEMA was never designed to be the first responder, nor should we be. And I would like to be able to discuss and have open dialogue with you today on how we can better the entire disaster response community going forward.

I want to put some magnitude around what has just happened. It is estimated that from Harvey, Irma, Maria, and the California wildfires, that 25 million citizens, or 12 percent of the population, has been impacted by one of those 4 events. FEMA's search and rescue teams alone are credited with saving 9,000 lives. That is in addition to whatever the Coast Guard numbers are. I heard 20,000 or more saved by State and local responders or neighbors helping neighbors in Harvey.

Over 4.5 million citizens have been registered in FEMA's Individual Assistance program in 2 months. It is an unprecedented number. It is never going to move as fast as people want, but let me put that into context. That is more than Hurricane Katrina, Hurricane Sandy, Hurricane Wilma, and Hurricane Rita combined.

Over $3.5 billion has been distributed or expedited through the NFIP [National Flood Insurance Program], and that number is projected to climb to over $16 or $17 billion as a result of Harvey and Irma alone.

Since the onset of Hurricane Harvey, mass-care partners like the Red Cross and many State and local responders have housed over 1.1 million Americans in shelters. At its peak, there were 200,000 Americans in a shelter overnight.

I have reason to believe that the humanitarian mission to Puerto Rico and the Virgin Islands is one of the largest humanitarian missions ever pulled off by the United States Government, or at least within FEMA's context.

We have a lot of work to do. I realize that. Turning the power on in Puerto Rico and the Virgin Islands solves a lot of our problems, and we are continuing to work with the Governor. I spoke with the Governor when he was here yesterday. We are working with the Governor, the Army Corps of Engineers, and trying to facilitate mutual aid to do that as quickly as possible. But we have to recognize that there are a lot of deferred maintenance issues and an antiquated system that we are having to overcome.

We continue to build up the hospitals and medical functions to a truly stable situation. We have unique disaster housing issues for all over the country right now, from California to the Virgin Islands. And each mission is going to be unique. We have to continue to fix roads, clear roads, but also dispose of debris. And you can never do debris the same way any given time.

We have a lot of challenges. But the long-term recovery of Puerto Rico and the Virgin Islands is going to require a far greater solution than what FEMA can offer. It may even increase the authorities that we have to do things in a more resilient fashion.

Going forward to improve the whole community response, I would like to work with the Congress to do a lot of things. One, we got to streamline Federal Government disaster assistance. It comes down from a multitude of Government agencies. We have to bring it together, simplify it to make it down to the local level, where it is understandable and easy to use.

We have to implement and ensure survivable communications. We can no longer have communications knocked out if we continue to go to digital solutions. How are we making them redundant? How are we making them resilient, so that we don't lose connectivity and situational awareness?

We have to increase pre-disaster mitigation funding. It does not make sense that you have to get hit to have access to mitigation funding. We need to put it upfront. I am willing to work with you to do that.

We have to ensure that State and local governments have their own ability to do their lifesaving commodity missions and not be fully dependent upon the Federal Emergency Management Agency to do so.

We have to find low- to no-cost ways to truly create a true culture of preparedness within our citizens. We have to help them understand why it is important to be insured, give them affordable insurance, but also help them understand that if you are insured, you are going to respond and recover a lot quicker than those that don't have it.

We have to ensure that States have baseline capabilities to perform their own individual and public assistance programs when FEMA assistance is not coming.

We have to fix the NFIP, bottom line. I don't like running a program that is too confusing to citizens. It is too cumbersome, and the bottom line is that it continues to go into debt every time we have a major event.

I am here to work with you in the spirit of improvement to do everything that we can to alleviate suffering and to build a more resilient Nation.

Thank you.

Mr. SHUSTER. Thank you very much for that, Mr. Long.

And I recognize Admiral Schultz.

Admiral SCHULTZ. Good morning, Mr. Chairman, Ranking Member, committee members. It is my pleasure to be with you today to discuss the United States Coast Guard's role in the broader Federal response to Hurricanes Harvey, Irma, and Maria.

As Federal Government's maritime first responder, we carry out our statutory requirements under title 14, U.S. Code. And during disaster response missions, we focus on ensuring the survivability of our own forces and capabilities in order to conduct the post-disaster response operations, saving lives in distress, reconstituting the affected ports, waterways, and maritime infrastructure, responding to oil and chemical and hazardous material spills, and supporting other agencies.

The Coast Guard stands ready to respond alongside civil first responders. At the same time, the Coast Guard seamlessly integrates with the Department of Defense in a variety of operating environments, as demonstrated during these recent responses. As the lead Federal disaster response organization in the maritime domain, and an armed service at all times, the Coast Guard is uniquely positioned to operate across the full response spectrum, often serving as a bridge between the military and civil response efforts.

The Coast Guard has been operating helicopters, boats, cutters, vehicles, and even on foot, rescued over 11,300 people as part of these broader response efforts. Working with partner agencies such as the Army Corps and NOAA, we conducted soundings, corrected 1,200 discrepant aids to navigation, removed obstructions from shipping channels to rapidly reconstitute our maritime transportation system's key ports and waterways. These are critical enablers to jump-starting adversely impacted regional economies.

We also worked with the Army Corps and the EPA to coordinate the salvage and environmental remediation of 3,600 damaged or sunken vessels, and that work continues in progress.

These storms arriving in rapid succession directly impacted our numerous Coast Guard facilities, our crews, our families. But despite that, your Coast Guard has always found a way to respond, oftentimes in the face of personal adversity, to help ensure the safety of their communities.

After Irma and Maria, our multimission cutters and their crews evacuated citizens from the U.S. Virgin Islands to deliver humanitarian supplies to outlying areas, and facilitated port and waterway surveys essential to reconstituting those ports. Several of those same crewmembers then joined task forces to distribute essential commodities like bottled water and food to isolated communities.

One out of every four Coast Guard rotary wing aircraft helicopters deployed in response to Harvey, collectively flying over 1,600 hours. That is more than double annual programmed hours for one of those classes of helicopters.

Before Harvey's landfall in southwest Texas, two of our short-range Dolphin helicopters battled 60-knot winds to rescue 12 mariners on sinking vessels.

While fully engaged in almost 2 months of high-tempo hurricane response recovery operations, the Coast Guard judiciously absorbed risk in other mission areas and locations outside of the storm-impacted areas in order to meet our operational requirements to the Nation. Forces normally allocated to counterdrug, port security, and fisheries enforcement missions were significantly impacted and reduced.

As Maria damaged our Coast Guard facilities in Puerto Rico, including the sector San Juan Operations Center and its command and control capabilities, the Coast Guard found itself challenged to coordinate operations. Fortunately, in anticipation of Maria's catastrophic damages, we had diverted one of our newest National Security Cutters, the Coast Guard cutter *James*, returning from a multimonth drug patrol in the eastern Pacific, to Puerto Rico.

In Puerto Rico, she became an afloat command and control—or C2—node, and was able to run the operations normally run from shoreside facilities.

Emblematic of the Coast Guard's agility and our layered defense of capabilities, when *James* repositioned to Puerto Rico, a 48-year-old ship, the Coast Guard cutter *Alert* out of the Pacific Northwest, stood the watch against transnational criminal activities in the eastern Pacific. That crew interdicted 4,800 kilograms of cocaine and arrested or detained 19 smugglers.

In support of the hurricanes, the Coast Guard mobilized nearly 3,000 people. Roughly 2,000 of that was Active Duty, 800 Reservists, and 150 of our civilians. Also a sizeable number of our volunteer auxilliarists.

Coast Guards from across the Nation, as far away as Alaska and Hawaii, supported these efforts in Texas, Florida, the Commonwealth of Puerto Rico, and the Territories of the U.S. Virgin Islands. It is really one of the reasons I am tremendously proud of this total workforce.

Coastguardsmen and their families are part of the communities impacted, and they were victims of the storm, noting the homes of almost 100 coastguardsmen were damaged to the point they are uninhabitable, and we are seeking relocation for them.

Our workforce is agile. We have the centralized command and control structure, and that enables us to respond agilely to these types of situations. Our broad authorities and experiences working closely with other interagency response organizations allows us to take a lead role as the Nation's maritime first responders.

But these operations do not come without consequences, without costs. These are measured in the resources operating well above their programmed or planned funded levels, delayed maintenance at the depot level, and damage to our Coast Guard facilities. We have identified hundreds of millions of dollars needed to restore the readiness of our infrastructure. These costs are compounded by over $70 million of unrepaired facility work from Matthew in the fall of 2016.

When the Coast Guard has the opportunity to replace our facilities, we endeavor to make them storm-resilient and survivable. In fact, several of our shore facilities that were built following Ike were on the paths of these hurricanes, one being a facility in the Bahamas which has since endured the passage of many hurricanes without damages. And in Houston, the center of gravity for the Harvey response, that was a new facility, also funded with post-Ike dollars. And that facility was absolutely essential to the response operations there.

The United States Coast Guard, Mr. Chairman, are among the most dedicated, selfless, effective men and women you will find in Government. They rely on a foundation of good training, reliable equipment, blended with courage, discipline, and vigilance. They remain semper paratus, or always ready to assist.

Thanks to the support of this committee, the administration, and the Department of Homeland Security, we have begun replacing some of our aging assets, but we have outstanding needs. We have an unfunded priorities list before the Congress. So I ask your continued support as we strive to provide the assets, equipment, and facilities that our coastguardsmen need and deserve as they answer the Nation's call.

And with that, sir, I stand by for your questions.

Mr. SHUSTER. Thank you very much, Admiral. Thank you for your service.

I recognize General Jackson to proceed.

General JACKSON. Chairman Shuster, Ranking Member DeFazio, and distinguished members of the committee, my name is Major General Ed Jackson, deputy commanding general for civil and emergency operations, U.S. Army Corps of Engineers, and I thank you for the opportunity to testify today.

The Corps conducts emergency response activities under two basic authorities: the Stafford Act and Public Law 84–99. Under the Stafford Act, we support FEMA under the National Response Framework as the lead Federal agency for Emergency Support Function 3—Public Works and Engineering.

ESF–3 provides temporary emergency power, temporary roofing, debris management, infrastructure assessment, critical public facility restoration, and temporary housing. Under Public Law 84–99, we prepare for disasters through planning, coordination, and training with local, State, and Federal partners, assisting our partners to implement advanced measures that prevent or reduce storm event damages, and repair damage to authorized Federal projects working with States and municipalities to rehabilitate and restore eligible non-Federal flood infrastructure to pre-storm condition.

When disasters occur, Corps teams and other resources are mobilized from across the command to assist local offices for their response to the event. As part of this mission, the Corps has more than 50 specially trained teams supported by emergency contracts that perform a wide range of public works and engineering-related support missions, as I just described.

The Corps uses pre-awarded contracts that can be quickly activated for missions such as debris removal, temporary roofing, and generator installation. This year, the Corps has supported FEMA-led Federal response and recovery operations in support of multiple events, including Hurricanes Harvey, Irma, and Maria.

FEMA directed 37 mission assignments to the Corps for supporting Hurricane Harvey response and recovery. Currently the Corps has 183 employees still deployed. The Corps assisted in temporary emergency power, and continues to support the State of Texas with the development and implementation of a temporary housing project management plan.

Debris teams led by Corps subject matter experts continue providing State and local municipalities with debris technical assistance to define requirements and monitor debris removal and disposal operations in 15 counties.

FEMA directed 81 mission assignments to the Corps for supporting Hurricanes Irma and Maria response and recovery. Currently, the Corps has over 1,500 personnel deployed. As of this morning, the Corps has completed over 1,000 generator assessments and over 500 temporary generator installations across the Caribbean. This includes 250 assessments and 150 generator installations in the U.S. Virgin Islands, and 750 assessments and over 400 generator installations in Puerto Rico.

Under FEMA authority, we are also assisting Puerto Rico with operation and maintenance of critical, non-Federal generators across the island.

The Corps has completed over 14,000 temporary roofing installations in Florida, and is on track to complete this mission by the 4th of November. We have also completed over 7,000 temporary roofing installations across the Caribbean, including over 2,500 in the U.S. Virgin Islands, and over 4,500 in Puerto Rico. Roofing requirements in both the U.S. Virgin Islands and Puerto Rico have been extensive, requiring additional material and construction support, which initially slowed progress. We have adjusted added capacity, and are seeing daily improvements in both locations.

Corps debris subject matter experts provided technical assistance to counties across Florida and Georgia in response to Hurricane Irma, and continue to provide oversight to five regions within the Florida Department of Emergency Management. The Corps is working to remove an estimated 1 million cubic yards of debris in the U.S. Virgin Islands, and 6 million cubic yards of debris across Puerto Rico.

The Corps worked closely with the Coast Guard and the National Oceanic and Atmospheric Administration and local authorities to open harbors and navigation channels across all affected areas critical to restoring commerce and allowing the flow of commodities and essential equipment to reach affected communities. The Corps worked closely with officials in Texas and Florida to manage local flood control reservoirs during periods of unprecedented rainfall.

In Puerto Rico, Corps dam and levee teams inspected 17 priority dams and 14 levees, working closely with the Puerto Rico Electric Power Authority to stabilize the spillway failure at Guajataca Dam. Additionally, the Corps teams cleared existing conduits and placed emergency pumps to further reduce water levels in the dam, yet restore flow to a critical treatment plant that supports the needs of over 30,000 people.

On September 30th the Corps was given a FEMA mission assignment under Stafford Act authority to assist the Puerto Rico Electric Power Authority in conducting emergency repairs to the power grid itself. The Corps is partnering with PREPA in this effort, and has established a general officer/senior executive-level task force, as well as three area offices on the island, to oversee work and provide technical assistance. The Department of Energy has embedded experts in our team, and continues to assist in all of our efforts.

Within 2 weeks of receiving the mission assignment, the Corps awarded contracts for large-scale temporary power generation to stabilize the grid in San Juan, and for additional line repair assets that will assist ongoing efforts by PREPA to complete the mission as quickly as possible.

The Corps remains fully committed and capable of executing its other civil works activities across the Nation, despite our heavy involvement in these ongoing response and recovery operations. We also remain ready and poised to assist in any future events as they may occur.

This concludes my testimony, and I look forward to answering any questions you might have. Thank you.

Mr. SHUSTER. Thank you, General. And again, thank you for your service.

I want to yield to Mr. Faso for a statement.

Mr. FASO. Thank you, Mr. Chairman. I want to welcome Pete Lopez, our regional administrator for EPA region 2. Pete is my constituent from Schoharie County. Also years ago, worked for me when I was minority leader in the State assembly. Had a distinguished career of his own in the State legislature, and was also someone who suffered—his family suffered directly from being flooded back in Irene, when it struck our area back in 2011. So he knows firsthand what he is talking about.

So I want to welcome Pete, and also excuse myself, because before too long I have to go downtown for a meeting. So thanks for being here.

Mr. SHUSTER. I thank the gentleman from New York. And with that, Mr. Lopez, proceed.

Mr. LOPEZ. Thank you, Mr. Faso. Thank you, Chairman, Ranking Member, committee members. I am Pete Lopez, I am the region 2 administrator, which covers New York, New Jersey, Puerto Rico, Virgin Islands, and eight American Tribes. And I want to speak to you directly about EPA's response to the devastating impacts of Harvey, Irma, and Maria. Much of my focus will be on region 2, which is where I am serving on the ground.

So just a couple notes. This is just a snapshot. For Members, you have full testimony. I will try to keep it—I may not be following the script, exactly. And also I will try to honor the 5-minute rule here, Chairman, so I will keep moving as quickly as I can.

So in response to these storms, EPA has assessed morethan 5,000 drinking water systems, nearly 1,200 wastewater systems, including 100 percent of Texas and Florida systems. We have assessed nearly 250 National Priorities List, EPA removal and oil sites. We have assessed more than 1,400regulated facilities, recovered more than 1,500 containers, drums and tanks, and worked with the Coast Guard to address oil and hazardous materials released from more than 1,800 sunken vessels. We were able to predeploy our emergency response special teams and mobile assets to quickly conduct real-time analyses to assist with determining threats to human health.

To minimize or prevent disruptions with the supply of diesel fuel for mobile nonroad generators and pumps used for emergency purposes, EPA also waived the diesel requirements in these affected areas.

EPA continued its round-the-clock response to these storms, in close coordination with State, Territory, and local partners. EPA remains focused on environmental impacts and potential threats to human health, as well as the safety of those in the affected areas.

EPA has largely transitioned away from round-the-clock response to aftermath recovery—a significant difference between response and recovery—for Hurricane Harvey. So here EPA continues to coordinate recovery efforts with local, State, and Federal officials, again, to address human health and environmental impacts, especially with water systems in the affected areas.

As Mr. Faso mentioned—and it was my privilege to serve with him and for him—in my years of experience as a State legislator, I was intensely involved in a response to a very similar situation to what has happened in Puerto Rico. So upstate New York was hit by Hurricane Irene and Tropical Storm Lee. Here my parents

and family members were left homeless and six of my seven counties were placed in states of emergency.

The region faced very similar demographic constraints, very similar geographic constraints—mountainous Territories, northern Appalachia, very limited incomes and very limited response capability.

And through that experience—and this is personal for me, because my family was affected not only in New York, but also family in Puerto Rico in the Arecibo and Camuy area—here I developed an understanding of how complicated it can be for areas to recover. And significantly for our people here, the more disadvantaged the community, the slower and more painful the recovery. And I cannot overemphasize that point.

So, as I turn to the Caribbean, I recently had a chance to travel with my colleague, Deputy Regional Administrator Catherine McCabe, who is here, seated with me, behind me, and we were struck by the incredible devastation. And the sights, the sounds, the smells were all too familiar to me, living through Irene and Lee, very similar.

The focus of the trip was not to simply observe, but, as our mission, to engage. And the engagement was substantive, the engagement was working with local leaders, the Commonwealth, the Territory, and our main mission was to find solutions to pressing problems. So very much main mission, but also troubleshooting.

We saw incredible needs. And I can tell you the experience was very sobering, but also very galvanizing. So we are blessed to have an incredible team, and including my colleagues here at the dais, who are engaged not just substantively, but also understand the emotions at work and the challenges for all those on the island trying to resolve these issues.

The overarching issue—and this has been highlighted by my colleagues—has been the lack of electricity. So if you can imagine dealing with these situations and having no power, so the lack of electricity has dramatically slowed down the pace and greatly complicated our collective response.

In terms of our staffing, we have roughly 300 employees and contractors involved, with nearly 200 on the ground in Puerto Rico and the U.S. Virgin Islands.

You will see in your written testimony, which all the Members should have, a more detailed analysis. I will try to highlight.

In those bullets you will see reflections on wastewater treatment assessments, including plants, pump stations, trunk lines, wastewater treatment plants, a number of plants in service, still out of service. You will see reference to drinking water systems, and our assessment of these systems, both utility-driven and systems that are not within utility, particularly on Puerto Rico.

In the Virgin Islands there is a focus on taking drinking water samples. There the drinking water system setup is uniquely different from Puerto Rico. There is a heavy reliance on cisterns, and so our group has been supporting local officials as they conduct assessments of those systems and disinfection, to make sure the supplies are adequate.

We completed about 320 assessments of facilities covered by hazardous waste risk management and spill prevention, and assessed Superfund sites and oil sites.

We are working with Army Corps and other partners to address debris—you have heard some reference to that. That is very complicated, because the debris tends to be commingled. So if you can imagine all of the waste being put into piles haphazardly throughout these islands—so our goal is to separate the waste, make sense of it, and treat it accordingly. That includes possibly burning some of the debris, although we are trying to maximize composting.

In our challenges, just quickly, many roads are impassable, so we are still having trouble getting to people. There is a need for ongoing humanitarian aid. You heard that referenced here. Our teams have been trying to work comprehensively to provide additional support, really outside of our role, providing water—thank you, Mr. Faso—food, and supplies to remote areas where we are conducting assessments, and where we may be the first teams on the ground.

Also, we are struggling with delays to transport heavy equipment to Puerto Rico.

So, as we look to the future, Mr. Chairman, we continue to actively and thoughtfully respond to the devastation.

One lesson that we learned is that every situation is different. No disaster is exactly the same. So we will focus on the geography, the focus on the demographics is critically important. And for U.S. policymakers—I know you are wrestling with that—how we provide funding and support remains an open question.

So, in closing, Chairman, we are very proud of our engagement, we are very proud of our people. We are mission-driven. And we treat them as extension of family. They are our neighbors, and we are very concerned about their best interests.

Thank you, Mr. Chairman.

Mr. SHUSTER. Thank you very much, Mr. Lopez. Now we will go to questioning. I just remind Members we are going to adhere to the 5-minute rule because I anticipate there will be lots and lots of questions today. So let's stick to the 5-minute rule. You will hear the gavel if you go over. So let's be respectful of everybody here's time, our time, and, of course, these four gentlemen that have, as I have said in the opening, a lot of work to do.

So thank you all, each and every one, for being here.

The first question I have is, Mr. Long, Administrator Long, you had a whole list of ideas that I think—every one that I heard, there is great merit to it. And Mr. DeFazio and I were talking about it. So that is something we really want to explore indepth with you as we move forward.

And the dollars are precious around here, and I know that sometimes we don't spend money as wisely as we should, but I just saw there is a new study out that it used to be for every dollar you spent on mitigation you save three to four. There is a new study that came out that said it is one to seven. So mitigation dollars are important.

And one of the things that you talked about, which I would like you to expand on——

Mr. LONG. Sure.

Mr. SHUSTER [continuing]. Is these pre—the Hazard Mitigation Grant Program only becomes available if you have been hit. And we are talking about pre-mitigation dollars. Can you talk about that and the importance of it and what we in Congress can do, moving forward?

Mr. LONG. Sure. I would truly appreciate the opportunity to work with you to specifically change the Stafford Act. The Stafford Act is what guides my authorities to administer funding.

Section 404 of the Stafford Act provides a formula that allows each one of your States, after a disaster, to access mitigation funding, based on a percentage of dollars obligated from public assistance. To me, that is totally backwards. We need to shift that to the pre-storm side.

And it does a couple of things. It allows States to better plan for how they want to implement the key to their success for future disaster resiliency. If it is all put on after the fact, you can't plan and strategize how you are going to access funding, and ultimately to put your plans in place. It sounds very simple, but I know it takes a lot of work to do that. And I would love to be able to accomplish that with you and your support.

Mr. SHUSTER. Again, you have a whole list of things that, again, Mr. DeFazio and I are up here shaking our heads saying we got to explore these things. So we look forward to working with you.

Second question to Admiral Schultz. One of the little-known facts is we know you folks are out there doing great work, you are—not only are you responding, but you are usually in the eye of the storm. And there has been significant damage done to your assets in the Coast Guard. Can you talk a little bit about that?

Because again, I think that is something that most Americans, most Members of Congress may not even know, is how hard hit the Coast Guard actually was.

Admiral SCHULTZ. Absolutely, Mr. Chairman. Thank you for the question. You know, we are nationally deployed all around the country. And in the areas that were hit by these storms, we have had significant damages to more than 40 facilities. I think if you roll up those damages in terms of cost to replace that infrastructure in the hundreds of millions.

We have had wear and tear on our resources, we flew our helicopters, as I mentioned in my opening statement, you know, almost 2 full years' worth of operating hours in the 3-day period around Texas for support of Hurricane Harvey. So there is a roll-up cost that approaches or slightly exceeds $1 billion here as impact to the Coast Guard.

Mr. SHUSTER. And that was $1 billion?

Admiral SCHULTZ. $1 billion, roughly.

Mr. SHUSTER. Yeah, because the number I got for your facilities was in excess of $500 million. But if you——

Admiral SCHULTZ. Yes, sir. Facilities, $500 million. I think when you roll in personnel cost, other things, some ability—I mentioned in my statement about reconstituting building facilities—standards, modern standards. That gets you to that number, just slightly over $1 billion.

Mr. SHUSTER. All right. Well, thank you all. And again, I want to thank you all for being here. I may have further questions, but

I have about 1 minute and 40 seconds left. I want to yield to the vice ranking member. I know she has to go down to the White House for a meeting, and I want to make sure she makes that meeting. It sounds like it is going to be a good meeting.

So with that I yield the remainder of my time to Ms. Esty.

Ms. ESTY. Thank you very much, Mr. Chairman. And thank you so much for being with us here today. And I can assure you we have already been talking about forming a working group to work on this issue of how do we need to change the Stafford Act. And I think it is tremendously important that we learn from this and plan for resiliency. So I want to thank you all for your prior commitment to help us do right by this.

I want to thank the chairman and Mr. DeFazio for allowing me to go out of order here today.

But we are not here today only talking about how to get it right the next time. We are also here talking about what we need to do right now, today, to help American citizens who live in Puerto Rico and the U.S. Virgin Islands.

I have 75,000 residents in my district—that is 1 out of every 10 residents of my district in Connecticut hails originally from Puerto Rico. They and their families want answers. They can't even find some of their folks. They still have, you know, three-quarters of the island without power, 800,000 without water. We have hospitals with black mold. I had a meeting in my district the beginning of this week, and family members inland want to stay. They don't have roofs on their houses.

You know, we are having real difficulty getting supplies around the island, so it is tremendously difficult. We know that, and we want to thank the FEMA workers and Coast Guard and everyone—you can imagine Coast Guard from Connecticut, we are very appreciative of their efforts. But we need to do better, and we need answers.

And so, we ask again for your continued work with us to do better to work to allow debris to clear—to be cleared, to clear the roads, to get these supplies in as quickly as possible. But we are not there yet. We need to do better. We will be there with you and give you the resources you need, but we need to do better now.

Texas and Florida got immediate relief in ways that Puerto Rico and U.S. Virgin Islands did not. They deserve it. All Americans deserve the aid of the Federal Government wherever they live in this great country.

Thank you, and I yield back.

Mr. SHUSTER. I thank the gentlelady, and I am going to go out of order again. I know that Mr. Smucker is going to the White House for that same meeting, so I am going to yield him a minute because I know that he has a lot of concerns that—Mr. Smucker, I yield you a minute.

Mr. SMUCKER. Thank you, Mr. Chairman. I really appreciate that.

I would like to first thank all of you for being here today, thank you for your service, and that—all you have done in response to—what has been very difficult, multiple emergencies, multiple hurricanes. So I really appreciate that. I know you have saved lives, and so we want to thank you for that.

I had the opportunity just about 2½ weeks after Hurricane Maria hit Puerto Rico to join a congressional group and visit the island. And my friend from New York, who is a member of the committee here, Mr. Maloney, was on that trip, as well. And we had meetings with Governor Rossello, General Buchanan, FEMA, Coast Guard, the Corps, a lot of folks, not only did we survey the damage, but had meetings and received updates in regards to the progress that had been made at that point.

And again, I think the takeaway from that was, you know, this is an all-out effort from each of your agencies to respond. It is a 24/7 operation. We saw the number of people that were on the ground. So there is no concern about the commitment from each of your agencies, from the commitment of the administration to respond.

And I am specifically focused on Puerto Rico. My district is in Pennsylvania, but I also have a large number of people who hail from Puerto Rico, over 70,000 as well, so a lot of concern from folks in my district about family and friends in Puerto Rico.

The—one concern, or—there were, of course, many concerns. But one of the other takeaways from that—again, this was about 2½ weeks—I think it was 17 days after the hurricane hit, and the response around restoring the electrical grid, I will be honest, was unsatisfactory at that point. And there were many agencies, of course, that were involved with this. But we—or at least, speaking for myself—came away from there concerned that we did not at that point yet have a really good plan to restore the grid.

So, I guess, you know, my first question is—and Administrator Long, I think you said it very, very well—restoring the electrical power will solve a lot of other problems. It is absolutely clear that is the critical path activity.

So, you know, at that point it wasn't even clear which agency was taking the lead. So I guess that is my first question in this regard, and I will start——

Mr. SHUSTER. The gentleman—you can answer the question, but then we got to get back to regular order.

Mr. SMUCKER. OK.

Mr. SHUSTER. So I appreciate the gentleman's question, but go ahead and—who are you directing it to, anybody in particular?

Mr. SMUCKER. Yes, Administrator Long.

Mr. LONG. Sure.

Mr. SMUCKER. Tell us about which agency really is in charge of restoring the power.

Mr. LONG. Immediately after the storm we had no choice but to basically mission-assign the Army Corps of Engineers, who has been working around the clock on that. And that was actually done very quickly because of the diminished capacity.

PREPA was nowhere to be found. And largely—that is not a shot at PREPA, that is just—they are also disaster victims, and the equipment was damaged, as well. So the bottom line is that we moved forward and mission-assigned the Corps to first do emergency power.

So, before you even start to talk about the power grid, you have to make sure that the generators at hospitals are working and are fueled. You have got to clear the roads, you have got to do so many

things. So there was emergency power, and then they folded over into, basically, the grid. So—and now General Jackson is here to—if you would like to say a couple words on what the plan is.

General JACKSON. Sure, I would love to do that. First of all, thank you for the question. I know this is on a lot of people's minds, so, Mr. Chairman, if I could take a few minutes to explain it, that would be helpful.

Mr. SHUSTER. Sure, go ahead.

General JACKSON. I think one thing that is important to note is the Corps of Engineers typically does emergency temporary power through the use of our generators. That is part of our ESF–3 mission, that is what we have done in every storm so far. And typically, we flow into the affected area under a FEMA mission assignment. We do assessments, we install generators, and we deinstall generators as the grid comes up in operation.

Typically, large-scale grid repairs are done differently. The affected public utility in the affected area activates mutual assistance agreements, and the multitude of public utilities from across the Nation flow in to provide additional capacity to allow that grid to be more quickly restored. That was the case in Texas, that was the case in Florida. That was even the case in the U.S. Virgin Islands. That was not the case in Puerto Rico.

The Corps of Engineers does not have pre-scripted, pre-awarded contracts, like we do for debris for temporary power, where we can quickly pull something off the shelf and award it and get things moving. We have to use our contingency contracts that we have, which are competitive contracts, to be able to bring in the resources that are required to do the work that we were mission-assigned to do. So I think that is important to note.

Mr. Chairman, can I keep going, or——

Mr. SHUSTER. I am sure you are going to get more questions on that.

General JACKSON. OK, OK, I will cover more at a later time.

Mr. SHUSTER. All right. Well, again, I thank the gentleman. The gentleman from Pennsylvania can submit his other questions, as we are back to regular order.

And with that, I recognize——

Mr. SMUCKER. Thank you, Mr. Chairman.

Mr. SHUSTER [continuing]. Mr. DeFazio for 5 minutes.

Mr. DEFAZIO. Thank you, Mr. Chairman.

Again, Administrator Long, the chairman and I discussed—and I think you have got a lot of great ideas about how to streamline the programs, and I want to work with you on that. And I particularly support the pre-disaster mitigation. I won't put you on the spot by asking you a question, but I will observe that the President's proposed budget cut pre-disaster mitigation by 61 percent, not going in the right direction. Hopefully you can have some influence on that.

Quick question. On Puerto Rico and the Virgin Islands, have you made any request for the movement of goods by sea that has not been fulfilled by Jones Act carriers?

Mr. LONG. To my knowledge, the Jones Act—any time there is an issue that we would perceive that we would need the waiver

from the Jones Act, we work very diligently with the Department of Homeland Security and Customs and Border Protection——

Mr. DEFAZIO. Right. But, I mean, has there been anything you have wanted to——

Mr. LONG. Not to my knowledge.

Mr. DEFAZIO. OK.

Mr. LONG. And we would be very careful. We do not want to get in—the Jones Act to get in the way of life safety.

Mr. DEFAZIO. Right, OK, thank you. On—with—since we are on the issue of power, obviously the Whitefish Energy no-bid contract has received a lot of press. There is a provision in that contract—and another one, which I just became aware of, with a company called Cobra—for $200 million, no-bid contract. And both contracts say that, "by executing this contract, PREPA hereby represents and warrants that FEMA has reviewed and approved this contract."

Did you or anyone at FEMA approve the Whitefish contract and/or the Cobra contract?

Mr. LONG. No, we did not. And there is not a lawyer within FEMA that would have ever approved that contract. And the bottom line is it was not our contract.

And the other thing, to be clear here, is we don't approve contracts. We review and we make sure that our applicants are following 2 CFR.

Mr. DEFAZIO. Right, right. So, basically, as I understand both these contracts, there is a big question about whether you could find them eligible for reimbursement. The local entity spends the money and then they apply to you for reimbursement. That is the way it works, correct?

Mr. LONG. It is——

Mr. DEFAZIO. And then follow your guidelines.

Mr. LONG. So there is an OIG inspector. I know that even the Governor was concerned about it, so that——

Mr. DEFAZIO. Right.

Mr. LONG [continuing]. He has also launched an investigation into it, as well.

Mr. DEFAZIO. Well, there is—and again, in the Cobra contract, there is a very peculiar provision—and again, I am glad to hear your agency didn't approve it—because it says, "In no event shall PREPA, the Commonwealth of Puerto Rico, the FEMA Administrator," you, "the Comptroller General of the United States, or any of their authorized representatives have the right to audit or review the cost and profit elements of the labor rate specified herein." That is in this Cobra contract to some company in Oklahoma. I mean what the hell is that about? I mean we can't review it?

Mr. LONG. That is not—again, we would never approve any language like that.

Mr. DEFAZIO. OK.

Mr. LONG. And that language is added in after the fact.

Mr. DEFAZIO. I am thrilled to hear that.

Before I forget, I am going to ask unanimous consent to put the statement by Sheila Jackson Lee, who wanted to testify today, in the record.

Mr. SHUSTER. Without objection, so ordered.

[The statement of Congresswoman Sheila Jackson Lee is on pages 70–82.]

Mr. DEFAZIO. OK. And then I would move on quickly to the Coast Guard.

Again, Admiral, I believe the estimates I saw were, like, close to $1.3 billion in damages. Have you submitted a supplemental appropriation request? Because you are already way behind on, you know, your ongoing capital needs. Have you submitted a request to OMB for that to be included in the next disaster appropriation?

Admiral SCHULTZ. Yes, sir, Congressman. There was a request for that from OMB to the Departments here a couple weeks back. We have submitted our request that is more than $1 billion to the Department of Homeland Security, sir, and it is making its way up, I believe, to the Office of Management and Budget.

Mr. DEFAZIO. Excellent. I am really happy to hear that.

And to General Jackson, then, quickly, you didn't get to finish. I would give you—you get 1 minute if you could talk about anything else that relates to the grid. Because obviously, that is a critical problem. We don't have drinking water, because we don't have distributed electricity, and do you have anything to add in 1 minute to what you were saying?

General JACKSON. Congressman, I will go as fast as I can. I am from Georgia, so that may be hard.

Mr. SHUSTER. Take your time in answering.

General JACKSON. The Administrator has already talked about temporary emergency power generation. That is a key element of our overall strategy to provide power to the island. We have put in over 400 generators. Just by comparison, we put in 307 generators for Katrina, which was the largest in the past history of the Corps for our temporary generator mission. So, this is significant.

We are also servicing non-FEMA generators under FEMA authority to provide additional capability for temporary power generation to critical facilities that are prioritized by FEMA and the Territory there on the ground. That is ongoing, it has been ongoing since Irma hit, and will continue to go on until we finish the grid repair mission.

The second thing that we were asked to do—we got a FEMA mission assignment to do the grid repair mission on the 30th of September. So about 10 days after the hurricane, when it was apparent that that was the best course of action.

So the bottom line is, since 30 September, we have awarded a competitive contract, brought in a 50-megawatt temporary power plant to hook into the Palo Seco plant in Greater San Juan that was designed to help stabilize the grid and be able to leverage the 602 megawatts of the entire grid, for the entire system at Palo Seco to be able to help provide power to the citizens in San Juan, where the largest population density is.

We have also awarded two additional contracts, one to the Fluor Corporation, and one to PowerSecure, which is a subsidiary of the Southern Company out of the Georgia-Alabama area. Those contracts were awarded the third week of October, competitively. They had their advance party on the ground within a week, finding places to do life support, arranging for transportation, and they have already started flowing their crews in.

Two big ships are due in within the next week that are bringing in over 300 pieces of rolling stock that will allow these folks to get up into both the transmission and the distribution systems across the island to start the restoration work.

Additionally, the Corps, within a week of receiving our mission assignment, initiated the purchase of over $150 million worth of critical material that is required: 60,000 poles of different kinds, 6,100 miles of transmission wire of all high-voltage distribution to replace. And we have gone from site to site to site with the Department of Energy and PREPA to understand what stocks they have on the island, to refine our requirements to get stuff in production, to go around to warehouses to find off-market materials, so that material is not going to be a limiting factor. And we have done a multitude of that over the last couple of weeks, and that material is flowing into Puerto Rico right now.

So, within the next week or so we have equipment, we have people, we have material, all on the ground there to start making a much greater rate of progress on the power grid than is currently being done right now, which I know is frustrating to the Governor.

Mr. DEFAZIO. Excellent, thank you.

Mr. SHUSTER. Thank you, gentlemen. Again, I knew that question was going to come up. It is probably going to come again and again. But I think it is really important that people understand, because there has been a lot of criticism about what is going on in Puerto Rico, but the mutual aid agreements weren't in place. And, unlike the other States—which I think was pointed out by—I forget who pointed it out, but that is something we need to encourage everybody to make sure that they have.

So, with that, just remind Members we are going with—when the gavel went down after that we are—go by seniority before that. But I know both sides operate in that way, so Mr. Farenthold is recognized.

Mr. FARENTHOLD. Thank you, Chairman Shuster. August 25th Hurricane Harvey made first landfall of the 27th District of Texas, the district that I represent. Over the next week he would slowly move up the coast, destroying homes, communities, and lives. Often TV news cameras go in search of the worst possible damage to make the most dramatic story on television. Well, in the case of Hurricane Harvey in the district I represent, you could have dropped a camera almost any place in towns like Rockport, Port Aransas, Aransas Pass, Ingleside, Refugio, Tivoli, Woodsboro, and others. And it would have been as dramatic as the worst footage they probably could have found in many disasters.

Hurricane winds completely destroyed many of my friends' homes. Businesses were damaged or destroyed. And towns like Wharton had many neighborhoods left under water for days following the unprecedented flooding left by this storm, the worst we have seen in decades.

I have visited the areas ravaged by Harvey, along with President Trump, Vice President Pence, and Governor Abbott, and I have seen firsthand the destruction caused by the hurricane. And I am working hard to make sure folks are connected with the resources that they need to rebuild.

You know, a town like Rockport—just got an email from the mayor today. They have removed 1.3 million cubic yards of debris, and they are 53 percent finished. And they say they will be lucky to finish this year. And I have got to tell you there is nothing more psychologically painful than walking out and seeing your belongings, parts of your house, on the street. It is bad enough just seeing your trees there for months. But when it is your personal effects and your scrapbooks, I mean, it is heartbreaking.

And I do want to thank the hard-working folks at FEMA, the SBA, the Army Corps, State officials, other Government officials. Everybody is working hard and trying to do their best, and I want to thank you. And we will rebuild. But there are a couple of questions that I want to ask.

And Administrator Long, I think you and I have actually talked about this before. Earlier on in the process, in the first months or so, people would go online and fill out their applications for FEMA. And about a week later they would get this letter. Right up at the top it says, you have been denied FEMA aid, and then they would go through paragraph upon paragraph of legalese. And then at the bottom it will say, oh, by the way, you forgot to dot this "i" and cross that "t." If you will reapply, we will probably help you out.

Why can't you get a letter that doesn't just add insult to injury to folks?

Mr. LONG. I would be happy to work with you on that. A lot of times people are denied individual assistance without bringing proper paperwork or levels of insurance. I am very aware of that. I would be happy to work with you on the language for that.

Mr. FARENTHOLD. Thank you very much. And General Jackson, I want to talk a little bit about the Army Corps of Engineers. There are dozens, if not more, of authorized but unfunded projects in the area that have been declared disaster areas.

For instance, up in the Houston area, there were improvements to reservoirs and levees that have gone for years not happening. Had those been funded in a timely manner, would the property damage, and even possibly the loss of life, been less?

General JACKSON. Congressman, that is a really difficult question to answer. I can tell you that I think every bit of flood control infrastructure that we can put in place can be helpful. How much specific property damage it would have prevented in this particular disaster is hard to tell because of the unprecedented amount of rainfall that came down that far exceeded anything that I think the area has ever seen.

But I think that any piece that we can work with the Congress and the administration to get the funding for, working with the local authorities to get it put in place, all of that together will help to reduce the damages and hopefully reduce loss of life, as well.

Mr. FARENTHOLD. Surely after Hurricane Harvey—I began hearing from companies located along some of the waterways—the Colorado River and even some of the ports that were having trouble because they couldn't get the raw materials necessary because they were waiting for the Corps to get contracts or dredges in place.

FEMA did a great job pre-positioning resources in Texas. Puerto Rico, obviously, more of a challenge. Has the Corps looked at pre-positioning or contracting for emergencies, where—or writing in

your contract you have the ability to pull dredges off the other jobs or pre-position them in light of this happening? Because we saw gas prices go up 30 cents or more as a result of closed ports.

General JACKSON. Congressman, that is a great question. We monitor the dredge fleet very closely. Obviously, many of them are under contract to the Federal Government in various places. And we have the provisions to be able to quickly move them and repurpose them, based upon an emergency situation, and we have done that time and time again.

Many of the dredges are working private jobs. And my experience has been that when we ask, the dredge companies are more than willing to do everything they can to try to reconfigure and move to wherever it is that we need them to do in the interest of the Nation.

And so I am happy with the response, but we have a limited number and we have to manage it very carefully. But, we have great cooperation from the industry to help us turn on a dime when we need to.

Mr. FARENTHOLD. Thank you. I see my time has expired.

Mr. SHUSTER. I thank the gentleman. And I recognize Ms. Norton.

Ms. NORTON. First, Mr. Chairman, I would like to thank you for the workman-like committee hearing you are holding. A couple of committees called off the hearing when the Democrats asked for a witness. You have had everybody here before us, and you have had all the agencies here before us. This is what real oversight is about.

I certainly appreciate the testimony of the witnesses, and I appreciate that you have been working under quite arduous circumstances.

Actually, the gentleman from Texas presaged my concern, and that is, for lack of a better word—perhaps, Mr. Long, I should turn to you—I will call preparation for the inevitable.

Puerto Rico is an island. The Virgin Islands is a series of islands. Annually—if not annually, often I should say—they are the objects of frequent hurricanes, floods, and other natural disasters, almost on a predictable basis. Yet they are offshore. And unlike Texas, for example—which is far away, perhaps, from some supplies—or Florida, you—as we saw with the controversy about shipping, there is a big difference there.

Yet it appears that the agencies were, if not unprepared—and it does look like they were unprepared on the ground, or may even have been surprised about these inevitable events, given the slow response, for example, that both Puerto Rico and the Virgin Islands are complaining of.

So what I really want to know, given the inevitable, why there isn't a virtual branch of FEMA, for example, on these islands. Why supplies aren't pre-positioned there, so that this kind of a dispute, which is predictable, about getting to the islands does not come up. It is not as if this is the first time we have encountered this. I would like to know what kind of preparations were made a year ago, when there wasn't any hurricane. And what have you learned about pre-positioning for the next hurricane, which could be next year?

Mr. LONG. You know, ma'am, I can't speak for what happened a year ago. Again, I have been in office 132 days.

Ms. NORTON. I am talking about looking to what happened a year ago, or the year before that, to decide what you are going to do next year, for example.

Mr. LONG. Right. Well, first of all, we do have a Caribbean area division office. OK, we do have people in place——

Ms. NORTON. Where is that located, sir?

Mr. LONG. It is in Puerto Rico, right outside of San Juan. And not only do we have staff there, we also have commodities prestaged.

Ms. NORTON. Could you tell me something about supplies, any of you?

Mr. LONG. Sure.

Ms. NORTON. Since these are offshore, why did supplies have to—a dispute have to arise about whether there were enough supplies there? Why weren't there enough supplies to at least begin to take care of a catastrophe?

Mr. LONG. We were there before Irma, we were there after Irma, we were rebuilding the power grid as Irma was passing. The second thing is that, as Maria was coming in, we resupplied food and commodities on the island in Puerto Rico. We also verified that Governor Rossello had food in all of the shelters that were there.

And the problem with an island is that you can only shove so much food, so many staff into an island, and then you start to basically take away critical shelter spots for the citizens. So we actually had——

Ms. NORTON. You take away what? I am sorry.

Mr. LONG. You take away shelter spots from the citizens. We have mobilized almost 20,000 Federal Government workers——

Ms. NORTON. Mr. Long, I am talking about, basically, supplies. I know you can't preship power, but when it comes to supplies, you could have a warehouse.

Mr. LONG. We do.

Ms. NORTON. You know, you—and what I am trying to ask is have we learned that perhaps we need to pre-position a great many more supplies, basic supplies there, basic food, basic commodities, so that we don't have to depend upon how many trucks will pick up supplies in a devastation like Puerto Rico, for example, is experiencing. Have we learned? Can we rent or build a warehouse in those island communities so that we are not so dependent upon getting there in the first place?

Mr. LONG. Yes, ma'am. We have a warehouse. The question is is it large enough, and we haven't been able to do any——

Ms. NORTON. Can you make it larger?

Mr. LONG. I am sorry, I——

Ms. NORTON. I am asking you——

Mr. LONG. If I may answer the question?

Mr. SHUSTER. Yes.

Mr. LONG. The question is we have not been allowed to do an after-action review of all the things, not just commodities. We do have a warehouse. The question is how do we expand that.

But also, what is the role and responsibility of also the State and local governments to do commodities, not only from Puerto Rico,

but across the States. If you look at the model way it is done, Texas has their own contracts, they store their own food. We backfill their ability to do the first 72 to 120 hours' worth of commodities, if we are ever needed to be called in.

Every State, every island should have that capability.

Mr. SHUSTER. I thank the gentleman and, with that, recognize Mr. Barletta for 5 minutes.

Mr. BARLETTA. Thank you. Before I turn to my questions, I want to thank Chairman Shuster for holding today's hearing. I thank the Members and all the witnesses for being here, as well.

As chairman of the Subcommittee on Economic Development, Public Buildings, and Emergency Management, we have held a series of hearings and roundtables on how we can rebuild smarter and better after a disaster. In every instance, we found mitigation is a critical part of saving lives and reducing costs. We must build in mitigation on the front end and ensure that, as the communities rebuild from these recent disasters, we are building back in a way that will minimize damage in the next storm.

So to these points I want to turn to my questions.

Administrator Long, FEMA has expert personnel who get called to deploy when disasters strike. How can we support the work of FEMA personnel and ensure continuity in staffing and the response to and recovery from disasters?

Mr. LONG. In a multitude of ways. Look, my staff works under austere conditions away from their families. They deploy, they sacrifice a lot of their personal time to help others, and they work around the clock. And when it comes to pay capping, we could help there.

The bottom line is I would like to redesign the entire workforce structure in the way we hire. I would like to move to an FBI or Secret Service model, where we hire in a true academy format. I would like to increase the footprint of FEMA. I would like to move us out of the regional offices and be embedded in stage agencies and on island Territories. I would like to have multifaceted teams that can approve plans, do things on the ground, rather than having to go back through a region or all the way to the headquarters.

There is a multitude of things that we could do, and I would be happy to provide it to you in writing.

Mr. BARLETTA. That would be great. I understand some States have robust State-level programs that can effectively leverage private investment in public infrastructure. The use of public-private partnerships, or P3s, could be another tool that States impacted by disasters could use to help speed up recovery.

Administrator Long, do you think allowing States to use such programs following a disaster could be helpful in the recovery process?

Mr. LONG. Absolutely. I ran a private-sector company for 6 years before coming back to FEMA. And I am a true believer in public-private sector partnerships. We have to expand ways on how we utilize our business emergency operations center to get more private companies included.

One of the things I would also like to do is introduce a private-sector toolkit to State and local governments, so that they under-

stand what types of pre-event contracts they should have in place, and how to use them.

Mr. BARLETTA. You know, we have been working to find ways to encourage mitigation in rebuilding after a disaster. What can be done to ensure that people don't just build back to the way things were? How can FEMA help ensure that the infrastructure is rebuilt or repaired better after a disaster?

Mr. LONG. So this is a concern. If you look at Puerto Rico, for example, there are deferred maintenance issues. Like the average age of the power plants are 44 years old, versus the global average of 18. When it comes to rebuilding, if we spend a lot of taxpayer dollars, which I would love to protect, and if we are going to do it, we need to be able to do it right. But I am not so sure that the Stafford Act gives me the authority to be able to do it in that manner.

I also believe that disaster resiliency—the key to that success lies at the local elected official level when it comes to building codes and proper land use planning. It has got to be a greater partnership than what FEMA provides to State and local governments. It is a whole community effort when it comes to mitigation and how we focus on resiliency.

Mr. BARLETTA. Thank you.

Thank you, Mr. Chairman. I yield back.

Mr. SHUSTER. I thank the gentleman and now recognize Mr. Nadler for 5 minutes.

Mr. NADLER. Thank you, Mr. Chairman.

Mr. Lopez, I have to start by saying that I am greatly concerned about EPA's response to Hurricane Maria. It is eerily similar to EPA's response after 9/11 at the World Trade Center in my district in New York, when EPA infamously and incorrectly declared the area safe to breathe, and the water was safe to drink. Thousands of people became sick and hundreds died because of EPA's negligence and lying at that time. So I am very concerned with that precedent.

Now, I hope you can finally clear up some confusion related to news reports of people drinking water from wells on the Dorado contamination Superfund site. On Tuesday an EPA spokesperson was quoted that water being pulled from the Dorado Superfund site is "OK to consume, based on the analysis that we have done," a quote that could have come directly 17 years ago.

The day before, EPA responded to committee staff to the very same question about whether people were obtaining drinking water from the Dorado site—that "people are not drinking water from the EPA Superfund site wells." That is troubling, because it adds to the confusion, secrecy, and distrust of Government sources in protecting public health and the environment.

So I have some specific questions regarding the Dorado Superfund site and EPA actions to protect human health from known contaminants on that site.

The Dorado Superfund site was listed to the National Priorities List just last year, correct?

Mr. LOPEZ. Yes, sir. That is correct.

Mr. NADLER. Thank you. The Superfund site consists of a groundwater plume of industrial chemicals and solvents including

TCE, PCE, chloroform, and other chemicals known to have adverse human health effects, both short-term and long-term, correct?

Mr. LOPEZ. Correct, sir.

Mr. NADLER. Thank you. It is my understanding that two wells in the Dorado Superfund site, the Navarro and Santa Rosa well sites, still have active wells in operation, some of which the press has reported were used as a source of drinking water following Hurricane Maria.

Mr. LOPEZ. That is also correct.

Mr. NADLER. Has EPA investigated whether any other well on the Dorado site was used as a source of drinking water since Hurricane Maria?

Mr. LOPEZ. So, sir, those are the two that we understand are the ones that are used on a interim basis by PRASA [Puerto Rico Aqueducts and Sewers Authority], which is the utility.

Mr. NADLER. So the answer is you haven't investigated whether other sites were used.

Mr. LOPEZ. Our understanding is that no other sites are used.

Mr. NADLER. OK.

Mr. LOPEZ. So those are the two.

Mr. NADLER. It is also my understanding that when the Dorado Superfund site was listed on the NPL, sampling at the Navarro and Santa Rosa sites both found traces of these industrial chemicals, including chloroform, DCE, TCE, and PCE. Is that correct?

Mr. LOPEZ. It is correct. Just as a note, though, if I may, so——

Mr. NADLER. Talk a little louder, please.

Mr. LOPEZ. If I may, the chloroform piece was a byproduct of chlorination. So that was an early indication that that is part of a public water supply.

Mr. NADLER. But all of these chemicals were found there.

Mr. LOPEZ. In terms of the——

Mr. NADLER. OK.

Mr. LOPEZ. If I may, in terms of the chemical analysis, the analysis is roughly—was conducted on a regular basis by the Department of Health on Puerto Rico and by PRASA. We also have done sampling.

Ultimately, in terms of the threshold of safety, those levels for the Santa Rosa and——

Mr. NADLER. OK, but——

Mr. LOPEZ [continuing]. Are below safe tolerance levels for standard drinking water.

Mr. NADLER. You are saying that all of these chemicals are found there, but they are below tolerance levels.

Mr. LOPEZ. Correct, sir.

Mr. NADLER. All right. Now the Wednesday news report quotes an EPA spokesperson saying that water being pulled from the Dorado Superfund site "meets Federal drinking water standards." Is that based on EPA testing since the landfall of Hurricane Maria?

Mr. LOPEZ. Yes, sir. We have testing underway. We actually completed the testing for bacterial, microbial——

Mr. NADLER. So—but that statement that the water meets Federal drinking water standards, that is based on the EPA testing since the landfall?

Mr. LOPEZ. It is, and we have the results in-house.

Mr. NADLER. OK. Has EPA made all the drinking water sampling data publicly available?

Mr. LOPEZ. We are working towards that, sir, and would be happy to provide a greater expanded——

Mr. NADLER. But you haven't made it publicly available.

Mr. LOPEZ. We have the VOC and the microbial. We still are working on the drinking water, and would be happy to——

Mr. NADLER. And you will make all the sampling data——

Mr. LOPEZ. Happy to do that, sir.

Mr. NADLER [continuing]. Immediately available.

Mr. LOPEZ. As soon as we have the available data, we can give it to you.

Mr. NADLER. The press also reports that in 2016, when the Dorado Superfund site was initially listed on the Superfund National Priorities List, that EPA stated, "Drinking water with the solvents which include tetrachloroethylene and trichloroethylene can have serious health impacts, including damage to the liver and increasing risk of cancer."

Now EPA is saying that the water is safe to consume. Is that because they are below threshold levels? Or why the change in position in just 1 year?

Mr. LOPEZ. So there is no change in position, sir. There are thresholds that are part of the drinking water—safe drinking water standards. And in terms of testing, again, for the Navarro and Santa Rosa sites, those are——

Mr. NADLER. All right. So your testimony is that all of these poisonous chemicals are there, but they are all below tolerable levels.

Mr. LOPEZ. Sir, we are—again, our testimony is they are within drinking water tolerance levels.

Mr. NADLER. Yes, but you said most of them——

Mr. LOPEZ. Which are national standards.

Mr. NADLER. All the ones I mentioned were there, but they are within drinking water tolerance levels.

Mr. LOPEZ. Correct, sir.

Mr. NADLER. Is there any scientific dispute as to what drinking water tolerable levels are?

Mr. LOPEZ. I would have to get back to you on the detail of any scientific dispute. In terms of the standards, the standards are nationally known, and are regularly imposed, not——

Mr. NADLER. And the reason I——

Mr. LOPEZ [continuing]. Just in Puerto Rico, but in all communities across the United——

Mr. NADLER. The reason I ask the question——

Mr. LOPEZ. But——

Mr. NADLER. And my time is expiring, so let me give you quickly here—is because this is exactly what we got from EPA after 9/11. All the toxins in the air were below tolerable levels, they were all OK, and everybody was going to be fine, and thousands of people are sick and hundreds of people are dead because they weren't fine. And that is why I am very skeptical.

I thank you, I yield back.

Mr. SHUSTER. I thank the gentleman. With that I recognize Mr. Webster for 5 minutes.

Mr. WEBSTER. Thank you, Mr. Chair. Thank you all for what you have done in Florida. And a lot of our counties have taken full advantage of category 8 funding, Mr. Long, and I would just like to say a little bit about that. And it has helped immensely.

The 30-day window for some of us in some of our counties is a concern. I wrote 3 weeks ago a bipartisan letter. Actually, it was signed by me and others in the Florida delegation, talking about the fact that in my district many of the homes were still under water at that time because Florida is flat. And when the rivers crest, it runs everywhere. And so many of them could not even do an assessment a month after, which is just about the time the 30-day window was dissipating, and there wasn't going to be an opportunity.

And so, we were hoping there could be some flexibility in that 30-day window because of the fact—not only was it impossible to do the debris cleanup, it was impossible to do an assessment of what that would take.

And so—and I just—I get an update from FEMA every day on flood alerts, and there is still one existing on St. Johns River, which is part of my district, also, along with the Withlacoochee River.

And so, anyway, we had a lot of lakes. Takes them a while to drain into the rivers. When they do, that crest moves down the river, it floods everywhere, and it is usually past the 30 days. So I don't know if there is any way that could be modified. I know the State has a role in setting that. But could there be a dual track, or could there be an opportunity—and this is not the first time I have brought it up, but I just think it is something that is still concerning—just within the last week, along the Withlacoochee, did the flood waters go low enough to where it is almost below flood stage.

And so, anyway, what can you say about that?

Mr. LONG. I would be happy to look into that. In some cases, the 30-day window is dynamic, where you can shift it to where it is more effective at the local government, but let me go back and verify that. And not only that, we can also discuss with Governor Scott the length——

Mr. WEBSTER. Right, because this is—it is not just a couple of days, you know, it is weeks. And the storm is gone, the wind is gone, the rain is gone, the surge is gone. It is just these flood waters are still there, and it is still affecting thousands of my constituents.

Mr. LONG. I would be happy to follow up with you.

Mr. WEBSTER. Thanks a lot. I yield back.

Mr. SHUSTER. I thank the gentleman and now recognize Mr. Larsen.

Mr. LARSEN. Thank you, Mr. Chairman. So, being the ranking member on the Aviation Subcommittee, I really have questions regarding the role of aerial surveillance and sort of the immediate response, as well as an evaluation of disaster and what to do next.

So for Mr. Long, can you walk through the process that FEMA and FAA use to considering airspace waivers so you can better utilize unmanned aerial systems in the evaluation of damage, as well as providing direction to your folks?

Mr. LONG. Great question, understand the concern, because the air traffic control system was totally wiped out, which made it even more, you know, complex to sequence aircraft in, as well as the air traffic control above the islands.

I would have to follow up with you specifically on that question on how we can work closer together on whatever decisions we can make.

Mr. LARSEN. Yes, could you do that? Could you—so you have provided a list in your testimony of a variety of directions you will—are going to take sort of in your after-action report. So I would ask you to include that set of questions and that set of issues in your AAR, because of the clear role that drones are playing in not just commercial space, but also in disaster relief and response.

We did hear quite a bit about how drones assisted emergency response in Texas and Florida. So were they used specifically in USVI and Puerto Rico, as well, from——

Mr. LONG. I do not know, but I would like to work with the Congress. You know, particularly, we get a lot of complaints about the speed in which the inspection process takes place.

Mr. LARSEN. Yes.

Mr. LONG. One of the innovative ways we can move forward on that is through aerial imagery and desktop assessments, rather than having to find thousands and thousands of inspectors to go door to door. I am all for expediting processes through technology, just like that.

Mr. LARSEN. Yes, there were—I don't know how much detail you can get into with the use of drones, but you can get some detail. Insurance adjusters were in the office a few weeks back to talk about how they are now beginning to use unmanned aerial systems for claims purposes, and so there may be some routes to go.

So, Admiral, can you expand a little bit on if Coast Guard used drones, drone technology, for your assessments?

Admiral SCHULTZ. Yes, sir, Congressman. First off, the short answer is no, we did not use drone technology in any of the response operations. We are doing some partnership with Customs and Border Protection on drones for some of our maritime enforcement-type duties.

One caution I would say, when we talk about response operations and drones in the airspace, so when we rolled in and were responding to Harvey, at one point we had more than 40 helicopters flying in the area with fixed wings, flying C2. First 2 days, first 36 hours, you know, the other agencies—National Guard, Department of Defense—were falling in on our operations. When Department of Defense started coming in heavily, you know, you start having a very convoluted, clouded airspace. We had Coast Guard helicopters with aircraft stacked on top of that.

Mr. LARSEN. Yes.

Admiral SCHULTZ. There is an airspace deconfliction safety thing.

I think there is a role for drones, an appropriate role for drones in certain times.

Mr. LARSEN. Yes, and I agree that the space gets conflicted, it is crowded. My point is that the technology is advancing to a point where maybe you can relieve some of that fixed-wing aircraft. Maybe you can relieve some of that rotor aircraft and use different

technology to achieve the same thing. And that is just, again, looking forward. It is probably worth looking at.

Admiral SCHULTZ. Absolutely, sir. I think we are embracing the technology. We are looking at, you know, bringing unmanned systems more on board the Coast Guard. We have done some work out at sea. And like I said, I think there is definitely technological advances, as the Administrator said. I think we support that. I just caution, as we move into that space——

Mr. LARSEN. Yes, yes.

Admiral SCHULTZ [continuing]. There is just some balance there to look at.

Mr. LARSEN. Well, the big, big issue we have is traffic management in this world on that.

General, do you have any thought on that, as well?

General JACKSON. Sir, we have, in many cases after disasters, used unmanned surveillance to verify damages to systems, unleveed systems, or whatever, that are hard to access.

In Puerto Rico, we didn't have a need. We had access to be able to get out to the sites we needed to, so we didn't need to use them. But we do have them, and have used them in the past.

Mr. LARSEN. Yes, I am sure. All right.

Mr. Lopez, you are off the hook. You are off the hook, Mr. Lopez, I will yield back.

Mr. SHUSTER. I thank the gentleman and, with that, recognize Mr. Graves for 5 minutes.

Mr. GRAVES OF LOUISIANA. Thank you, Mr. Chairman.

Mr. Long, first of all, I want to say that I—I want to commend you for your testimony and your statements so far. Having been through a number of hurricanes and other disasters in a previous life, you sound like someone who has been on the ground and actually dealt with these things. And I know that we did somewhat cross paths when you were working in Alabama.

But I want to urge you, as you deal with the bureaucracy, keep the perspective of focusing on people and outcomes, because we are continuing to see all sorts of challenges in recovery that I think are items that can be preventable with the right leadership.

First, I know you are aware of this, but I want to remind you anyway, we did have a 1,000-year storm in Louisiana last year. It was an unnamed storm. We received more rainfall in about a 36-hour period than most Americans receive in an entire year. And we still have much devastation from that. And certainly our friends in Texas, Florida, Puerto Rico, and the Virgin Islands need much attention and the focus of FEMA at this point, but we still have a lot of lingering concerns in Louisiana, as well.

You talked about leaning forward on pre-disaster mitigation. I couldn't agree with you more. The fact that you come in and use HMGP [Hazard Mitigation Grant Program] after a disaster—statistically, that is not the way—the place where we should be investing dollars, yet it is what we do.

There is a particular concern—and I understand that Chairman McCaul might have noted this. Right now, under the Stafford Act, there is a provision called duplication of benefits. There are many projects that your friend two people over, General Jackson, runs regarding the Corps of Engineers, where the Corps doesn't have suffi-

cient funds to implement a project. Yet after a disaster you have situations where FEMA comes in and gives hundreds of millions—or, in some cases, billions—of dollars to a community for hazard mitigation, reducing flood risk or other types of hazard risk in the future.

Why in the world would FEMA prevent a State, a municipality from using those dollars to finish a Corps of Engineers project that has been through cost of benefit scrutiny, been through environmental scrutiny, and is viewed as having the greatest return of investment for Federal dollars?

Mr. LONG. I can't speak on the individual issues that you are talking about specifically, but the issue, nationwide, is fragmented recovery when it comes from—you know, have we ever taken a look across the Federal Government as to the number of funds that come down not only from FEMA, but HUD, economic injury loans, and how we actually streamline them and use them concurrently to do the greatest good? I am all for that.

Trust me, it is too confusing. And local governments and State governments have to basically hire consultants to be able to come in and help them navigate that funding. I would be happy to meet with you specifically to overcome the issues with that policy. If we are standing in the way, I don't want to do that. I want to do what is right, and I want to do what makes sense.

Mr. GRAVES OF LOUISIANA. This duplication of benefits issue and the way it is interpreted has some very serious flaws. I had the opportunity to meet with the chairman and the ranking member on it, and had very productive discussions there, and the subcommittee chairman, as well.

There is a belief on the part of FEMA that you are going to duplicate Corps of Engineers money by using these FEMA dollars. Nobody is asking to build these projects twice. That is an idiotic response. And if we are all trying to be good stewards of Federal dollars, this just doesn't make sense.

Similarly, on the duplication of benefits issue, there is a position within FEMA now that if someone applies for an SBA loan that is duplicative of, well—duplicative of a Community Development Block Grant, Disaster Recovery Grant—I don't know how people view a loan being duplicative of a grant. Those are two totally different things. And so I just want to ask if we can work together to try and resolve some of these things, because these are not in the best interest of flood victims.

Mr. LONG. Absolutely, and I agree with you. It is way too complex. In some cases, where does FEMA's assistance begin and end, versus some of the other agencies? We have got a lot of work to do to streamline, and I haven't had a chance to catch my breath to be able to put forward my vision of emergency management and the way we should go forward. I would be happy to work with you, because that is one of the initiatives of streamlining fragmented recovery across the Federal Government that I would love to be able to put forward.

Mr. GRAVES OF LOUISIANA. Thank you. I think I could probably sit here for an hour and ask you questions. I am going to try and get two other things in real quick.

Under staff—the law says that when you are applying deductions for facilities—and the law specifically says "facilities"—that you are to deduct $500,000 per facility whenever providing assistance for schools and other flooded structures. Yet FEMA has come in and determined that a school should consist of a $500,000 deduction for a gymnasium, a storage facility, one classroom building, another classroom building, cafeterias, or whatever else.

So in some cases you could have millions of dollars in deductible coming from one school facility from a community that is entirely flooded, like in Livingston Parish, Louisiana. They don't have the ability to actually reopen their schools because of this structure versus facility interpretation from FEMA.

And lastly, I just want to say that on HMGP and other things, perhaps coming in and looking at ideas like a block grant, we also need to work together on housing and trailer issues. But again, I could probably sit here forever.

I want to thank you for being here and urge you to keep the bold perspective.

Mr. SHUSTER. I thank the gentleman and now I will recognize Mrs. Napolitano for 5 minutes.

Mrs. NAPOLITANO. Thank you, Mr. Chairman, and thank you for the witnesses for being here.

I might add although today's focus is on the east coast natural disasters, I would like to acknowledge the unprecedented hardships faced by the western communities this year with historic storms in the past winter and tragic fires that we are still addressing today.

The 2017 severe winter storms in California cost $1.2 billion in damages to our State and highway system that is eligible for the Federal Highway Administration's disaster relief program, but DOT is sitting on $911 million in disaster relief program funding they have not obligated to the States, plus sufficient funding to cover $4.1 billion in outstanding Federal disaster obligations owed to California through the years since 1983.

DOT needs to obligate the money they already have for disaster relief, and needs to increase the funding to the Federal Highway Administration in disaster supplemental. Wildfires in California have been devastating—245,000 acres have been burned, 8,800 structures have been destroyed. In the peak of the wildfires, 11,000 firefighters battled 21 major fires that forced 100,000 people to evacuate, 43 lost their lives. And on October, the President approved a major disaster declaration. Over 300 homes were burned, a whole city was devastated.

According to the California Office of Emergency Services, California has $2.1 billion in outstanding Federal disaster assistance funding that has not been allocated. We need to pass emergency supplemental that addresses the disaster assistance and prevention for the whole country.

In going back to this, Administrator Long and General Jackson, can you discuss FEMA's and the Army Corps' efforts to address these happenings in California?

Mr. LONG. Yes, ma'am. I personally made a visit and met with Governor Brown in California regarding the wildfires. And I got to tell you the urban wildfire that impacted mostly Santa Rosa and Napa and Sonoma Counties is one of the most disturbing events I

have ever seen in my career. There are actually—the last count—and I am sure it has grown—6,800 destroyed homes, and the fire was apparently moving at 200 feet per second. And I am very aware, we are there with Californians, helping them to respond and recover.

When it comes to expediting funding—and, you know, here again it is a partnership—in many cases it takes three levels of Government to make sure that the money can go down. I mean I am always in this balancing act—or FEMA is—of expediting funding down quickly to activate, you know, recovery, but then also staying within OIG expectations of making sure that we are utilizing taxpaying dollars.

I do believe that section 428, the pilot program within FEMA, you know, within the Stafford Act, is the way to go. I do believe that we need to do more to expedite funding down, but ensure that project controls and grant monitoring and oversight training is provided at all three levels and upheld. It has got to be more than FEMA making sure that the taxpaying dollars are being used correctly.

And so I am—we are with you in helping Californians recover.

Mrs. NAPOLITANO. Well, the wildfires were not expected. So we need to expect the unexpected. And I am sure that we need to expedite the use of agencies' ability to respond immediately, due to the severity of the disasters.

In other words, can we find a way to work together and eliminate—not eliminate, but waiver some of the restrictions the agencies have on certain things? Because waiting in Puerto Rico is outstanding, it is just too long. And the people are still—some of them still don't have power, they still don't have housing, they still don't have potable water.

Could there be a way to be able to get some of those things done, addressed immediately?

Mr. LONG. I would be happy to work with you on any waiver issues that you may have. I would be happy to work with you to understand them better.

Mrs. NAPOLITANO. OK. And is the energy going to be restored to modern standards, instead of the 1950s standards?

General JACKSON. Ma'am, we are going to repair the system to get the power restored to the condition it was before the storm. That doesn't mean it is going to be repaired with 1950s parts; it is going to be repaired with modern parts. It is going to be repaired to current electrical code. But there is not going to be any overarching improvements to the system. For example, if a line is above ground, it is going to remain above ground. We are not going to put it below the ground.

Mrs. NAPOLITANO. Well, certainly.

Mr. Chair, I would like to submit for the record some letters from the Governor of California.

Mr. SHUSTER. Without objection, so ordered.

[Letters from the State of California are on pages 179–186.]

Mr. SHUSTER. I thank the gentlelady.

Mrs. NAPOLITANO. Thank you, gentleman.

Mr. SHUSTER. And just—General Jackson, I spoke to General Semonite about the underground-aboveground, and he told me that some of the power lines, when they are dealing with hospitals and public safety and security, will be underground. But to do the whole system underground is just cost prohibitive.

General JACKSON. That is correct, Mr. Chairman. There are underground lines there now. And so those, if they have sustained damage, will be repaired and will be underground. But the vast majority of the transmission lines are above ground across the island.

Mr. SHUSTER. Thank you very much. And with that, I recognize Mr. Weber for 5 minutes.

Mr. WEBER. Thank you, Mr. Chairman. I represent District 14 on the Texas coast, the first three coastal counties from Louisiana. We are ground zero for Harvey flooding. Harvey was a three-rain event for us. It came in at Rockport and Corpus Christi, and we got the bad side of the wind and the rain.

Then it went up above us, it rained in all the watersheds north of us. And then it moved down and back on top of us and into Louisiana. About 80,000 homes were flooded out. My guess is probably 40,000 of those people are still out of their homes.

Then, to Admiral Schultz, as I criss-crossed the district, we were able to fly over with our great Coast Guard and see it firsthand. I have learned more about disaster relief that I hope I never, ever have to use again. So I appreciate you all's work. I tell people that Harvey brought the downpour, but Texans and friends and neighbors brought the outpour. And so we appreciated all that response.

Ike was the forgotten hurricane. Let me tell you about our district. My district on the Texas gulf coast produces 60 percent of the Nation's jet fuel, almost 20 percent of the Nation's gasoline, east of the Rockies. We are the 13th largest exporting district out of 435 Members of Congress. We have 60 percent of the Nation's strategic petroleum reserve. We have the largest petrol chemical refinery in the Western Hemisphere, the second largest in the world. We produce a lot of gasoline and fuel, especially jet fuel. You saw fuel prices spike after Harvey.

So Sabine-Neches Waterway, which has the Port of Beaumont and Port of Port Arthur on it, Port of Beaumont sends out more military personnel and equipment than any other port in the United States. That is how important this is. Sabine-Neches is shoaled in. It is extremely important—the Sabine-Neches is the second largest waterway on the gulf coast, second only to the Mississippi River. This is a hugely important district. If you added a congressional district or two north of me, then we produce 80 percent of the Nation's jet fuel, almost 40 percent of the Nation's gasoline east of the Rockies. It is a huge energy district.

We dodged a bullet with Ike. Ike almost hit the Houston ship channel and brought a 20-foot wall of water up into the ship channel. Had that happened, we would have devastated the Texas energy economy, produced fuel prices—although it already did, because a lot of the refineries were shut down after Ike.

And so this infrastructure, being on this committee, is extremely important. This infrastructure needs to be highlighted, how important it is. You just cannot imagine how important it is for our

State, for our Nation, because it is national security. We can't—we need to fly jet planes and tanks and all kinds of things.

Ike—I want to talk to Mr. Long with FEMA. There are some backlogged FEMA claims still held up from Ike. Now, let's put this in perspective. Ike landed ashore on September the 13th, 2008. We would like to see FEMA come back and pay the counties for debris removal. There is a lot of claims out there that would help make whole some of these small communities.

We need to absolutely have an ounce of prevention worth a pound or, in this case, millions of pounds of cure. So I would like for you gentlemen—Mr. Long and perhaps you, Major General Jackson—to give us a white paper of three things that we could do better in preparedness to make sure we have got better infrastructure, that you work well with Texas agencies, as I—well, all of our agencies.

As I said, Mr. Long, I have learned more about disaster recovery than I thought I ever wanted to know. And you are right, Texas does a fairly good job. But we rely on the Federal Government for backup. When Ike hit we pretty much repaired our own State. The week after Ike—I call it the forgotten hurricane, because a week after Ike, the world recession came into—the bottom of the stock market fell out, the housing bubble burst, and Texas pretty much did most of the stuff on its own for Ike. So we cannot afford to do that. The Governor of Texas now has submitted a request for about $61 billion, just a few days ago, to Congress.

We can do things to make the coast better. We can do things—we are going to have another hurricane. We can do things to make sure we protect our energy supply, protect our ability to get the military in and out of the Sabine-Neches Waterway. They were in the middle of an exercise, and they had to shut it down because of all the shoaling.

Would you all be willing to give us just a white paper—I would go with you, too, Admiral Schultz—three things we could do better to prevent this in the future?

Mr. LONG. Absolutely.

General JACKSON. Yes, sir.

Admiral SCHULTZ. Likewise, sir.

[The U.S. Coast Guard has provided the following three ways that the Service can improve disaster response preparedness:]

Three ways the Coast Guard could improve preparedness to respond to disasters such as the hurricanes of 2017 are:

Rebuild Facilities to Modern Resiliency Standards: At a minimum, the Coast Guard must rebuild its damaged shore infrastructure to pre-hurricane conditions, but more importantly the Coast Guard should rebuild with a focus on resiliency to withstand damage from future events to ensure uninterrupted response operations.

The hurricane supplemental request the administration provided to Congress is sufficient to restore Coast Guard's depleted operational response costs and repair our damaged infrastructure to pre-existing conditions, but additional funding would be needed to invest in Coast Guard facilities to meet modern resiliency standards.

Restore Readiness: While the Coast Guard was able to meet the Nation's call responding to all three disasters this past year, this response has a cost. Operational missions, patrols, and training were canceled, additional unplanned hours and fatigue were incurred on Coast Guard ships and air-

craft, and increased maintenance and repair will be required. All of this erodes the Coast Guard's future readiness without adequate resourcing. Like the other armed services, the Coast Guard has experienced significant deterioration in readiness, and its aging assets are in dire need of operations and maintenance restoration until recapitalization of these capital assets can occur. But unlike the other armed services, the Coast Guard has not been included in efforts to rebuild and restore military readiness simply because most of the Coast Guard's budget does not fall under the "defense funding" umbrella. The Coast Guard's budget is not protected within the "non-defense funding" category, requiring the Service to compete with every other Federal discretionary account to merely sustain critical operations.

Grow the Coast Guard to Meet Increasing Manpower Requirements: The Coast Guard needs to grow by 5,000 Active Duty members and 1,100 Reservists over the next 5 years to meet increasing mission demands and effectively respond to contingent events.

The Coast Guard must be ready to respond at all times and that demands a full strength and highly trained workforce. Unlike the other Armed Forces, the Coast Guard does not garrison its forces, and during contingency responses it must take forces from the front-line.

The Coast Guard has been relied heavily upon to support man-made and natural disaster responses, most recently associated with the 2017 hurricanes. While the current Reserve workforce was able to support the immediate response to these hurricanes, the Coast Guard does not have the "bench strength" necessary to maintain surge operations for an extended period of time.

Mr. WEBER. Mr. Chairman, I yield back 7 seconds.

Mr. SHUSTER. I thank the gentleman. With that I recognize Mr. Sires from New Jersey for 5 minutes.

Mr. SIRES. Thank you, Mr. Chairman, and thank you for holding this meeting. Thank you for all the work that you do.

I represent the Eighth District of New Jersey, which is across from New York City, Hoboken, Jersey City, the whole area that was hit pretty hard by Sandy. And I hope that we can work together on streamlining this whole mitigation process, because I have been working for the last 5 years on a project, trying to get something from FEMA that was rejected. Tell them why, then you appeal, they say you are still rejected, they don't tell why. It is not a big project, but the response is just ridiculous. And it takes forever to get a response. So I hope that we can work together on that.

But my question has to do with Puerto Rico, and I hope you can help me determine this. I know that New Jersey has sent State troopers through to Puerto Rico, and I have some—that I have spoken with. Pretty lawless over there now. And I was wondering. Do you have an input, do you determine, or do you have a recommendation on how many National Guards are sent to a site like Puerto Rico? When you get there do you maybe—do you say, well, we don't have enough National Guards? Do you also——

Mr. LONG. We would be happy to get you the specific number that was there pre——

Mr. SIRES. Well, there are 4,000 there now.

Mr. LONG. Yes, so——

Mr. SIRES. There are 4,000 there. But I don't know if it is enough. What I am saying is when you are there and you see how bad the situation is, do you pick up the phone and say to somebody, look, I think we need more help, or you don't say anything, or you don't have the authority, or you don't talk to anybody.

Mr. LONG. Sure. So right now in Puerto Rico and the Virgin Islands we have roughly 20,000 Federal—that is civilian and DoD—officials on the island. Now, if you put that number into context, 20,000 people is like the average population of most American cities. We have deployed, basically, an entire city's worth of Federal Government workers to the island.

Now, there are thousands of DoD officials there, in conjunction with the National Guard. But I would be happy to get you a specific number.

Mr. SIRES. OK. No, because one of the things that I was talking to the State trooper from New Jersey, he says it is pretty lawless. And I was just wondering if the people that you have down there, are they safe in some of these areas?

Mr. LONG. I—you know, I would be happy to look into the lawlessness piece, but I have not heard that. Now, is there everyday crime that takes place, as normal in Puerto Rico? Probably so. But I have not seen lawlessness.

And quite honestly, you know, one of the things that—because of the response effort, we kept security in check, you know, after Maria went through. I am not aware of what you would determine as lawlessness.

Mr. SIRES. Well, I mean, just a State trooper would not lie to me. I mean I know him pretty well. And there are a number of them there.

But if you could get that information for me about the National Guard, because I think that is important. And I think you should—if you are there on site, and you can make a recommendation that maybe we don't have enough, you know, I think that would be great.

Mr. LONG. Absolutely. And, you know, I speak with Governor Rossello on a regular basis. And not only that, but we have constant communication with all 78 mayors that are there. And in addition to that, we have over 100 intergovernmental representatives embedded with all the mayors in Puerto Rico on a day-in and day-out basis. So we use them as sensors to make sure that we are trying to do everything that needs to be done.

Mr. SIRES. Well, and as far as trying to streamline, you can count on my support on streamlining, because it is just very frustrating dealing—when you have a situation as bad as you have had in some of these areas, and you get very little response, and it takes forever—I mean this is 5 years later that I am dealing with this. And I know he was talking about 8 years ago, you know, 8 years later.

And one of my pet peeves—I will finish—I don't know if you have anything to do with this, but I just hate these airlines. They charge you $900, $1,000 for people to come to the States, and $90, $100 to go there. And you might not have anything to do with it, it might not be your responsibility, but I think we should look at this. Because I have about 80,000 people from Puerto Rico in my district. And one of the things that they are trying to do is alleviate the situation that the family has. And they are telling me that they are charging $900, $1,000 to come to the United States, when it is only $90 or $120 to go to the island. I think that is something that

this committee should look at. I am not saying that you should. You got enough on your plate.

Thank you very much.

Mr. DAVIS [presiding]. The Chair recognizes Mr. Mast from Florida for 5 minutes.

Mr. MAST. Thank you, Chairman, and thank you all for your testimony. I will be brief with my questions.

As you, General Jackson, you know, we have had conversations before. My district is a ground zero for stormwater across the breadth of Florida. Whenever we have a hurricane coming through there or several hurricanes, water goes towards the Kissimmee River from the breadth of Florida. It flows down into Lake Okeechobee, and then it flows into my backyard. This is largely freshwater and it goes into our saltwater estuaries.

So I want to ask a little bit about this in terms of emergency response, this in the context of emergency response and what goes on there.

Vice Admiral Schultz, you did speak about your role as responding to oil, chemical, and hazardous material spills. And in your purview, does stormwater ever fall into hazardous material? Or in your purview have you ever seen that be something that falls in there?

Admiral SCHULTZ. Sir, I do not have much expertise in that stormwater piece of that. Generally it would be a vessel that would bring us out to a site. We work very closely with EPA. And in that type of situation, we would come out generally to remediate, you know, oil on a vessel, other type of hazardous chemicals on a vessel. The actual stormwater, testing of stormwater, generally I am not familiar with that being our—I am not sure if my EPA colleague has something to add to that, or not.

Mr. MAST. Trying to look for clarity on hazardous—really, for—take it from any of you, clarity on hazardous materials.

Admiral SCHULTZ. Hazardous material in a wet, maritime environment generally brings out attention out there, and we do get involved with that under ESF–10. And, like I said, from a vessel standpoint, there are 3,600-plus vessels. Down in Katrina there are different hazmat things that have floated into the city that drew our attention.

So I think it depends on the specifics, sir, and we will certainly work with your staff to understand if there is something particular you are looking at. We will try to be responsive——

Mr. MAST. Quite often the case for us is the conversation of algal blooms, which often are transferred as a result of flood control—it is in the name of flood control—because we do have an aging and failing dike there. But it leaves another area with a great deal of debris of very harmful algal blooms, often very harmful to human life, certainly harmful to sea life. And so that is the issue we face.

I would hope that we could have a conversation, perhaps as a group, about this at a future date.

Admiral SCHULTZ. Thank you.

Mr. MAST. With that, I will yield back. Thank you.

Mr. DAVIS. The gentleman from California, Mr. Garamendi, is recognized for 5 minutes.

Mr. GARAMENDI. I thank you very much, Mr. Chairman. I appreciate the witnesses and the work that you are doing. I have three different questions.

First to FEMA, Mr. Long, the disaster recovery program—excuse me, the disaster response. You have adjusted the cost-sharing requirements for disaster aid for Texas and Florida, as a result of the recent hurricanes. California has had a recent disaster. Do you intend to also adjust for California the cost-sharing requirements for the emergency aid?

Mr. LONG. So it depends. There are a couple things. The 90/10 cost-share is triggered and there is a formula that is set forth by procurement of the Post-Katrina Emergency Management Reform Act. And here again I can submit specifically to you how that formula works. But basically, if I remember correctly, if the damage cost is $140 per person for the entire population of California, then that basically triggers the 90/10 cost share.

Mr. GARAMENDI. We will work with you on that. The disaster recovery program, a couple of our colleagues have already raised this question about past Presidential disasters and the FEMA's IOUs to State and local government for the Federal cost-share in the recovery. And that is infrastructure repair, and so forth.

Do you intend to request in the upcoming emergency appropriation bill sufficient money to cover past Presidential declarations and the local and State recovery money that is owed to them?

Mr. LONG. Right now I don't have an understanding of the issue specifically that you are referring——

Mr. GARAMENDI. It has been raised by three of my colleagues here, and this has to do with past emergencies declared by the President in which local governments have put up their 25 percent and have paid for the recovery of various infrastructure, and FEMA has yet to pay the 75 percent Federal share of that recovery work.

Mr. LONG. I would be happy to look into it.

Mr. GARAMENDI. If you would, we think there is about $5 billion owed to the State of California for past Presidential declarations. You heard from Texas just a moment ago and, similarly, most every State where there has been a Presidential declaration.

My understanding is what has happened is you have had little enough money to deal with the emergencies and the response to the emergencies. And therefore, you have delayed payment on these IOUs. So if you would look into that, I would appreciate it.

Mr. LONG. Yes, sir.

Mr. GARAMENDI. Coast Guard, you are at about $1.8 billion in infrastructure damage as a result of the hurricanes. Is that correct?

Admiral SCHULTZ. Congressman, as a result of the hurricanes, this season here may be a little carryover—about $70 million—from 2016, Matthew. I would say we are at about $1.1 billion, $2 billion, $3 billion, somewhere in that range.

Mr. GARAMENDI. OK. How do you expect to get that money to rebuild the infrastructure?

Admiral SCHULTZ. Well, sir——

Mr. GARAMENDI. This is infrastructure that is being used that has been damaged, in some cases not even available for us.

Admiral SCHULTZ. Yes, sir, Congressman. There are more than 40 facilities that have been damaged here in the recent round of storms. We, at the request of OMB, through our parent department, the Department of Homeland Security, have submitted our needs. That number is, again, a number north of $1 billion. It is working through the Department. I am not sure if it has left the——

Mr. GARAMENDI. I believe you have also submitted information to the subcommittee of this—the Coast Guard and Maritime Transportation Subcommittee of this committee, and we will work with you on trying to secure that funding, and it is out there.

You have also had an extraordinary expense in the immediate emergency response. How much have you spent in the immediate emergency response for the three hurricanes?

Admiral SCHULTZ. Well, sir, like I said, that number, that billion-plus number there, there is about half-a-billion that I believe is actual hard facility costs. There were some damages to our aircraft. There are, you know, other wear-and-tear type things. There are personnel costs in there. That collectively gets you to that number that is north of——

Mr. GARAMENDI. Ongoing operational costs are what I am referring to.

Admiral SCHULTZ. Ongoing operational costs, sir?

Mr. GARAMENDI. I guess my point is that my understanding from the information that we have received is that the Coast Guard has spent into its annual appropriations to deal with the emergencies, and you may have a shortfall for the remainder of the current fiscal year.

Admiral SCHULTZ. Yes, sir. I think——

Mr. GARAMENDI. I am curious how you are going to backfill, or if you will be—if you need to backfill that amount of money. If so, then we need to know so that when there—the new emergency appropriation bill goes through, that we include in that bill the Coast Guard.

Admiral SCHULTZ. Yes, sir. I think if you look at, sir, where we were at the close of a fiscal year, at the end of September to 1 October, we deferred things in our operating and maintenance class. We deferred a $7 billion contract to replace 19 small operational boats. We had to make decisions as you close out the fiscal year in a responsible way to do that. So there are some things. There is deferred maintenance, and that stuff plays forward. And we can work with you, sir, on those specifics.

Mr. GARAMENDI. We would appreciate specific information so that we can work on the appropriation, the emergency appropriation.

Finally, I am really curious how we are going to pay for all of this. I believe we just made a major move here in this House to significantly reduce the Federal revenues. It is called tax cuts.

I will let it go at that, Mr. Chairman. Thank you.

Mr. SHUSTER. I thank the gentleman. With that, I recognize Dr. Babin for 5 minutes.

Dr. BABIN. Yes, sir. Thank you, Mr. Chairman, and thank you, witnesses, for being here.

My district is in east Texas, as well, dovetails right in with Congressman Weber, who—we actually have the dubious honor of having the continental rainfall record in one single storm in my district, District 36. I also have more petrochemical refining facilities than any other district in the country. I have Port of Houston, a lot of damage, a lot of siltation and shoaling. And we certainly need to have some of these funds for disaster.

But my biggest concern here—and I direct this to General Jackson, or really, anybody who can answer this—a lot of tough questions had to be made during this storm, and will have to be made in the future by local river authorities and water jurisdictions with regards to lowering reservoir levels prior to the onset of a predictable flood event, so that we can save lives and property for those who are down below these dams.

However, at locations that are under the authority and jurisdiction of the Federal Energy Regulatory Commission, or FERC, because of their proximity and relationship to federally managed hydropower facilities, these local river authorities have told me that they believe they are basically powerless to make these critical decisions that have to do with lives and property.

I have heard more about this issue from constituents over on the east side of my district, in Texas, than any other area. And I have here a resolution that was recently passed by the Cameron Parish Police Jury in Louisiana to demonstrate that these issues are often not limited to just one State. And I would like to submit this for the record, Mr. Chairman.

What are your thoughts on a solution to these issues? And could the Army Corps perhaps find a role as the arbiter between FERC and local authorities when these decisions need to be made, or possibly do you see a need for an interagency process to steer these decisions? For example, a process by which the Corps, local river authorities, and FERC all might have a voice in developing more flood storage capacity or lowering these lake levels when we have a known flood event about to occur.

[The resolution from the Cameron Parish Police Jury is on pages 187–188.]

General JACKSON. Yes, Congressman, I appreciate that question. You know, water management is always a very controversial issue. We don't have any authority over FERC, but we work very closely with FERC on water management across the Nation.

I think there is always room for continued dialogue, especially as situations in a watershed change over time. To help us make better informed decisions on how we manage water, how we manage the releases, there are significant advances in meteorology that have given us better forecasting capability that allow us to see events coming and better understand what is going to happen in the basin.

I would be happy, sir, to get with you and your staff——

Dr. BABIN. I would love that.

General JACKSON [continuing]. And better understand some of the concerns, the information that you have, engage with FERC, and then, with FERC, come and see you and have a discussion on what we can do.

Dr. BABIN. Well, these poor folks that are with these river authorities have their hands tied. And they don't—the people that live below and lose their property and some lives, some of them are ready to take up arms. I mean this is how angry these folks are, and blaming the river authorities, when really it is a protocol, it is a guideline from the Federal Government.

Who can make these decisions? We had a terrible flood on the Sabine River the year before last, and we asked these questions we could not get answers to. So I want to have some answers.

Do you know how we could amend these protocols?

General JACKSON. Sir, let me get with your staff offline and we will figure out specifically which issues are most concerning.

I understand the general issue that you are talking about, and I want to be able to get with FERC offline, make sure they are aware of the concerns, and then come in together and lay it all out for you so it is not confusing. And we can think about what we need to do next.

Dr. BABIN. Yes, indeed. I appreciate that.

Anybody else want to have anything they want to add about that?

OK. Well, with that, I will yield back, Mr. Chairman. Thank you.

Mr. SHUSTER [presiding]. I thank the gentleman. And then, with that, I recognize Mr. Johnson for 5 minutes.

Mr. JOHNSON OF GEORGIA. Thank you, Mr. Chairman. Back in September, the Virgin Islands and Puerto Rico were devastated by a 150-mile-per-hour category 4 hurricane that inflicted damage that was described as being catastrophic. A humanitarian disaster was unfolding with food and water being unavailable, and communications being cut off. And there was a sense of desperation among the people of the Virgin Islands and Puerto Rico.

And it was during that time period that the mayor of San Juan, Puerto Rico, Carmen Yulin Cruz, became a public voice of the frustration being felt by the people of Puerto Rico.

And Administrator Long, on or about October the 8th you are reported to have stated, "We filtered out the mayor a long time ago. We don't have time for political noise." Is that your statement?

Mr. LONG. Poor choice of words under a lot of stress. Yes, sir.

Mr. JOHNSON OF GEORGIA. What did you mean when you said you had filtered out the mayor?

Mr. LONG. As I said, it was a poor choice of words. The bottom line is that we were under tremendous stress at the time, and——

Mr. JOHNSON OF GEORGIA. I understand that.

Mr. LONG [continuing]. Then the rapid-fire questions of the media and everything——

Mr. JOHNSON OF GEORGIA. I appreciate the stress that you all were working under, and I appreciate your efforts.

Mr. LONG. Right.

Mr. JOHNSON OF GEORGIA. But what did you mean when you said you had filtered her out?

Mr. LONG. Bottom line is that any time we are going through—unity of effort is what is required. At the time, the mayor refused to be a part of the joint field office organization that we had to ensure a unified effort. There are over 78 mayors in Puerto Rico that——

Mr. JOHNSON OF GEORGIA. Did you——

Mr. LONG. Do you mind if I answer the question?

Mr. JOHNSON OF GEORGIA. Well, I do, but I have limited time, and that is why I am interrupting you.

Did you freeze the mayor out of those discussions with the other mayors?

Mr. LONG. No, Congressman, we did not. She had——

Mr. JOHNSON OF GEORGIA. You didn't mean that when you said that you had filtered her out.

Mr. LONG. That is not true. As I said, it was a poor choice of words. And specifically, we have had staff embedded with her basically since Maria exited. I have one of my best Federal coordinating officers there right now, as we speak, along with intergovernmental staff that has been embedded with her and all the other mayors, if they choose. Those are only two mayors that have chosen not to have my staff in there.

Mr. JOHNSON OF GEORGIA. And she was one of them?

Mr. LONG. No, she was not. We——

Mr. JOHNSON OF GEORGIA. So she——

Mr. LONG. But all the other mayors have been regularly——

Mr. JOHNSON OF GEORGIA. So she—Mayor Cruz has been trying to cooperate with FEMA, but she has been critical of the response. And I would note that, you know, 75 percent of the people in Puerto Rico to this day are still without power. Isn't that correct?

Mr. LONG. Yes, sir.

Mr. JOHNSON OF GEORGIA. And what about in the Virgin Islands, same situation exists?

Mr. LONG. There are many without power in the Virgin Islands as well, yes, sir.

Mr. JOHNSON OF GEORGIA. And so, when people complain about it, is it the Trump administration's muscular approach now to critics that you can vocalize your frustration? Do you feel that that is appropriate for a person in your position to make those kinds of assertions about publicly elected officials who are only trying to serve the public that they are elected to represent?

Mr. LONG. At the end of the day I believe the mayor of San Juan and I share the same goal, and that is to help people. I didn't take this job to step on people, by any means. I have spent two decades as an emergency manager, dedicating my career to taking care of a lot of people. You don't——

Mr. JOHNSON OF GEORGIA. Yes, you have a long history as a professional in emergency management, and I deeply respect it.

Mr. LONG. Thank you.

Mr. JOHNSON OF GEORGIA. Let me ask this question. In restoring the electrical grid, I know that some of my colleagues have asked a question about the suitability of going underground with power lines. And it has been stated that it is cost-prohibitive and, in certain cases, the terrain does not lend itself to undergrounding.

What I want to know is are there any cost estimates that back up that assertion that it is cost-prohibitive with respect to laying in underground utilities in Puerto Rico?

Mr. LONG. That is a great question. My authorities are limited in what we can do by the Stafford Act when it comes to making improvements, particularly when there are deferred maintenance

issues on the power grid. It is a very antiquated system that was not working before the storm that we are having to fix underneath my emergency authorities.

But when it comes to the permanent work of repairing that power facility, it is going to take an act from Congress that is far greater than my authority to be able to rebuild in a more resilient fashion so that we do not go through this collectively, as a Nation, ever again.

Mr. SHUSTER. The gentleman's time has expired.

Mr. JOHNSON OF GEORGIA. Thank you. I yield back.

Mr. SHUSTER. I thank the gentleman.

Mr. Davis is recognized for 5 minutes.

Mr. DAVIS. Thank you.

Administrator Long, did you have anything else you might want to add on the interactions with the mayor that my colleague asked about?

Mr. LONG. Negative. Well, I take that back. Look, uniformity of effort is definitely what is needed. My goal is to support the Governors. I mean I talked to Governor Rossello, Governor Mapp. There was one day when I spoke to seven Governors from California to the Virgin Islands to ensure response and recovery priorities and making sure that we are meeting the mark.

And we embedded—we realized that there was not an emergency management infrastructure in place at the local level in Puerto Rico, and we proactively have embedded a lot of staff in each one of those offices to make sure that the mayors have a voice back to what needs to be done.

Mr. DAVIS. Thank you. Thank you.

General Jackson, as you are fully aware, there has been a lot of discussion among members of this committee about the Corps' implementation of section 408 permissions. From my end, you know, a lot of those concerns deal with section 408 permissions on non-Federal levees.

First, can you tell me how many miles of levees will need to be repaired, modified, or rebuilt, due to the recent hurricanes and storms?

General JACKSON. Congressman, I don't have, off the top of my head, the miles of levee. But I know that they have been addressed in our submission for damage estimates to the administration. But I can pull that information and get that to you.

Mr. DAVIS. Is there a different process that the Corps uses for section 408 permissions in the aftermath of a disaster, to expedite them?

General JACKSON. Congressman, if a levee is damaged and the Corps repairs it under Public Law 84–99, a section 408 permission is not required.

Mr. DAVIS. OK. Do you think there are many levees that will be repaired by the Federal Government that will not fall under that provision?

General JACKSON. Perhaps there will be.

Mr. DAVIS. Will there be an expedited process to go through the section 408s?

General JACKSON. The section 408 process itself has obviously been under a lot of criticism. And we have looked inwardly in the

Corps to determine how can we improve the responsiveness of section 408s. And we have waived and changed a lot of the provisions that we have had before, such as the percentage design requirement not requiring section 408s for more routine operation and maintenance-type activities, trying to eliminate environmental reviews for section 408s that are redundant with other types of environmental reviews, and we have worked very hard to power down the decisionmaking authority to the lowest level.

So it is below the district commander, now, all the way down to a responsible GS–15, like the chief of engineering and construction at a district, to allow for greater responsiveness.

Mr. DAVIS. So there is a great responsiveness at the district level. Are you noticing that when you implement these internal changes, are the districts uniform in implementation?

General JACKSON. It is going to be really interesting. We like to call them geographically tailored solutions. And the reason I say that is there is going to be some difference when you have 41 districts all doing something; we have given autonomy to them to do it as fast as they can, we are using the right engineering standards, there is going to be differences of opinion. There is difference in topography, difference in projects. They are not all the same.

So there will be some differences, but I am not going to call them inconsistencies anymore. I am going to call them geographically tailored solutions.

Mr. DAVIS. That is a good paraphrase, I guess. We will look forward to working with you. And obviously, we will bring up the geographical whatever exclusions—inclusion, however you called it—when we see some discrepancies.

But I do appreciate you really looking at the section 408 process, because, obviously, it needed to be—needed to have some changes. And thank you for that.

Administrator Long, it is great to see you again. You were in my office not too long ago—I appreciate that—long before the storms. And I think you have done the yeoman's work in doing everything you can to address many of the issues that we have heard about today, especially from our colleagues who represent those areas that have been hit.

I know we are talking about the hurricanes today, but you and I talked about a bill that I had, which is the Disaster Declaration Improvement Act, that would allow FEMA to utilize more localized impacts when determining whether or not an area that had been hit by a disaster would be eligible for Federal disaster assistance.

As we move ahead on this, you know, this bill actually passed the House in May, 425 to nothing. We are not going to stop. As you see these storms hit, you see many storms hit areas in the Midwest even. How can you tell me how those localized impacts can be taken into consideration by FEMA in the future to better assess true disasters, and whether or not States and localities can cover their costs in absence of the Federal Government?

Mr. LONG. Here again it goes back to the Stafford Act. In many cases, small communities can have devastating storms, but the overall statewide impact doesn't meet the indicators that would say Federal assistance is down the road.

I hear you loud and clear. I would like to continue to work with you on how we can work through those issues.

Mr. DAVIS. Well, we will do that. And just like—you know, it seems even smaller storms—not the ones we are talking about today—once the disaster happens, the communities come together, agencies come together, clean up, and then we forget about the underlying policies that may have led to some heartaches during that storm process and recovery process. So we will work together when you get to catch your breath.

Thank you all, and I yield back.

Mr. SHUSTER. I thank the gentleman. I now recognize the gentleman from New York, Mr. Maloney.

Mr. MALONEY. Thank you, Mr. Chairman. Mr. Chairman, I read an article in Travel Weekly about the response of private U.S. airlines to the disaster. I would ask unanimous consent that it be entered in the record.

Hearing no objection?

Mr. SHUSTER. Hearing no objections, so ordered.

[The Travel Weekly article is on pages 189–191.]

Mr. MALONEY. Thank you, Mr. Chairman.

Gentlemen, I am going to have some questions that are going to sound critical, but I want you to understand they actually are not. And I think that will become clear.

First of all, I did have the opportunity to go to Puerto Rico 2½ weeks after the storm with Congressman Smucker and a bunch of other Members. We saw firsthand the extraordinary work and dedication of the men and women of FEMA, of the Coast Guard, Lord knows, the Army Corps of Engineers, and all the other responders. So thank you, first and foremost.

In particular, Admiral Schultz, a constituent of mine—I have got a bunch of constituents who had family there, very concerned. One gentleman in particular named Doug McHoul from Hopewell Junction, New York, was very concerned about his parents, who own a bed and breakfast. Your folks actually located them and put them in touch specifically for him. That was great for his family. I want to thank you for that, publicly.

General Jackson, here is the deal. On this power grid issue, the bottom line is you guys don't normally do that, do you, after a storm?

General JACKSON. That is correct, we don't normally do that.

Mr. MALONEY. And the reason you don't normally do that is because States normally have emergency mutual assistance compacts with other States. Isn't that right?

General JACKSON. That is correct. Yes, sir.

Mr. MALONEY. And so private crews from other power companies show up within the days after a storm and flood the zone, if you will, and put those wires back up. Isn't that right?

General JACKSON. That is correct, yes——

Mr. MALONEY. And those agreements contemplate reimbursement to those power companies by the power company in the jurisdiction affected. Is that right?

General JACKSON. Yes, sir.

Mr. MALONEY. Right. And so, when the Administrator says that you are—I believe his term was mission-assigned that task, that is a polite way of saying that got landed on your plate, but you don't normally do it. Right?

General JACKSON. That is correct, sir.

Mr. MALONEY. And so, when you say that within—by the third week of October you had awarded contracts on that, unfortunately that is a month after landfall, right?

General JACKSON. Yes, sir.

Mr. MALONEY. And a month went by without power for the vast majority of the island's population, while we are still sorting out who is going to do it. And then we award those contracts a few weeks later. We know all about the Whitefish stuff, I don't want to get into that.

But the fact of the matter is today your testimony, I believe, was that we now have Fluor and PowerSecure and some other companies—I am very familiar with Fluor, I understand these are very capable entities—and that we have about 300 pieces of rolling stock, I think you said, that are on their way to the island. Is that right?

General JACKSON. Sir, if I may, we have 450 Corps of Engineers employees and contractors doing the temporary emergency power mission, which is what began after Irma's landfall and continues and will continue until the grid is restored.

Today we have over 150 contractors from Fluor and PowerSecure that are on the ground.

Mr. MALONEY. Right.

General JACKSON. Mostly——

Mr. MALONEY. You are talking about individuals.

General JACKSON. I am talking individuals.

Mr. MALONEY. But in terms of the rolling stock, I think you said 300 pieces are en route?

General JACKSON. Sir, there are two vessels that are due in within the next week, one this weekend and one on the 7th of November. Each has about 300 pieces of rolling stock for those individual contractors. So when——

Mr. MALONEY. Each? Each has about 300 pieces of rolling——

General JACKSON. That is correct. Yes, sir.

Mr. MALONEY. So we are talking about 600 pieces of rolling stock. How many crews does that equate to, do you know?

General JACKSON. We should have 108 crews on the ground the first part of next week.

Mr. MALONEY. 108?

General JACKSON. And by the 25th of November we will have 181 crews. We have gotten approval and we are working through the action right now to increase those numbers.

Mr. MALONEY. I understand that, General, but my——

General JACKSON. That——

Mr. MALONEY. So if I may, sir, I understand that. I had an opportunity to speak to the Governor of Puerto Rico yesterday, Governor Rossello. We were all together in Puerto Rico 2 weeks after the storm.

At that time, Brigadier General Holland, who is your senior commander on the island, told us there were about 200 crews avail-

able, and they were going to double it through these private contracting to 400. You may recall I had the opportunity to ask this question here in the auditorium a couple days later.

General JACKSON. Yes, sir.

Mr. MALONEY. And your answer to me was that we were going to surge that to whatever the level was needed.

But here, as we sit here, 6 weeks after landfall, the Governor of Puerto Rico told me yesterday, sir, that the number of crews he has on the island right now is 400, and he needs 2,000. He needs, minimum, 2,000 crews—not individuals, crews—to get that power grid up.

Now, I know it is not normally your job, and I know we got a couple hundred pieces of rolling stock that are going to get there at some point. And I know we got a few hundred individuals on the island. But, for God's sakes, we are nowhere near the resource level we need, are we, to get that power grid back up, because the mutual assistance compacts that are normally in effect aren't working. Isn't that right?

General JACKSON. They are not working, sir, because they weren't requested until this week.

Mr. MALONEY. In fact, Puerto Rico has an emergency mutual assistance compact, does it not?

General JACKSON. Yes, sir, they do.

Mr. MALONEY. It is a signatory. It was said here earlier that they weren't in place. But that is not true, is it? They are in place.

General JACKSON. No, they are in place, sir, but they were never——

Mr. MALONEY. It is just that the power companies from other States aren't responding——

General JACKSON. Excuse me, if I may, they were——

Mr. MALONEY [continuing]. Isn't that right?

General JACKSON [continuing]. In place. They were available, but the Governor chose not to activate them until this week.

Mr. MALONEY. But isn't the issue that the power companies that would have had to respond were worried about reimbursed? Isn't that really the issue, General?

General JACKSON. That I can't answer.

Mr. MALONEY. Fair enough, fair enough. But do you agree with me that right now we have maybe—maybe—20 percent of the resources, strand wire and running cable, that we need to get that power grid back up?

General JACKSON. Sir, we have resources that are flowing in as fast as we can get them in, and——

Mr. MALONEY. That wasn't my question. Respectfully, General, that was not my question.

We have about 20 percent, maybe, of the resources we need to get the power grid back up.

General JACKSON. Congressman, I don't know what the number of resources are, in terms of the overall——

Mr. MALONEY. You disagree with the Governor that he needs 2,000?

General JACKSON. We are still doing the assessments that we need to determine what the resources are, at the same time we are flowing in as many resources as we can physically——

Mr. MALONEY. You disagree with the Governor's assessment that he needs 2,000 and we have got 400?

General JACKSON. I would like to see the Governor's assessment on what is driving 2,000. I know we need to get crews in faster, and are working to do that, but I don't know what the Governor said, I don't know what he is judging 2,000 crews on. But we are working very diligently to get as many as we can under the authority that we have to be——

Mr. SHUSTER. The gentleman's time has expired.

General JACKSON [continuing]. Able to address the problems in Puerto Rico, and we are——

Mr. MALONEY. I appreciate that. And I want to reiterate I understand this is not normally your responsibility. And thank you for your efforts.

Thank you, Mr. Chairman.

Mr. SHUSTER. I thank the gentleman. And with that, Governor Sanford, you are recognized for 5 minutes.

Mr. SANFORD. I thank the chairman. I would like to follow up on the interchange that I just heard. Because whether it is 300 crews, 400 crews, 2,000 crews, whatever number of rolling stock, I think the question is how do you get more there faster.

And so I guess my question would be to the Administrator, to the admiral. And there was, as we all know, a 10-day repeal, if you will, of the Jones Act in an effort to get more things to Puerto Rico quicker and cheaper. Would it help if that repeal was reinstated? I guess I would ask that first of you, Mr. Administrator. And second to you, Mr. Admiral.

Mr. LONG. We constantly evaluate with the Department of Homeland Security and our partners at Customs and Border Protection. If there are any issues that we can't seem to get any U.S.-flagged vessels in to bring, whether it is commodities, fuels, or whatever else to the island——

Mr. SANFORD. I am just asking for a yes or no. Would it help, or not?

Mr. LONG. At this point I don't believe it would help the way that——

Mr. SANFORD. You don't think it would.

Admiral, what is your thought?

Admiral SCHULTZ. Congressman, I would echo the Administrator's words. Currently I believe there are sufficient vessels to deliver the commodities to Puerto Rico. So my answer is no, I don't believe there is a need for a Jones Act waiver at this time.

Mr. SANFORD. So then neither of you care about the cost of doing so. Because there are finite dollars in addressing the issue in Puerto Rico, and what, you know, the U.S. International Trade Commission has said is, in essence, the Jones Act represents about a 65-percent surcharge on cost of goods sold going into Puerto Rico.

So what you would say is yes, we may have enough in the way of capacity, but it is at a much greater cost. And neither of you care about the cost?

Admiral SCHULTZ. Congressman, I would say on the Jones Act, sir, that is a law that is nearly 100 years on the books. There are many complexities, in terms of national security, there are com-

plexities with economic factors with the U.S. Fleet that I think would have to be approached very thoughtfully.

Mr. SANFORD. OK, but that is not really answering the question. It is indisputable that it is at a higher cost. And you are saying that cost shouldn't be factored in, in getting finite resources into Puerto Rico?

Admiral SCHULTZ. Sir, I believe the cost, when you are dealing with U.S. Fleets, there is reasons for that cost. They tie back to the safety management systems and structures on that ship. So there is a cost, but with that cost comes factors that factor into the broader whole conversation.

You can't—you know, obviously, doing things in Puerto Rico at the most efficient cost is a consideration. The Jones Act is a—it has a longstanding, you know, almost a 100-year history, sir, of why——

Mr. SANFORD. I understand that, but it is also why the President repealed it for 10 days, because, based on cost and availability, they said we have got to get aid.

But what we have seen is this is a much longer rolling crisis in Puerto Rico than people would have presupposed. And consequently, wouldn't it make sense to again enact that repeal for a longer time period so that more aid at a lower cost could go into Puerto Rico?

You say no——

Admiral SCHULTZ. I would say my understanding was the 10-day repeal was to make sure there was an availability of platform ships to meet the immediate commodities delivery need.

Administrator, I am not sure if you have anything to add to that.

Mr. LONG. I would agree. I believe that that question is beyond FEMA's authority to make that decision. I believe that decision lies with you.

Mr. SANFORD. Well, it doesn't lie with me, it lies with the President. But I think it is instructive, because both of you all, as I understand it, requested that waiver of the President at the—you know, prior to the 10-day repeal. Am I mistaken in that belief?

Admiral SCHULTZ. Sir, I believe that waiver was triggered by the Secretary of Defense for purposes of national security for that short duration period.

Mr. SANFORD. OK.

Admiral SCHULTZ. And then that process is through the Secretary of Homeland——

Mr. SANFORD. But you all did not object at that time.

Admiral SCHULTZ. Sir——

Mr. SANFORD. You thought it was a good idea.

Admiral SCHULTZ. Sir, at the time it was a decision by the administration that we supported. Yes, sir.

Mr. SANFORD. You supported it, and FEMA, if I am not mistaken——

Mr. LONG. Yes, sir.

Mr. SANFORD [continuing]. You all supported it, as well. So my simple question goes back again to the backlog that we were just listening to in that interchange. Given the fact that this crisis has lasted much longer than people would have presupposed, given that there is a higher cost to people in Puerto Rico in bringing aid

and armament—if you want to think about it in defense terms—then why wouldn't it be a good idea to extend, in essence, that moratorium or repeal, whatever you want to call it?

And both of you are saying, well, I—you know, it is outside my pay grade, I am just asking for your recommendation, because you all are seeing firsthand the degree of hardship and plight that the people of Puerto Rico have seen.

And therefore, I would see that anything that would help the situation down there—and particularly dollars are finite. And if you can get more throughput at a lower cost, that would ultimately be good for the people of Puerto Rico. I don't know why you all wouldn't support that idea and push for it.

Admiral SCHULTZ. Congressman, I would echo the Administrator, that I believe that is a choice of Congress. The Jones Act has been in the books, it serves many different purposes. Cost response for Puerto Rico is a consideration. That may be something that would factor into any discussions about whether the Jones Act remained in effect and was eventually repealed.

Mr. SANFORD. If I might, just for 1 more second?

Mr. SHUSTER. You have got 15 seconds.

Mr. SANFORD. Yes, sir. That seems such a push answer, respectfully. I get—you can throw it back to Congress. But what I am asking, given that you all are on the front lines, is what is your opinion. I want to make sure both of you think leaving it alone is best for the people of Puerto Rico.

Admiral SCHULTZ. Congressman, in full respect, sir, I am saying obviously, as a responder, we care about helping those in need, as—you know, as best possible. I would say determinations such as the Jones Act have many layers of complexity and political considerations of that.

Ultimately, this expenditure of dollars is not in my lane, outside of what I do with monies appropriated to the Coast Guard. And I guess, politely, I am pushing that back, sir, that I think it is a consideration for the Congress.

Mr. SHUSTER. I thank the gentleman. Mr. DeFazio and I are going to take another round of questions, but we will go back and forth, Democrat, Republican. So I am going to go to Mr. DeFazio first, and then Mr. Perry, and then I will finish up. So Mr. DeFazio is recognized for 5 minutes.

Mr. DEFAZIO. Thank you. That—I am going to provide you a copy of this. This is the last definitive study on whether or not there are additional costs, and whether or not Puerto Rico would benefit from the loss of the Jones Act. And, in fact, basically, it says they wouldn't, because they wouldn't have regularly scheduled shipping, they would be at the whim of the international lines, who aren't very interested in a little tiny market like Puerto Rico with regular service from Jacksonville.

No, no, no, I am sorry. You can—after you read this, we can have a discussion.

But the bottom line is I asked was any shipment delayed, you know, or denied because of the Jones Act, and the definitive answer from the Coast Guard and FEMA was no. So let's not create a myth here, pursuing an ideological agenda which would both un-

dermine national security, probably deprive the people of Puerto Rico of a good shipping service and other things.

And I am also going to put a copy of this in the record. So these are facts. And I know we have fake facts these days, but these are real facts. And let's move on from there.

So, the—I am curious about this mutual aid thing. The Governor is alleging that FEMA told him that because he had—because the Corps was designated to restore power, that he could not execute the mutual aid. Are you aware that anybody in your agency told him that?

[The U.S. Government Accountability Office report referenced by Congressman DeFazio is on pages 192–237.]

Mr. LONG. I am not aware of that, no.

Mr. DEFAZIO. OK. So we are—we have to get to the bottom of that. But that is his claim that that is why he didn't execute it. And the mutual aid, obviously, is less expensive than a couple of contracts, which I mentioned already, these no-bid contracts that Puerto Rico entered into. So we will have to get to the bottom of that.

And to one other quick question, do you have—I mean you gave us a litany of good ideas at the beginning that I would like to pursue, but do you have also ideas about how we are going to deal with noncompliance of NFIP? Because we already heard that, well, we got a bunch of people here who didn't buy the insurance who were supposed to, and now we got to bail them out. You got any ideas on that?

Mr. LONG. We got to fix the—we have to make a decision. Do we want to continue to reward people building in vulnerable areas by giving them insurance that is not at an actuarial rate? Or do we hit the reset button and allow the private-sector market to start dictating more of what those rates look like, and taking over some of the market?

I mean it is going to be a tough question. But I can tell you that I am not interested in running an NFIP program that is going to go into debt continuously. You did the good work of listening to our requests when it came to providing the additional funding for Harvey and Maria—but if we do that, we have got to fix the framework of the NFIP to honor the taxpayers' dollar.

Mr. DEFAZIO. OK. And, I mean, you know, one—seemed to me one simple fix would be we will insure you once, you have a loss, next time you go to the private market.

Mr. LONG. We would be happy to provide you our thoughts on an NFIP restructuring, as well.

Mr. DEFAZIO. Great. General, just since I know your expertise is not necessarily the restoration of a—you know, a power grid, and we talked about that extensively, but one thing I know the Corps is really good at is construction, temporary bridges. What are our barriers to—I mean we are still hearing about problems with access to remote areas and highways that are, you know, that—where the bridges are out, or the highway itself is out.

I mean what are the barriers there for getting better access?

General JACKSON. Sir, first of all, the Department of Transportation has the lead for all the roads and bridges, and they are

working very closely with the highway department and the Department of Transportation in Puerto Rico to do the assessments to identify the requirements.

They have already installed a number of temporary bridges, and they have already put in a request for funding that the Federal Highway Administration has, to make more permanent, long-lasting repairs to some of the infrastructure.

One of the real challenges in the remote areas—and I spent some time with General Buchanan a couple weeks ago—is that many of the remote areas suffer from landslides. You may have a road that is cleared into a remote area on one day, it rains a lot, and you have a landslide that causes a road to close, you have to go back in there and open it back up again.

So it is an on-again, off-again, long-term issue that we will continue to deal with, especially gaining access in the remote areas. But I believe DOT has a pretty good handle with the Puerto Rico Department of Transportation on the way ahead for transportation infrastructure on the island.

Mr. DEFAZIO. OK, thank you.

Thank you, Mr. Chairman.

Mr. SHUSTER. I thank the gentleman. Mr. Perry is recognized for 5 minutes.

Mr. PERRY. Thank you, Mr. Chairman. Thank you, gentlemen, for your service.

Every single Member of Congress, I think—all the American people, their hearts are broken for the people of Puerto Rico and their continued suffering without power and without access to services and infrastructure.

My questions will go to Administrator Long, initially, and Major General Jackson.

PREPA was created—the Puerto Rico Electric Power Authority was created in 1941, when the Governor nationalized private electric companies on the island. And prior to the hurricane, the State-owned monopoly, which is PREPA, was $9 billion in debt with an estimated $4 billion in needed infrastructure upgrades at that time.

A contributing factor to PREPA's dire financial situation is the fact that PREPA had been giving free power to all 78 of Puerto Rico's municipalities—many of its Government-owned enterprises and even some of its for-profit businesses. The practice has occurred for decades, even as PREPA continued to take on debt, borrowing billions of dollars in the process. Property taxes, which pay for it, were last assessed in 1958.

Another contributing factor to PREPA's financial situation is its own mismanagement. According to a 2016 Synapse Energy Associates report compiled for Puerto Rico, it says this: "Our review indicates that PREPA's operational spending has not been consistent with operation of a safe and reliable system since at least FY 2014. A major component of PREPA's operational spending lands in Administrative and General functional area, and that spending in this area has increased in recent years for unexplained causes."

And to give this figure context, in 2016 PREPA spent the equivalent of more than one-third of its entire capital budget on discretionary A&G spending. And according to the report, PREPA's fi-

nancial woes led to a deliberate decision by its leadership to forgo the necessary infrastructure upgrades needed to produce a reliable system.

To keep its budgets under the cap, PREPA has engaged in what appear to be self-defeating practices, such as deferring maintenance, extending outages to avoid overtime, and allocating budget away from critical but low utilization unit.

The report conclusion is a damning indictment of the island's infrastructure, and explains the difficulties encountered in reelectrifying the island. And it says the current reality is stark. Many of PREPA's existing units are in such a poor state of repair that PREPA must consider itself lucky if they remain operational for more than several months at a time, and that PREPA's transmission and distribution systems are falling apart, quite literally. They are cracking, corroding, and collapsing.

And it is my understanding that there were no activated mutual aid agreements, which we are familiar here, where, when something happens, other power companies come to the aid.

It seems to me that it is a dereliction of duty and incredibly irresponsible, in caring for the people of Puerto Rico, what has happened there. While restoring power to the island is necessary, the question is should FEMA and the Federal Government be on the hook indefinitely, after years of willful neglect of PREPA's grid?

Mr. Long, are you set up for that?

Mr. LONG. I don't think we should be on the hook. We have been put in a terribly complex situation, as a result of deferred maintenance and a system that was allowed to decay. And, unfortunately, everybody wants the power back on—nobody wants the power back on more than FEMA and the Army Corps of Engineers.

Mr. PERRY. Right.

Mr. LONG. And we have been working through that, sir, left and right.

But the thing is that a large portion of it never worked before Maria hit, and now we are having to basically——

Mr. PERRY. And you are not set up to be there indefinitely, because some were kind of implying—they are making the implicit claim that you are supposed to be there indefinitely. Are you set up for that?

Mr. LONG. Indefinitely?

Mr. PERRY. Yes.

Mr. LONG. No. No, we are not.

Mr. PERRY. All right, and I just want to make that clear. We all want the power. Everybody wants the power on.

Mr. LONG. Right.

Mr. PERRY. No more than you folks sitting in front of all of us.

General, do you believe that PREPA should strongly consider privatization?

General JACKSON. Sir, I think there are a lot of decisions that face Puerto Rico right now, and privatization could be one of those. I know that the Department of Energy is really taking a hard look at the grid itself. They are looking at what can be done to make the grid more effective, more efficient.

They have 15 power plants right now. They are supposed to put out about 5,200 megawatts, but they only use about 2,500

megawatts. The power plants that produce most of the generation are on the southern side of the island, but all the people live on the north, which makes big, high-voltage transmission lines vulnerable to the winds that hit Puerto Rico.

There is a lot of room for improvement. DOE is looking really hard at that, and they are going to be making some recommendations not only to what needs to be done to the grid itself, but they are probably prepared to make some recommendations on what the public utility could do to be more efficient and effective. I have read all the same reports that you have, so I am not unfamiliar with some of those conditions that caused it to be the way it is right now. I think there is a lot of room for improvement.

The Corps of Engineers is really focused on the response piece, and that is just getting this power grid back up as fast as we can, and getting it to the most essential places where it needs to be. But we realize that what we are doing is in no way going to be the ultimate end-state solution for where the grid needs to be.

Mr. PERRY. Thank you, sir.

Gentlemen, thank you.

Chair?

Mr. SHUSTER. I thank the gentleman. I recognize Mr. Hunter for 5 minutes.

Mr. HUNTER. Thank you, Mr. Chairman. Thank you, gentlemen, for being here. I didn't want to be the one Committee on Transportation and Infrastructure member that didn't talk today, so I figured I would add on to the end here.

So two specific things. There is a—it is called a—the *Hermes*. Are you familiar with this, Admiral? The *Hermes*, it is a, let's see, 30-inch outer hull, rather than 34, the void on the vessel's bottom, 47 instead of 50. So they were turned away for bringing fuel to Puerto Rico because of the 3 inches in the double hull width, and then the void. That sounds kind of crazy to me, unless there is a really great reason for it.

Admiral SCHULTZ. Congressman, I think there is a vessel that has requested a waiver from the Coast Guard. I think, as you know, sir, as our subcommittee chair, better than anyone, you know, we are an Armed Force, we are a first responder, we are a regulatory agency, we are a law enforcement agency. Each of those has statutory reach-back that tells us what we can do, where we have discretion. The—a subchapter vessel, a general freight cargo-type vessel, it is also an offshore supply vessel, a subchapter L vessel. It is not a subchapter D vessel that is allowed to carry bulk quantities of flammable and combustible liquids. They are asking for a waiver to be able to do that. By law, subject to——

Mr. HUNTER. But you don't look at different things if there is an emergency like this? I mean, and it is months after, so it is different. But I mean during an emergency you would say a subchapter whatever can still do something, right?

Admiral SCHULTZ. Well, sir, I think there are many considerations in granting a waiver. The short of this, as of Friday the 27th, the 7th District—who is working supporting the officer in charge of marine inspection down in Puerto Rico because of their workload, being the center, they are supporting them—basically, this waiver was denied.

I think when you say, well, why is it denied, you are talking about whether it is a double-bottle hull or not, the engine——

Mr. HUNTER. A double-hull——

Admiral SCHULTZ. It is not a double-hull vessel, by the law. There is an appeal process for this waiver, and I would encourage——

Mr. HUNTER. And one of the reasons I ask this is because, getting into the Jones Act and how much capacity there is for shipping, so there is so much capacity now we are turning down ships is my point.

Admiral SCHULTZ. Sir, I would say there is—I believe there is sufficient capacity of subchapter D ships, these ships, that do this, you know, move flammable cargoes like that. They are available.

Mr. HUNTER. So the capacity is there.

Admiral SCHULTZ. My understanding is capacity is there, yes.

Mr. HUNTER. Second specific question. There is a guy named Sean Carroll that does the pre-positioning for Air Force One and Marine One for fuel. He pre-positions fuel. And you can imagine if you get that contract, you have got a—you have to be ready at all times, anywhere, to be able to fuel up Air Force One, right?

He has approached FEMA in the past, and Coast Guard. He has that contract now, by the way. He pre-positions fuel, he was—and FEMA has said great things, said yes, we should do this when a big storm is coming. The Coast Guard has also said yes, we should do this when a big storm is coming.

He has been in Puerto Rico now for about 44 days. FEMA called him and said on like day one or two and said, this would be great, if you could actually—yes, come on, you are in. So he has been on the ground with portable fuel, getting resupplied for over 40 days now. And I just want to bring that to your attention. This is one of those things where you have a person that could fill that gap, and they are doing it now, and they are actually on the ground in Puerto Rico.

So I would just encourage you—I am happy to give you the information on it, but I think that is pretty important, to pre-position stuff. I think we have already talked about it, but this guy is doing it, he is there, he does it for the President. It is a pretty good system of pre-positioning fuel, but that is one of the things that you got to have, and it is hard to transport into the country, right, or to the province.

Anyway, thank you, Mr. Chairman, for letting me add on to the end, and thank you all for what you are doing.

Mr. SHUSTER. Well, thank you. Thank you for yielding back.

I just have one final question. And I just have to say I have been in a position in my time in Congress that seems that I was subcommittee chairman during Katrina, and so we—I was very involved, and we tried to rewrite the law and streamline it. And then I was full committee chairman in 2013 with Sandy, and we were able to change some things, and one specifically.

And so my point I was making is I have been involved in trying to streamline FEMA and emergency response for a number of years. But in the Sandy legislation we did the FEMA reauthorization. We were able to enter in—and you mentioned it, Administrator Long—the section 428 authority, which is based on esti-

mates, and it gives flexibility. And I just wonder if you could just talk a little bit more about that, because I think those are the kinds of things we need to strengthen and move forward through all the agencies, where we can do it.

Mr. LONG. Anything we can do to expedite funding but protect the taxpaying dollar is what we need to be able to work on. The section 428 pilot program is something that I truly believe in, and we are working with Governor Rossello to implement that in discussions now.

For example, at one point I read a report where there were 3,200 different roadway obstructions. Instead of writing 3,200 different project worksheets to fix these various portions in the road, we can write one project worksheet, estimate what it would cost to do that, but it makes it outcome-driven at the very beginning, so we can say here is the design, this is what we are going for. You can cap the expenditures. And if we don't go that route, then each one of those project worksheets can be reversioned and reversioned and reversioned, and then we wind up being there for over a decade without completing the projects.

Mr. SHUSTER. And it has been your experience the States—this is something they welcome?

Mr. LONG. Some do, some don't. But I think that it is a constant balancing act. And I have invited the office of inspector general to FEMA. I want to understand how to make sure that we protect taxpayer dollars and increase grant monitoring.

But whereas section 428 says be more efficient and put money down, the office of inspector general reports are saying you need to batten down the hatches and do more oversight. So we are caught in this balancing act of which way to go. But I would rather get the money out and get recovering kickstarted and done, rather than wait years and years and years because of the reversioning that takes place on project worksheets.

Mr. SHUSTER. Well, I agree with you, and this committee is going to be working diligently over the next several months to talk to all the four agencies here to try to figure out—give us the ideas, tell us what makes sense, what doesn't make sense, and we are going to push for that.

So again, I know that talking to Mr. DeFazio—and as we—as I have said earlier, your list of reforms is something that I think Mr. DeFazio and I will be pretty much on the same page.

So again, I want to thank each and every one of you for coming here. I know you are very busy, and I know you got lots of work to do. So again, thanks. Thanks for being here, taking the time.

And with that I ask unanimous consent that the record of today's hearing remain open until such time as our witnesses have provided answers to any questions that may be submitted to them in writing, and unanimous consent that the record remain open for 15 days for any additional comments, information submitted by Members or witnesses to be included in the record of today's hearing.

Without objection, so ordered.

And again, thank you very much for being here. And with that, the committee stands adjourned.

[Whereupon, at 1:27 p.m., the committee was adjourned.]

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CONGRESSWOMAN SHEILA JACKSON LEE

BEFORE THE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

"EMERGENCY RESPONSE AND RECOVERY: CENTRAL TAKEAWAYS FROM THE UNPRECEDENTED 2017 HURRICANE SEASON"

NOVEMBER 2, 2017

- Chairman Shuster and Ranking Member DeFazio, thank you for holding today's hearing entitled, "Emergency Response and Recovery: Central Takeaways from the Unprecedented 2017 Hurricane Season."

- Since the first days of our nation, when the Constitution provided the Congress with the power to establish post roads and regulate commerce among the states, the federal government has played a significant role in providing for our country's transportation and infrastructure improvements.

- Our roads, bridges, railways, waterways and runways have all made it possible for what was initially a collection of relatively independent states to truly become one nation, intimately connected over millions of square miles.

- The Transcontinental Railroad, the stringing of Telegraph wire, and the paving of the first coast to coast federal

highways linked our nation and its people in ways that drove the American engine for well over 200 years of success.

- Infrastructure has always been the backbone of the United States economy.

- Our diverse and distant communities are tied together, and commerce thrives, because the American people have always understood the need for a cohesive, unifying transportation network.

- The United States is first and foremost a nation of people who span the socio-economic spectrum.

- The difference that wealth and class makes in how we might thrive is evident in the lives of people who are able to do better than their parents.

- The hidden truth is revealed following natural disasters when must confront the lack of sufficient funding for social safety net programs.

Hurricane Harvey by the Numbers

- Hurricane Harvey dropped 21 trillion gallons of rainfall on Texas and Louisiana, most of it on the Houston Metroplex.

- This amount of rainfall could fill more than 24 thousand Astrodomes or supply the water for the raging Niagara Falls for 15 days.

- Hurricane Harvey was a Category 4 storm that hit Texas on August 25, 2017.

- Harvey made landfall three separate times in six days.

- It is estimated to have caused $180 billion in damage.
- Eighty-two people were killed as a result of the storm and flooding.
- At its peak on September 1, 2017, one-third of Houston was underwater.
- Two feet of rain fell in the first 24 hours.
- Flooding forced 39,000 people out of their homes and into shelters.
- As of September 5, 2017, Hurricane Harvey damaged 203,000 homes, of which 12,700 were destroyed.
- There were 738,000 people who registered for assistance with the Federal Emergency Management Agency.
- The agency has paid $378 million to them.

Transportation and Infrastructure and Flooding

- The hearing today is particularly important because of the impact of flooding on roads, bridges, and underpasses.
- After just five days of rain due to Hurricane Harvey, Addicks and Barker Reservoirs were as full as could be, leaving houses both upstream and downstream sitting in feet of water
- .The reservoirs filled to record levels.
- Water got to 109 feet above sea level at Addicks.

- Areas on the upstream side of the reservoirs flooded.
- But of course a large release of water from the reservoirs means downstream flooding along Buffalo Bayou, too.
- The Army Corps of Engineers opened the floodgates.
- Just a little at first, a few hundred cubic feet of water per second, and then wide—7,500 cfs from Barker and 6,300 cfs from Addick.
- It is of utmost importance that we swiftly replace these malfunctioning reservoirs to ensure the safety of the neighboring communities.
- The tragic loss of six members of the Saldivar family during Hurricane Harvey flooding when the van they were riding in plunged into floodwaters after crossing a bridge over the engorged Greens.
- Manuel and Belia Saldivar along with their great-grandchildren: Devy Saldivar, 16, Dominic 14, Xavier, 8, and Daisy, 6 were taken by the flood waters.
- In addition to these deaths, we lost Sgt. Steve Perez, a 34-year veteran who drowned tragically when he drove into an underpass with 16 1/2 feet of water.
- In my congressional district, we continue to mourn the loss of the heroic DREAMER, Alonso Guillen, who came to the U.S. from Mexico as a child, and died here in the United States when his boat capsized while he was rescuing survivors of the flooding caused by Hurricane Harvey in the Houston area.

Congresswoman Jackson Lee's Efforts Post Hurricane Harvey

- I Introduced H.R. 3686, the Hurricane Harvey Supplemental Appropriations Act of 2017 that provides nearly $174 billion to help those impacted by the storm and their communities to recover.

- I also introduce H.R. 3990, the Small Business Hurricane Harvey Recovery Grants bill to assist small businesses in their recovery following the storm to make sure that neighborhood businesses are able to recovery along with the entire community.

- I requested and received a report from FEMA on the 270 thousand claims filed by Houston area residents.

- I made a request to the Administration that the time for individuals to register with FEMA be extended until December 26, 2017.

- The FEMA deadline has been extended until November 24, 2017.

- I also requested an extension of the DSNAP program that was extended an additional 3 days.

- **As of October 7, 2017**:
  - 105 thousand claims were approved by FEMA for repair or replacement housing; and
  - 164 thousand claims were found to be ineligible.

- I made a request to the Administration that the time for individuals to register with FEMA to be extended until December 26, 2017.

- The FEMA deadline has been extended until November 24, 2017.

- I also requested an extension of the DSNAP program that was extended an additional 3 days.

- The burden must be on FEMA to conduct outreach to make sure that all those who have damage and are in need of assistance receives the help that they need.

- The biggest challenge for residents of the 18th Congressional District is accessing the assistance that is available to them.

Hurricane Harvey Recovery Moving Forward

- Keeping rooms in hotels for those displaced by flood waters until transitional housing is ready to finding Disaster Assistance Centers that are accessible—when so many cars were damaged by Hurricane Harvey flood waters must be addressed.

- I want to thank the representatives from FEMA, the SBA and the Texas General Land Office for being here this evening to provide critical information to you and those who are attempting to recover from the catastrophe of Hurricane Harvey.

- I will continue to work with my colleagues in the House of Representatives to meet the needs of the people of Houston and surrounding areas as we continue this long road to recovery.

Response to Hurricane Harvey

- I thank the men and women of FEMA, the Coast Guard, city Houston Sanitation Department, the military, Texas Guard, the thousands of volunteers who came from across the region and other states who assisted in rescuing thousands of people trapped by flood waters.

- I want to highlight my observations while traveling with rescue teams to bring them to shelters or other safe havens.

- Fundamentally the immediate response during the disaster was geared to provide the greatest assistance to those who are healthy and fit.

- Receiving calls from trapped constituents, whom I knew were elderly or disabled and in need of rescue was difficult.

- The hours that passed and the following calls reminded me how the vulnerable were fairing during the disaster.

- Post-disaster it is easy to forget the conditions under which people were struggling to survive.

- Walking through flood waters to higher ground was difficult for the elderly, those recently released from hospital care, disabled persons, and the young.

- When rescue vehicles were within sight of those strained the health could reach them must quicker than those who were not well.

- The primary thing needed during the disaster was battlefield triage to determine who needed to be taken because the conditions posed a serious threat to life and health.

Accessing FEMA Assistance

- Many of those in need of FEMA assistance are still waiting for home inspections and need answers regarding the appeals process and how best to utilize Home Inspection Teams.

- This will help the many who are struggling to get their lives back in order.

- FEMA announced the creation of a new housing program under the Direct Housing Assistance Program, which allows FEMA disaster relief funding to go to individual homeowners or to local governments to provide housing.

- To be considered for this program, people must first register with FEMA at **www.DisasterAssistance.gov**.

- This sounds easier than it actually is for too many persons who are elderly, disabled, low-income, or part of the working poor.

- Although thousands have registered the overwhelming majority of applicants for assistance are denied.

- A report I requested from revealed that in the Houston Area 270 thousand applications for assistance were filed with FEMA and of those 164 thousand were denied.

- FEMA seems to struggle over challenge of adequate response in an urban area with too few disaster recovery centers, an in

ability to provide for more than one head of household residing at a single residence, subletting of rooms in a home, and providing sufficient assistance to the elderly, and disabled following the disaster.

- In adequate numbers of FEMA inspoectors, not maximizing the use of technology through the development of an App that could keep people apprised of the progress in providing much needed assistance is hard to comprehend when mobile technology is a primary means for people to access information.

Poverty and Hurricane Harvey

- Texas is a big and diverse state, and considering the evolving social makeup and the widespread need for improvement in areas of health care, poverty and education.
- Texas has the 5th highest poverty rate in the country, according to the U.S. Census Bureau.
- Texas ranks 50th in high school graduation rate.
- The conditions following Hurricane Harvey is another chapter on the state of poverty in the United States.
- Over 1 million cars were destroyed by the storm and flooding.
- A car in Houston is a vital life line for working people to remain employed.
- The lack of transportation in a city like Houston that also does not have significant mass transit infrastructure immediately put low wage jobs at risk of losing their jobs.

- Coupled with this reality—thousands of units of affordable multi-family housing remain unavailable due to storm or flood damage.

- Compounding the problem of available housing is the numbers of families across the economic spectrum that lost their homes to flood waters and is now residing in Apartments until homes can be repaired or rebuilt.

- There are people living in their cars because they were denied assistance, had no means of reaching the assistance that is available, or have no insurance or financial resources to replace storm damaged property.

Hurricane Harvey Recovery Continues

- There are particular concerns for our seniors who survived the terrible storms that ravaged the Texas Coast, Florida, U.S. Virgin Islands and Puerto Rico because so many of them are alone, while trying to the do difficult and hard job of cleaning out their homes, or removing debris from their yards.

- The work is not done in of Texas there are thousands of families have no home to return to following the historic flood.

- We have communities that are struggling to find the new normal that FEMA officials warned Texans would need to accept following the historic flood.

The Elderly Struggling to Survive

- Recovery work in homes damaged by flood water is hard work for young people, but it almost an impossible task for the elder and many are at risk of physical injury or falling into poor health due to their age or medical condition.

- I am particularly concerned about the elderly who survived the Hurricanes in Texas, Florida, U.S. Virgin Islands, and Puerto Rico.

- Our nation's seniors are proudly independent, but a hurricane was not part of their retirement plan.

- But when our seniors are trying to remove water logged furniture, pull up sodden carpet, or knock out damaged drywall that is too much to ask them to do.

- When water gets into a home there is not enough air or sunlight to remove the access moisture before mold and fungi will begin to grow.

- We have run out of time in my State of Texas and now mold is a threat to respiratory health.

- Our seniors should not have to face the task of recovery alone because they have survived their children or may not live near a relative who can help them.

- My request to this committee is that you consider that disasters do not visit only the young and healthy.

- The disabled and elderly are victims and their needs are very different and should be addressed in the recovery efforts.

- We need to help them with getting sufficient resources in place to do this difficult and heavy work of clearing their

homes of water damage and removing debris from neighborhoods.

- If the homes of seniors are not cleared their lives are put at risk due to mold, which will come because Houston is a subtropical area were dampness will allow spores to grow within homes, which can cause health concerns.

- The Centers for Disease Control and Prevention alerted my office that they were conducting surveillance in the Houston area for medical conditions that can arise from exposure to mold because of reported cases.

- We should have extended the work of homes being cleared of conditions that could lead to unsafe and unsanitary conditions followed by a comprehensive systematic program for debris removal from neighborhoods.

- This Hurricane Season was different because of the rapid succession of storms: Harvey, Irma, and Maria, which left deep scares, lost lives, and devastated communities in their wake.

- The focus of Congress has to be on resiliency and not just replacing what was lost.

- The infrastructure of urban areas must be able to with stand floods, and hurricanes.

- Lives will depend on the actions taken by Congress to provide the necessary funding to make sure that we are not here next year or the year after because of short sighted planning during the recovery efforts for Hurricane Harvey.

- The same is true for the U.S. Virgin Islands and Puerto Rico in the wake of their Hurricane disaster recovery efforts.

- Thank you.

STATEMENT

OF

WILLIAM B. LONG
ADMINISTRATOR
FEDERAL EMERGENCY MANAGEMENT AGENCY
U.S. DEPARTMENT OF HOMELAND SECURITY

BEFORE

THE

HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
UNITED STATES HOUSE OF REPRESENTATIVES
WASHINGTON, D.C.

"Emergency Response and Recovery: Central Takeaways from Unprecedented 2017 Hurricane Season"

Submitted

By

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

November 2, 2017

Introduction:

Good morning, Chairman Shuster, Ranking Member DeFazio, and Members of the Committee. My name is Brock Long, and I am the Administrator of the Federal Emergency Management Agency (FEMA). I'd like to thank you for the opportunity to discuss the future of FEMA and this hurricane season's federal response and recovery efforts.

I have been in office for just over four months, and I am proud to be part of an agency that, every day, is helping communities reduce the risks associated with future disasters, as well as assisting disaster survivors all across the country. As I returned to serve at FEMA, I came in with ideas on how to make this Agency more effective. But before implementing a set of changes and reforms, I needed to spend time in the Agency with the people who do this important work every day to ensure my ideas withstood the rigors of a thorough review. Just as I began this effort, Hurricane Harvey struck Texas. Then, Hurricane Irma swept through the Caribbean, striking the U.S. Virgin Islands, Puerto Rico, Georgia, and the entire state of Florida. Hurricane Maria followed, striking a devastating blow to the U.S. Virgin Islands and Puerto Rico.

These historic disasters – each historic in its own right – put to test many ideas and concepts in a way that no intra-Agency dialogue could ever accomplish. In my testimony today, I would like to share with you not only the experiences of recent months, to include the catastrophic wildfires in the Northwest and California, but also insights into which ideas survived the test of this historic hurricane season.

2017 Hurricane Season

FEMA works quietly, day in and day out, across the country responding to many disasters that do not get national attention. Prior to Harvey making landfall on August 25, 2017, FEMA had 17 Joint Field Offices working 28 presidentially-declared disasters. FEMA, our partner agencies in the Federal, state, local, tribal, and territorial governments, in addition to our vital volunteer relief organizations and the private sector, work in concert, with unity of effort, to serve the needs of disaster survivors.

To say this hurricane season has been historic is an understatement. To date, we've had four hurricanes make landfall this season, three of which have been major hurricanes (Harvey, Irma, and Maria).

Since Hurricane Harvey made landfall in Texas, the President has granted 14 Major Disaster declarations and 14 Emergency Declarations, while FEMA has authorized 25 Fire Management Assistance Grant declarations. Hurricane Irma was unique not only because it struck both the U.S. Virgin Islands and Puerto Rico, but also because it struck the entire State of Florida, including the Seminole Tribe of Florida. Hurricane Maria, following in quick succession, then struck the U.S. Virgin Islands and Puerto Rico, more than 1,000 nautical miles from the mainland United States, devastating an area with already fragile infrastructure and facing challenging economic circumstances. In a span of 25 days, FEMA and our partners deployed tens of thousands of personnel across 270,000 square miles in three different FEMA Regions.

The impacts of these events are substantial. Roughly 25.8 million people were affected by these three storms – eight percent of the entire U.S. population. As of October 16, 2017, more than four million survivors have registered for FEMA assistance, which is a greater number than Hurricanes Katrina, Rita, Wilma and Sandy combined. FEMA's Individual and Households Program (IHP) has thus far approved more than $2 billion in disaster assistance to respond to the three hurricanes, and I expect this number to continue to grow. As of mid-October, National Flood Insurance Program (NFIP) policyholders filed approximately 120,000 claims, and the NFIP has paid over $2 billion to them.

In just over 30 days, FEMA increased our call center capacity to more than ten times our steady-state level. Call centers receive registrations for FEMA's Individual Assistance program from survivors, and also serves as a helpline for those survivors who have questions about their applications. Additionally, FEMA more than quadrupled our cadre of inspectors, who validate damages to an applicant's home and property. We will continue to expand these capacities each day for as long as the mission requires.

FEMA alone cannot deliver assistance to this vast number of survivors. Unity of effort is required for disaster response and recovery on any scale, but especially during this historic season. When emergency managers call for unity of effort, we mean that all levels of government, non-profit organizations, private sector businesses, and survivors must work together – each drawing upon their unique skills and capabilities – to meet the needs of disaster survivors.

State, local, tribal, and territorial governments, along with the residents in the impacted areas, are the true first responders. Non-profit organizations like those that are members of the National Voluntary Organizations Active in Disasters (NVOADs) provide crucial services to sustain lives while the rest of the response and recovery infrastructure can be established by emergency managers for longer-term needs. The private sector also plays a critical role in disasters, as businesses work to restore critical services and donate their time and resources – in close coordination with emergency management personnel – to help communities rebound in the wake of disasters. The whole community must be, and is, engaged, involved, and well coordinated.

For our part on the Federal level, FEMA called upon not only the vast majority of our own workforce, but also engaged over 3,800 other Federal employees through the Department of Homeland Security's "Surge Capacity Force," and, extended the Surge Capacity Force to all Federal agencies. This is significant. FEMA employees come to FEMA knowing they will be deployed into disaster areas, work in austere conditions, and assist survivors. That's part of our job at FEMA. However, when personnel from other Federal agencies volunteer for the Surge Capacity Force, they volunteer to leave their jobs and families, receive just-in-time training, and work in an environment that is completely unfamiliar and outside of their normal job responsibilities. I am incredibly grateful to my interagency colleagues from across the Federal government for supporting this important initiative, and for allowing their hardworking and dedicated personnel to support disaster survivors who have been impacted by these historic events. Over 22,300 members of the Federal workforce were deployed to Texas, Florida, the

U.S. Virgin Islands, and Puerto Rico. This includes 13,892 staff from various offices of the Department of Defense, including the military services. We could not do this without them.

This unprecedented hurricane season has truly tested us as a nation and tested many of our assumptions about what works in disaster response and recovery. While each year the hurricane season comes to an end on November 30, the lessons that we are learning from the response and recovery operations that we are performing this year, under the most difficult circumstances possible, will transform the field of emergency management forever.

Lessons Learned and Key Priorities for FEMA's Future Success

Whole Community Engagement-Early and Often

All levels of government, along with the private and non-profit sectors, share a responsibility for disaster preparedness, response, recovery, and mitigation. Throughout my time at FEMA, I intend to focus on not just engaging the whole community, but coordinating closely with the whole community. I believe the Federal government plays a vital role in supporting state, local, tribal, and territorial (SLTT) partners before, during, and after disasters. The Federal government should bring resources and capabilities following a disaster that our partners do not have at their disposal. However, we are just part of the team.

State, local, tribal, and territorial governments know their communities and their needs best, and have a critical role in preparing for and responding to disasters in order to manage risk to communities and infrastructure. States also play a critical role in supporting each other through mutual aid agreements like the Emergency Management Assistance Compact (EMAC). Indeed, many of these mutual aid agreements have been activated during this hurricane season to support affected states, Puerto Rico, and the U.S. Virgin Islands. As of October 13, EMAC supported 85 different requests for assistance to Puerto Rico, leveraging assistance from 26 different states.

I plan to work with our partners to identify areas of the collective mission that the Federal government, SLTT governments, and private sector partners may each be in the best position to manage. Throughout this collaborative process, it is important that FEMA provide clear guidance on what our role is, what support our partners might expect from the Federal government, and what they should be prepared to handle at their level. This will help support communities in becoming more self-sufficient while allowing everyone to focus their resources and training on identified areas of responsibility. As a result of a discussion with the Council of Governors this summer, FEMA will develop a checklist of actions Governors should take to be ready to support the disaster response mission in their states and territories, and enable Governors to identify areas where they could implement better local solutions. The Federal government must work with SLTT governments to build capability and manage risk.

For instance, if an event does not rise to the level of a Federal disaster declaration, FEMA should help SLTT governments in planning for how they could support their impacted communities and individuals through state-, commonwealth-, territorial-, or tribe-led disaster assistance programs. According to the 2016 National Emergency Management Association (NEMA) Biennial Report, 28 states have their own state-funded assistance programs to help individuals and businesses

when a disaster or emergency does not meet the criteria for a Federal declaration. That means that 22 states do not have any financial resources set aside to support their citizens when disaster strikes. Moreover, even for those states that have programs, many are underfunded and several are entirely unfunded. How can FEMA help incentivize and support SLTT partners in creating and maintaining their own programs similar to FEMA's Individual Assistance and Public Assistance programs that work for them? How can we encourage and support additional mitigation activities prior to a disaster?

The key to working on these and other areas of collaboration with our partners is communication and relationship building. This is why I am exploring options for improving coordination with our partners in order to ensure a quick and effective response after a disaster strikes, and helping improve national resilience. For instance, FEMA personnel could support states with their pre-disaster technical assistance needs, including disaster planning, training, exercising, and initial response and recovery support.

We will also examine how FEMA can better work with the private sector -- including businesses, industry associations, trade groups, and academia -- to help solve challenges, spur innovation in emergency management, identify any current barriers to effective coordination, and integrate, as appropriate, the private sector across various Federal programs.

We continue to bolster FEMA capacity at both the Headquarters and Regional levels to ensure we meet the needs of the whole community--including people with disabilities. Through our Office of Disability Integration and Coordination (ODIC), we are continuing our work to ensure that FEMA programs and services are accessible to everyone by promoting equal physical access, program access, and effective forms of communication. Including people with disabilities and groups that represent them in disaster response and recovery planning efforts will result in solutions and resources that better suit a variety of needs. In addition, we are committed to ensuring FEMA and its partners provide services and run programs in accordance with applicable Federal civil rights laws, including Title VI of the Civil Rights Act of 1964 and Section 504 of the Rehabilitation Act of 1973.

Finally, we cannot forget about engaging individuals across America. During a disaster, people in the affected community become the "first responders." We need to empower individuals with the skills necessary to help speed their recovery after an emergency. Do they know how to shut off their own water and gas? Do they check on their neighbors? Do they know CPR?

September was National Preparedness Month, and this year's theme was "*Disasters Don't Plan Ahead. You Can.*" During this campaign and other public awareness campaigns throughout the year, such as "*You Are the Help Until Help Arrives*," FEMA provides actionable steps that people can take to prepare themselves and their families. I'd like to thank Congress for supporting this effort, and Chairman McCaul and Ranking Member Thompson for co-chairing the National Preparedness Month campaign.

The Disaster Relief Fund

Under current law, the Disaster Relief Fund (DRF) is the source of the funding that enables FEMA to direct, coordinate, manage, and fund response, recovery, and mitigation efforts associated with major disasters and emergencies that receive a Presidential declaration pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act). Therefore, FEMA's ability to provide essential services and financial assistance to overwhelmed SLTT governments relies on having sufficient balances in the DRF.

The DRF helped fund response needs related to hurricanes Harvey, Irma, and Maria and will also help fund recovery efforts for those events. As of October 27, 2017, FEMA obligated approximately $12.7 billion in support of these hurricanes response and recovery operations. Adequate funding for the DRF is essential to FEMA's ability to carry out its mission.

Because FEMA had only $2 billion on hand to fund Major Disasters at the time Harvey struck, the Agency took extraordinary measures to maintain the DRF's solvency during the first two weeks of the incident, including temporarily suspending payments for long-term recovery projects (a policy known as Immediate Needs Funding), reprogramming a net total of $750 million from the Base category of the DRF (which funds, among other things, emergency declarations) to the Majors Disaster category.

To date Congress has passed two supplemental appropriations bills that enables FEMA to continue helping communities respond to and recovery from Harvey, Irma, and Maria. I'm concerned, however, that use of emergency appropriations like those passed on September 8 and October 24 may become the new normal due to a projected decline in the amount of funding available for natural disasters since FY 2015.

Currently, Congress proactively funds the DRF through annual appropriations in anticipation of future disaster activity. This mechanism, known as the Disaster Relief Allowable Adjustment, or more simply the Disaster Cap, was successful in decreasing dependence on supplemental appropriations since it was put into place with the passage of the Budget Control Act of 2011 (BCA).

Funding available under the Disaster Cap is recalculated each year based on a formula established by the BCA. However, the Disaster Cap will continue to fall or remain flat over the next few years due to the good fortune of relatively low disaster spending between 2012 and 2016 and the fact that the formula does not take into account emergency funding FEMA will receive in FY 2018.

This drop in the Disaster Cap could result in constraints on future DRF appropriations and, consequently, insufficient balances in the DRF to support mission operations. This dynamic could lead to an increasing reliance on emergency supplemental appropriations to support basic disaster missions as soon as this fiscal year or FY 2019. We would like to work together with Congress to provide a fix to the mechanism that funds the DRF.

Simplifying Recovery and Reducing Disaster Costs

My goal is to make navigating FEMA's programs as clear and easy as possible. I'm also committed to making sure Federal dollars are spent in the most effective way possible and that we're taking steps to reduce disaster costs for all levels of government.

This year, FEMA focused on improving the delivery of direct post-disaster housing when financial rental assistance is not practical or does not meet the need. The agency recognizes that this is a complicated issue that requires diverse, innovative solutions that meet individual communities' needs. FEMA would like to work with SLTT governments to help and incentivize them to build more capacity to allow them to take a leadership role in post-disaster housing.

Following Hurricane Harvey in Texas, FEMA entered into an Intergovernmental Service Agreement with the State of Texas which allows the delivery of post-disaster housing to be Federally supported, state managed, and locally executed. FEMA continues to engage our SLTT partners, other Federal agencies, and industry stakeholders to explore ways to improve disaster housing outcomes through improving coordination, improving implementation of our programs, and evaluating new, innovative housing solutions. FEMA is working with each of the impacted areas to look at which temporary housing solutions can best meet community-specific needs. Working with the Texas General Land Office, FEMA has authorized new forms of housing assistance such as "Direct Lease" and "Direct Repair," increased eligibility for the Multi-Family Repair & Lease program, and authorized the use of recreational vehicles as a housing solution for eligible applicants. FEMA also continues to work with the U.S. Department of Housing and Urban Development (HUD) to ensure our programs transition into HUD long-term housing programs. As Texas recovers from the effects of Hurricane Harvey, it will be important for FEMA and the DHS Office of Inspector General to validate both the effectiveness and financial benefit of these new approaches.

Even as we take steps to streamline and simplify assistance, we must strive for a future where disasters cause less disruption in our communities. It's important to acknowledge that the number of Presidential disaster declarations is increasing, as is the cost of disasters to the Federal government. From 1995 through 2004, the President approved 598 disaster declarations with a cost of $36.9 billion in FEMA assistance. From 2005 to 2014, that number increased to 808 disasters with a cost of $106.9 billion. The increasing cost is primarily driven by at least three factors: 1) the increase in the overall number of declared disasters; 2) the magnitude of destruction caused in declared disaster areas (particularly the devastation caused by the most significant events, such as Hurricane Katrina and Superstorm Sandy); and 3) the widening gaps in insured versus uninsured losses. Given this backdrop, we must consider what steps we can take collectively to reduce costs and, more importantly, to reduce the human and economic impacts of disasters. Costs are merely a proxy measure for the extent of disruption our communities face from disasters. As Administrator, I look forward to working with Congress to find ways to address these causes of increased disaster costs.

Additionally, flooding is the most frequent and costly disaster we face. For example, over 3.24 million flood insurance policies administered by the National Flood Insurance Program (NFIP) were in areas impacted by Hurricanes Harvey, Irma, and Maria. The NFIP has paid over $2 billion to policy holders, and the program managers estimate that both storms caused up to $16

billion in losses. We expect much more to be provided in the near future. Homeowners who maintain flood insurance are not only able to recover more quickly and fully after a flood disaster, but they also have less of a need for Federal disaster assistance grants. FEMA is engaging in an effort to double the number of flood insurance policies nationwide by 2023. This effort is focused on encouraging homeowners to purchase insurance not just through the NFIP, but through the private market as well. Insured survivors -- regardless of how they purchase their coverage -- will be in a better position to recover. FEMA will be working closely with the insurance industry, realtors, mortgage lenders, community leaders, and other partners -- including Congress -- to work towards this goal.

Buying Down Risk through Preparedness and Mitigation

Building more resilient communities is the best way to reduce risks to people, property, and taxpayer dollars. I cannot overstate the importance of focusing on investing in mitigation before a disaster strikes. Developing resilient capacity ahead of an incident 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.

Through the Mitigation Framework Leadership Group (MitFLG), FEMA is working with Federal, SLTT, and private sector partners to help align pre- and post-disaster mitigation investments to more effectively reduce disaster losses and increase resilience. The results of this effort will also provide strategic planning considerations for the Federal government, SLTT partners, and the private sector as they make resource allocation decisions.

FEMA also manages the Hazard Mitigation Grant Program (HMGP), the Flood Mitigation Assistance (FMA) grant program, and the Pre-Disaster Mitigation (PDM) grant program that fund projects such as seismic retrofits, safe rooms, and risk reduction for utility and other infrastructure. These funds play a key role in building resilient communities. For example, in September 2013, an unprecedented rainfall event occurred along Colorado's Front Range of the Rocky Mountains, resulting in catastrophic flooding. Eighteen counties experienced significant damage from this flood. Fortunately, a 2010 PDM project for the City of Longmont (the Left Hand Creek flood project), located in Boulder and Weld counties, two of the affected counties, had been completed in 2012. The mitigation project was designed to increase the flow capacity of the creek channel through a mixed-use area. The Left Hand Creek flood project improved the creek channel design and updated and resized two bridge culverts. The project also removed 110 structures from the Special Flood Hazard Area (SFHA). In 2012 dollars, the FEMA project cost was $5,689,013, with total estimated losses avoided of $22,453,091. This mitigation project avoided losses and resulted in a return on investment of $3.95 saved for every $1 spent.

In addition, FEMA's investment of $205 million in the coastal areas of Texas for the acquisition and elevation of 1,618 properties avoided losses from Hurricane Harvey of what could have been more than $330 million.

HMGP is available to a state following a major disaster declaration, and its funding level is based on the costs associated with that disaster. Each year, we receive more PDM and FMA

applications than we are able to fund. This enables FEMA to select the best applicants on a competitive basis. From FY 2003-2016, FEMA received PDM grant applications requesting a total of $3.4 billion. From FY 2013-2016, FEMA received FMA grant applications requesting a total of $1.2 billion. During my time at FEMA, I plan to work with SLTT and private sector partners to explore other potential avenues to enhance pre-disaster mitigation efforts so the Nation is investing as many resources as possible into managing risk, and consequently lessening the impacts to communities, before a disaster strikes.

From the preparedness perspective, FEMA continues to maintain and strengthen the National Preparedness System by helping our non-Federal partners build their capabilities, which will reduce their reliance on the Federal government in the future. Together, we are working to achieve the National Preparedness Goal of a "secure and resilient nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to and recover from the threats and hazards that pose the greatest risk." Our team is currently focused on promoting integrated mutual aid across the whole community, continuing the development of a National Qualifications System for first responders, and advancing a National Training and Education System and National Exercise Program to prepare responders and officials for disasters.

Addressing Human Capital Challenges and Improving FEMA's Processes

As former administrators have told this committee, FEMA's best assets are its people. One of my key areas of focus is determining how we can holistically look at our hiring, training, and career paths to serve the needs of our staff and the Nation while reducing preparedness costs. For example, how do we develop better career progression opportunities so that motivated, experienced staff have a path to move forward and do not leave the agency? How do we remove silos across programs, enhance cross-training, and expand development opportunities so employees can gain a better understanding of the big picture? How do we develop a more robust Reservist capacity while increasing the cost efficiencies of the program? The 2017 hurricane season provided many opportunities for FEMA's programmatic staff to support response and recovery efforts. This experience is invaluable and will help FEMA deliver better services and support in future disasters. These are some of the issues we'll be exploring during my time at the agency.

FEMA is also making a concerted effort to modernize our various information technology (IT) systems and processes to be a more responsive and agile agency. FEMA has several ongoing initiatives: Financial Systems Modernization (FSM); the Grants Management Modernization (GMM) Program; the Pivot NFIP IT Modernization Initiative, and the Enterprise Data & Analytics Modernization Initiative (EDAMI). These initiatives target FEMA's existing IT infrastructure to deliver crucial mission capability by improving the customer experience, minimizing service gaps, reducing costs and delays in services, improving logistics and delivery coordination, and minimizing barriers to informed and timely decisions.

Next Steps and Conclusion

At FEMA, we strongly believe in the importance of listening to our employees and external partners on how to improve our programs and the way we do business. In August of this year, we began hosting several "Discovery Change" sessions to help shape our future strategic direction, brainstorm on topics covered in this testimony, and explore new ways to accomplish our mission.

These sessions are my first step in a new cycle of listening to stakeholders, including agency employees, SLTT governments, non-governmental organizations, and the private sector, regarding ideas to improve the agency, our processes, and our services. During those sessions, stakeholders discussed the importance of building State-level capacity, reducing risk, streamlining and simplifying recovery, and improving FEMA's internal processes. The agency will continue to leverage ideas from these sessions and lessons learned from the recent hurricanes and wildfires to define our strategic goals and objectives for the 2018-2022 FEMA Strategic Plan.

The 2017 hurricane season has and continues to provide me the opportunity to test the validity of many of the ideas I had coming into this job. We look forward to collaborating with the House Committee on Transportation and Infrastructure in the coming months to implement lessons learned, as well as gather any additional feedback that you may have. I look forward to your questions. Again, thank you for the opportunity to appear before the Committee today.

Question#:	1
Topic:	Elevation Data
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Blake Farenthold
Committee:	TRANSPORTATION (HOUSE)

Question: FEMA Administrator Long, I want to applaud you and your agency for chipping in roughly $20 million from you $177 million for the National Flood Insurance Program to help fund the U.S. Geological Survey 3D Elevation Program (USGS 3DEP). Can you discuss the important of elevation data to your agency's role in emergency response and recovery as connected to the 2017 Hurricane Season?

Response: A foundational understanding of risk is the starting point for everything we do in FEMA, particularly in mitigation and insurance. High resolution ground elevation data is key to building this foundational understanding of risk, which helps us to modernize our flood mapping program, transform flood insurance for our customers, and enable communities to take action to reduce their risks. Working through 3DEP with the USGS and other federal partners is the most cost effective way for FEMA to get the elevation data needed.

As part of the National Flood Insurance Program (NFIP), FEMA produces flood maps, which are used to help us set rates, price flood insurance, and establish minimum floodplain management requirements to which communities must adhere.

As bad as the flooding damage was during the 2017 Hurricane Season, the NFIP helped to reduce the impacts and enable communities to recover more quickly. Buildings constructed based on FEMA's flood maps experienced less damage than older buildings. Survivors with flood insurance received billions of dollars in insurance payments and are better able to rebuild their homes than survivors without insurance.

Accurate elevations and flood maps will also reduce future risk. Part of the design of the NFIP is a requirement that when older homes are substantially damaged, they must be rebuilt in compliance with NFIP standards. This means that thousands of homes being rebuilt in the disaster-affected areas will be less vulnerable in the future.

During the response to this year's events, accurate elevation data also helped FEMA expedite other disaster assistance to survivors. Precise elevation data collected prior to this year's events for areas in Texas, Florida, the U.S. Virgin Islands, and Puerto Rico allowed FEMA to use Geospatial Information Systems technology to calculate flood depths and estimate damages to communities immediately following Hurricanes Harvey, Irma, and Maria. Because FEMA was able to estimate damages remotely before field

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inspectors could survey the damage on site, FEMA and our partners could expedite funding and program assistance to disaster survivors.

Question#:	2
Topic:	Permanent Work
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: Was the territory of Puerto Rico required to complete a certain percentage of its Preliminary Damage Assessments before the President declared all categories of permanent work available to the territory? If so, what percentage was required to be completed, how does this percentage compare to the percentages completed or required to be completed by other states before those other states were declared eligible for permanent work assistance, and what role did you, or any other Federal Emergency Management Agency (FEMA) employee, have in proposing, recommending, or implementing this requirement?

Did you, or any other FEMA official, or any Administration official, tell or imply to the Governor of Puerto Rico, or anyone else associated with the territory of Puerto Rico, that the President would declare permanent work as eligible activities for funding only if Puerto Rico agreed to perform some or all of its permanent work under section 428 of the Stafford Act (which allows federal disaster assistance to be made available based on cost estimates)?

On November 3, 2017, the President declared the territory of Puerto Rico eligible for all permanent work categories and recognized the territory's election to participate in alternative procedures authorized under section 428. What analysis was done by FEMA to ensure that the territory of Puerto Rico and its local governments have the capacity, including financial capability, to execute its responsibilities pursuant to section 428? What assistance is available to help the territory of Puerto Rico perform the work pursuant to section 428?

Response: Preliminary damage assessments (PDAs) provide data regarding disaster-related damages to inform decision-making for federal assistance for disaster response and recovery. Under the FEMA Public Assistance Program, damages associated with eligible emergency and permanent work are assessed by the criteria prescribed at Title 44 of the Code of Federal Regulations (44 CFR) §206.48(a) Factors considered when evaluating a Governor's request for a major disaster declaration, *Public Assistance Program*. One of the primary quantitative considerations is the estimated cost of assistance,[1] which is described as follows in the law:

> We evaluate the estimated cost of Federal and nonfederal public assistance against the statewide population to give some measure of the per capita

[1] 44 CFR §206.48(a)(1)

Question#:	2
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Committee:	TRANSPORTATION (HOUSE)

> impact within the State. We use a figure of $1 per capita as an indicator that the disaster is of such size that it might warrant Federal assistance, and adjust this figure annually based on the Consumer Price Index for all Urban Consumers. We are establishing a minimum threshold of $1 million in public assistance damages per disaster in the belief that we can reasonably expect even the lowest population States to cover this level of public assistance damage.

The per capita impact indicator applicable to Hurricanes Irma and Maria was $1.43. Public Assistance (PA) applies this indicator to census data from the most recent decennial census. According to 2010 U.S. Census data, Puerto Rico's population is 3,725,789. Calculated with the per capita impact indicator for Public Assistance, the minimum estimated cost for disaster damage that would warrant federal assistance for Puerto Rico is $5,327,878.27. Considering that preliminary assessments and estimates were in the tens of billions of dollars, Puerto Rico more than met the criteria established for receiving public assistance under a major disaster declaration. FEMA's role in making emergency and major disaster declarations is only advisory, as declarations are at the discretion of the President. FEMA bases its recommendations to the President for Public Assistance primarily on the factors promulgated at 44 CFR §206.48(a).

The alternative procedures for public assistance authorized under Section 428 of the Stafford Act are provided at the discretion of the recipient or subrecipient authorized for funding under the Public Assistance Program as described in Section 428(d) of the Stafford Act:

> Participation in the alternative procedures adopted under this section shall be at the election of a State, tribal or local government, or owner or operator of a private nonprofit facility consistent with procedures determined by the Administrator.

In the case of Puerto Rico, the Commonwealth elected to participate in the alternative procedures for all permanent work under DR-4339-PR on October 30, 2017. Of note, the President authorized special cost-sharing arrangements for all categories of Public Assistance on November 2, 2017.

FEMA is fully committed to ensuring the recovery efforts in Puerto Rico, including funding provided for public assistance under Section 428 alternative procedures, are implemented effectively and responsibly. In terms of efforts and initiatives to mitigate these challenges in Puerto Rico under DR-4339-PR, there

Question#:	2
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are a number of measures intended to achieve this goal. FEMA will provide technical assistance to the Commonwealth, its various agencies, and municipalities to assist in identifying eligible damages and mitigation opportunities, developing scopes of work and cost estimates, and successfully completing eligible work. FEMA is also providing funds for direct administrative costs (DACs) to support the work necessary to apply for, manage, and administer grant funds provided under the Public Assistance program. In addition, given the severity of impacts, the President authorized increasing the federal cost share from 75 percent to 100 percent for emergency work (Public Assistance Categories A-B) for 180 days and then 90 percent for the entire event and 90 percent for permanent work (Public Assistance Categories C-G). This relieves some of the fiscal pressure by ensuring that a significant level of federal funding will be available to the Commonwealth and its various agencies and municipalities.

Question#:	3
Topic:	Offsets
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: In a letter to Congressional leaders dated October 24, 2017, the Director of the Office of Management and Budget stated that Congress should offset natural disaster spending with other spending cuts. In the history of FEMA, has Congress ever required spending cuts before we have helped communities recover from natural disasters? If yes, please provide a list of such natural disasters and the offsets.

Response: To FEMA's knowledge, no.

Question#:	4
Topic:	Employees
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: As of October 30, 2017, FEMA has provided information in its daily operations update that there are 1,585 employees working on Puerto Rico disaster response and recovery. How many of these employees are actually on the ground in Puerto Rico? Where are the federal employees staying on the islands?

Response: As of November 27, 2017, there were 2,375 FEMA responders and Surge Capacity Force (SCF) members deployed on the ground in Puerto Rico. This includes FEMA full time employees, Incident Management Assistance Teams (IMATs), Reservists, FEMA Corps members, local hires, and SCF volunteers serving at 49 duty stations across Puerto Rico.

During the initial response, many federal employees were staying on berthing ships because hotel rooms were limited and first priority for available hotel rooms was given to survivors. As more hotel rooms have become available, FEMA responders are primarily staying in local hotels during their deployments.

Question#:	5
Topic:	Contracting
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: According to the press, this year's record hurricane season has led to the biggest spike in government disaster contracts in more than a decade, testing the government's ability to manage the contracts. Since Hurricane Harvey, FEMA has awarded $2.2 billion in contracts, about twice what the agency typically awards over an entire year.

To what extent has FEMA been driven to bypass the competitive bidding process during the 2017 hurricane season? How has this impacted minority and small business contracting?

Response: FEMA Office of the Chief Procurement Officer (OCPO) utilizes the competitive process as much as practicable during disasters. FEMA OCPO maintains a suite of approximately 50 pre-positioned contracts. These previously-completed contracts provide the ability to quickly acquire goods and services that FEMA has learned, through years of experience and practice, would be considered essential immediately following a disaster (e.g., meals, tarps, and medical kits). While FEMA makes optimal, but pragmatic use of FAR Part 18, Emergency Acquisitions, which provides non-competitive acquisition flexibilities in an emergency, the majority of contracts awarded during this hurricane season utilized some form of competition.

Question: What additional controls has FEMA implemented to ensure that contractors with questionable track records are not awarded big contracts or paid for unsupported costs?

To what extent has FEMA awarded disaster contracts to smaller companies with limited records of disaster relief?

Response: FEMA's solicitations may give evaluation credit to offerors for having demonstrated successful past performance in emergencies (and evaluations in the Past Performance Information Retrieval System (PPIRS) are reviewed for this purpose), but our solicitations stop short of limiting competition only to such offerors in order to avoid restricting competition unnecessarily.

The contracting officer reviews the following databases to make an affirmative determination of responsibility: Federal Awardee Performance and Integrity Information System (FAPIIS), System for Award Management (SAM.gov), and Past Performance Information Retrieval System (PPIRS).

Question#:	6
Topic:	Contracting 2
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: In September 2017, FEMA awarded a $1 billion intergovernmental service agreement to the State of Texas to execute the direct housing mission for Hurricane Harvey. Services over the 18-month performance period include lease and repair of rental properties, direct temporary housing using recreational vehicles and manufactured housing units, and permanent housing construction. The state of Texas General Land Office will manage the effort, administering it through local councils of government.

Please identify FEMA's authority to enter into the Intergovernmental Service Agreement with the state of Texas and how does FEMA plan to oversee this $1 billion effort.

Response: FEMA may provide direct temporary housing and permanent housing construction-repair under section 408 of the Stafford Act to individuals and households "who, as a direct result of a major disaster, have necessary expenses and serious needs in which the individual or households are unable to meet such expenses, or needs through other means," such as insurance. FEMA determined that due to the significant damage caused by Hurricane Harvey in the state, the exigent need for housing requires the provision of direct housing assistance to eligible survivors under section 408. Based on FEMA's authority under section 408 of the Stafford Act to provide direct housing assistance through a variety of mechanisms, FEMA entered into the Intergovernmental Service Agreement with the State of Texas to execute the housing mission on FEMA's behalf.

FEMA will oversee program performance and costs under the Intergovernmental Service Agreement (IGSA) through administrative and project management plans that include performance schedules and cost estimates for work to be performed under each program, regular reporting requirements, and sharing applicant information with GLO.

Question: What analysis was done by FEMA to ensure that the Texas General Land Office and local councils of government have the capacity, including financial capability, of executing these responsibilities?

Response: FEMA analyzed and relied on the Texas General Land Office's (GLO) track record with the Housing and Urban Development (HUD) Community Development Block Grant Disaster Recovery (CDBG-DR) funds when making the determination that GLO had the capacity to take on the responsibilities. GLO has administered and managed over $4 billion in HUD CDBG-DR funds since 2011. These funds were allocated following Hurricanes Rita, Dolly, and Ike; the 2011 wildfires; and the 2015 and 2016 floods. In 2015 and 2016 alone, Texas also received six federal disaster declarations that

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spread across 160 of the state's 254 counties. These disasters affected more than 76 percent of the state's population, or nearly 21 million people - a total population greater than the populations of 48 individual states.

The Governor of the State of Texas determines which state agency oversees the CDBG-DR grant program. In 2011, then Governor Perry made the decision to transfer administration of the program to the GLO after problematic delays in management of the funding from Hurricanes Ike, Dolly and Rita by previous administrators. At the time the program was transferred, less than 10% of the $3.1 billion in Hurricane Ike funds had been spent and more than a quarter of those that went to the cost of administration of the program.

Since being granted oversight of the program, the GLO has successfully closed the Hurricane Rita grant, obligated 99% of the Hurricane Ike grant, and is in the process of closing out the Wildfire grants from 2011. Contract management costs were reduced by more than 90% and general administrative costs were reduced by nearly 50%. The program continues to efficiently manage funds for more than 160 eligible counties across four grants and is doing so with a leaner, more effective staff.

During the IGSA creation and negotiation, financial capabilities were discussed between FEMA and GLO. The reimbursable nature of the agreement obviated the need to fund the work up front, but it was determined that initial staffing and operational costs would be beneficial to ensure the state had adequate resources to accomplish its responsibilities. The mechanism negotiated in Section IX.F of the IGSA allowed for the state to receive 25 percent of its total projected administrative costs up front. Additionally, the state could access its $10.3 billion "rainy day fund", if necessary, with the approval of the state legislature.

The initial development of the Agreement focused on GLO's capabilities and responsibilities, with the understanding that the Council of Governments (COGs) and local governments would supplement and subcontract GLO's responsibilities, as they were capable and willing. A survey was issued by GLO, in coordination with FEMA, to the affected COGs to assess the respective interest and capabilities in the IGSA work. This survey was issued and responses were received back before the IGSA was finalized. Finally, GLO committed to providing the contract support for any community which would not be able to take on the IGSA responsibilities.

Question: What steps did FEMA take to make sure that Texas properly administers the funds and that Texas competitively awards contracts to ensure the best outcome for disaster victims and taxpayers?

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Response: In connection with the housing mission, FEMA procurement attorneys (Office of Chief Counsel, Procurement Disaster Assistance Team, or OCC-PDAT) have assisted GLO with the requirement embedded in the IGSA to comply with the Federal procurement standards. OCC-PDAT reviewed GLO's Requests for Qualifications to provide technical assistance and ensured the required contract clauses were included. OCC-PDAT also reviewed GLO's draft Standard Operating Procedure for the Councils of Government procurements.

To date, OCC-PDAT has trained 27 Texas General Land Office (GLO) staff and attorneys, and 45 attorneys for the state who make up the Governor's State Attorney Work Group, which was formed by the Governor's office after the disaster, and provides technical assistance to local governments who reach out to the Governor's Commission to Rebuild Texas. PDAT will conduct training in early December for Galveston County and the Houston Galveston Area Council of Government, which will carry out work under the IGSA.

Finally, OCC has issued and shared several fact sheets and other guidance which can be found on the PDAT website at: https://www.fema.gov/procurement-disaster-assistance-team.

Question: The agreement notes that FEMA may issue firm fixed price or time and materials task orders to the state and its local partners. The Government Accountability Office (GAO) has reported that these time and materials contracts are risky because the government bears the risk of cost overruns. What actions does FEMA plan to take to manage the costs of any time and materials task orders that it issues?

Response:

- JFO finance and contracting coordinated with GLO, FEMA Region 6 (R6) Disaster Grants, and the FEMA Finance Center (FC) to establish monitoring and audit reporting and schedules to ensure proper administration of funds
- The JFO, R6, FEMA FC, and GLO have a bi-weekly coordination call to discuss reporting, administration of funds, invoicing, and any issues.
- The FEMA Region 6 Grants Management Division (GMD) will provide support and assistance with the development of a cost monitoring process similar to the one used under the State's grants program. The process will ensure compliance with procurement standards outlined in 2 CFR 200.317-326. Administrative costs will be managed consistent with Public Assistance Program grants. GMD will

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review a sampling of administrative costs once a quarter. Additionally, under the IGSA, project cost estimates are submitted and reviewed at the work order level, and each program has cost limitations and ceiling limitations, which cannot be exceeded without approval from the contracting officer.

There will be financial oversight. GMD has reviewed the administrative plan, and will review and analyze GLO's cash-on-hand on a quarterly basis. On a monthly basis, GMD will conduct a monthly sample review of administrative costs source documentation

Question#:	7
Topic:	Workforce
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: Some reports indicate that the combined impacts of Hurricanes Harvey, Irma, and Maria have overwhelmed federal disaster officials. As a result, disaster victims in Texas and Florida have faced unusually long delays in getting basic disaster assistance. For example, some have reported FEMA has taken weeks to inspect damaged homes and apartments, delaying flood victims' attempts to rebuild their lives and properties. Reportedly, people who call FEMA's help line have waited on hold for hours before they even speak to a FEMA representative.

Has FEMA identified how many inspectors they need to reduce the backlog?

Response: The onboarding of inspectors to reduce the backlog occurred both state side and in Puerto Rico in response to the Harvey, Irma, and Maria disasters. Inspectors were brought on board through two hiring initiatives – one in Denton, Texas and the other in San Juan, Puerto Rico. The results of the effort expanded the staff from 1,350 inspectors to over 11,500 trained inspectors deployed in response to the disasters. As of December 20, 2017, there were a total of 11,500 inspectors who work across all open disasters.

Question: What are FEMA's goals for average wait time for an inspection?

Response: FEMA issues inspection work orders after a survivor registers for assistance and strives to schedule and complete the inspection within 10 days; however, there were a number of extenuating factors after Hurricanes Harvey, Irma, and Maria (particularly in Puerto Rico and the United States Virgin Islands) that contributed to delays, resulting in some applicants having to wait longer. Extenuating factors included the unprecedented volume of registrations and inspections (4.7 million registrations and 2.4 million inspections processed as of February 6, 2018), widespread mass evacuations, extended power outages and devastation that prevented applicants from returning to impacted areas for inspections, washed out roads and bridges which left many areas inaccessible for extended periods of time, and lengthy commutes in mountainous areas of Puerto Rico which limited productivity. All other disaster-related inspections are nearly complete, with survivor wait times of less than seven days.

Question: With 85 percent of FEMA's workforce deployed, what additional steps can FEMA field managers do to obtain staff to meet disaster survivors' needs?

Response: With concurrent, complex response and recovery operations, FEMA has deployed a total of 15,000 personnel to all open events, including responders in the field, Surge Capacity Force volunteers, National Processing Service Center (NPSC) support,

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National Response Coordination Center (NRCC) / Regional Response Coordination Center (RRCC), and those deployed in-place. FEMA has been able to supplement the disaster workforce through Surge Capacity Force deployments, including deploying employees of other federal agencies (Tier IV) for the first time, as well as state or local partners, contract support and just-in-time trainings. To address staffing shortfalls and the need for additional responders, FEMA leadership in Texas, Florida, Puerto Rico, and the U.S. Virgin Islands have utilized deployment extensions and local hiring initiatives. In Puerto Rico, FEMA has been hiring locals aggressively, and each program area has already set clear requirements for local hires. In addition, anticipating that FEMA will have a footprint in Puerto Rico for several years, planning for long-term recovery has already begun, including but not limited to identifying avenues to hire Cadre of On-call Response/Recovery Employees (COREs) locally. In Texas, FEMA's robust local hire campaign, which included a job fair in late October, has so far resulted in approximately 431 local hires as of late October, with an anticipated additional 739 to be hired. FEMA Region 6 has also undertaken a separate hiring initiative to staff its Texas Long-Term Recovery Office. This initiative is a phased transition approach projected to be completed by June 2018.

Question: How well did FEMA's new Incident Management Assistance Team (IMAT) members perform in Texas, Florida, and Puerto Rico?

Response: In response to Hurricanes Harvey, Irma, and Maria, FEMA deployed all 3 of its National IMATs and 11 of its 13 Regional IMATs (the Region 9 IMATs remained in California supporting the response to the wildfires). All teams were able to rapidly deploy and form the core of the Unified Command Structure, in support of their local, state, tribal, and territorial government counterparts. The teams successfully executed their essential tasks and were able to adapt to changing conditions and requirements. A complete after-action review of these teams and their performance remains in progress; undoubtedly there are areas for improvement and best practices that need to be incorporated into the program's guidance documents and training.

Question: To what extent has staffing been an issue in the deployment of those teams?

Response: Staffing all IMATs with highly qualified personnel and retaining those individuals on the teams has been and continues to be a challenge. FEMA has leveraged a variety of incentive programs in order to recruit top talent, and through its chief Component human capital officer, is working to refine pay, performance, and recruitment policies to support team development and performance. This Hurricane season, FEMA was able to staff all critical positions or backfill vacancies on the teams with qualified members of the incident workforce.

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Question: Regarding Reservists, to what extent have FEMA's longstanding issues with training continued to affect Reservists' performance?

Response: The FEMA Qualification System (FQS) structures the institutional mechanisms used to track disaster workforce qualification for all Agency employees, including Reservists. FQS fulfills the requirement established in the Post-Katrina Emergency Management Reform Act for the Agency to establish standards to credential the FEMA incident management workforce. The Agency, via FQS, ensures that its disaster workforce is qualified to perform mission critical tasks in the field. We anticipate that recent ongoing improvements to FQS will further refine these performance requirements, strengthen the development and delivery of associated training, and enhance how FEMA tracks progress towards workforce qualification. Robust training opportunities are seen as a critical link to performance in the field.

Question: To what extent has FEMA's implementation of the Surge Force employing personnel outside of Department of Homeland Security (DHS) been successful? Please provide data to support your conclusion.

Response: For the first time, FEMA utilized personnel from federal agencies outside the Department of Homeland Security to support an extraordinary number of disaster operations across the United States and the territory of Puerto Rico. Initially, the goal was to build a roster of 1,150 volunteers from other federal agencies. As of November 28, 2017, FEMA counts 3,012 non-DHS volunteers, of which 1,296 have deployed, a significant achievement given the novelty of the program's expansion. Continuing to leverage the Surge Capacity Force (SCF) Concept of Operations, the Agency rapidly mobilized personnel from 34 non-DHS federal agencies, and trained and equipped volunteers to perform a variety of missions. The Agency's ability to deploy more than one-third of its newly rostered non-DHS volunteers to four concurrent operations is a testament to the overwhelming success of FEMA's implementation of SCF deployments. These added deployments ensured FEMA could continue to perform disaster operations and deliver assistance via its program areas. As of November 28, 2017, the Agency continues to receive requests for SCF volunteers to assist with field operations.

Question#:	8
Topic:	Housing
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: FEMA has asked pre-fabricated housing manufacturers to produce at least 4,500 homes for families affected by Hurricane Harvey. FEMA's new housing initiative with Texas has shifted the responsibility from FEMA directly funding/managing housing assistance to the Texas General Land Office through local councils of government via a $1 billion intergovernmental service agreement.

How many trailers have been approved by FEMA in Texas?

Response: For Hurricane Harvey in Texas, FEMA purchased 4,500 Manufactured Housing Units (MHUs) through FEMA's national contracts. In addition to the MHUs purchased, FEMA also purchased an initial 1,000 recreational vehicles, specifically travel trailers (TTs), to support the housing needs of disaster survivors. FEMA also has 2,600 MHUs available in its current inventory. FEMA has enough inventory to support anticipated housing needs of applicants based on current projection and historical data. In accordance with the Intergovernmental Service Agreement, the State of Texas General Land Office has the option to procure MHU's and TTs locally to meet applicant's needs. As of February 4, 2018, there are 2,939 survivors in Texas that have been determined eligible for MHUs/TTs; 1,485 have been licensed into a MHU/TT.

Question: How will FEMA avoid the mistakes after Hurricane Katrina and ensure the quality and quantity of disaster housing units needed for disaster survivors in Texas will be successful?

Response: All MHUs are built to the Housing and Urban Development standard in accordance with 24 CFR Part 3280 "Manufactured Home Construction and Safety Standards". All travel trailers purchased by FEMA are certified to meet the California Air Resources Board Phase II standards, which took effect in 2008. FEMA is working closely with the Texas Department of Housing and Community Affairs, Manufactured Housing Division to ensure that all MHUs are inspected by the State.

Question: To what extent are those types of housing options relevant or available to victims of Hurricanes Irma and Maria in Puerto Rico and the U.S. Virgin Islands?

Response: Manufactured Housing Units (MHUs) are not being considered at this time in either the Virgin Islands or Puerto Rico. A series of challenges, including the logistics of shipping MHUs, topography, and utility access, makes FEMA's use of MHUs insupportable. In view of these challenges, multiple other housing options are available to disaster survivors, which include Direct Lease, Multi-Family Lease and Repair,

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Transitional Sheltering Assistance, Rental Assistance, Permanent Housing Construction, and FEMA Individuals and Household's financial assistance.

Question#:	9
Topic:	Shelter
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: FEMA has decided to cap the Sheltering and Temporary Essential Power (STEP) program at an amount which breaks down to about $20,000 per home, even though such an amount would not fix a home in the U.S. Virgin Islands given the level of damages and the cost of housing in the territory. Even under the temporary Blue Roof program, only about $25,000 per roof is being provided.

Does FEMA plan to increase the amount provided under the STEP program to enable U.S. Virgin Islands residents to participate in the program?

Response: FEMA establishes a per-residence funding cap based on the parameters set forth in the Sheltering and Temporary Essential Power (STEP) Policy to ensure that the emergency work undertaken as part of the STEP Program complies with FEMA's authorities for emergency work under Section 403 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. On November 17, 2017, FEMA authorized a $5,000 cap increase for the STEP Program for the U.S. Virgin Islands to account for price escalation of goods and services in the territory. The STEP Policy also allows for the FEMA Federal Coordinating Officer to increase the cap on a case-by-case basis if repairs consistent with FEMA's regulatory authority for emergency work are expected to exceed $25,000.

Establishing a funding cap for the STEP Program is vital to ensuring work does not exceed the scope of emergency repairs necessary to make a home safe and accessible for sheltering. The emergency work carried out under STEP must be reasonable, necessary, and include an evaluation of low-cost options. While some fixtures associated with STEP repairs may remain in the home on a permanent basis, STEP is not intended, nor is it authorized to, permanently repair a home. The cap serves as a control to ensure FEMA does not fund permanent repairs that exceed the parameters of Section 403 authority set forth in the policy. FEMA would be obligated to recoup funds expended on work exceeding FEMA's authority. Lastly, FEMA has found in past disasters where the STEP Program has been authorized that the average cost to make a home safe for sheltering was on average less than the capped amount.

Question#:	10
Topic:	Individual
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: According to news reports, FEMA has denied 23 percent of the 2.9 million applications for individual assistance the agency has received after Hurricanes Harvey, Irma, and Maria, with the majority of those denials in Florida.
How does this denial rate compare to prior disasters?

What factors might explain the difference, if any?

Given that the agency has insufficient staff to conduct inspections in a timely manner, how did FEMA officials determine that homes were not significantly damaged by the storm and therefore ineligible for assistance?

Response: For Hurricanes Harvey, Irma, and Maria, FEMA received 4,663,517 valid registrations for FEMA disaster assistance as of December 7, 2017. A breakdown of the registrations by hurricane is included in the table below. The breakdown includes the number of valid registrations, registrations referred for possible assistance, registrations approved for assistance, registrations that are still pending, registrations that have been found to be ineligible for assistance, registrations that have been voluntarily withdrawn, and registrations where no decision has been made as the registrations indicated that they had insurance for all or part of the damage. The table also shows the number of approved Individuals and Households Program (IHP) assistance for each hurricane.

Disaster Name	HURRICANE HARVEY	HURRICANE IRMA	HURRICANE MARIA
Valid Registrations	891,756	2,698,343	1,099,747
Referrals	739,527	1,964,460	850,108
Approved	358,072	768,652	303,343
Pending	9,297	60,522	318,927
Ineligible	275,805	733,769	164,643
Withdrawn	48,882	106,693	40,383
No Decision-INS	47,471	294,824	22,812
Approved Amount	$1,463,684,248	$978,767,644	$451,999,105

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Topic:	Individual
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Primary:	The Honorable Peter A. DeFazio
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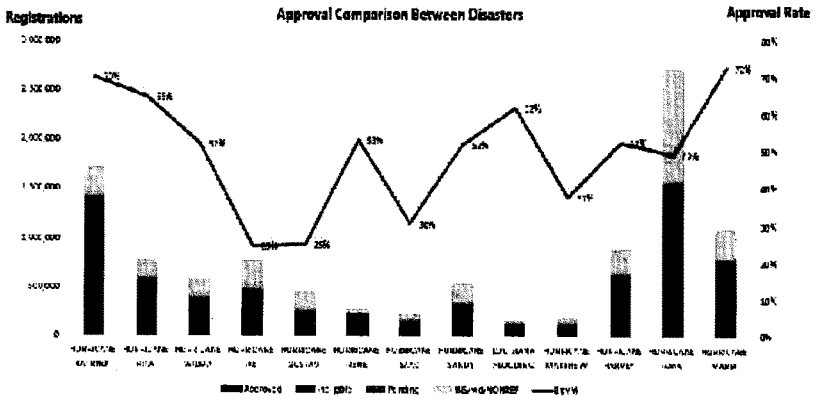
Approval rates between separate disasters can vary significantly, as every disaster is different. There are a number of factors that affect approval rates for a disaster, especially the cause and scope of damage from the disaster and the percentage of individuals who have insurance coverage for all or part of the damage. The chart below provides a comparison of approval rates between several disasters using data as of December 7, 2017. The bar graph shows blue for the number of registrations approved for assistance, orange for the number of registrations found to be ineligible, gray represents the number of registrations still pending, and yellow for the number of registrations that were not referred for assistance, voluntarily withdrawn, or indicated that they had insurance to cover all or part of the damage The blue line graph shows the approval rate for each disaster.



Once disaster survivors register for assistance, FEMA is required to verify losses to determine eligibility for IHP Assistance. FEMA's standard loss verification method for initial eligibility determination is an onsite inspection by a FEMA inspector. During the inspection, the FEMA inspector assesses disaster-caused damage to the applicant's residence and personal property such as furniture, appliances, vehicles, and essential equipment for daily household needs. The FEMA inspector does not determine the applicant's eligibility for disaster assistance; the inspector will solely record the damage.

In some cases, when onsite inspections cannot be conducted safely and effectively, FEMA may use geospatial data inspections to help verify loss and deliver some types of assistance until onsite inspections become feasible. FEMA may also review and verify

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documentation such as medical bills or auto repair receipts submitted by the applicant for disaster-caused losses that cannot be verified through onsite or geospatial inspections.

The amount of financial assistance an individual or household may receive under the IHP is limited. Although minimal damage may cause inconvenience, it is expected that individuals or households will address those losses without federal assistance. Therefore, if FEMA considers that the home was not significantly damaged, the applicant is ineligible for assistance.

Question#:	11
Topic:	Public Assistance
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: FEMA had been pilot testing its new Public Assistance program model since 2014 and was planning to implement the model in January 2018. However, agency officials decided to proceed to full implementation in response to the unexpected demands of the 2017 hurricane season.
What concerns do you have with the early roll out of the new model in Texas and Florida?

Will the new model be rolled out in Puerto Rico and the U.S. Virgin Islands? If not, please explain why it will not be rolled out in the territories.
Are there sufficient staff to support full implementation of the model?

To what extent have FEMA's Public Assistance staff been fully trained to implement the model?

What potential challenges do you see for the program in 2018?

Response: In response to unprecedented demands of the 2017 hurricane season, on September 12, 2017, FEMA made the decision to begin implementing an updated Public Assistance Program delivery model nationwide for all subsequent declared disasters. The new PA Delivery Model is based on a re-engineering of the previous process and improves efficiency, accuracy, consistency, timeliness, and transparency in the implementation of the PA Program by adjusting roles, refining processes, and better using technology to track grant development. Currently, disaster declarations for Alaska, California, Florida, the Seminole Tribe of Florida, Georgia, Kansas, Louisiana, Maine, Mississippi, Missouri, New Hampshire, New York, North Dakota, Pueblo of Acoma, South Carolina, Texas, Vermont, Wisconsin, and Wyoming are using the updated delivery model.

Alabama, Idaho, Puerto Rico, and the U.S. Virgin Islands received disaster declarations shortly after this decision but were in the process of implementing the Public Assistance Program for prior events using the legacy delivery model. Therefore, these events are not using the updated delivery model. Using the updated delivery model in these four states and territories would have created unnecessary confusion for state, tribal and local government officials who had already begun disaster recovery using legacy processes. It would have required pulling already-deployed staff from field work in order to retrain and reorient them to updated processes, roles, and tools. Further, it would have required back-filling significant amounts of information into the updated delivery model systems.

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The agency determined that such steps would cause delays and lead to a more complex recovery than proceeding with the legacy delivery model.

FEMA is in the process of ensuring there is sufficient staff to support full implementation of the updated model. As of November 29, 2017, FEMA has 1,277 staff deployed to joint field offices to serve in Public Assistance Program field operational roles, and is in the process of deploying an additional 777 staff. Further, FEMA has 132 staff at its Consolidated Resource Centers to serve in cross-disaster technical roles and is in the process of immediately adding an additional 200 staff to these centers. Furthermore, FEMA is undertaking a long-term reorganization to staff these centers and other consolidated functions with 503 full time staff to support Public Assistance Program disaster operations. With these staffing actions, FEMA believes there are sufficient resources to support full implementation of the model and that any staffing challenges arising from future disasters will be more easily addressed using the updated delivery model.

In addition to sufficient staffing, FEMA has undertaken a number of training efforts to ensure federal staff—as well as state, local, tribal, and territorial government counterparts—are able to perform their roles.

With respect to training for FEMA's workforce, FEMA standardized processes and roles through the development of 29 job-specific aides, 31 task-specific guides, checklists and templates, and 6 system user guides. FEMA trained on these process and roles through the development and delivery of seven new training courses initially piloted in June 2016 and updated after each test stage based on feedback from course participants and after-action reporting. FEMA updated training requirements and re-assigned 1,760 disaster workforce positions to ensure staff go through position specific required training prior to operating in their role as part of the FEMA's Qualification System. In preparing for full implementation, FEMA trained over 1,900 individuals between June 2016 and August 2017. Since September, FEMA has trained an additional 1,711 federal staff prior to their deployment.

FEMA has consistently engaged with the National Emergency Management Association, International Association of Emergency Managers, our National Advisory Committee, and recipient emergency management and homeland security agencies to ensure partners are aware of—and involved with—program improvements and that non-federal officials are given training before and during disaster operations. Prior to full implementation, FEMA trained over 200 non-federal officials on the updated delivery model.

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One of the hallmarks of the updated delivery model is a commitment to continued training. Under the model, field instructors are deployed to every event and work with disaster response leadership to develop a custom training plan for local officials including video tutorials, webinars, and in-person training. Since September 2, 2017, 331 state, local, tribal, and territorial and 1,823 federal officials have received this on-the-ground training. In addition, FEMA provides a hotline to state, local, tribal, territorial, and federal staff to call with any questions they may encounter in the delivery of Public Assistance. Since September, the hotline has fielded 3,935 calls.

Question#:	12
Topic:	federal response coordination
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: Pursuant to the National Response Framework, federal agencies, as national Emergency Support Function (ESF) coordinators, are responsible for overseeing the preparedness activities of their function and coordinating with other ESF support agencies to ensure that the ESF is engaged in appropriate planning and preparedness activities including coordination, planning, and capability assessment activities.

To what extent have the Environmental Protection Agency, the Department of Energy, and the U.S. Army Corps of Engineers (Corps) established capability requirements for their ESFs, cataloged currently available ESF capabilities, and conducted capability gap analyses of currently available capabilities against capability requirements for their ESFs?

To what extent has the 2017 hurricane season validated or raised questions regarding these assessments?

What new gaps did the national response during the 2017 hurricane season reveal for the different ESFs? What steps need to be taken based on the initial lessons learned?

Response: FEMA recommends that questions pertaining to capability requirements, preparedness activities, and coordination with support agencies under Emergency Support Functions (ESFs) 3, 10, and 12 be directed to their corresponding ESF Coordinator, the U.S. Army Corps of Engineers, the Environmental Protection Agency, and the Department of Energy, respectively.

The Emergency Support Function Leadership Group (ESFLG) recently began conducting after-action activities aimed at assessing lessons learned from the 2017 hurricane season and identifying any potential improvements across the ESFs. Additionally, each ESF is conducting an after-action review process for their respective ESFs. FEMA is also conducting an internal after-action assessment. The findings from these after-action activities, including any lessons learned and potential corrective actions, will be thoroughly validated and reported, with an expected timeline of several months. To analyze and validate best practices and lessons learned, the National Level Exercise 2018 (NLE 2018) will examine response and recovery core capabilities and the Federal Government's ability to sustain National Essential Functions through a catastrophic hurricane impacting the Mid-Atlantic. The NLE planning team has worked closely with ongoing 2017 hurricane season after-action efforts led by the FEMA National Preparedness Assessment Division, Emergency Support Function Leadership Group, and

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Topic:	federal response coordination
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
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Committee:	TRANSPORTATION (HOUSE)

Recovery Support Function Leadership Group to identify specific areas of focus areas to incorporate into the design of NLE 2018. Institutionalizing best practices and implementing corrective actions for any potential capability gaps identified as a result of after-action activities will be implemented following the reports' findings.

Question#:	13
Topic:	Task Force
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: After Hurricane Sandy, the Obama Administration established the Hurricane Sandy Rebuilding Task Force to provide government-wide coordination of the numerous federal agencies assisting the affected States and localities with recovery efforts. The Task Force was well-received by stakeholders and over the years, there have been requests for similar, Congressional mandated recovery task forces. Does FEMA or the Administration intend to establish recovery task forces for Hurricanes Harvey, Irma, and Maria?

Response: Acting Secretary of Homeland Security Duke, in coordination with the heads of other relevant departments and agencies, has established an Undersecretary/Assistant Secretary-level Recovery Support Function Leadership Group (RSFLG) to coordinate interagency recovery support for the 2017 hurricanes under the National Disaster Recovery Framework (NDRF). In addition, Recovery Support Functions (RSFs) have been deployed to Texas, Florida, Puerto Rico, and the U.S. Virgin Islands. The NDRF was established shortly after Hurricane Sandy in 2012, and the RSFs and the RSFLG have had time to develop and mature their procedures and training since then.

The NDRF organizes more than 30 coordinating, primary, and supporting agencies and organizations, into 6 RSFs, to work together to synchronize their support efforts and leverage their authorities and resources to help communities recover with increased resilience following a major disaster. Chaired by FEMA, the RSFLG brings together the leadership of these departments and agencies into a coordinating network which we have tested and refined over the last five years.

Since the onset of the 2017 hurricane season, the RSFLG has been meeting weekly at FEMA headquarters, currently at the Under Secretary/Assistant Secretary level. The RSFLG serves as the policy coordinating committee to raise and resolve interagency operational, policy, and resource issues in order to support recovery. The Federal Disaster Recovery Coordinators (FDRC) coordinate the field-level work to assess and resolve recovery challenges and participate in RSFLG meetings to discuss cross-cutting issues with the national-level interagency partners. If necessary, the RSFLG may elevate issues using the National Security Council process for executive-level policy consideration and resolution. RSFLG meetings and the RSFLG's Max.gov collaboration portal also serve as vehicles for information exchange between RSF member agencies.

Question#:	14
Topic:	resilience
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
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Question: In addition to FEMA, other Federal agencies provide post-disaster assistance that can be used to enhance national resilience. For example, the Federal Transit Administration's (FTA) Public Transportation Emergency Relief Program, the Department of Housing and Urban Development's (HUD) Community Development Block Grant-Disaster Recovery, and the Corps Hurricane Sandy program can all be used to enhance the resilience of the national infrastructure to limit the damage from future disasters.

What steps have FTA, HUD, and the Corps taken to better integrate their post-disaster assistance with FEMA disaster assistance programs since Hurricane Sandy?

How have these steps been incorporated into interagency disaster recovery efforts for the 2017 hurricane season? What have been the results?

To what extent are there opportunities to overcome the local challenge of the cost of mitigation through a more integrated approach to coordinate funding streams?

Response: Under the National Disaster Recovery Framework, the Infrastructure Recovery Support Function (RSF) is a network of departments and agencies that have resources and authorities to support infrastructure restoration post-disaster. The U.S. Army of Corps of Engineers (USACE), Department of Energy (DOE), Department of Transportation (DOT) [including the Federal Transit Administration (FTA), Federal Highway Administration (FHWA), Federal Aviation Administration (FAA), etc.], Environmental Protection Agency (EPA), Department of Housing and Urban Development (HUD), Department of Homeland Security (DHS), as well as other federal agencies, coordinate their funding and resource allocations through the RSF at the Joint Field Office, under leadership of the Federal Disaster Recovery Coordinator (FDRC).

Given the significant damage across multiple states, Hurricane Sandy recovery catalyzed a transformation in the Federal Government's approach to infrastructure investments – across repair, improvement, and new projects – by inducing commitments to broader perspectives, information sharing, and coordination. After Sandy, the federal interagency partners created an interagency coordination process whereby all levels of government work together towards regional infrastructure resilience through projects funded in whole or in part by the Disaster Relief Appropriations Act of 2013, P.L. 113-2 (the "Sandy Supplemental"). Through this process, federal agencies worked to coordinate funding streams to enable the wisest use of federal funds to support a resilient recovery throughout the affected region.

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Since early 2014, these agencies and their grantees have shared extensive information about each of their programs, processes, as well as the projects to be funded by their programs. They also meet in smaller technical coordination teams to leverage resources and address constraints, to maximize project-specific and area resilience to the greatest extent possible, and to facilitate timely federal permits and environmental reviews. Federal leadership in the affected region also meets regularly to ensure that each federal agency understands collective disaster recovery programs, address practical challenges, avoid duplication of work, and take a broader look at risk reduction among the agencies and their respective grantees. The interagency projects list allows visibility and tracking of approximately 400 infrastructure projects, which have a combined total value of over $28 billion and will be supported by approximately $19 billion in federal funds. Updates to the list are posted regularly in a dedicated section of MAX.gov and allows federal, state, and local officials to look at projects across the region and drill down to individual watersheds, communities, and neighborhoods.

The Infrastructure Systems RSF is leveraging the coordination process developed after Sandy for the 2017 hurricane season recovery. Building on what was learned from increased information sharing and enhanced coordination across agencies and grantees after Sandy, the FDRCs and Infrastructure RSF have already started information sharing and relationship building across the agencies, grantees, and partners for Hurricanes Harvey, Irma, and Maria. While federal agencies maintain their statutory authorities, the FDRC takes a lead role in ensuring that federal expenditures are coordinated in an effective manner, leading to increased resilience. This coordinated approach has improved the ability of different federal agencies to identify cross-cutting recovery issues and develop informed strategies to address those issues. Cross-sector issue identification occurs sooner, and issue adjudication is done in a collaborative manner across RSFs. Questions about sequencing of funding and optimal federal expenditure levels are broached earlier in recovery.

This latest effort to engage all federal partners goes beyond infrastructure and has started even earlier than after Hurricane Sandy. Early engagement serves as the critical foundation for what will be needed to coordinate well-informed planning, approval, and implementation of the many infrastructure and non-infrastructure projects that will be supported by federal disaster programs and resources.

Communities are often faced with the significant challenge of addressing immediate needs while simultaneously planning for their long term recovery and resilience. Blending funding streams from different entities is often the best available solution to support local mitigation efforts. It is essential that disaster-related funding be made

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available in a timely manner, and there must be mutual understanding of how different funding sources may be used.

The state plays a crucial role in assisting communities to navigate and maximize funding streams from FEMA programs, HUD CDBG-DR, and other sources. The FDRC and the FEMA Mitigation Advisor work closely with grantee leadership to assist the grantee with its strategy for establishing recovery and mitigation priorities and helping communities to access federal and grantee funding sources. The type of early coordination of infrastructure and other large project development described above is crucial for helping communities to identify and access opportunities to build resilience and resources to meet their recovery and resilience goals.

Question#:	15
Topic:	Stafford Act
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: Before the Senate Committee on Homeland Security and Government Affairs, you stated that "what we have to do is restore to a pre-disaster condition, but obviously, that is not optimal, and not the way I would ever recommend this country to go. We do not want to be back in this situation again, after having this-this disaster and an opportunity to change it." You continued that your "authorities are limited to the Stafford Act", and that more resiliency in rebuilding infrastructure is "probably what's needed, but the authority for me to spend taxpayer dollars to do that, I'm not so sure that I have and that's something I would ask this committee to take a look at."
However, under the Stafford Act, the cost of replacing facilities is determined "on the basis of the design of such facility as it existed immediately prior to the major disaster and in conformity with current applicable codes, specifications, and standards (including floodplain management and hazard mitigation criteria required by the President or by the Coastal Barrier Resources Act (16 U.S.C. 3501 et seq.)...".

Is the issue of rebuilding with resiliency a matter of a lack of statutory authority, or because the administration has not effectively required the incorporation of "hazard mitigation criteria" to be taken into account, in addition to pre-disaster conditions, in determining what it takes to rebuild, as authorized by the Stafford Act?

Would you be in favor of an amendment to the Stafford Act that would be more explicit to, in the words of House Majority Leader Kevin McCarthy, "allow the Federal Emergency Management Agency, Army Corps of Engineers and other federal agencies to rebuild damaged infrastructure - including buildings, roads, bridges and the power grid - not merely to the vulnerable state they were in before but to modern, 21st-century standards that can withstand future storms"?

Response: FEMA has sufficient authority under the Stafford Act to rebuild damaged infrastructure and to fund mitigation measures that will protect that infrastructure from future storms. In particular, the Stafford Act authorizes Federal funding to assist communities with mitigation efforts under Sections 404 and 406. These authorities also help ensure communities impacted by a disaster can be better prepared and mitigate against future disasters. My comments on limitations in addressing pre-disaster condition were in reference to Puerto Rico where much of the public infrastructure was in very poor condition prior to the hurricanes. In certain circumstances it is very difficult for FEMA to discern what damages are disaster related and what conditions are pre-existing. In addition, repairing disaster-damaged components of a system can be impossible without addressing non-damaged, aged components. The Administration has supported language the House passed in HR4667 that will authorize FEMA to provide assistance to

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Puerto Rico and the U.S Virgin Islands under its Public Assistance Program without regard to pre-disaster condition.

Question#:	16
Topic:	Management
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: Over the last decade, the number of federal disaster declarations and overall federal disaster spending has increased significantly. For example, in 2017 (as of October 6), there have been 15 weather and climate disaster events with losses exceeding $1 billion each across the United States; and the costs for Hurricanes Harvey, Irma, and Maria are still being assessed. While the reasons for this may vary, it is clear that there is an increased expectation by state and local governments, and citizens, that the federal government will fund much of the response and long-term recovery to major disasters. This expectation increases the federal government's future fiscal exposure to disasters and extreme weather.

What new challenges did Hurricanes Harvey, Irma, and Maria pose for the DHS and FEMA and what steps would you plan to take to address them?

Response: Following the unprecedented 2017 Hurricane Season, FEMA, through the Federal Insurance and Mitigation Administration (FIMA), faced multiple challenges in managing flood loss claims through the National Flood Insurance Program (NFIP) and ensuring the effective application of mitigation efforts throughout the recovery process. In responding to three catastrophic hurricanes simultaneously, FIMA implemented innovative solutions to provide post-disaster services to survivors.

To address staffing shortfalls, FIMA developed new data-driven and utility maximizing approaches to reduce claims handling timeframes and optimize staff resources. A few examples of these approaches include:

- With over 124,000 NFIP claims submitted across the impacted areas, FIMA implemented several enhancements to the claims process that served to improve policyholders' claims experience, expedite payment of claims, and assist insured-survivors to recover quickly and return to their new normal following the historic floods of 2017. Some of those enhancements include the building valuation loss assessment tool (BVLA) that used claims data, geospatial maps, and event information to provide rapid assessments based on home square footage, thereby enabling speedy advance payments to NFIP policyholders; larger pre-inspection advance payments; one year Proof of Loss extension that reduced paperwork burden for policyholders; streamlined prior loss reviews avoiding delays in completing claims assessment; contents grouping, expediting the adjustment of personal property (contents) claims; and the implementation of the Special Catastrophe Adjuster Fee Schedule that allowed the NFIP to attract and retain qualified adjusters to service our impacted policyholders in impacted areas.

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- In Texas, tens of thousands of substantial damage estimations were avoided with the use of data-driven prioritization. As a result, rebuilding timelines were shortened for individuals and millions of dollars were saved.
- Coordination of efforts across the Joint Field Office (e.g., geospatial data analysis, messaging and outreach, cross-program coordination) were consolidated to maximize staff utility across all active disasters.

Question: What role do you think mitigation and resilience building will have in addressing federal disaster costs issues?

Response: FEMA believes that it is critical to focus on investing in mitigation before a disaster strikes. Building more resilient communities and developing resilient capacity ahead of an incident is the best way to reduce risks to people, property, and taxpayer dollars. When communities are affected, they should ensure that they rebuild infrastructure better, tougher, and stronger to protect taxpayer investment and promote economic stability. In 2017, the Multi-hazard Mitigation Council conducted an independent study that demonstrated that federal grant investments in mitigation have a return of 6:1; in other words, every dollar invested in mitigation returns (on average) six dollars. These results rely on a 2.2% discount rate. OMB procedures call for BCAs to be performed considering a seven percent discount rate to reflect the time value of money. If using a seven percent discount rate, every federal grant dollar spent on mitigation would save an average of four dollars on future disaster costs. Investments made specifically in riverine flood mitigation return an average of and three dollars for every dollar invested.

FEMA currently provides mitigation assistance under four programs: (1) Pre-Disaster Mitigation (PDM); (2) Flood Mitigation Assistance (FMA); (3) Hazard Mitigation Assistance Program (HMGP) and (4) Public Assistance (PA). PDM and FMA are annual competitive grant programs that serve as vital means to provide mitigation from natural hazards before a disaster happens; however, PDM and FMA have been oversubscribed annually, with a high number of applicants seeking far more funding for mitigation projects than is available. FEMA provides far more mitigation funding under HMGP and PA. This sizeable source of financial assistance results in worthy and effective mitigation projects; however, those programs are contingent on the declaration of major disasters under the Stafford Act. States and local governments cannot adequately plan for and mitigate against disasters when the bulk of their mitigation funding is received in large and unpredictable tranches of assistance only after a disaster strikes.

FEMA has been considering what changes it can make in its current mitigation programs to advance this objective. For instance, FEMA is working actively with Recovery and

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Mitigation Framework Leadership Groups to inform the recovery in Puerto Rico and U.S. Virgin Islands to build back stronger and more resilient. In the cases of Texas and Florida, FEMA is working actively with state partners after the major flooding events so elevations and buy-out offers of Severe Repetitive and Repetitive Loss properties can occur in an expeditious manner.

Fortifying homes and communities to withstand the various hazards that might affect them has been shown to reduce long-term human and financial costs. Reducing the impacts of hazards like floods, tornadoes, hurricanes, earthquakes and other natural events doesn't have to be complicated or cost a lot of money. There are many ways to reduce exposure to losses. For example, a community which agrees to limit building in high flood-risk zones, or one which enforces building codes in places where earthquakes, tornadoes, or hurricanes are a major threat, significantly reduces its risk when natural events occur. This means fewer lives lost, and less damage to buildings and infrastructure. In fact, a 2017 study conducted by the Multihazard Mitigation Council (MMC) showed that for every federal grant dollar spent on mitigation, American tax payers would save an average of six dollars on future disaster costs. The study also showed that investments made specifically in (riverine) flood mitigation go even further, with a demonstrated return of seven dollars on average for every dollar invested. These results rely on a 2.2% discount rate. OMB procedures call for BCAs to be performed considering a seven percent discount rate to reflect the time value of money. If using a seven percent discount rate, every federal grant dollar spent on mitigation would save an average of five on future disaster costs. Investments made specifically in riverine flood mitigation return an average of three dollars for every dollar invested.

FEMA has several hazard mitigation grant programs which aim to protect homes and communities from hazards. Additionally, in recognition of the value of mitigation in lessening future disaster losses, FEMA's Administrator signed the *Disaster Risk Reduction Minimum Codes and Standards policy (FEMA Policy 204-078-2)* in 2016. This policy requires that FEMA funding for building construction and repair be designed and constructed in accordance with the latest hazard-resistant building codes. The policy applies to all FEMA offices and programs, including disaster and non-disaster grant programs. To that end, the *FEMA Public Assistance Required Minimum Standards policy (FEMA Recovery Policy FP-104-009-4)* requires meeting hazard-resistant standards from the most recent international codes for the purpose of promoting resilience and achieving increased risk reduction during the post-disaster re-building process under the Stafford Act.

In a 2015 report, the Government Accountability Office recommended that the federal government develop an investment strategy to help enhance national resilience for future

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disasters. The National Mitigation Investment Strategy (NMIS) is intended to increase the effectiveness of investments in reducing disaster losses and increasing resilience, and to provide strategic planning considerations for federal, state, local, tribal and territorial entities and the private sector as they make investment decisions. NMIS complements the National Mitigation Framework and will contribute to the Nation's overall national strategy for mitigation. The Investment Strategy will be grounded in three fundamental principles: (1) that we must encourage private and non-profit sector mitigation investments and innovation; (2) we must improve collaboration between federal state, local, tribal and territorial governments and the private sector respecting local expertise in mitigation investing; and (3) that we must make data- and risk-informed decisions that include lifetime costs and risks

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Topic:	GAO
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
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Question: In 2015, the GAO found that while FEMA has more than tripled the number of contracting officers it employs since Hurricane Katrina in 2005, it does not have a sufficient process in place to prioritize its disaster workload and cohesively manage its workforce. Please discuss your plans to ensure that FEMA can prioritize its disaster-related workload and manage its workforce, especially given that FEMA is now responding to four simultaneous nationally-declared disasters.

Response: Given that FEMA is fully engaged in responding to four concurrent nationally-declared disasters, the Agency has taken an enterprise view to ensure that staffing for its field operations is organized, effective, and efficient. Through detailed analysis and deliberation with Agency stakeholders, FEMA has established a robust process to balance its incident workforce and effectively meet the needs of response operations. In May, the Field Operations Directorate (FOD) created three distinct force packages (i.e., Large IA/PA, Small IA/PA, and PA-only) to be used for time-phased deployment of personnel. These force packages are composed of program area-specific force modules determined to fulfill staffing requirements for incidents of varying scope and scale, and they can be further modified to fit specialized disaster needs. In August, FOD implemented a modified Large IA/PA Force Package for Hurricane Harvey response and recovery efforts. In addition, the Large IA/PA Force Package was utilized as a baseline during Hurricanes Irma and Maria response and recovery operations to inform analysis and planning for workforce staffing across multiple open events. Implementation of this process continues, along with ongoing assessments of workforce needs for each disaster.

Question: In 2015, GAO found that FEMA has not fully implemented the Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA) (P.L. 109-295, title VI) contracting reforms due in part to incomplete guidance. For example, GAO found that FEMA officials were aware of preferences for local contracts, but the process for determining if vendors are local is not well-defined in FEMA's guidance. Only one of the 13 non-local contracts that GAO reviewed included the required written justifications. Please discuss plans to ensure that FEMA continues to fully implement PKEMRA contracting reforms.

Response: FEMA has made efforts to build and manage its contracting workforce and structure since PKEMRA, adopted PKEMRA reforms to improve management practices for disaster contracting, and continues to fully implement PKEMRA contracting reforms by taking the following actions:

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- Since Katrina in 2005, FEMA has tripled the number of contracting officers it employs, with some of the workforce growth attributed to the establishment of a Disaster Acquisition Response Team (DART) in 2010.
- Utilized the FEMA Qualification Standards (FQS) to identify titles and roles of its acquisition cadre. This construct is based on disaster experience, emergency management training, and federal acquisition certifications, and warrant levels.
- Hosted annual webinars specific to disaster contracting for contracting officers to learn and get updates on disaster-related information such as the roles and responsibilities of deployed staff and how they interact together, the list of advance contracts and how they are used, lessons learned from recent disasters, and topics specific to regional offices in an effort to transfer knowledge from one region to another.
- Implemented disaster contracting courses, specifically a disaster contracting guide and a disaster contracting readiness directive, finished a review of all contracting related doctrines, and is in the process of updating these doctrines.
- Leveraged information management tools, such as SharePoint to make readily available vital information concerning contracting policies and guidance specific to FAR Part 18 and the Stafford Act. FEMA is continuously updating the SharePoint site in an effort to make the information current, accurate, and readily available for personnel.
- Improved its contract organizational structure, aligning it to functional business lines. Previously, the operation contracting division had 10 branches. In January of 2015, these 10 branches collapsed down to 4 branches. Two branches are specific to disaster contracting: an expeditionary branch and an incident support branch.
- FEMA's competed prepositioned Indefinite Delivery Indefinite Quantity (IDIQ) contracts both provide expedited mission essential disaster support and reduce the need for noncompetitive contracts. Any noncompetitive actions that are awarded separately under unusual and compelling urgency authority undergo multiple compliance reviews, including the component's advocate for competition to ensure compliance with PKEMRA requirements.
- FEMA Office of Chief Procurement Officer's (OCPO) Local Business Transition Team (LBTT) strives to encourage, when feasible, all procurement actions to be awarded to local organizations, firms, and individuals residing or doing business primarily in the area or areas affected by a major disaster or emergency. This in turn assists in the restoration of the local economies, employment opportunities, and tax bases. Even when using the pre-positioned contracts mentioned above, we work as expeditiously as possible to transition responsibility for the provision of supplies and services back to the local economy.

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- Established an internal control group, to include legal counsel, which reviews all actions greater than $500,000. The scope of these reviews is to ensure compliance with applicable federal and DHS policies and procedures. This group is also responsible for reviewing the Federal Procurement Data System-Next Generation data to ensure that actions are accuracy reported to Congress.

FEMA continues to leverage its available resources to manage unprecedented workloads during the response and recovery under Hurricanes Harvey, Irma, and Maria; as well as the wildfires. The OCPO is organized along lines of business to support the organization. During this time, OCPO prioritized the workloads of the Disaster Acquisition Response Team as well as the steady state contracting professionals to make sound business decisions in support of the survivors of Harvey, Irma, and Maria.

Question: As you know, FEMA has one of the oldest and most outdated financial management systems in DHS and is currently undergoing a grants management modernization effort to better integrate numerous systems.

Given the complexity of these efforts and the amount of funding that FEMA manages and provides through grants, how do you plan to ensure these efforts are successful?

What challenges do you anticipate and are current timetables and estimates reasonable?

Response: FEMA is working aggressively to transform its grant programs and improve its overall business and operational efficiency and effectiveness to meet the expected needs of the users and stakeholders. FEMA has initiated a multi-year effort to transform the way the Agency manages grants. The Grants Management Modernization (GMM) program seeks to simplify and coordinate business management approaches across all of the Agency's grants programs, thereby establishing a common grants life cycle and platform for its users. The GMM program will provide the capability to manage all FEMA grants across the entire grants management life cycle. It will help FEMA streamline its grants operations, and will address key capability gaps associated with the Agency's current systems.

FEMA is currently managing over 40 active grants programs to support the Department of Homeland Security (DHS) missions in prevention, protection, mitigation, response, and recovery. The Agency uses ten primary information technology (IT) systems to manage these grants, with programs conducting business and engaging stakeholders in many different ways. The GMM program is employing a user-centered, business-driven approach that actively engages with stakeholders to fully capture modernization needs, gaps, and transformation opportunities. GMM's cross-agency and integrated approach

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will improve the oversight and monitoring of funding allocations and support integrated data analytics across the program areas for improved grants management efficiencies.

GMM is currently developing a target solution to deliver functionality and data to support FEMA's disaster and non-disaster grants programs. The GMM program is also working closely with the FEMA Financial System Modernization (FSM) program, which will modernize the Agency's financial system to ensure the Agency's unmet needs for grants and financial management are addressed. The GMM and FSM programs are collaborating to identify desired business requirements and data exchange opportunities between the two solutions to better support the integration of grants and financial management within FEMA. In order for both efforts to be successful, GMM and FSM plan to continue a high level of engagement as GMM begins development of the target solution in FY18.

GMM plans to deploy its initial functionality to a subset of users as early as Q1 FY 2019, with continual roll out of capabilities thereafter. The new GMM system will provide full operational capability by the end of Q4 FY 2020. However, since the FEMA FSM modernization timeline for development of a new financial system has been delayed, as DHS prioritizes the development and stabilization of financial systems for the components most in need (DNDO, TSA, and USCG), the GMM program will be unable to realize the benefits of real-time reconciliation of grants financial data.

FEMA's FSM initiative is being led by the DHS OFCO FSM Joint Program Management Office (JPMO), with strong support from, and in coordination with, FEMA's FSM Program Management Office. Given the prioritization of developing and stabilizing financial systems for the DHS components most in need (CWMD, TSA, and USCG), DHS estimates that initial FEMA FSM acquisition and deployment will occur in late FY 2020, and the system will go-live in early FY 2023.

Even with the delay of the FEMA FSM modernization timeline, GMM will still be able to deploy a new system to users to support grants management that provides a significant improvement over existing capability. In the interim, the program offices for GMM and FSM are working together closely to develop a robust interface with the legacy system that can also be applied to the modernized FEMA FSM solution once it is ready. These two program offices are also working together to develop new services that would reside in the GMM sub-ledger.

Question#:	18
Topic:	Whitefish Cobra
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: Did you, or anyone from FEMA, oversee, participate in, or have any role in the contract negotiations between the Puerto Rico Electric Power Authority (PREPA) and Cobra Acquisitions, LLC that led to the contract executed on October 19, 2017? If so, please provide details on FEMA's role or activities in the contract negotiations.

The contract between PREPA and Whitefish Energy Holdings, LLC, dated October 17, 2017, states, "By executing this contract, PREPA hereby represents and warrants that FEMA has reviewed and approved of this contract...". Did you or anyone at FEMA participate in the contract negotiations that led to the contract between the PREPA and the Whitefish Energy Holdings, LLC, either verbally or in writing before or after the October 17, 2017 contract? If yes, who was involved and what was their role?

What is your role in, and responsibility, including financial responsibility, for contracts that PREPA has directly awarded, such as the contract with Whitefish Energy Holdings, LLC or Cobra Acquisitions LLC?

Response: The decision to award a contract to Whitefish Energy was made exclusively by PREPA. FEMA was not involved in the selection with Whitefish Energy Holdings, LLC or Cobra Acquisitions LLC. Questions regarding the awarding of the contract should be directed to PREPA.

As of November 13, FEMA has obligated funding against three Public Assistance Project Worksheets:

- $45 million federal share to reimburse PREPA for overtime labor costs associated with temporary repair work necessary to provide immediate power to hospitals, airports, and other critical facilities.
- $171.2 million federal share to reimburse PREPA for diesel fuel necessary to provide immediate power to hospitals, water pumps, and other critical facilities for an estimated period of 4 weeks.
- $7.2 million federal share to reimburse PREPA for overtime labor costs associated with emergency work to perform temporary repairs of transmission and distribution lines island-wide.

PREPA has not requested FEMA reimbursement, FEMA still awaits information from PREPA on the contracting process, and FEMA will have to confirm the contract costs incurred to date are reasonable before it will provide reimbursement.

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FEMA also provides training to make recipients and applicants aware of provisions they should include in contracts to ensure compliance and decrease risk that costs will be disallowed in the future as a result of adverse audit and grant compliance findings. Training available to Puerto Rico includes a four hour training entitled "Procurement Under FEMA Awards: Requirements for Recipients and Subrecipients When Procuring Services and Supplies with Funding under Stafford Act Grant Programs." This training seeks to reduce recipient and applicant violations of the Federal procurement regulations by training participants on the Federal procurement requirements set forth at 2 C.F.R. §§ 200.317 through 200.326 (the "Uniform Rules").

FEMA also provides technical assistance through the Procurement Disaster Assistance Team website, which provides training, aides, and template clauses for recipients and applicants.

Question#:	19
Topic:	Jones Act
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: Critics of the Jones Act claim that the reason that much of Puerto Rico is still without power and relief supplies are in short supply is that the Jones Act prevents foreign vessels from delivering emergency shipments and, in the absence of the Jones Act, emergency relief supplies would arrive more quickly and efficiently. To the contrary, it is my understanding that the three primary carriers (Crowley, TOTE, and Trailer Bridge) who have operated for decades to provide reliable, regularly scheduled service to Puerto Rico quickly reopened their terminals for operation, increased fleet capacity, and lowered transit times to deliver FEMA emergency relief cargoes and other vital supplies. Moreover, other U.S. flag carriers have diverted additional Jones Act vessels from other trades to provide additional service to Puerto Rico. It is my further understanding that the real reason explaining why emergency supplies have been slow to reach the residents of Puerto Rico has been, and remains, a myriad of factors on the island, notably severe damage to infrastructure, shattered power grid, fuel shortages, and road network congestion. As a result, thousands of containers remain stacked up at marine terminals awaiting distribution across the island.

Has FEMA encountered any delays from U.S. flag carriers in moving emergency relief supplies from the U.S. mainland to Puerto Rico?

Response: Initially, there was a delay in meeting immediate, time-sensitive needs via maritime transportation due to the distance from the U.S. mainland to Puerto Rico. Once the commercial maritime industry identified response requirements, they increased capacity to deliver a consistent flow of resources through U.S. flag carriers. U.S. maritime flag carriers became the primary mode of transportation, and this reduced the need for air transport. There were a couple of additional delays due to the San Juan port manager not allowing any FEMA contracted vessel to call on the seaport at San Juan, Puerto Rico. The reason for these delays was to clear containers from the port. These delays did not affect the distribution of resources to points of need in Puerto Rico, and there have been no other delays with vessels calling on the port.

Question: Has FEMA encountered any circumstance in the Puerto Rico emergency relief effort where a U.S. flag carrier was unable to carry an emergency relief shipment?

Response: While the Jones Act Waiver was in place, FEMA required the use of self-contained vessels with the capability to move break bulk cargo. This requirement was due to damaged port infrastructure or inoperable cranes on the island and a lack of available shipping containers and trailers. During this time, a FEMA contractor did contract for two foreign flag vessels to move resources for FEMA because there were no

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Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

U.S. flag carriers with self-contained vessels available. Other requirements were supported through U.S. flag carriers in Puerto Rico.

Question: Did FEMA encounter any circumstance in the responses to Hurricanes Harvey or Irma where U.S. carriers were unable to transport FEMA cargo?

Response: None, U.S. flag carriers met FEMA requirements for these responses.

Question: Considering that damage to surface transportation routes has created a chokepoint that prevents the distribution of relief supplies in Puerto Rico, why has FEMA not done more to prioritize the re-opening of certain surface transportation arteries for the delivery of emergency supplies?

Response: Immediately following Hurricane Maria, FEMA's priority was first to assess and open airfields for time sensitive movements and then to assess the seaports. Simultaneously, FEMA worked with the Puerto Rican Government to identify and prioritize the clearing of surface transportation routes to facilitate movement of resources from the air and seaports to points of need throughout Puerto Rico. FEMA used both rotary and fixed wing aircraft to move resources while surface transportation infrastructure was being cleared to ensure survivors were supported with critical lifesaving and life sustaining resources.

Question: Why has FEMA not identified alternative methods of moving containers, such as lifts by air, to bypass this known bottleneck?

Response: FEMA used all available options to meet Puerto Rico's requirements for movements from the U.S. mainland and within the Puerto Rico. Airlift (through Department of Defense (DOD) and commercial vendors) was the primary means of moving resources immediately following Hurricane Maria while additional resources were being containerized for maritime movement. Airlift was used to support movement to Puerto Rico from the mainland, as well as a primary method of distribution throughout the island. Time sensitive requirements and deliveries to remote locations were accomplished primarily through airlift.

Question#:	20
Topic:	Vessels
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: The federal government has at its disposal a fleet of 46 vessels, the Ready Reserve Fleet (RRF), whose sole purpose is to be available to provide sealift capacity to move U.S. military forces overseas, or to provide supplemental marine transportation in times of national emergencies, such as natural disasters. Specifically, 27 RRF vessels are Roll On/Roll Off (Ro/Ro) vessels which have great utility in moving large pieces of motorized military equipment (i.e., tanks, Humvees, artillery pieces, etc.), or for that matter, other motorized construction equipment such as bucket trucks, bulldozers, excavators, graders, etc. Two weeks ago, it was reported that FEMA contracted to have three heavy lift cargo planes operated by Antonov International Cargo Transporter air lift five bucket trucks each to Puerto Rico for their use in restoring the island's electric grid. Conversely, just one of the RRF Ro/Ro vessels could carry hundreds of bucket trucks to the island in one voyage with a transit time of two to four days, at far less cost. Interestingly, FEMA approached the Maritime Administration (MARAD) about activating two RRF Ro/Ro vessels but declined to use either ship.

What was the cost to FEMA for contracting to use the three Antonov 124 cargo transport aircraft?

Response: The FEMA total cost was $1,629,500 for use of the AN124s. FEMA however did not contract for the movement of these bucket trucks to Puerto Rico.

Question: How many lifts has FEMA contracted for with this operator, and was this a pre-existing contract?

Response: FEMA contracted for 4 flights of AN124s in support of Hurricane Maria. There is no pre-existing contract with the owner of the AN124s.

Question: If airlift was a transportation option, why did FEMA not decide to airlift more emergency supplies to Puerto Rico when it was obvious that materials were not being distributed across the island due to damaged infrastructure?

Response: Initially, all emergency supplies and equipment were moved by air due to the time sensitive nature of the mission in Puerto Rico and the inability of maritime transportation to meet requirements in a timely manner. While airlift was meeting the immediate needs in Puerto Rico, FEMA was simultaneously moving resources to seaports for maritime movements to Puerto Rico. Once maritime transportation was operational and able to deliver a consistent flow of resources, airlift was reduced and only used to meet immediate needs identified by FEMA or other interagency components on the ground in Puerto Rico.

Question#:	20
Topic:	Vessels
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: Why has FEMA decided against activating RRF vessels during the emergency response to these hurricanes?

Response: FEMA did request MARAD support in Puerto Rico. A Mission Assignment was submitted to MARAD with approval to use one of the MARAD vessels to move a combination of rolling stock and containerized cargo from the United States to Puerto Rico. Due to the damaged seaport infrastructure in Puerto Rico, FEMA requested a self-contained vessel equipped with a ship crane for lift on/lift off operations for containers and other types of break bulk cargo. MARAD did not have any self-contained vessels available to meet FEMA's requirement. Due to this shortfall, MARAD, in coordination with the Department of Defense (DoD), decided the best course of action was to activate a DoD-supplied Large/Medium-Speed Roll-on/Roll-off (LMSR) vessel to meet FEMA's needs. The LMSR is currently being used to move resources to Puerto Rico and for the redeployment/retrograde of resources back to the United States. Because FEMA now has a private sector contractor with the capacity to meet FEMA requirements, this will allow the LMSR to go off hire as scheduled on December 12, 2017.

Question#:	21
Topic:	Billboards
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Garret Graves
Committee:	TRANSPORTATION (HOUSE)

Question: Regarding the "Whole Community Engagement/Early and Often" portion of your testimony to the Committee on Transportation and Infrastructure:

Administrator Long, has your agency learned lessons from deployment of donated digital (electronic) billboards located near roadways, as a means of communicating with the public to assist hurricane recovery and-or preparation?

Response: FEMA routinely works with large billboard companies and retail stores that use digital signage to share information on how survivors can register for assistance and direct survivors to further up-to-date information.

This complements efforts of many state and local governments which use roadside digital signage to share critical information during disasters regarding evacuation and where to take shelter.

Use of digital signage along highways is part of the layering and unity of messaging to reach affected communities and supplements radio and mobile alerts. As with many means of communication used, there is no exact analytics for signage used by either local, state or federal agencies. However it remains an important tool for communities to share information to the public.

Question#:	22
Topic:	Military Assistance
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Daniel W. Lipinski
Committee:	TRANSPORTATION (HOUSE)

Question: Your testimony discussed efforts to simplify recovery efforts and improve coordination with FEMA 's response partners to ensure a quick and effective response. As you know, Title 10 requires that a state government formally request help from the Department of Defense (DoD) before federal active-duty or reserve forces can assist in disaster relief.

Can you discuss the limitations of Title 10 authority? I understand that Judge Advocate Generals are often overwhelmed in the immediate aftermath of a disaster, trying to determine the limits and nature of assistance they are able to provide, is there a more efficient or expeditious way of making military personnel available to assist both in immediate and prolonged disaster response, for example, are there "off the shelf" legal solutions that could expedite the deployment of personnel and equipment? Should FEMA have the ability to request this assistance, and would it be more efficient to couple a disaster declaration with authorizing DoD support, rather than continuing to require state governments to make the request?

Do possee comitatus or the Insurrection Act unreasonably restrict essential security related functions associated with the provision of aid (e.g. the safeguarding of relief supplies)? Do you have any suggested changes to Jaw that would help?

Response: Consistent with the law and the National Response Framework, when a disaster is anticipated to exceed State resources or when the Federal Government has unique capabilities needed by States, governors may request Federal assistance under the Stafford Act. States request assistance from FEMA, which coordinates the Federal response. The Stafford Act permits FEMA to request support from other Federal departments and agencies, including the Department of Defense and its Federal military forces. FEMA uses Mission Assignments (MA) to request such support. Throughout the response to Hurricane Maria, FEMA issued 77 MAs to the Department of Defense for missions including strategic airlift, medical personnel augmentation, route clearance, transportation, and staging area management. MAs come in one of two classifications: Federal Operations Support or Direct Federal Assistance (to a state, tribe, or territory). A Federal Operations Support MA orders assistance from one federal agency to another and does not require state, tribal, or territorial government approval. Only a Direct Federal Assistance (DFA) MA requires state, tribal, or territorial government approval, as the state, tribal, or territorial government may incur a cost share. Examples of a DFA MA include generator installation, commodity provision, and medical support team provision.

Question#:	22
Topic:	Military Assistance
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Daniel W. Lipinski
Committee:	TRANSPORTATION (HOUSE)

As provided for in the Post Katrina Emergency Management Reform Act, and in order to expedite the issuance of MAs during disaster operations, FEMA and federal agencies with responsibilities under the National Response Framework developed 211 Pre-Scripted Mission Assignments (PSMAs) with agreed scopes of work and cost estimates for mission areas. Mission areas include logistics, communications, mass care, health services, and public safety. FEMA has 38 standing PSMAs with the Department of Defense.

FEMA believes the current system is effective and enables the delivery of a coordinated and timely federal response in support of state, local, tribal, and territorial governments for Emergencies and Major Disasters declared under the Stafford Act. FEMA defers to the Department of Defense on questions pertaining to its Title 10 authorities, limitations, and changes.

Question#:	23
Topic:	States and Localities
Hearing:	Emergency Response and Recovery from the 2017 Hurricane Season
Primary:	The Honorable Daniel W. Lipinski
Committee:	TRANSPORTATION (HOUSE)

Question: How does FEMA assure that its field staff are adequately trained to inform local officials of the total universe of resources available to them, and how to request them? How could we communicate more effectively that some of these resources are incumbent upon them to request?

Response: FEMA's incident management workforce is categorized in four tiers, from the specialist level at tier four to senior positions at tier one. Tier two positions include mid to high level managers and have the most direct contact with the state, local, territorial and tribal (SLTT) stakeholders. The Agency provides workforce training, organized by these tiers, to support qualification requirements. There are approximately 232 training courses specifically developed for personnel holding tier two positons within FEMA's Incident Management workforce. The courses include program-specific curriculum designed to increase the employee's knowledge of FEMA's disaster recovery programs at the middle and senior management levels and outline their responsibilities to inform SLTT partners, building on the employee's prior training and experience. Moreover, these courses are taught by seasoned FEMA experts with years of disaster experience who understand how the programs work, and what SLTT partners need to do to request support. The training plan also includes management and leadership courses designed to enhance the employee's emergency management, personnel management, and cross-agency coordination skills. Additionally, some courses are designed to be taken in conjunction with FEMA's SLTT partners not only to only enhance the learning environment but also build working relationships between FEMA personnel and our partners.

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TESTIMONY OF
VICE ADMIRAL KARL L. SCHULTZ
COMMANDER, U. S. COAST GUARD ATLANTIC AREA

ON
"EMERGENCY RESPONSE AND RECOVERY: CENTRAL TAKEAWAYS FROM THE UNPRECEDENTED 2017 HURRICANE SEASON"

BEFORE THE
HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

NOVEMBER 2, 2017

Introduction

Good morning Mr. Chairman and Members of the Committee. Thank you for the opportunity to address you today as we discuss the role of the Federal Government and the Coast Guard's response to the 2017 hurricanes. The Coast Guard has unique capability, capacity, and authority that allow us to play a critical role in disaster response. The Coast Guard is a first responder, one of very few federal first responders, and the only national maritime first responder. Today I would like to discuss the Coast Guard's primary missions in disaster response, our strengths, limitations, and some issues that we must focus on as the nation moves forward in this area.

Primary Missions in Disaster Response

The Coast Guard's primary missions in domestic disaster response, supporting the states and the Federal Emergency Management Agency (FEMA), are:

1) Saving lives in distress, and ensuring the survivability of our own forces and assets for immediate post-disaster response operations;

2) Security and reconstitution of ports, waterways, and critical maritime infrastructure;

3) Environmental response operations (oil, chemical and hazardous material); and

4) Support to other agencies and the whole-of-government response effort.

Saving lives in distress remains our first priority. During Hurricanes HARVEY, IRMA, MARIA, and NATE, Coast Guard women and men in helicopters, boats, cutters, vehicles, and on foot rescued over 11,300 people and over 1,500 pets. In HARVEY, Coast Guard helicopter crews started rescuing mariners in peril[1] off the coast of Corpus Christi, Texas, just hours before Hurricane Harvey made landfall between Port Aransas and Port O'Connor.
For each of these storms and all natural disasters along our coastlines, Coast Guard crews are typically the first federal responders to re-enter an impacted area to conduct rescues and assess

[1] Two MH-65's from Sector/Air Station Corpus Christi saved 12 lives off a vessel taking on water in 45 knot sustained/60 knot gusting winds.

damage. I should note that in an average year, the Coast Guard saves 3,600 lives. The Coast Guard tripled that number in HARVEY alone.

In addition to search and rescue operations, the Coast Guard continued to flow forces into the impacted regions to restore ports and waterways, respond to pollution, where necessary provide security and additional law enforcement capability, and protect offshore petrochemical platforms. Within five weeks, Hurricanes HARVEY, IRMA, MARIA, and NATE impacted over 2,540 miles of shoreline[2]. The Coast Guard responded to 1,269 aids to navigation discrepancies, handled 290 pollution cases, targeted and assessed more than 3,623 grounded vessels, with more than 1,585 removed to date. Coast Guard Damage and Recovery Assessment Teams were on-scene within hours determining the status of ports and waterways, assessing the impacts to Coast Guard facilities and capabilities, and where possible leveraging technology such as the employment of electronic aids to navigation to facilitate the reopening of key ports and waterways.

Those of you who have had the opportunity to walk the ground in the most impacted parts of the Florida Keys, or to have navigated above Houston and Port Arthur's flooded streets and neighborhoods, or overfly the island of Puerto Rico, know the magnitude of the challenge our men and women have faced and the reconstruction issues our Nation will be dealing with for quite a while.

Our Strengths

The Coast Guard has several key strengths that enable quick and effective response to natural disasters. The first of these strengths begins with our people, whose bias for action and adaptability to rapidly changing circumstances and uncertainty never ceases to fill me with pride and admiration.

Our Coast Guard cutters, aircraft, and boats are built to respond to a variety of missions without the need for any real reconfiguration or the addition of special equipment. Cutters conducting counter-drug patrols in the Transit Zone are quickly diverted to disaster areas to provide command and control, deliver rotary wing air capability from the sea, conduct refueling, and, when necessary, provide forward staging facilities. Coast Guard aircraft that normally perform law enforcement surveillance to thwart transnational maritime criminal activities are dynamically repositioned and re-tasked to deliver disaster relief supplies, additional responders, and equipment to affected areas.

Additionally, Coast Guard forces are on station at key locations around the Nation, most of them on short-notice recall, so they can respond quickly to emergent events. When a major catastrophe occurs, or is anticipated, we can reposition forces quickly to that area to optimize the response.

It is also important to note that the Coast Guard enjoys an agile and decentralized command and control structure, which provides operational commanders the authority to move forces quickly to respond to large contingencies.

Our two Area senior operational commanders, and their nine subordinate District Commanders, can shift and reallocate forces from one region to another based on levels of risk and anticipated demand for operational capabilities. The Coast Guard has also developed and regularly exercises

[2] Using CRS method of Shoreline Measurement: Texas: 367 mi, Louisiana: 397 mi, Florida: 1,350 mi, Puerto Rico: 311 mi, USVI: 117 mi

Continuity of Operations Plans for relocating command and control functions out of harm's way but strategically positioned to effectively conduct response and recovery operations.

In addition to fielding flexible, multi-mission forces and effective command and control systems, the Coast Guard also benefits from its unique mix of broad standing authorities, as well as extensive experience operating within both military and other interagency response organizations.

As a military service, the Coast Guard can be a supported or supporting commander, and our forces are frequently integrated with U.S. Department of Defense (DOD) services in Joint Task Force organizations. We regularly provide forces in support of DOD exercises, Combatant Commander contingency plans, and theater security cooperation activities. This close cooperation and routinely exercised relationship at the service level enables Coast Guard and DOD forces to integrate seamlessly during disaster response operations.

In addition to its military role, the Coast Guard routinely works with other federal agencies, state and local governments, non-governmental agencies, and international organizations under its U.S. Code, Title 14 law enforcement and regulatory responsibilities.

The Coast Guard is the Nation's "maritime first responder" and has a leading role in executing the National Response Framework (NRF) for disaster situations. Our personnel are well trained and experienced in response operations, which make them a sound choice to be designated for key leadership positions in the NRF structure. This ability to operate concurrently in both military Joint Task Force and civilian NRF structures enhances unity of effort/whole-of-government response efforts across organizations and dramatically improves the effectiveness of disaster response, which makes the Coast Guard a truly unique federal agency.

Our Limitations

Despite the many strengths the Coast Guard brings to disaster response, the Service has limitations that must be considered.

Across the recent disaster response operations, more than 3,000 Coast Guard women and men, and 200 assets or platforms from across the service, from places as far away as Alaska, Hawaii, and Maine, responded to save over 11,300 citizens in distress. The Coast Guard is small in comparison to the other Armed Services. With only 40,600 personnel on active duty, responding to a major natural disaster requires balancing risk in other geographic regions and mission areas in order to flow forces and capabilities into the major disaster response.

Residual risk was spread across the Coast Guard, with a keen eye towards meeting minimal mission standards in most, but not all, locations. Given the heavy demand for aviation capabilities following each of the storms, all aviation training was deferred until the later stages of recovery efforts were reached. The level of forces typically allocated to performing counter-drug, fisheries enforcement, and migrant interdiction operations in the Eastern Pacific Ocean, Caribbean Sea, and Florida Straits were reduced as well.

The Service has a limited capacity to respond to prolonged and sequential events. While the Coast Guard is well-positioned for immediate and effective first response, plans to sustain operations and hand-off responsibilities once a crisis has been stabilized are a primary consideration for Coast Guard commanders responding to natural disasters.

The age and condition of the Coast Guard's assets is another concern, and is one that the Administration, with the support of Congress, is working hard to improve. As more modern and capable cutters repositioned for hurricane response, the Coast Guard Cutter ALERT, a 48-year-old cutter, held the line in the Eastern Pacific Ocean. The crew performed admirably, including seizing nearly 4,800 kilograms of cocaine worth nearly $142 million and apprehending 19 drug smugglers while one of only four cutters patrolling the transit zone during the period of our peak hurricane response efforts. This included a two-week period as the only cutter operating in the Eastern Pacific.

Issues to Focus on Going Forward

Lastly, there are several areas that will require continued energy and focus in the months and years ahead in order to enhance our national disaster response capacity and capability.

When the Coast Guard has the opportunity to recapitalize our facilities, we need to make them more storm-resilient and survivable. In fact, several of our shore facilities that were rebuilt following Hurricane IKE suffered minimal damages along the paths of HARVEY and IRMA, a testament to modern building codes and standards.

Investing in our infrastructure also supports our greatest resource, our people. Although we deployed approximately 3,000 Coast Guard women and men to support response operations, many more Coast Guardsmen responded to help those that were displaced and distressed, when in fact they and their loved ones were also displaced. The Coast Guard estimates approximately 700 Coast Guard families' homes have been damaged to the point where they will need to be relocated.

Preparedness is essential. No amount of response capacity and capability will be effective without a foundation of preparedness. Relationships between responders across all levels of government must be created, nurtured, and maintained before an actual event. It is too late to start building such relationships when a hurricane is barreling down on a coastal community. Advance planning and exercises, involving all potential responders, are a must for effective disaster response. Command and control constructs must be clarified, both in theory and in practice. Interoperability is critical and we must keep working to find the appropriate mechanisms that will optimize unity of effort.

Conclusion

The Coast Guard is well-positioned to respond to natural disasters due to its unique blend of authorities, capabilities, and capacity. Flexible, multi-mission forces and agile command and control systems provide the solid foundation from which we can respond to major catastrophes. When combined with broad authorities and extensive experience operating with diverse partners, the Coast Guard provides a vital service to our Nation.

Thank you for the opportunity to testify before you today and for your ongoing support for the men and women of the Coast Guard. I look forward to your questions.

Question#:	1
Topic:	USGC 3DEP
Hearing:	Emergency Response and Recovery: Central Takeaways from the Unprecedented 2017 Hurricane Season
Primary:	The Honorable Blake Farenthold
Committee:	TRANSPORTATION (HOUSE)

Question: Can you tell me how much from the U.S. Coast Guard's budget is going to help the U.S. Geological Survey 3D Elevation Program (USGC 3DEP)?

Response: The Coast Guard's budget does not include funding to support the USGS 3D Elevation Program.

Question: If none, could the Coast Guard's mission as connected to emergency response and recovery be aided by enhanced elevation data from 3DEP?

Response: This enhanced elevation data would not likely aid the Coast Guard directly. However, products from other government agencies, such as storm surge forecasting from the National Weather Service, may benefit from this enhanced data and indirectly aid the Coast Guard in making decisions such as relocation of personnel and assets ahead of a storm's landfall.

Question#:	2
Topic:	Funding for Hurricane Damages
Hearing:	Emergency Response and Recovery: Central Takeaways from the Unprecedented 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: Has the Coast Guard formally sent up to the Department of Homeland Security (Department) its request for supplemental appropriations to address the damages sustained by the Coast Guard? What was the total amount requested by the Coast Guard? Has the Department approved this request and has the department forwarded that request to the Office of Management and Budget?

Response: Yes, the Coast Guard provided information to DHS regarding the significant damage to its infrastructure and degradation of its surface and aviation assets associated with recent hurricanes and response efforts. DHS provided this information to OMB to inform budget deliberations with Congress. As part of the FY2018 Hurricane Supplemental, the Coast Guard was appropriated $835M to restore capacity and to repair and rebuild damaged Coast Guard facilities.

Question: How has the damage inflicted on Coast Guard infrastructure and facilities in the affected Districts and Sectors of your command impacted Coast Guard operational readiness and capabilities in those Districts and Sectors?

Response: The Coast Guard continues to experience the limitations of operating in temporary facilities and will continue to do so through the 2018 season. For example:

- CG STA Port Aransas was destroyed and will need to be completely rebuilt.
- The cutter CHINOOK and Station Tybee suffered significant damage to their piers, offices and maintenance facilities.
- Base Miami Beach, FL incurred significant damage to its sandblast and paint maintenance building, which supports boat and aids to navigation assets, necessitating a complete rebuild.
- Station Marathon, FL Housing incurred damage necessitating major repairs and a complete rebuild its unaccompanied personnel housing unit and one of its family housing units.
- Sector San Juan and Air Station Borinquen incurred widespread and significant damage to numerous facilities and sub-units necessitating major repairs and includes rebuilding the electrical distribution and emergency power systems to resilient standards.
- Sector San Juan Bayamon housing incurred widespread damage to 176 housing units necessitating major repairs.

Question#:	3
Topic:	Operational Impact I
Hearing:	Emergency Response and Recovery: Central Takeaways from the Unprecedented 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: What has been the operational impact in other Coast Guard Districts and Sectors from which the Coast Guard mustered and redeployed personnel and assets to respond to these disasters in the Southeastern United States and Caribbean region?

Response: While the Coast Guard was able to respond to all three disasters, this response has a cost. Operational missions, patrols, and training were canceled, additional unplanned hours and fatigue were incurred on Coast Guard ships and aircraft, and increased maintenance and repair was required. For short durations, the Coast Guard can handle these surge operations and reserve activations. However, in the long term the Coast Guard cannot sustain such activity without significant personnel impacts and increased risk. Unlike other Armed Forces, the Coast Guard does not have a garrison force. The Coast Guard is fully employed performing its missions every day. When surging to respond to contingencies, the Coast Guard pulls forces from around the country, leaving those units with personnel and equipment shortfalls.

Question#:	4
Topic:	Operational Impact II
Hearing:	Emergency Response and Recovery: Central Takeaways from the Unprecedented 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: The Coast Guard redeployed 3,000 Coast Guard men and women and 200 assets or platforms from across the service to respond to the areas impacted by these recent hurricanes. Additionally, the Coast Guard suffered significant damage to its facilities, housing, and infrastructure estimated to cost almost $1.2 billion to repair and rebuild.

What has been the impact on the operational readiness and response of the Districts and Sectors, which redeployed 3,000 Coast Guard personnel and assets?

Response: While the Coast Guard was able to respond to all three disasters, this response has a cost. Operational missions, patrols, and training were canceled, additional unplanned hours and fatigue were incurred on Coast Guard ships and aircraft, and increased maintenance and repair was required. For short durations, the Coast Guard can handle these surge operations and reserve activations. However, in the long term the Coast Guard cannot sustain such activity without significant personnel impacts and increased risk. Unlike other Armed Forces, the Coast Guard does not have a garrison force. The Coast Guard is fully employed performing its missions every day. When surging to respond to contingencies, the Coast Guard pulls forces from around the country, leaving those units with personnel and equipment shortfalls.

Question: Has the Coast Guard been unable to conduct important missions, such as search and rescue or maritime drug interdiction, due to insufficient resources?

Response: The Coast Guard prioritizes resourcing for the most critical near-term operations and direct support activities. When surging to respond to contingencies, the Coast Guard pulls forces from around the country, leaving those units with personnel and equipment shortfalls. In the long term, the Coast Guard cannot sustain such activity without significant personnel impacts and increased risk.

Question: What has been the impact on Coast Guard families displaced and dislocated by these hurricanes?

Response: Approximately 700 Coast Guard members and dependents were displaced from their homes due to hurricane damage. Despite that impact, Coast Guard members continued to answer the call in hurricane response operations while facing their own personal challenges. Even after the response to these disasters concluded, Coast Guard

Question#:	4
Topic:	Operational Impact II
Hearing:	Emergency Response and Recovery: Central Takeaways from the Unprecedented 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

men and women continue to be a part of impacted communities as they work to recover together.

Question: Does the Coast Guard have established programs and funding to assist these families and Coast Guard men and women who have to cope through this trauma?

Response: Yes. Coast Guard members and their dependents have access to the services of Coast Guard Mutual Assistance. One of the main purposes of Coast Guard Mutual Assistance is to provide non-appropriated financial assistance to Coast Guard members and their dependents in emergency, short-term, financial situations. Through interest-free loans, grants, and counseling, Coast Guard Mutual Assistance provides immediate relief to members and their dependents in circumstances that impose a serious financial or personal hardship requiring urgent help.

Question#:	5
Topic:	Jones Act
Hearing:	Emergency Response and Recovery: Central Takeaways from the Unprecedented 2017 Hurricane Season
Primary:	The Honorable Peter A. DeFazio
Committee:	TRANSPORTATION (HOUSE)

Question: Critics have leveled charges that the Jones Act is limiting or hindering the transportation of emergency shipments to Puerto Rico. Have you observed any problems with marine transportation to and from the U.S. mainland to Puerto Rico by U.S. flag Jones Act carriers? Have these Jones Act carriers been providing reliable and timely service to Puerto Rico?

Response: We did not see any issues with Jones Act carriers providing marine transportation services between the U.S. mainland and Puerto Rico. Further, we did not receive a demand signal from FEMA, MARAD or other DHS responders on the ground that they did not have access to available U.S. tonnage that met the regulatory requirements.

Question: If Puerto Rico were allowed to leave the U.S. coastwise trade, and U.S. coastwise carriers ceased providing service to the island, would Puerto Rico's exclusive reliance on foreign flag vessels create any new security concerns for the Coast Guard, in general, and Sector San Juan, specifically?

Response: Puerto Rico has multiple ports that receive foreign-flagged vessels and engage in international trade. The Coast Guard and the marine industry fully leverage existing international and domestic security regimes to ensure the secure flow of commerce through these ports. Within these regimes, any change in the percentage of foreign-flagged vessels calling on these ports should not negatively affect maritime security.

DEPARTMENT OF THE ARMY CORPS OF ENGINEERS

COMPLETE STATEMENT OF

MAJOR GENERAL ED JACKSON
DEPUTY COMMANDING GENERAL, CIVIL AND EMERGENCY OPERATIONS

BEFORE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
UNITED STATES HOUSE OF REPRESENTATIVES

ON

EMERGENCY RESPONSE AND RECOVERY: CENTRAL TAKEAWAYS FROM THE UNPRECEDENTED 2017 HURRICANE SEASON

NOVEMBER 2, 2017

Mr. Chairman and distinguished members of the Committee:

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. I am Major General Ed Jackson, Deputy Commanding General for Civil and Emergency Operations, U.S. Army Corps of Engineers.

The Corps conducts its emergency response activities under two basic authorities: the Stafford Disaster and Emergency Assistance Act (Stafford Act); and Public Law 84-99, 33 U.S.C. 701n as amended (PL 84-99). Under the Stafford Act, we and other Federal agencies support the Federal Emergency Management Agency (FEMA) under the National Response Framework (NRF). In this capacity, the Corps is the lead Federal agency for Emergency Support Function 3 (Public Works and Engineering), but works under FEMA's direction. ESF-3 provides Temporary Emergency Power, Temporary Roofing, Debris Management, Emergency Infrastructure Assessment, Critical Public Facility Restoration, Temporary Housing, Demolition/Structural Stabilization, and support to FEMA Command and Control Nodes/ESF3. Under PL 84-99, we prepare for disasters through planning, coordination, and training with local, state, Federal partners; and by assisting state and local entities in implementing advance measures to prevent/reduce storm event damages. After the emergency event, 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 and other resources are mobilized from across the country to assist the local Corps districts and offices respond to the event. 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, commodities distribution, and generator installation.

2017 Hurricane Season – With regard to hurricane activity, 2017 has been an unusually active season. The Corps has been involved in the FEMA-led Federal response and recovery operations in support of multiple events, including Hurricanes Harvey, Irma, and Maria.

Hurricane Harvey –On August 25, 2017, Category 4 Hurricane Harvey made landfall along the central Texas coast near Rockport, Texas, between Port Aransas and Port O'Connor and the President approved an Expedited Major Disaster Declaration for Texas. Large amounts of rainfall fell across the greater Houston metropolitan area causing record flooding. FEMA has identified $93.7 million in Mission Assignments for the Corps to assist in Hurricane Harvey response and recovery. Currently, the Corps has 201 Corps employees deployed at key response nodes.

Temporary Emergency Power: As of September 11, 2017, the Corps completed 68 pre-installation inspections and 45 generator installations at identified critical public facilities fulfilling the temporary emergency power mission in Texas.

Temporary Housing: Corps teams, in conjunction with FEMA, continue to assist the State of Texas with the development and implementation of a temporary housing Project Management Plan. The plan includes establishing 20,000 travel trailers and 4,000 mobile housing units. The Corps continues to conduct reconnaissance and assessments, identifying sites to fulfil the scope of this plan, and establishing conceptual layouts for the assessed sites. The Direct Housing Assessment Team is providing technical monitors that continue to prepare Site Inspections Reports in 26 counties.

Debris Management: Debris Teams led by Corps subject matter experts continue to provide locals with technical assistance in defining requirements and monitoring debris removal and disposal operations in 15 counties. 461,000 cubic yards of debris have been removed to date and that number continues to rise.

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. FEMA has identified $1.7 billion in Mission Assignments for the Corps to assist in Hurricanes Irma and Maria response and recovery (45 Mission Assignments totaling $176.3 million for Hurricane Irma and 34 Mission Assignments totaling $1.5 billion for Hurricane Maria). Currently, the Corps has over 1,243 personnel deployed in various locations supporting the recovery missions.

Temporary Emergency Power: As of October 31, 2017, the Corps and its contractors have completed 740 of 827 requested pre-installation inspections (for temporary generators) and 392 generator installations in Puerto Rico. The Corps and its contractors have completed 249 of 277 pre-installation inspections (for temporary generators) and 140 general installations in the U.S. Virgin Islands.

Temporary Roofing: In order for the Corps and its contractors to install temporary covering (blue roof), the government and its contractors require validated rights of entry. As of October 31, 2017, the Corps and its contractors have completed 13,127 blue roof installations and collected 14,822 validated rights of entry in Florida. At this time, requests for temporary roofing have begun to decrease in Florida. In the U.S. Virgin Islands, the Corps and its contractors have completed 2,255 blue roof installations and collected 4,120 rights of entry. An additional contractor began blue roof installations on October 24, 2017. In Puerto Rico, the Corps and its contractors have completed 3,986 blue roof installations and collected over 17,000 rights of entry.

Debris Management: As of October 31, 2017, the Corps has removed approximately 141,000 cubic yards of the estimated over 1 million cubic yards of debris in the U.S. Virgin Islands and 62,500 cubic yards of the estimated over 6 million cubic yards of debris in Puerto Rico. Corps debris subject matter experts provided technical assistance to counties across Florida and Georgia in response to Hurricane Irma and continue to provide oversight to five regions within the Florida Department of Emergency Management.

Dam and Levee Safety, Assessments, and Response: In Puerto Rico, Corps Dam and Levee teams inspected 17 priority dam locations and Guajataca Dam was the only site deemed in critical condition. Hurricane Maria caused a significant rise in the water level of the dam, and resulted in overflow of the spillway. The spillway structure was compromised and the surrounding area began to erode, posing immediate risk to 70,000 residents. Corps teams placed over 500 Jersey barriers and over 1,300 super sand bags to cease any further erosion and allow for long-term repair of the spillway. Additionally, the Corps teams cleared existing outflow conduits and are conditioning to place piping and pumps to further reduce the water level in the dam. When the water level reaches 25 feet below the spillway, more substantial repairs will begin.

Power Mission: On September, 30 2017, the Corps was given a FEMA Mission Assignment, within the authority of the Stafford Act, to assist the Puerto Rico Electric Power Authority (PREPA) in further repairing the power system to its pre-storm condition. The Corps is conducting this mission.

The Corps remains fully committed and capable of executing its other civil works activities across the Nation despite our heavy involvement in these ongoing response and recovery operations. We also remain ready and poised to assist in future events as they may occur. This concludes my testimony and I look forward to answering any questions you might have. Thank you.

"Emergency Response and Recovery:
Central Takeaways from the Unprecedented 2017 Hurricane Season"
Committee on Transportation and Infrastructure Hearing Thursday,
November 2, 2017, 10:00 a.m.
2167 Rayburn House Office Building
Washington, D.C.

Questions for the Record for the Major General Donald E. Jackson, Jr.

Submitted on behalf of Representative Blake Farenthold (TX-27)

1. General Jackson, I want to commend you and your agency for also working closely with USGS and helping to fund their 3DEP. Can you discuss the important of elevation data to your agency's role in emergency response and recovery as connected to the 2017 Hurricane Season?

Answer:

The Corps uses elevation data, which USGS provides, in determining the vulnerabilities and impacts from storm surge and waves and flood levels. State and local authorities rely on these data to inform their evacuation planning and their emergency response in advance of the storm and for the duration of the flooding .

Submitted on behalf of Ranking Member Peter DeFazio (OR-04)

1. Recognizing that climate change means that Puerto Rico and the U.S. Virgin Islands may be hit by storms of increasing intensity and frequency, in what ways is the U.S. Army Corps of Engineers (Corps) building resiliency measures into the infrastructure on Puerto Rico and the U.S. Virgin Islands?

Answer:

With regard to the infrastructure of Puerto Rico and the U.S. Virgin Islands, the current mission and focus of the Corps involves repairing infrastructure to pre-storm condition. In cases where pre-storm condition was not up to current code, the repairs will necessarily result in an improved condition that will have the effect of improving its resilience.

2. It is our understanding that after the Whitefish Energy, LLC contract was cancelled, the Corps revised its contract with the Fluor Company to now encompass $840 million for power restoration in Puerto Rico. Does the Fluor Corporation have the capacity to meet the need for power restoration in Puerto Rico, and what has the Corps done to ensure that this new contract was awarded as open and as transparently as possible?

Answer:

The Corps has awarded two separate time and materials contracts to Fluor Enterprises Inc., Greenville, South Carolina, to support ongoing work to restore the power grid in Puerto Rico. The Corps released the Request for Proposal to the nine companies that are part of the Resilient Power and Mechanical Systems (RPMS) Basic Ordering Agreement (BOA) – similar to a multiple award task order contract. Both times, a best value competitive selection process selected Fluor from the proposals received. These awards were in compliance with the Competition in Contracting Act and Federal Acquisition Regulations.

The Corps also has other contracts in place with PowerSecure and other companies to restore electrical power, and is also pursuing additional contracts in an "all-hands-on-deck" approach.

3. Your prepared testimony highlighted the actions that the Corps has taken since Hurricanes Harvey, Irma, and Maria made landfall. However, did the Corps undertake any pre-storm activities in any of the areas that were forecasted to be affected by Hurricanes Harvey, Irma, and Maria? For example, did the Corps deploy any assets to these areas in anticipation of the storms making landfall?

Answer:

By August 25, 2017, in preparation for Hurricane Harvey, two Corps divisions, Southwest Division and Mississippi Valley Division activated their emergency operations centers (EOC) and ESF-3 personnel arrived to FEMA's National Response Coordination Center and FEMA Region VI Regional Response Coordination Center. Subject Matter Experts for Temporary Emergency Power, Temporary Housing and Debris were alerted and preparing for travel. Power Planning and Response Teams (PRT) and soldiers from the 249th Engineer Battalion Prime Power were alerted and deploying. Roofing PRT, Debris PRT and Housing PRT were all alerted and preparing to deploy. Personnel were identified and alerted for potential support to the State of Louisiana as well as Texas. Additionally, four of the Corps Deployable Tactical Operations Systems (DTOS) were alerted and preparing to deploy to Texas and/or Louisiana.

By September 4, 2017, in support of Hurricane Irma, some Corps personnel were working at the National Response Coordination Center (NRCC), while others were enroute to Puerto Rico or alerted for travel to the U.S. Virgin Islands, Florida, Georgia, South Carolina and Alabama. Support requirements for power in the U.S. Virgin Island and Puerto Rico were identified and Housing, Debris and Roofing teams were identified and alerted.

By September 19, 2017, in preparation for Hurricane Maria, seventy-five Corps personnel rode out the storm in Puerto Rico and the U.S. Virgin Islands. Corps personnel continued to support FEMA at the NRCC, which was combined with the Region II Regional Response Coordination Center. As with Hurricane Irma, technical teams were identified and alerted for deployment.

4. Concerns have been raised about ongoing debris management practices in Puerto Rico and on the U.S. Virgin Islands. In particular, there is a practice called "air curtain incinerating" that involves the burning of vegetative debris, like downed trees.

    a. In the instances where the Corps is using air curtain incinerators, is the Corps or the Environmental Protection Agency (EPA) utilizing air-monitoring procedures to ensure that pollutants from the debris do not injure human health or the environment, as they did in New York and New Jersey after Hurricane Sandy?

Answer: As of November 2, 2017, the Corps has not utilized any air curtain incinerators. However, we expect to do so. When that occurs, air monitoring is required for all air curtain incineration operations managed by the Corps, as we did during recovery operations following Hurricane Sandy. The Corps and the U.S. Environmental Protection Agency (EPA) will be coordinating to monitor emissions during air curtain incineration (ACI) operations to aid in the protection of human health and the environment. Before ACI operations begin, the EPA will conduct baseline air monitoring at each location where the operation will occur. Once ACI operations begin, the EPA will be present to constantly monitor air quality for particulate matter up to 2.5 microns (PM2.5) on site and in the nearby community. If ACI operations exceed predetermined thresholds, the Corps will direct its contractor to slow or stop feeding vegetative debris into the ACI until concentrations return to an acceptable level. The EPA Quality Assurance Project Plan provides the guidance that we follow when performing this work.

ACI operations will also be monitored for opacity. Opacity is the degree to which emissions reduce the transmission of light and obscure the view of an object in the background. Federal and local regulations determine the allowable opacity of emissions rising from the pit during ACI operation. After initial start-up and once full ACI operation begins, opacity of emissions must be limited to 20%. Opacity will be measured in accordance with EPA Method 22 (reference available upon request).

    b. Are the results of those tests being made publicly available online as they were after Hurricane Sandy?

Answer: The thermal reduction process has not yet begun. The EPA will be conducting the air quality monitoring. The Corps will continue to work with the EPA to determine the most appropriate method of disseminating this information to the public.

    c. Has the Corps undertaken a cost comparison analysis of utilizing air curtain incinerators as opposed to other material disposal methods, such as composting, for example?

Answer: Yes, FEMA requested the Corps to put together a comparison between vegetative debris reduction methods and a cost comparison between ACI, mulching, and mulching with composting. These comparisons showed that for the U.S. Virgin Islands, the use of Air Curtain Incineration is much more cost effective for the Federal government and the territory. It should be noted that the maintenance of a comprehensive Debris Management Plan which details how disaster related debris will be disposed of is the responsibility of the territory and not the Federal

government. When mission assigned, the Corps provides debris reduction and disposal support to supplement local capabilities as directed by the territories through FEMA. Update: FEMA distributed these comparisons to the U.S. Virgin Islands agencies, including the Department of Planning and Natural Resources, the Department of Public Works, and the Virgin Islands Waste Management Authority on November 7, 2017 to aid in their consideration for the final disposition of the vegetative debris generated by the 2017 hurricanes.

5. Does the Corps have any recommendations for changes to Corps' projects in the affected areas (Texas, Florida, Puerto Rico, and the U.S. Virgin Islands) that could further reduce damages in the future?

Answer: We do not have any such recommendations at this time.

a. In answering this question, please provide your thoughts on the performance of the Addicks and Barker Reservoirs in Houston.

Answer: Hurricane Harvey brought an unprecedented amount of rainfall to the Houston area and caused the largest pool of record for the Addicks and Barker reservoirs. Throughout the event, the structures performed as designed.

b. Lastly, please provide us with an update on any efforts to dredge the Cano Martin Pena in Puerto Rico. As this area floods quite frequently with contaminated water, it is our understanding that dredging in that area would have significant environmental and resiliency benefits. Is that the case?

Answer: The proposed project, as currently envisioned, would re-establish the tidal connection between the San José Lagoon and the San Juan Bay, improve dissolved oxygen levels and salinity stratification, increase biodiversity by restoring fish habitat and benthic conditions, and improve the functional value of mangrove habitat within the estuary.

The project is currently in the preconstruction engineering and design phase; the design agreement was executed in June 2016.

6. As you know, the deadline for hurricane survivors in the U.S. Virgin Islands to sign up for the Blue Roof program has been extended to November 23, 2017. According to the U.S. Virgin Islands Consortium, "[t]he announcement follows multiple issues the Corps faced with the program in the territory – from a late rollout to issues with contractors who have performed, according to multiple homeowners whose houses were outfitted with the blue roofs, sloppy jobs. One married couple said their child stepped on a nail left in their home by a contractor whose employees left the job with construction debris."

   What is your assessment of the Blue Roof program in the U.S. Virgin Islands, including any difficulties the Corps has had in completing temporary roofing repairs to applicants' homes in a timely fashion?

Answer: Immediately following Hurricane Irma, challenges unique to the U.S. Virgin Islands and the expeditionary operating environment created difficulties with the Blue Roof program. These challenges were exacerbated by Hurricane Maria, as this second storm effectively reset the response clock for the blue roof mission. A summary of the major challenges follows:

1. Deployment and Employment of Critical Personnel: Island logistics after two Category 5 hurricanes were severely hampered. Everything from flights, to rental cars, to location of suitable lodging impacted the deployment and employment of Corps Blue roof mission personnel.

2. Communications: Communications capabilities (cellular service and internet) during the early part of the mission were very limited or non-existent.

3. Deployment of Resources: The St. Thomas airport and sea port were both significantly degraded following both hurricanes, limiting shipments of vital supplies including construction materials (primarily plywood). Post Hurricane Irma, primary logistical nodes on both islands were severely impacted by an extreme lack of communication capabilities, limited airport functionality and significantly reduced sea port capabilities. For example, the conditions of the local ports of debarkation after a storm can affect the accessibility of these remote island locations, as well as the logistics and timing for the recovery efforts.

4. Neighborhood Navigation: The address system in the U.S. Virgin Islands is unique and estate-based, resulting in time lost searching for homes. This also caused confusion and duplication of effort when an assessment was completed on the wrong structure due to multiple homes occupying the same plot of land. This challenge was partially overcome in early October when plat mapping was obtained from the Government. Once this information was obtained, addresses were easier to find for the assessor.

5. During-Mission Scope Change: According to the Blue Roof Advanced Contracting Initiative, structures with 50% or more roof rafters and/or decking missing are considered beyond the limits of temporary repair, thus ineligible for blue roof installation. Initially the blue roof mission operated under this criteria. At the request of the U.S. Virgin Islands and with concurrence FEMA, the Corps broadened the eligibility criteria to include structures with greater than 50% damage. This resulted in increased material and time requirements for many structures.

6. Roofing Materials: The Blue Roof mission was designed for traditional shingle type roofs. Many roofs in the U.S. Virgin Islands are metal construction with no plywood sheeting; therefore, very time consuming installation of plywood decking on the homes is required prior to installation of a blue roof. While the blue roof reduces leakage the vast majority of the time, there are instances where adding nail holes to a metal roof may lead to increased leakage, especially when there is no decking below the metal.

7. Prioritization of Critical Facilities: The U.S. Virgin Islands requested that the Corps install high priority temporary roofs on several critical facilities such as the St. Thomas airport. Such large installations significantly reduced contractor personnel available to work on residential roofs.

Testimony of
Peter D. Lopez, U.S. Environmental Protection Agency
Region 2, Regional Administrator

Before the U.S. House of Representatives Transportation and Infrastructure Committee

November 2, 2017

Good morning Mr. Chairman and fellow Transportation and Infrastructure Committee members, I am Pete Lopez, Regional Administrator for EPA's Region 2, which covers New Jersey, New York, Puerto Rico and the U.S. Virgin Islands. Thank you for the privilege of joining you today for this important conversation. While I can only speak directly about EPA's response to the devastating impacts of Irma and Maria in Region 2, I will first briefly highlight EPA's overall efforts in response to Harvey, Irma and Maria.

HIGHLIGHTS:

In response to Hurricanes Harvey, Irma and Maria, EPA has assessed more than 5,000 drinking water systems and nearly 1,200 wastewater systems, including 100% of Texas and Florida systems. We have assessed nearly 250 National Priorities List, EPA removal and oil sites. We have assessed more than 1,400 regulated facilities, recovered more than 1,500 containers, drums and tanks, and

worked with the U.S. Coast Guard to address oil and hazardous materials released from more than 1,800 sunken vessels. We were able to pre-deploy our emergency response special teams and mobile assets to quickly conduct real-time analysis to assist with determining sources of threats to human health. To minimize or prevent disruptions with the supply of diesel fuel for mobile non-road generators and pumps used for emergency purposes, the EPA also waived the diesel requirements in the hurricane affected areas.

The EPA continues its round-the-clock response to Hurricanes Maria and Irma in close coordination with federal, state, territory, and local partners. EPA remains focused on environmental impacts and potential threats to human health as well as the safety of those in the affected areas. The EPA has largely transitioned away from round-the-clock response to aftermath recovery on Hurricane Harvey. Working together, the EPA continues to coordinate recovery efforts with local, state and federal officials to address the human health and environmental impacts of Hurricane Harvey and its aftermath, especially the water systems in the affected areas.

EXPERIENCE WITH IRENE AND LEE:

In my years of experience as a New York State Legislator, I was intensely involved in a response to a very similar situation to Irma and Maria. In 2011, upstate NY was hit by a double punch from Hurricane Irene and Tropical Storm Lee. In that storm, my parents and family members were left homeless and 6 out of 7 of my counties were placed in states of emergency. My region faced similar devastation and had similar geographical features (i.e. mountainous terrain) and had similar socioeconomic conditions (northern Appalachia). Throughout my experience with Irene and Lee, I developed an understanding of how complicated it can be for areas to recover, and I learned firsthand that the more disadvantaged the community, the slower and more painful the recovery.

IRMA, MARIA AND THE CARIBBEAN:

Let me turn to EPA's effort in Puerto Rico and the U.S. Virgin Islands. I traveled to Puerto Rico and the U.S. Virgin Islands the week of October 16. I was, of course, struck by the incredible destruction in the wake of the hurricanes, but I was also immensely impressed with the resilience of the people in both Puerto Rico and the U.S. Virgin Islands. The focus of my trip was not to simply observe EPA's work, but also to strengthen relationships with Commonwealth, Territory and local officials and find solutions to pressing local problems. The experience

was both sobering and galvanizing. I saw the incredible needs, and witnessed the urgency with which EPA and our other partners are working to meet these challenges.

Clearly, the major obstacle for Puerto Rico and U.S. Virgin Islands communities, as well as the responding agencies, has been the lack of electricity. While I know the U.S. Army Corps of Engineers, FEMA and the Commonwealth and Territory governments are working hard to tackle this problem, the lack of electricity has dramatically slowed down the pace and greatly complicated our collective response.

EPA Region 2 has about 300 employees and contractors involved in the response, with nearly 200 on the ground in Puerto Rico and the U.S. Virgin Islands.

The following is the status report as of October 30, 2017, resulting from our work with the governments of Puerto Rico and the U.S. Virgin Islands, as well as with our many federal partners:

- EPA has conducted about 250 wastewater treatment assessments, including plants, pump stations and trunk lines.
- In Puerto Rico, 9 of the 51 wastewater treatment plants operated by PRASA are out of service. Of the 800 pump stations in Puerto Rico,

about 150 are overflowing sewage due to lack of power, malfunctioning generators or damage.

- Many of the USVI wastewater plants on St. Thomas, St. Croix and St. John are operating, though some plants and pump stations are damaged or blocked by storm debris.
- In Puerto Rico, 25 of 115 drinking water plants are out of service. EPA has assessed approximately 237 independent smaller rural systems not operated by PRASA, where they were accessible. We continue to work toward gaining access to the remaining systems, which may be inaccessible as a result of road/bridge damage and/or are located in mountainous and more isolated regions of the Island.
- In the U.S. Virgin Islands, EPA has taken over 700 drinking water samples. This information is being used to determine where disinfection of systems is needed. EPA is offering assistance to VI officials to support follow up visits to those sites that have been impacted.
- We have completed about 320 assessments of facilities covered by hazardous waste, risk management, and spill prevention regulations. While there was damage at some of these facilities, there were no major releases or spills reported.

- EPA has assessed 34 of about 35 Superfund and oil sites. The Culebra site is a DOD lead, and they are addressing that site.
- EPA is working with local jurisdictions and the U.S. Army Corps of Engineers to begin collecting hazardous debris – household hazardous waste, white goods (i.e., heavy consumer durables such as for example, air conditioners, refrigerators, and stoves) and electronics. We are also coordinating with Puerto Rico, the U.S. Virgin Islands and the U.S. Army Corps of Engineers to handle other, often comingled debris. Where vegetative debris is concerned, we are working to support composting efforts and will be providing real-time monitoring where local and state officials choose to burn woody debris using special devices.
- EPA is working closely with the U.S. Coast Guard as they deal with the approximately 726 sunken vessels and the resulting debris and widespread small oil spills.

CHALLENGES:

We have much work ahead of us, and face a number of serious challenges:

- Many roads are still impassable and there are dangerous mud and rock slides in mountainous regions.

- There is a need for ongoing humanitarian aid. In some cases, EPA has stepped out of its traditional role, coordinating closely with FEMA to bring water, food and supplies to more remote areas where we are conducting assessments and where our responders have been the first to arrive.
- Initially, travel and lodging limitations impacted our ability to accommodate responders on the islands. These limitations are now subsiding.
- We are struggling with delays and continue to work closely with FEMA to transport heavy equipment to Puerto Rico via barge.

LOOKING TO THE FUTURE:

EPA continues to actively and thoughtfully respond to the devastation of Maria and Irma. As required, we will participate in the Federal government's after-action report and include a detailed description of strategies for more effectively responding to future storm events.

One critical lesson learned so far is that there are unique challenges for both emergency response and future hazard mitigation on the Caribbean islands. For example, there were not enough generators available on the islands to provide back-up electrical power needed for essential services such as drinking water,

hospitals, labs, and wastewater collection and treatment. In Puerto Rico this resulted in much of the population losing access to safe drinking water, widespread sewer overflows that contaminated surface waters and posed risks to the health of people who were drinking from or bathing in surface waters i.e., streams, rivers, lakes, and reservoirs.

I am extremely proud of the work that EPA is doing in response to all three Hurricanes, but I am also mindful that there are always opportunities for improvement. We look forward to working with this and other Congressional Committees and federal partners to explore how our agency can more effectively respond during and following natural disasters. These collaborative efforts will enable all of us to better safeguard the health and safety of the public while protecting our natural resources to the best of our ability. Thank you again for the opportunity to testify today and I look forward to any questions the committee might have on EPA's important role in emergency response and recovery efforts.

Enclosure

U.S. Environmental Protection Agency
Responses to Questions for the Record
Committee on Transportation and Infrastructure
Subcommittee on Water Resources and Environment
Hearing on
"Emergency Response and Recovery: Central Takeaways from the Unprecedented 2017 Hurricane Season"
November 2, 2017

Submitted on behalf of Representative Blake Farenthold (TX-27)

1. **Can you tell me how much from the Environmental Protection Agency's (EPA's) budget is going to help the U.S. Geological Survey 3D Elevation Program (USGC 3DEP)?**
   a. **If none, could the EPA's mission as connected to emergency response and recovery be aided by enhanced elevation data from 3DEP?**

Response: The EPA is not involved in this project, nor do we fund it. Elevation data is not needed for EPA's current emergency response to Hurricanes Irma and Maria in the Caribbean. In the future, enhanced elevation data would certainly assist in planning both response and recovery efforts and evaluating location and resiliency of critical infrastructure. The EPA works with FEMA on using their models to determine the areas of the U.S. Caribbean where coastal/inland storm surge and flooding from a rain event may occur. The EPA uses that model as part of its facility assessment plan.

Submitted on behalf of Ranking Member Peter DeFazio (OR-04)

Superfund

1. **What activities did EPA undertake at the Superfund sites on Puerto Rico and the U.S. Virgin Islands prior to the arrival of Hurricane Irma and Maria?**

   Response: EPA Region 2 did field assessments of all Superfund and oil sites in Puerto Rico and the U.S. Virgin Islands prior to Irma and had just finished re-assessing all Superfund sites and all but two of the oil sites again when Hurricane Maria arrived.

   The two sites not yet assessed when Maria hit were the Guayanilla Bay oil site in Puerto Rico and the Cruz Bay Oil Tank site in St. John, U.S. Virgin Islands. For the Guayanilla Bay oil site in Puerto Rico, which has a sub-surface oil plume that has discharged oil through a storm sewer line in the past, an in-person inspection that had been planned for

September 18, 2017, was postponed due to preparations for Hurricane Maria. For the Cruz Bay Oil Tank site in St. John, U.S. Virgin Islands, the EPA had assessed via overflights, but had not yet gained access before Maria hit. The site involves an oil storage tank where the oil has been removed with the exception of oil sludge in the bottom of the tank. The tank was damaged during Irma but overflights of the area did not show any oil spills from the site. EPA worked with FEMA and the U.S. Navy to gain access to the site and pump the tank to provide more capacity for future rainfall. The remaining oil in the tank bottom will be removed and the tank dismantled once access to St. John has improved.

a. **For example, we are aware that EPA took active steps to secure Superfund sites in New Jersey and New York prior to the arrival of Hurricane Sandy in 2012. Did EPA take any active steps to secure Superfund sites in a similar manner in advance of Hurricanes Irma and Maria?**

Response: EPA conducted pre-assessments of the 34 Superfund and oil sites (30 in PR and 4 in USVI) prior to Hurricane Irma and had nearly completed post-Irma assessments when Hurricane Maria hit. The assessments prior to Irma included site visits and discussions with responsible parties to ensure that all that could be done to secure the sites was done. In general, "active steps" were not necessary to secure Superfund sites prior to the hurricanes because most of the Superfund sites are groundwater contamination sites, with minimal surface structures that would pose a contamination risk. Given the number of Superfund sites in the path of the hurricanes, the site remedies proved resilient as the hurricanes caused relatively limited damage at these sites. The Administration requested $3.5 million for Superfund in its November 17, 2017, supplemental funding request to address damage to tanks, monitoring wells, aeration towers, and caps at certain sites in Puerto Rico and the U.S. Virgin Islands.

b. **Is EPA monitoring and sampling in and around those Superfund sites to ensure that there are no off-site impacts caused by storms?**

Response: EPA has completed all on-site assessments of Superfund and oil sites in Puerto Rico and the U.S Virgin Islands. While some damage was found as mentioned in response to the previous question, no sites showed evidence of off-site releases of chemicals.

It should be noted that the only sites where EPA took samples in the aftermath of Hurricane Sandy were sites that had contaminated material that may have moved to areas where people could be exposed. The EPA sampled mud around three sites with contaminated sediment (Gowanus Canal in Brooklyn, Newtown Creek on the Brooklyn/Queens border, and the Passaic River Superfund site). This sampling was to determine if heavily contaminated sediments from these sites moved into residential areas (they had not). A fourth site, Raritan Bay Slag, was sampled to determine if lead contaminated sand had shifted into playground and other accessible areas (some

shifting had occurred). EPA received supplemental funds (Public Law 113-2) to address the additional damage from the Raritan Bay Slag site following Hurricane Sandy.

c. **Will EPA post all monitoring and sampling results at those sites online for the public to see just as EPA did after Hurricane Sandy in 2012?**

Response: Yes, where sampling data are available. Because none of the sites in USVI and Puerto Rico were damaged in a way that could spread contamination, sampling at these sites was not needed. Most sites in the Caribbean are groundwater sites, where surface conditions have little or no impact, and many have little or no above-ground equipment.

The EPA did sample some spigots at the Dorado site, which is detailed below. The final validated data for this testing is available on EPA's Hurricane Maria website (www.epa.gov/hurricane-maria).

2. **According to multiple press reports, people accessed wells at the Dorado Superfund site for drinking water in the aftermath at the story. Did EPA take any steps prior to Hurricanes Irma and Maria to ensure that the Dorado Superfund site was secure and that no one would be able to access these wells for drinking water?**

Response: Residents did not access contaminated wells at the Dorado site. It is impossible to access water from the contaminated wells at the site because the pumps are disconnected. The contaminated wells were within locked, fenced enclosures, with posted warning signs instructing people not to enter the enclosures. There were no necessary additional steps that the EPA needed to take prior to the hurricanes.

Co-located with the contaminated wells are spigots that can deliver water from the PRASA public distribution system. These spigots are not connected to the contaminated wells themselves. After Hurricane Maria, some residents entered the enclosures and drew water from these spigots. Some of the fencing and warning signs were damaged. EPA promptly repaired the fences and re-posted the signs. Additionally, EPA tested the water from the spigots to confirm that the water was from the PRASA public water itself, which is subject to regular testing and oversight from the Puerto Rico Department of Health.

3. **What has EPA done to ensure that wells at the Dorado Superfund site aren't used for drinking water in the future? For example, has EPA capped/disabled those wells that were being accessed for drinking water after Hurricane Maria after EPA became aware of their use? Why didn't EPA take those steps prior to the arrival of Hurricanes Irma and Maria?**

Response: Initial reports of people drawing water from contaminated wells at the Dorado site were incorrect. The pumps in the contaminated wells have been disabled for some time, and water cannot be drawn from these wells.

There are a number of wells on the Dorado site, including two wells (Nevarez and Santa Rosa) used by PRASA intermittently to provide drinking water. These two wells have historically met drinking water standards and they are tested regularly by PRASA and the Puerto Rico Department of Health. These wells did not show TCE or PCE contamination above drinking water standards when EPA tested in 2015 as part of its effort to place the site on the Superfund list. Regular testing by Puerto Rico Department of Health and PRASA has not shown levels above drinking water standards since that time. These wells are included in the Dorado site as a precaution as we examine the nature and extent of the contaminated groundwater within the designated geographic area.

When EPA received reports that people might be drinking from the contaminated wells at the Dorado site, we immediately investigated. There was understandable confusion when people obtained drinking water from spigots near some of the contaminated wells. These spigots are distinct from the wells themselves, and do not draw water from those wells. They instead draw water from a treated water system. However, to be absolutely certain, the EPA took samples from these spigots, as well as from the spigots at the two wells used intermittently by PRASA to provide water. These samples are being analyzed and compared to Safe Drinking Water Act standards for about 90 contaminants.

In the interim, EPA worked with FEMA and the U.S. Army Corps of Engineers to provide bottled water from water tankers to meet local demand for potable water. Some of the validated data is in and the results so far show that water from the spigots meets drinking water standards for microbial contaminants and volatile organic compounds, including the two main contaminants of concern at the Dorado site – TCE and PCE. The EPA has set standards for TCE and PCE, along with many other contaminants, which are applied to drinking water systems across the U.S. The validated results for VOCs and microbial contaminants are available on EPA's Hurricane Maria website. Further validated data for the rest of the suite of drinking water contaminants is expected in mid-December. EPA will post that data to its website.

Water and Wastewater

1. **Your prepared testimony noted that EPA had assessed more than 5,000 drinking water systems and nearly 1,200 wastewater systems in response to Hurricanes Harvey, Irma, and Maria.**

    a. **Does EPA plan to make the results of these assessments publicly available online?**

Response: The EPA established websites for all three hurricane responses (links to each are found on EPA's home page) which include information about the agency's response efforts, including drinking water and wastewater, as well as news releases which have provided regular updates for the public.

In terms of the agency's response to Hurricane Maria, the number of operating drinking water and wastewater systems has fluctuated, particularly due to power outages. The water quality test results EPA has are from tests that EPA has independently conducted separate from the testing conducted by the Puerto Rico Department of Health at the Dorado Superfund site. EPA also has been conducting drinking water system sampling on behalf of the U.S. Virgin Islands Department of Health. EPA's drinking water sampling in the USVI is to determine if a system has microbial contamination and should be disinfected. Contaminated systems are being addressed immediately. The data from the USVI is field data and it is not validated lab data that is typically posted. The validated data to date from the Dorado site is posted on the Hurricane Maria response website (www.epa.gov/hurricane-maria).

In the U.S. Virgin Islands, all eight wastewater treatment plants were operational as of November 30, 2017. Of the 30 wastewater pump stations, two are not operational. In the USVI, many people obtain their drinking water from small cisterns and some systems run by the utility use cisterns. As of November 30, 2017, about 90 of the 344 drinking water systems run by the USVI utility and nine of the 191 systems not run by the USVI public utility are out of service. EPA has taken over 1,931 samples from drinking water system in the USVI to identify possible microbial contamination. Where such contamination has been found, the information is provided to the U.S. Virgin Islands Department of Health, which follows up with the systems to ensure that they are disinfected. EPA then works with VIDOH to conduct follow up confirmatory sampling.

In Puerto Rico, as of December 15, 2017, one of the 51 wastewater treatment plants are not operational and 76 of the 714 wastewater pump stations are not operational. Serious problems remain with pump stations and sewer trunk lines in Puerto Rico. EPA is working with the Puerto Rico Aqueduct and Sewer Authority, as well as with the U.S. Army Corps of Engineers and FEMA to address the issues.

In Puerto Rico, one of the 115 drinking water plants are out of service as of December 15, 2017. Most issues are related to lack of primary power and generator failures.

b. Similarly, the testimony also noted that, in the U.S. Virgin Islands, more than 700 drinking water samples were taken. Does EPA plan to make the results of these assessments publicly available online?

Response: The EPA has taken well over 1,300 samples of water from drinking water systems in the U.S. Virgin Islands, mostly in cistern systems. These samples are tested for microbial contamination to determine which systems need to be disinfected. These

results are given to the U.S. Virgin Islands Department of Health, and they have been following up to ensure that the systems are disinfected. When a problem is identified, it is relatively easy to fix using a bleach solution. The samples are analyzed in the field and are intended for the USVI government to identify which systems need to be disinfected, rather than to assess the quality of the system's drinking water, so they are not included with data on the website.

2. **We are concerned about the status of the 59 wastewater treatment facilities on Puerto Rico and the U.S. Virgin Islands. In particular, we are concerned that the offline wastewater treatment facilities are allowing untreated sewage to contaminate the rivers and streams on Puerto Rico, some of which are being used as drinking water sources.**

    a. **Please provide an update on the status of these systems.**

Response: In Puerto Rico, as of November 27, 2017, three of 51 wastewater treatment plants are not operational and about 89 of the 714 pump stations are not operational. These numbers have fluctuated and continue to fluctuate due to power and equipment failures. There remain serious problems with pump stations and trunk lines in Puerto Rico. The EPA is working with the Puerto Rico Aqueduct and Sewer Authority, the U.S. Army Corps of Engineers and FEMA to address the issues. Major repair works have been completed for the trunk sewers of the Cayey, Corozal, and Comerio wastewater treatment plants, as well as cleanups of drinking water intakes in many facilities. Where there has been a risk of sewage overflows and reports of residents using the surface waters for bathing or drinking, EPA has coordinated with the Centers for Disease Control and the Puerto Rico and Virgin Islands Departments of Health to warn individuals of the health risks associated with using surface waters for those purposes.

    b. **Is EPA giving priority to restoring those wastewater treatment plants that are upstream of drinking water intake systems?**

Response: EPA facilitated the creation of a priority list – which prioritizes wastewater treatment system issues, especially pump stations, that could impact drinking water intakes. The U.S. Corps of Engineers and FEMA have been working with the Puerto Rico government to address these problems.

    c. **Given the increasing severity and frequency of these storms caused by climate change, is EPA taking any steps to increase the resiliency of these systems to ensure that they can remain online during future storm events?**

Response: The Puerto Rico Aqueduct and Sewer Authority, Puerto Rico Environmental Quality Board, and the U.S. Army Corps of Engineers have lead responsibility for wastewater infrastructure. EPA provides assessment assistance and advice for prioritization of repairs. There are restrictions on spending Stafford Act funds to re-build

infrastructure. FEMA generally advises that funding is limited to building back what was there before that storm. That said, EPA and federal agencies have historically worked together to find ways to introduce resilient approaches in communities using funds other than Stafford Act funding. For example, EPA has worked with FEMA and local NGOs to get some solar power to run some of the Non-PRASA drinking water systems. Funding may also be available for these purposes through the Clean Water and Drinking Water State Revolving Funds (SRFs) and other EPA grant programs.

General

1. **Puerto Rico has more than three million residents and the U.S. Virgin Islands has just over 100,000 people. However, it is our understanding that as of mid-October there were approximately 65 EPA regional personnel on the U.S. Virgin Islands and only 116 personnel on Puerto Rico.**

    a. **Given that the population of Puerto Rico is 30 times the size of the U.S. Virgin Islands, how does EPA justify its personnel placement in its post-storm response?**

Response: The EPA deploys its resources according to the particular needs of the relevant phase of the response, not in proportion to population. As of November 27, 2017, the EPA had about 125 people in the USVI and about 150 in Puerto Rico. These numbers fluctuate depending on the operational needs. The EPA expects to ramp up its personnel in both USVI and Puerto Rico as the debris management and household hazardous waste missions get into full swing during December. In addition to the staff deployed to Puerto Rico and the U.S. Virgin Islands, the EPA has about 94 staff supporting the response from its Regional Emergency Operations Center, which ensures that the staff on the ground in Puerto Rico and the U.S. Virgin Islands get what they need to support their work and that fresh staff is cycled in to ensure continuity.

    b. **Taking into account the severity of the damage that Puerto Rico experienced, are there sufficient EPA personnel on the ground to adequately respond to the need?**

Response: Yes. The EPA has pulled emergency response staff and other experts from every regional office and from our D.C. offices. While the agency has had four major responses in the past several months, we have been able to staff up to appropriate levels with the support of FEMA and Stafford act funding. EPA's work is in concert with other agencies, such as the local government agencies, the U.S. Coast Guard, US Army Corps of Engineers and of course FEMA. EPA staff attend to specific missions and may not be reflective of collective federal agency engagement for storm response.

Grace Napolitano CA letters on Disaster Needs

OFFICE OF THE GOVERNOR

October 5, 2017

To the California Congressional Delegation:

The people of Texas, Florida, Puerto Rico, and Mexico have suffered tremendously in recent weeks. At the request of the Federal Emergency Management Agency and the U.S. Agency for International Development, California is doing its part to help those in need. California has sent over 1,100 personnel to support domestic and international emergency operations due to Hurricanes Harvey, Irma, Maria and the earthquake in Puebla, Mexico.

As Congress develops a disaster assistance package, I urge the inclusion of sufficient funding to cover the $4.1 billion in outstanding federal disaster and emergency road repair obligations owed to California. since 1983

These funds are critical to California's recovery from multiple wildland fires and extensive winter storms in 2017. For reference, I am attaching previous requests from my Secretary of Transportation, Secretary of Natural Resources, and Director of Emergency Services.

I also urge Congress to increase funding within the U.S. Forest Service's ongoing budget for firefighting. To date, 760,265 acres have burned in California, representing almost 10% of total burnt acreage in the United States.

These funds are critical to responding to communities impacted by fires and rebuilding our roads.

Sincerely,

Edmund G. Brown Jr.

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
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Serious drought. Help save water!

April 7, 2017

Dear California Congressional Delegation Member

In 2017, California suffered the most severe winter storm events it has seen in 20 years, brought on by "atmospheric river" weather phenomena. In addition to damages to the Oroville Dam Spillway, the enclosed "2017 Severe Winter Storms" presentation illustrates major storm damage to highways, roads and bridges throughout the state. In January, more than nine feet of snow fell over Donner Summit in only seven days. In that same week, the storm brought as much as ten inches of rain in some places, and several corridors were flooded along the coast and inland. February offered no respite, as the torrential winter continued, and we had to deal with mudslides, rockslides, slip outs, and washouts – not to mention snowdrifts and avalanche control. All-in-all, the Donner Summit area received more than 56 feet of snow between January and February 2017.

Caltrans' dedicated maintenance crews have been up to the task, with many working 24 hours per day, on 12-hour shifts, responding to dozens of closures and working tirelessly to clear and repair damaged roadways. At some points in February, we had about 3,500 maintenance employees, dozens of information officers, and just under 400 engineers working around the clock to inform the public, and assess and repair roadways impacted by the winter storms. In addition, over 270 emergency contracts have been executed to augment Caltrans' staff and quickly restore access to state roads.

As a result of the 2017 Severe Winter Storms, designated Federal Highway Administration (FHWA) disaster code CA 17-2, Caltrans current (as of late-March 2017) preliminary damage estimate for the State Highway System is approximately $814 million, with an additional $400 million for local roads. However, only $100 million is authorized annually by the FHWA Emergency Relief Program for the emergency repair and restoration of federal-aid highway facilities. In fact, the $100 million Emergency Relief Program annual authorization is frequently exceeded, and, therefore, Congress has periodically provided additional funds for the Emergency Relief Program through Supplemental Appropriations. To date, Caltrans has received a $10 million FHWA "quick release" Emergency Relief allocation for work associated with the 2017 Severe Winter Storms (CA 17-2).

Given the magnitude of the California 2017 Severe Winter Storm (CA 17-2) damage, which greatly exceeds the total annual authorization for the FHWA Emergency Relief Program, I am

Given the magnitude of the California 2017 Severe Winter Storm (CA 17-2) damage, which greatly exceeds the total annual authorization for the FHWA Emergency Relief Program, I am requesting your support for including additional FHWA Emergency Relief funding in the federal fiscal year (FY) 2018 appropriation bill for Transportation, Housing and Urban Development (THUD), a Supplemental Appropriations bill, or any federal infrastructure investment legislation Congress considers this year to address California's 2017 Severe Winter Storm (CA 17-2) damage.

In addition to the damage associated with California's 2017 Severe Winter Storm (CA 17-2), you should also be aware that Caltrans has identified to FHWA a total need for $546 million in Emergency Relief funding for repairs associated with natural disaster and catastrophic failure events dating back to October 1990. Included within this Emergency Relief backlog, I would also like to highlight four events that occurred prior to October 1, 2012, each with total Emergency Relief funding needs greater than $100 million as well as significant remaining needs.

Disaster	Disaster Date	California ER Need (Incl. Fed. Lands)	Obligations to Date	Remaining ER Need
December 2004 Storms (CA05-1)	12/28/04	$341,751,062	$312,304,136	$29,446,926
December 2006 Storms (CA06-1)	12/19/05	$447,704,945	$342,002,079	$105,702,866
January 2010 Storms (CA10-1)	01/17/10	$117,274,380	$92,031,177	$22,743,203
March 2011 Storms (CA11-3)	03/15/11	$247,726,016	$98,945,066	$147,780,950

While the repairs associated with these events are eligible for Emergency Relief funding, and can be used as soon as Congress makes funding available, additional Emergency Relief expenditures for these events are currently capped because they occurred prior to October 1, 2012.[1] In past Supplemental Appropriations, Congress has provided Emergency Relief funding to address the ongoing needs associated with specific events requiring expenditures over $100 million. Therefore, I respectfully request Congress to provide sufficient Emergency Relief funding to fully address California's Emergency Relief needs, including these events, in the FY 2018 THUD appropriations or any Supplemental Appropriations or federal infrastructure investment legislation it considers this year.

[1] The Moving Ahead for Progress in the 21st Century Act (MAP-21; P.L. 112-141) eliminated the $100 million per State per event cap that was previously applied to Emergency Relief program, however the $100 million cap still applies to events that occurred prior to October 1, 2012.

For additional information about this request, please contact Giles Giovinazzi, Federal Transportation Liaison, Caltrans and the California High-Speed Rail Authority at giles.giovinazzi@dot.ca.gov or (916) 214-6144.

Thank you again for your continued leadership on behalf of the state of California.

Sincerely,

MALCOLM DOUGHERTY

Enclosure

CALIFORNIA NATURAL RESOURCES AGENCY

Cal OES
GOVERNOR'S OFFICE OF EMERGENCY SERVICES

September 5, 2017

Re: Hurricane Harvey Disaster Assistance; Outstanding Federal Assistance Funding and Fire Suppression Response Costs; California Commercial Sea Urchin Season and Pacific Sardine Fishery Disasters; and Unaddressed California Dungeness Crab Fishery and Yurok Tribe Klamath River Chinook Salmon Fishery Failures

To the California Congressional Delegation:

Hurricane Harvey Disaster Assistance
Since August 25, 2017, at the request of the Federal Emergency Management Agency and the State of Texas and through the California Fire and Rescue Mutual Aid System, the Governor's Office of Emergency Services has approved the activation of over 430 personnel, including eight State/National Urban Search and Rescue Task Forces, two Swift-water and Flood Rescue Teams, two Disaster Medical Assistance Teams and National Guard Air Rescue assets in support of emergency operations related to Hurricane Harvey in Texas. California's support represents the most resources provided by any State to assist in federal disaster response operations for Hurricane Harvey.

This disaster assistance is taking place at the same time that California is responding to record heat and multiple severe wildland fires on state and federal lands, many resulting in Federal Fire Management Assistance Grants, in conjunction with ongoing and extensive winter storm recovery efforts.

Outstanding Federal Assistance Funding and Fire Suppression Response Costs
As of September 5, 2017, California has approximately **$2.5 billion** in outstanding federal disaster assistance funding, which has yet to be allocated. As Congress is currently in process of developing a Hurricane Harvey disaster relief package, we urge the California Congressional Delegation to support the inclusion of **$2.5 billion** in outstanding federal disaster assistance to California. This funding will ensure that California's disaster recovery efforts from multiple wildland fires and extensive 2017 winter storms damage will continue.

Additionally, as of September 5, 2017, extreme fire weather conditions continue to cause multiple fires in Montana, Oregon and California. Currently, 81 large fires have burned 1.4 million acres in nine western states. More than 27,000 firefighters and support personnel are assigned to wildland fires in the West. In California, these fires are threatening some 10,777 structures with close to 10,853 local, State and federal firefighting personnel responding and utilizing 73 aircraft and more than 834 fire engines.

Given the continued rise in fire response activities by local, state and federal personnel, we also urge the California Congressional Delegation to ensure that sustainable funding for fire suppression response costs are appropriately updated and provided for within the U.S. Forest Service's on-going budget.

This funding will support sustainable fire suppression capability and ensure local, state and federal firefighting response is not hampered at any time, when California and the rest of the nation are responding to, or recovering from, multiple natural disasters caused by unprecedented climate-related events.

California Commercial Sea Urchin Season and Pacific Sardine Fishery Disasters
An imminent request will be forthcoming from the State of California for federal disaster determinations for the 2016 California commercial sea urchin season and the commercial Pacific Sardine fishery. We urge the California Congressional Delegation to support positive federal fisheries disaster determinations and for Congress to appropriate disaster relief funding for California's affected fishing businesses and fishing communities. If designated a federal disaster, the Magnuson-Stevens Fishery Conservation and Management Act and the Interjurisdictional Fisheries Act will provide federal funds to impacted communities.

California commercial fishers and fishing communities in the affected regions have suffered significant economic hardship due to poor oceanographic conditions. Preliminary economic analyses by the California Department of Fish and Wildlife indicate that reduced revenue in the affected regions are close to or exceed thresholds for a fisheries disaster determination.

For the 2016 California commercial sea urchin season season, the fishery in northern California (including the ports of Fort Bragg, Albion, Point Arena and Bodega Bay) had a 77% reduction in ex-vessel revenue relative to the 5-year average, which is close to the 80% threshold for an automatic fishery failure determination. The fishery in Orange County had a 93% reduction, exceeding the threshold, and the fishery in San Diego County had a 48% reduction in revenue.

For the Pacific Sardine fishery disaster, catches and revenue in 2015 and 2016 and projected catches and revenues for 2017 from businesses reliant on Pacific Sardine fisheries are more than 90%[1] lower than recent averages. This has resulted in mandatory closure of the commercial directed fishery for Sardine, pursuant to the federal Coastal Pelagic Species Fishery Management Plan. This plan establishes a cutoff biomass level of 150,000 metric tons, below which directed fishing is not allowed. Statewide, the commercial Sardine fisheries along the California coast in 2015 resulted in a total ex-vessel value of $343,148, which is 90% less than the 2010-14 average of $3,504,098.

In 2016, landings resulted in a total ex-vessel value of only $95,657, which is 96% less than the 2011-15 average of $2,711,679. Since the directed fishery is again closed in 2017, landings are anticipated to be in line with those seen in 2016 and this closure may continue into 2018.

Failures of California Dungeness and Rock Crab Fisheries, Salmon Fisheries and Yurok Tribe Klamath River Chinook Salmon Fishery

On January 18, 2017, under Section 312(a) of the Magnuson-Stevens Fishery Conservation and Management Act, the Secretary of Commerce determined the existence of a commercial California Dungeness and rock crab fishery failure for the 2015-2016 seasons resulting from a massive and persistent toxic harmful algal bloom of phytoplankton, which caused the closure of the Dungeness crab and rock crab fisheries to protect human health. Additionally, the Secretary of Commerce determined a catastrophic fishery disaster existed in the Yurok Tribe Klamath River Chinook salmon fishery in 2016. The California Dungeness crab and salmon fisheries are some of the highest valued commercial fisheries in California. Altogether, these fishery resource disasters, which have been already determined by the Secretary of Commerce, merit disaster relief funding to support activities that would restore the fisheries or prevent a similar failure and assist the affected fishing communities.

In May 2017, Governor Brown of California joined Governor Kate Brown of Oregon in requesting that Commerce Secretary Ross expedite disaster declarations for the salmon fisheries in 2016 and 2017. This request is still pending at Commerce. Catches and revenue in 2016 and projected catches and revenues from businesses reliant on salmon fisheries in 2017 are far below recent averages. This will result in continued economic impacts to fishing communities and the businesses that depend upon these fisheries.

Multiple years of drought, poor ocean conditions, and parasites within the Klamath River Basin have severely impacted salmon populations. For example, California's commercial ocean salmon fisheries in 2017 are projected to earn a total ex-vessel value of $4.5 million for the sale of 47,600 fish – 72 percent less than the 2012-16 statewide average of 169,400 fish, valued at $12.7 million. California's recreational ocean salmon fisheries likewise face both a lack of opportunity and low chances of success.

It is projected that 35,000 Chinook will be landed in California recreational ocean salmon fisheries statewide in 2017 – 55 percent less than the 2012-16 average of 78,000 fish. In addition, communities in the far-north are expected to be hardest hit. The full season closure for sport and commercial ocean salmon fisheries from the Oregon/California border south to Horse Mountain means that businesses dependent on salmon fishing in this area will earn zero revenue from salmon fishery activity in 2017. The California Department of Fish and Wildlife can provide additional details as needed regarding impacts.

CALIFORNIA NATURAL RESOURCES AGENCY

Cal OES GOVERNOR'S OFFICE OF EMERGENCY SERVICES

In closing, we urge that you include $2.5 billion in outstanding federal disaster assistance to California; provide sustainable funding for fire suppression response costs within the U.S. Forest Service's on-going budget; allocate federal funds for the 2016 California commercial sea urchin season and Pacific Sardine fishery disasters; and positively address the needs of the determined failures of the California Dungeness and Rock Crab fisheries, Salmon fisheries and Yurok Tribe Klamath River Chinook Salmon fishery.

Sincerely,

John Laird
Secretary for Natural Resources
State of California

Mark Ghilarducci
Director of Emergency Services
State of California

CURTIS FOUNTAIN
PRESIDENT

JOE DUPONT
VICE PRESIDENT

RYAN BOURRIAQUE
PARISH ADMINISTRATOR

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DISTRICT 6
JOE DUPONT
DISTRICT 7
DARRYL FARQUE
DISTRICT 8
LAWRENCE FAULK, JR.

RESOLUTION

RESOLUTION NO. 1070

STATE OF LOUISIANA
PARISH OF CAMERON

A RESOLUTION URGING THE SABINE RIVER AUTHORITY AND THE FEDERAL ENERGY REGULATORY COMMISSION TO ENACT OPERATING PROCEDURES CONSISTENT WITH ITS MISSION AND DESIGN TO REDUCE DOWNSTREAM FLOODING FROM IMMINENT STORMWATER EVENTS.

WHEREAS, individuals, businesses, homes, farms, camps, and recreational facilities have been severely flooded by the Sabine River below the dam at the Toledo Bend Reservoir from floods in March 2016, and from Hurricane Harvey during August and September 2017; and

WHEREAS, a significant portion of the damage downstream from the Toledo Bend Dam results from the release of water from the watershed of the lake itself through the gated spillway and into the Sabine River to relieve heavy rainfall; and

WHEREAS, this has not resulted in any deaths to Cameron Parish residents, however, it threatens the property, safety, and welfare of those in the affected areas; and

WHEREAS, a flood induced economic hardship plagues residents in home and property restoration costs and local governments in repeated repairs to its roads; and

WHEREAS, we acknowledge the concerns of property owners on the lake and of the Sabine River Authority (SRA) and the Federal Energy Regulatory Commission (FERC),

NOW, THEREFORE, BE IT RESOLVED that the Cameron Parish Police Jury requests that the SRA and FERC reciprocate and acknowledge the concerns of downstream citizens who are adversely affected by the current operating procedures, and join with us to endorse procedures designed to alleviate flooding due to impending significant weather events along the Sabine River; specifically, that FERC adjust federal guidelines to authorize the SRA to lower the reservoir level prior to the onset of these predictable flood events; and

BE IT FURTHER RESOLVED the Cameron Parish Police Jury requests that affected citizens, local and state governments in both Louisiana and Texas, unify and lend their voices to protect property and to enhance the lives of every resident irrespective of their location relative to the dam; to the end,

BE IT FURTHER RESOLVED that upon adoption of this resolution, that it be forwarded to Louisiana State Governor John Bel Edwards, Texas State Governor Greg Abbott, U.S. Congressional Delegates, Senator Bill Cassidy, Senator John Kennedy, Senator Ted Cruz, Senator John Cornyn, and Congressman Clay Higgins, Congressman Mike Johnson, Congressman Sam Johnson, Congressman Brian Babin, Louisiana State Senator Dan "Blade" Morrish, Louisiana State Senator John R. Smith, Texas State Senator Robert Nichols, Louisiana State Representatives, Bob Hensgens, James K. Armes, III, Stephen C. Dwight, and Dorothy Sue Hill, Texas State Representative James White, the Parishes of Sabine, Vernon, Calcasieu, and Beauregard, in Louisiana the

Counties of Sabine, Newton, Orange and Jefferson, in Texas, the Sabine River Authority, and the Federal Energy Regulatory Commission.

THUS DONE AND ADOPTED by a the following votes of the Cameron Parish Police Jury, in regular session convened on this October 5, 2017.

YEAS: Davy Doxey, Anthony Hicks, Terry Beard, Kirk Quinn, Curtis Fountain, Joe Dupont, Darryl Farque, and Lawrence Faulk

NAYS: None

ABSENT: None

APPROVED:

CURTIS FOUNTAIN, PRESIDENT

ATTEST:

DARRELL WILLIAMS, SECRETARY

TRAVEL WEEKLY
The Travel Industry's Trusted Voice

Aviation

With little fanfare, U.S. airlines mounted extensive storm relief

By Robert Silk / October 30, 2017

An American Airlines crew readies relief supplies for a flight from Miami Airport.

One week after Hurricane Maria battered Puerto Rico on Sept. 20, and with the airport still closed to commercial traffic, Spirit Airlines flew an Airbus A321 into Aguadilla to offer a free relief flight out.

Because the northwestern Puerto Rico city still lacked power, Spirit was unable to advertise the unscheduled service, said Barbara Webster, the airline's director of emergency response. Nevertheless, she said, all 228 available seats were filled within five hours.

One week later, on Oct. 3, Spirit flew its third Aguadilla relief flight, this time bringing along from its South Florida base cardiologist Walter Pinedo and urgent care physician Mario Fernandez. Among the passengers on the return trip were more than 50 who needed wheelchair assistance as well as more than 30 over age 80.

"Because Spirit has so many employees and people with loved ones throughout the Caribbean, I think it really hit us hard," Webster said of Maria. "We wanted to do everything we could to assist them."

In the aftermath of Maria, as well as hurricanes Harvey and Irma this year, Spirit said it delivered some 200,000 pounds of supplies to affected communities, flew more than 3,500 people to safety at no charge and pledged to match up to $150,000 in donations to the Red Cross.

Relief supplies being unloaded from a JetBlue relief flight in Aguadilla after Hurricane Maria.

But Spirit was by no means alone among U.S. airlines in making extensive efforts to provide relief to communities that were hard-hit during the extraordinary 2017 hurricane season.

United operated 46 relief flights to assist victims of hurricanes Harvey, Maria and Irma, in the process flying more than 2,000 evacuees out of affected areas while delivering more than 1.7 million pounds of supplies to Texas, Florida, Puerto Rico and other Caribbean islands, the carrier said.

Delta said it operated nine relief flights to the affected regions, shipped more than 600,000 pounds of relief supplies and made donations totaling $2.75 million to Red Cross organizations.

American operated nine relief flights for Irma and Maria victims, transporting more than 2.5 million pounds of supplies and more than 100,000 meals. On return flights with those aircraft, American evacuated 2,700 storm victims, the carrier said. In addition, the airline said it had raised nearly $2 million for the Red Cross.

Southwest ran 18 humanitarian flights after Maria, carrying more than 1,100 people out of Puerto Rico free of charge. The carrier also donated $1.1 million to charitable causes benefitting Houston and Puerto Rico, and it transported more than 5,000 rubber boots to Houston for rescue teams.

JetBlue, meanwhile, donated $1 million in supplies to Puerto Rico and by Sept. 29, had airlifted more than 3,000 people on 21 flights from San Juan and Aguadilla. The carrier, which flies more times per day through San Juan than any other airline, also made a commitment to provide a broad range of aid to the island through late December.JetBlue did not provide updated figures on its relief flights for this report.

Despite the negative impressions that many have of the U.S. airline industry, such humanitarian efforts in times of disaster are common, industry experts say.

"This industry, it just does that stuff," said Holly Hegeman, author of the weekly newsletter PlaneBusiness Banter. "I don't think its anything unusual. They've got the metal, and they know it's good in the long term."

Kevin Healy, CEO of Charlottesville, Va.-based Campbell-Hill Aviation Group and a former planning and marketing director at AirTran, said he was working at the carrier when it ran relief flights into Gulfport, Miss., and Shreveport, La., following Hurricane Katrina.

AirTran also offered cheap, last-second flights out of New Orleans ahead of Katrina, running as many flights as it could.

"Airlines aren't public utilities" Healy said. "It's tricky. You've got shareholders and boards to be accountable to, but you always want to help as long as you can."

Indeed, the efforts of airlines this year went far beyond relief flights and charitable donations. Carriers also used larger aircraft than usual for flights and added flights ahead of storms while capping ticket prices both before and after the hurricanes struck.

Passengers board one of Spirit's relief flights in Aguadilla, Puerto Rico, on Sept. 29.

United, for example, said it offered 13,600 extra seats to affected areas this storm season. JetBlue has capped fares to and from Puerto Rico at $135 through Nov. 15, a fare that includes two checked bags and free pet carriage.

Other airlines also capped ticket prices ahead of storms, but the broad move in that direction didn't come until after accusations of price gouging dominated one of the pre-Irma news cycles as people trying to get out of Florida encountered four-figure ticket prices.

Experts said those high prices were not price gouging, but rather the result of the airlines' revenue management programs performing their usual computerized functions of measuring supply versus demand on typically expensive close-in bookings. Still, that shot of bad press exemplified the razor's edge that airlines walk these days in the court of public opinion.

Hegeman said that while airlines have done good deeds in hurricane zones this year, they have likely been more cognizant of publicizing those efforts than they have been in storm seasons past.

"What I don't like to see particularly is when airlines put film crews there," she said.

In the case of Spirit, Webster said, public relations considerations haven't been a factor in the relief efforts.

"In fact, we didn't allow reporters on our aircraft for relief flights because we wanted to bring the maximum number of people out," she said. "We do it because we think it is the right thing to do."

Comments

United States Government Accountability Office

GAO

Report to Congressional Requesters

March 2013

PUERTO RICO

Characteristics of the Island's Maritime Trade and Potential Effects of Modifying the Jones Act

GAO-13-260

GAO
Accountability * Integrity * Reliability

Highlights

Highlights of GAO-13-260, a report to congressional requesters

March 2013

PUERTO RICO

Characteristics of the Island's Maritime Trade and Possible Effects of Modifying the Jones Act

Why GAO Did This Study

Puerto Rico is subject to Section 27 of the Merchant Marine Act of 1920, known as the "Jones Act" (Act), which requires that maritime transport of cargo between points in the United States be carried by vessels that are (1) owned by U.S. citizens and registered in the United States, (2) built in the United States, and (3) operated with predominantly U.S.-citizen crews. The general purposes of the Jones Act include providing the nation with a strong merchant marine that can provide transportation for the nation's maritime commerce, serve in time of war or national emergency, and support an adequate shipyard industrial base. Companies (shippers) that use Jones Act carriers for shipping in the Puerto Rico trade have expressed concerns that, as a result of the Jones Act, freight rates between the United States and Puerto Rico are higher than they otherwise would be, and given the reliance on waterborne transportation have an adverse economic impact on Puerto Rico.

This report examines (1) maritime transportation to and from Puerto Rico and how the Jones Act affects that trade and (2) possible effects of modifying the application of the Jones Act in Puerto Rico. GAO collected and analyzed information and literature relevant to the market and gathered the views of numerous public and private sector stakeholders through interviews and written responses. GAO is not making recommendations in this report. The Department of Transportation (DOT) generally agreed with the report, but emphasized that many of the issues related to the Jones Act are complex and multifaceted. DOT and others also provided technical clarifications, which GAO incorporated, as appropriate.

View GAO-13-260. For more information, contact Lorelei St. James at (202) 512-2834 or stjamesl@gao.gov.

What GAO Found

Jones Act requirements have resulted in a discrete shipping market between Puerto Rico and the United States. Most of the cargo shipped between the United States and Puerto Rico is carried by four Jones Act carriers that provide dedicated, scheduled weekly service using containerships and container barges. Although some vessels are operating beyond their expected useful service life, many have been reconstructed or refurbished. Jones Act dry and liquid bulk-cargo vessels also operate in the market, although some shippers report that qualified bulk-cargo vessels may not always be available to meet their needs. Cargo moving between Puerto Rico and foreign destinations is carried by numerous foreign-flag vessels, often with greater capacity, and typically as part of longer global trade routes. Freight rates are determined by a number of factors, including the supply of vessels and consumer demand in the market, as well as costs that carriers face to operate, some of which (e.g., crew costs) are affected by Jones Act requirements. The average freight rates of the four major Jones Act carriers in this market were lower in 2010 than they were in 2006, which was the onset of the recent recession in Puerto Rico that has contributed to decreases in demand. Foreign-flag carriers serving Puerto Rico from foreign ports operate under different rules, regulations, and supply and demand conditions and generally have lower costs to operate than Jones Act carriers have. Shippers doing business in Puerto Rico that GAO contacted reported that the freight rates are often—although not always—lower for foreign carriers going to and from Puerto Rico and foreign locations than the rates shippers pay to ship similar cargo to and from the United States, despite longer distances. However, data were not available to allow us to validate the examples given or verify the extent to which this difference occurred. According to these shippers, lower rates, as well as the limited availability of qualified vessels in some cases, can lead companies to source products from foreign countries rather than the United States.

The effects of modifying the application of the Jones Act for Puerto Rico are highly uncertain, and various trade-offs could materialize depending on how the Act is modified. Under a full exemption from the Act, the rules and requirements that would apply to all carriers would need to be determined. While proponents of this change expect increased competition and greater availability of vessels to suit shippers' needs, it is also possible that the reliability and other beneficial aspects of the current service could be affected. Furthermore, because of cost advantages, unrestricted competition from foreign-flag vessels could result in the disappearance of most U.S.-flag vessels in this trade, having a negative impact on the U.S. merchant marine and the shipyard industrial base that the Act was meant to protect. Instead of a full exemption, some stakeholders advocate an exemption from the U.S.-build requirement for vessels. According to proponents of this change, the availability of lower-cost, foreign-built vessels could encourage existing carriers to recapitalize their aging fleets (although one existing carrier has recently ordered two new U.S.-built vessels for this trade), and could encourage new carriers to enter the market. However, as with a full exemption, this partial exemption could also reduce or eliminate existing and future shipbuilding orders for vessels to be used in the Puerto Rico trade, having a negative impact on the shipyard industrial base the Act was meant to support.

Contents

Abbreviations

BVI	British Virgin Islands
CBP	Customs and Border Protection
DHS	Department of Homeland Security
DOD	Department of Defense
DOJ	Department of Justice
DOT	Department of Transportation
FEU	forty-foot equivalent unit
FMC	Federal Maritime Commission
LNG	liquefied natural gas
MARAD	Maritime Administration
NASSCO	National Steel and Shipbuilding Company
PREPA	Puerto Rico Electric Power Authority
STB	Surface Transportation Board
TEU	twenty-foot equivalent unit
USVI	U.S. Virgin Islands
VISA	Voluntary Intermodal Sealift Agreement

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GAO
Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, DC 20548

March 14, 2013

The Honorable Gregorio Kilili Camacho Sablan
Ranking Member
Subcommittee on Fisheries, Wildlife, Oceans
and Insular Affairs
Committee on Natural Resources
House of Representatives

The Honorable Pedro R. Pierluisi
House of Representatives

Puerto Rico—the largest and most populous insular area[1] of the United States—depends heavily on maritime transportation to move goods to and from the island. The Jones Act,[2] in general, requires that maritime transport of cargo between points in the United States be carried by vessels that are owned by U.S. citizens and registered under the U.S. flag with a coastwise[3] endorsement, which in turn requires that such vessels be built in the United States.[4] Further, because the Jones Act requires

[1]The U.S. Department of the Interior, Office of Insular Affairs, defines an insular area as a jurisdiction that is neither a part of one of the several states nor a federal district. Insular areas of the United States include American Samoa, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands, as well as the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau.

[2]Section 27 of the Merchant Marine Act of 1920, Pub. L. No. 66-261, 41 Stat. 988, 999 (1920) (codified as amended at 46 U.S.C. § 55102).

[3]Coastwise domestic shipping generally refers to the transport of cargo by oceangoing vessels between the U.S. mainland and Alaska, Hawaii, and Puerto Rico; and along the Atlantic, Gulf, and Pacific Coasts, as well as between these coasts and the St. Lawrence Seaway; and between the Atlantic, Gulf, and Pacific Coasts via the Panama Canal.

[4]Ownership must be by a U.S. citizen or by companies controlled by individuals that are U.S. citizens with at least 75 percent of ownership. Registry pertains to a vessel certificate determining the ownership and nationality of the vessel. The U.S. Coast Guard determines the rules and standards, and vessel eligibility for coastwise endorsement (which allows vessels to engage in the coastwise trade) and issues certificates of documentation defining the type of trade in which vessels are allowed to engage. The build requirement includes being rebuilt in the United States, but does not require repairs be made in U.S. shipyards. However, section 466 of the Tariff Act of 1930 (Pub. L. No. 71-361, 46 Stat. 590, 719 (codified at 19 U.S.C. § 1466)), as amended, generally requires that any repairs done abroad on certain U.S.-flag vessels, such as those documented for coastwise trade, pay a 50 percent duty on the cost of repairs.

U.S.-flag registry, U.S. manning laws apply, which require predominantly U.S. citizen crews.[5] Puerto Rico is subject to all Jones Act requirements. However, under statute, U.S. coastwise laws such as the Jones Act generally do not apply to cargo transported between the United States and certain other insular areas, including the U.S. Virgin Islands.[6] In addition, under statute, vessels engaging in domestic trade between the United States and certain other insular areas, including Guam, require only a registry endorsement (i.e., U.S.-flag registry without the U.S.-build requirement).[7]

Among other purposes, the Jones Act, as amended, was intended to provide the nation with 1) a strong merchant marine[8] that can serve as a naval or military auxiliary in time of war or national emergency, 2) transportation for the proper growth of the nation's maritime commerce, and 3) support for efficient facilities for building and repairing vessels.[9] Historically, however, shippers and others engaged in shipping between the United States and Puerto Rico have expressed concerns that, as a result of the Jones Act, freight rates between the United States and Puerto Rico are higher than they otherwise would be, and that the higher rates increase prices of goods and have a negative effect on the Puerto

[5]All licensed officers must be U.S. citizens and the unlicensed crew must be at least 75 percent U.S. citizens. See 46 U.S.C. § 8103.

[6]Pursuant to 46 U.S.C. § 55101, the United States coastwise laws, in general, apply to the United States, including the island territories and possessions of the United States. Section 55101 further provides specified exceptions to the application of the coastwise laws, whereby, in general, the coastwise laws do not apply to, for example, the Commonwealth of the Northern Mariana Islands and the U.S. Virgin Islands. For the U.S. Virgin Islands, under 46 U.S.C. § 55101(b)(3), this exemption is to be in effect until the President of the United States declares by proclamation that the coastwise laws apply to the Virgin Islands. While the insular areas of the United States, other than Puerto Rico, are not within the Customs territory of the United States, under the Harmonized Tariff Schedule of the United States, certain types of qualifying insular area exports to the United States are exempt from duty.

[7]In general, registry endorsements, which do not include a U.S.-build requirement, may be issued for vessels to engage in trade with American Samoa, Guam, Kingman Reef, Midway, and Wake. See 46 U.S.C. § 12111(b).

[8]The term "merchant marine" refers to the commercial ships or fleet of a nation, and to the people who operate them.

[9]Section 1 of the Merchant Marine Act, 1920 (46 U.S.C. App. 861), now codified at 46 U.S.C. § 50101.

Rico economy.[10] As a result, some of these stakeholders have called for an exemption for Puerto Rico from the Jones Act in its entirety, allowing foreign carriers to provide service between the United States and Puerto Rico or for an exemption from the U.S.-build requirement of the Jones Act, allowing U.S. carriers to use foreign-built vessels. Because of these concerns you asked us to examine the effect of the Jones Act's application to Puerto Rico. This report examines (1) the characteristics of maritime transportation to and from Puerto Rico and how the Jones Act affects that trade, and (2) possible effects of modifying the application of the Jones Act in Puerto Rico.

To address these objectives, we collected and analyzed data, reviewed literature and reports relevant to these markets, and gathered the perspectives and experiences of numerous public and private sector stakeholders, including companies that utilize maritime-shipping services (referred to as "shippers" in this report) through interviews and written responses. In particular, we gathered information from Jones Act carriers operating between the United States and Puerto Rico on various aspects of the services they provide, including information on their vessels, routes, services, operating and capital costs, and average freight rates. We also contacted 10 foreign carriers to obtain similar information; however, nine of the ten foreign carriers we contacted declined to be interviewed, although representatives from two foreign carriers participated in a larger meeting of stakeholders we held in Puerto Rico. As a result, we were not able to gather detailed cost or rate information from foreign carriers that call in Puerto Rico. See appendix I for more information about our scope and methodology and a listing of the stakeholders we interviewed.

We conducted this performance audit from October 2011 through February 2013 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

[10]Similar concerns have also been raised by stakeholders with other noncontiguous areas of the United States such as Alaska and Hawaii.

Background

Puerto Rico is an island about 1,000 miles southeast of Miami, Florida, and relies heavily on oceangoing vessels to move large volumes of goods to and from the island. Puerto Rico has maintained a strong trade relationship with U.S. suppliers and imports significantly more in trade volume, by weight, than it exports back to the United States. Of the total volume of trade between the United States and Puerto Rico in 2011, about 85 percent was shipped from the United States to Puerto Rico, while 15 percent went from Puerto Rico to the United States. Goods imported to Puerto Rico from the United States are primarily consumer goods, although 8 of the top 10 goods by volume imported into Puerto Rico are raw materials related to the manufacturing of pharmaceuticals and medical devices. Puerto Rico's major exports back to the United States are typically high-value finished products, particularly pharmaceutical products and medical devices. While trade between Puerto Rico and the United States is significant, Puerto Rico imports more by volume from foreign countries than from the United States, primarily due to imports of petroleum products.

The Jones Act is one of the cabotage (also known as "coastwise") laws of the United States and applies to cargo shipped by waterborne transportation between two U.S. points.[11] Cabotage laws are designed to limit the domestic transport of goods and passengers to a country's national flagged vessels. According to the Department of Transportation's (DOT) Maritime Administration (MARAD), under the Jones Act, all domestic water transportation providers compete under uniform laws and regulations, creating an even playing field.[12] The United States is not alone in establishing and enforcing cabotage laws. Most trading nations of the world, according to MARAD, have or have had cabotage laws of some kind. Furthermore, these types of laws are not unique to the maritime industry, but U.S. cabotage provisions apply, in some form or degree, to other transportation modes, such as aviation, rail, and trucking.[13]

[11]In general, the term "cabotage" has been used to refer to the transport of cargo or passengers between two points in the same country, as well as restrictions on such transport.

[12]MARAD, *America's Marine Highway Report to Congress* (Washington, D.C., April 2011).

[13]While cabotage principles are similar, no U.S.-build requirement exists for other modes in the United States.

Several federal agencies have a role in supporting, administering, and enforcing the Jones Act. In particular, MARAD's mission is to promote the maintenance of an adequate, well balanced U.S. merchant marine to ensure that the United States maintains adequate shipbuilding and repair services, efficient ports, and a pool of merchant mariners for both domestic commerce and national defense. Although the Department of Defense (DOD) does not administer or enforce the Jones Act, the military strategy of the United States relies on the use of commercial U.S.-flag ships and crews and the availability of a shipyard industrial base to support national defense needs. As such, MARAD and DOD jointly manage the Voluntary Intermodal Sealift Agreement (VISA) Program, established for emergency preparedness, which includes over 300 commercial U.S.-flag vessels to provide DOD with assured access to emergency sealift capacity. See appendix II for more details on federal agencies' roles in relation to the Jones Act.

Jones Act Results in a Discrete Shipping Market between the United States and Puerto Rico

Jones Act requirements have resulted in a discrete shipping market between Puerto Rico and the United States. Most of the cargo shipped between the United States and Puerto Rico is carried by four Jones Act carriers that provide dedicated, scheduled, weekly service using containerships and container barges—some of which have exceeded their expected useful life. Dry and liquid bulk cargo vessels also operate in the market under the Jones Act, although some shippers report that qualified bulk cargo vessels may not always be available to meet their needs. Cargo moving between Puerto Rico and foreign destinations is carried by numerous foreign-flag vessels, typically as part of longer global trade routes. Freight rates in this market are determined by a number of factors, including the supply of vessels and consumer demand in the market, as well as costs that carriers face to operate, some of which are affected by Jones Act requirements. The average freight rates of the four major Jones Act carriers in this market were lower in 2010 than they were in 2006, as the recent recession has contributed to decreases in demand. In contrast, foreign-flag carriers operate under different rules, regulations, and supply and demand conditions and generally have lower costs to operate than Jones Act carriers. Shippers doing business in Puerto Rico reported that freight rates for foreign carriers going to and from foreign ports are often—although not always—lower than rates they pay to ship similar cargo from the United States, despite longer distances. However, data were not available to allow us to validate the examples given or verify the extent to which this occurred. According to these shippers, lower rates, as well as limited availability of qualified vessels in some cases can lead companies to source products from foreign countries

rather than the United States. The impact of rates to ship between the United States and Puerto Rico on prices of goods in Puerto Rico is difficult to determine with any precision and likely varies by type of good.

Characteristics of Maritime Transportation to and from Puerto Rico

Four Jones Act Carriers Offer Regularly Scheduled Container Service

A large majority of the maritime trade between the United States and Puerto Rico is shipped in containers by four Jones Act carriers: Crowley Puerto Rico Services, Inc.; Horizon Lines, Inc., Sea Star Line, LLC; and Trailer Bridge, Inc. These carriers currently use 17 vessels to provide their shipping services—5 self-propelled containerships and 12 container barges that are pulled by tugboats (see table 1). As shown in the table, nearly all of the containerships and several of the barges used by these carriers are operating beyond their average expected useful life, which is about 30 years for a containership and about 27 years for a barge, according to Office of Management and Budget guidance.[14] Containerships in this trade average 39 years old, while barges averaged 31 years, although one carrier noted that, despite their advanced age, all its Jones Act vessels operating in the trade are fully compliant with Coast Guard rules and regulations. Furthermore, these averages reflect when the vessels were first constructed, but do not account for periodic refurbishments of many of the vessels to mitigate some of the effects of age and wear on a vessel and extend the expected useful service life. While the Jones Act vessels operating between the United States and Puerto Rico are all enrolled in MARAD and DOD's VISA program, these vessels would have limited contribution to military sealift capabilities, according to DOD officials. According to DOD, the containerships—particularly lift-on/lift-off vessels—in this trade are less useful for military

[14]The U.S. Navy, while acknowledging that the Office of Management and Budget's guidance of 30 years, depending on certain factors, estimates an expected service life of up to 40 years for cargo vessels and a financial rating agency set the expected useful life at 40 years. See OMB Circular No. A-76—Revised Supplemental Handbook, *Performance of Commercial Activities*, (Washington, D.C.: March 1996); Department of the Navy, Naval Sea Systems Command, *Design Data Sheet: Calculation of Surface Ship Annual Energy Usage, Annual Energy Cost, and Fully Burdened Cost of Energy*, (Washington, D.C.: August 7, 2012).

purposes compared to vessels with roll-on/roll-off capability;[15] and the tugs and barges in this trade are generally considered of lesser military value because of their slow speed relative to self-propelled vessels. Nonetheless, some of the vessels used for shipping between the United States and Puerto Rico have participated in past emergency responses, such as transporting goods to Haiti after the earthquake in 2010. In addition, according to DOD, whether or not the vessel is militarily useful, commercial U.S.-flag vessels provide employment to trained officers and unlicensed seamen, many of whom could be available to crew government-owned sealift vessels in times of war or national emergency.

Table 1: Information on Jones Act Carriers Shipping Containers between the United States and Puerto Rico, as of January 2013

Carrier	Percent market share (as of June 2011)	Type of vessels operated	Number of vessels used	Available weekly capacity (FEUs one way)[a]	Vessel age range in years	Number of service days per week	U.S. ports served[b]
Horizon Lines	30	Self-propelled containership (lift on/lift off)	3	2,340	38-44	3	Jacksonville, FL Elizabeth, NJ Houston, TX
Sea Star Line[c]	27	Self-propelled containership (lift on/lift off with roll on/roll off capability)	2	1,200	36-38	2	Port Everglades, FL Jacksonville, FL
Crowley	31	Barge (roll on/roll off)	8	1,820	33-42	4	Jacksonville, FL Pennsauken, NJ
Trailer Bridge	12	Barge (roll on/roll off)	4	800	14-28	2	Jacksonville, FL

Source: GAO, carriers, and publicly-available literature.

[a]A forty-foot equivalent unit (FEU) is a capacity measurement used in container transportation for cargo volume that can be carried in a standard 40-foot-long container. A twenty-foot equivalent unit (TEU) is a capacity measurement used in container transportation for cargo volume that can be carried in a standard 20-foot-long container.

[b]All carriers operate to the Port of San Juan in Puerto Rico.

[15]On lift-on/lift-off vessels, cargo is loaded and discharged over the top of the vessel using cranes or derricks. By contrast, Roll-on/roll-off vessels are designed to transport wheeled cargo, such as trailers, containers on chassis, railroad cars, and vehicles that are loaded and unloaded using port ramps.

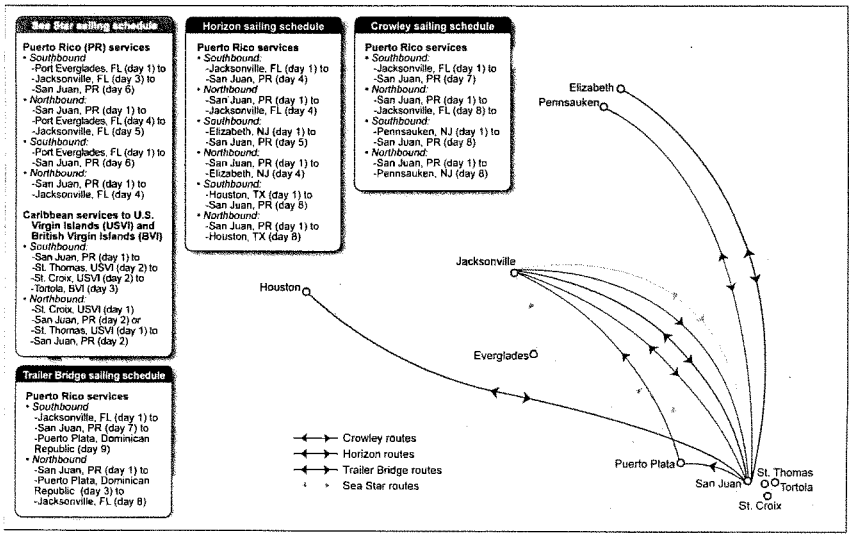
[9]In December 2012, Sea Star announced that it has contracted with General Dynamics' National Steel and Shipbuilding Company (NASSCO) shipyard for the construction of two new 3,100-TEU, containerships for the Puerto Rico service for about $350 million, with options for three additional vessels. When completed, the 764-foot-long containerships will be primarily powered by liquefied natural gas (LNG) and will be delivered and enter service between Jacksonville, Florida, and San Juan, Puerto Rico in 2015 and 2016. See TOTE, Inc., World's First and Largest LNG-Powered Containerships To Serve Puerto Rico For TOTE, Inc., December 4, 2012.

The four major Jones Act carriers provide regularly scheduled, weekly service between ports in the United States and Puerto Rico. These carriers offer different types of services based on the types of ships they operate. Horizon and Sea Star offer approximately 3-day one-way service between various U.S. ports and Puerto Rico on self-propelled containerships,[16] while Trailer Bridge and Crowley provide somewhat slower barge service—approximately 7 days one way.[17] Some of these vessels also serve ports in the Dominican Republic and the U.S. Virgin Islands (see fig. 1).

[16]Horizon Lines' service between Houston, Texas, and San Juan, Puerto Rico, requires 7 days of transit one-way.

[17]These are ocean transit times and do not capture door-to-door time differences. Roll on/roll off barge services may save time in cargo loading, unloading, and *drayage* (i.e., moves to or from the port from the origin or destination of the shipment) relative to containerships in port.

Figure 1: Jones Act Carriers' Container Shipping Routes between the United States, Puerto Rico, and Other Caribbean Destinations



Sources: Jones Act carriers, Map Resources, and GAO.

Some carriers have tailored their service specifically for shipping between the United States and Puerto Rico. For example, while foreign-flag carriers involved in international trade use standardized 20- and 40-foot containers, some Jones Act carriers provide shippers with a range of larger container units (45-, 48-, and 53-foot). The carriers' larger container units are the same size and type of equipment currently operated within the domestic U.S. trucking and rail transportation systems; thus, shippers can use the same packing systems they use for other modes of U.S. transportation, a benefit that provides cost savings to the carriers and shippers. This also enables more efficient loading and unloading of containers and trailers, and delivery to their final destination on the island.

According to U.S. and Puerto Rico shippers we interviewed, the four carriers generally provide reliable, on-time service between the United States and Puerto Rico, allowing shippers to meet "just in time" delivery needs. In fact, many island importers' inventory management relies on prompt and regular shipping and receipt of needed goods to stock shelves, instead of warehousing goods, a benefit that helps minimize inventory storage costs. In particular, we were told by stakeholders that warehousing is costly in Puerto Rico because of high energy costs and because the Puerto Rico government imposes inventory storage taxes on certain goods both imported into and manufactured in Puerto Rico.

Jones Act Vessels Also Provide Bulk Cargo and Other Transportation Services

The remaining maritime trade between the United States and Puerto Rico is shipped on bulk vessels. Bulk cargo—including dry bulk goods such as fertilizer, animal feed, grains, and coal, and liquid bulk goods, such as oil and gas—are imported in large volumes and are sometimes seasonal. According to MARAD officials, global bulk services are typically based on unscheduled operations, as opposed to scheduled container services. According to shippers we interviewed, these vessels are often under term charters and a limited number of qualified Jones Act vessels may be available at any given time to meet shippers' needs. While not encompassing all dry and liquid bulk vessels qualified to provide service between the United States and Puerto Rico, shippers that we interviewed identified three Jones Act carriers—utilizing a total of six vessels—that offer bulk-shipping services between the United States and Puerto Rico (see table 2). Some of the vessels are also used to serve ports in the U.S. Virgin Islands, the Dominican Republic, and Haiti.

Table 2: Information on Select Jones Act Carriers Shipping Bulk Cargo between the United States and Puerto Rico, as of August 2012

Carrier	Type of vessels operated[a]	Number of vessels used	Vessel age range in years	U.S. ports served[b]
Crimson Shipping	Bulk barge	3	12-17	Mobile, AL Fernandina Beach, FL
Moran Towing Corp	Bulk barge (articulated tug barge)	1[c]	30	New Orleans, LA
United Ocean Services	Bulk carrier	2	31-32	New Orleans, LA

Source: GAO, carriers and their publicly-available websites, and shippers.

[a]Bulk barges are pulled by tugboats; bulk carriers are self-propelled vessels. An articulated tug barge is a "hinged" connection system between the tug and barge that allows the tug to push the barge

instead of pulling it, while providing more maneuvering flexibility similar to that of a containership.

[b]These carriers may call in the Port of San Juan or in a number of smaller bulk ports around Puerto Rico.

[c]One barge is generally used for the regular service dedicated to Puerto Rico; an additional barge can be used to compensate when additional capacity or quicker turnaround service is needed.

In addition to services between the United States and Puerto Rico, the Jones Act requirements and other U.S. coastwise laws also apply to transportation of inter-island cargo, the transportation of passengers, and port towing operations, laws that restrict these services to vessels that are U.S.-owned and are qualified to engage in U.S. coastwise trade. As a result, for example, Puerto Rico has inter-island ferry services that transport cargo and passengers between Puerto Rico and its smaller islands. These services are operated by the government of Puerto Rico and generally cannot use foreign passenger vessels without a waiver.[18] According to one representative from the island of Vieques, these ferries are also reaching the end of their expected useful life, and the islands of Vieques and Culebra rely on daily transport of goods by the Puerto Rico ferry system. However, according to the representative, the service generates limited revenues, making it difficult to purchase new or used U.S-built ferries. In addition, according to representatives of the Puerto Rico Shipping Association, five tugboat companies—also subject to coastwise requirements[19]—provide towing and other services in the Port of San Juan, Puerto Rico.

Numerous Foreign-Flagged Vessels Operate in Puerto Rico

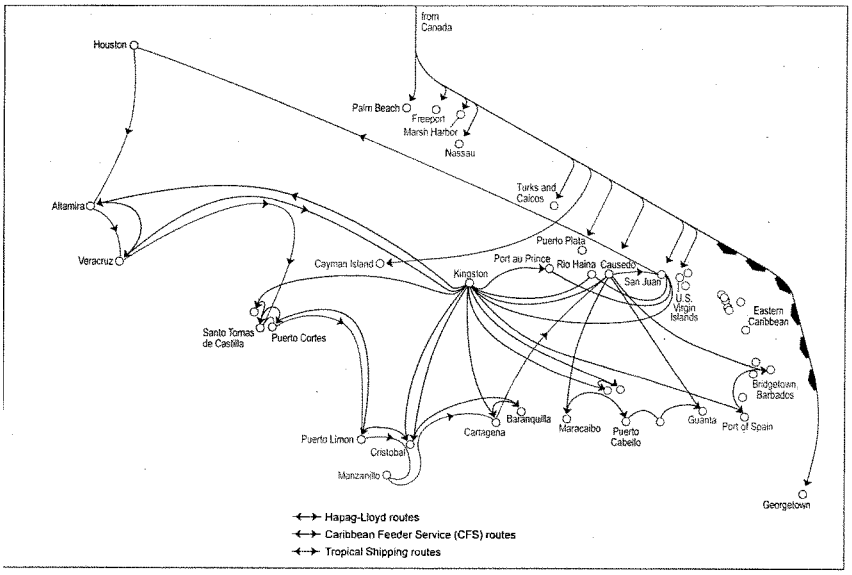
Numerous foreign carriers and foreign-flag vessels operate in Puerto Rico carrying cargo to and from foreign locations. According to data from the Puerto Rico Ports Authority, in April 2011 alone, 55 different foreign-flag cargo vessels—including tankers, containerships, and roll-on/roll-off cargo vessels, among others—loaded and unloaded cargo in the Port of San Juan, Puerto Rico. Over the entire year of 2011, 67 percent of the

[18]For example, under MARAD's small vessel waiver program, small passenger vessels authorized to carry no more than 12 passengers for hire are eligible for a waiver of the U.S.-build and certain other specific coastwise requirements (see 46 U.S.C. § 12121); in addition, there is a statutory exemption regarding Puerto Rico under which vessels not qualified to engage in coastwise trade (e.g., foreign vessels) may transport passengers between Puerto Rico and other ports in the U.S. until qualified U.S. vessels are available (see 46 U.S.C. § 55104).

[19]See, 46 U.S.C. § 55111 (towing) and § 55112 (vessel escort operations and towing assistance).

vessels that operated in the Port of San Juan were foreign-flag vessels, while 33 percent were U.S.-flag vessels. Some of the foreign carriers that serve Puerto Rico have extensive international operations—using vessels with larger capacity than the major Jones Act carriers—that stop at multiple ports along their shipping routes across the globe. Other foreign-flag carriers offer "feeder" services throughout the Caribbean from hubs in ports such as Kingston, Jamaica (see fig. 2).

Figure 2: Examples of Foreign Carriers' Feeder Services Operating in the Caribbean



Sources: Carrier information, Map Resources, and GAO.

According to MARAD, vessels engaged in foreign trade are typically registered under "flag-of-convenience," or open registries that have less stringent regulatory requirements than the U.S. flag registry. In 2011,

most of the foreign-flag vessels calling in the Port of San Juan, Puerto Rico were registered under the Panamanian flag, followed by the Bahamian flag, the flag of Antigua and Barbuda, and the Liberian flag. Foreign carriers can also use vessels that are built anywhere in the world, and the average age of foreign-flag vessels (around 11-12 years) is significantly less than the average age of Jones Act vessels.

Many Factors Determine Freight Rates for Maritime Transportation in Puerto Rico, While Some Factors Are Affected by Jones Act Requirements

Freight rates are set based on a host of supply and demand factors in the market, some of which are affected directly or indirectly by Jones Act requirements. However, because so many other factors besides the Jones Act affect rates, it is difficult to isolate the exact extent to which freight rates between the United States and Puerto Rico are affected by the Jones Act. The Puerto Rico trade, much like the maritime cargo trade around the world, has been affected by reduced demand overall because of the recession. Puerto Rico fell into a recession in 2006—before the onset of recession for the U.S. economy—and has had much more difficulty recovering from it, according to government sources.[20] Moreover, the population of the island has been decreasing in the past decade. This lower demand relative to supply (i.e. vessel capacity) is a factor that would likely be putting downward pressure on freight rates in recent years, as carriers would have more difficulty selling their existing capacity. According to the data provided by the four major Jones Act carriers, average freight rates from the United States to Puerto Rico declined about 10 percent from 2006 through 2010, while rates from Puerto Rico to the United States declined about 17 percent.

As demand decreases relative to supply, carriers will adjust their services in response.[21] In this market for example, according to Crowley, the company reduced its service to Puerto Rico with one less barge and one

[20]Information from the Commonwealth of Puerto Rico's Financial Information and Operating Data Report, June 8, 2012, and the Government Development Bank for Puerto Rico, Economic Activity Index, March 2006.

[21]Over the longer term, carriers may not be able to sustain services where demand is insufficient. For example, Horizon operated five foreign-built vessels under the U.S. flag to provide shipping services from the United States to Guam as part of a larger trans-pacific service that brought goods from Asia back to the United States on the return leg. However, according to a representative of the carrier, because of higher capacity vessels being deployed in the trans-pacific trade, slack demand as a result of the recession, and resulting decreases in freight rates, Horizon was unable to sustain the service and the service was discontinued in 2011.

less weekly sailing from Jacksonville in 2009, primarily in response to decreased demand. Also, more recently in July 2011, Sea Star discontinued its service from Philadelphia, Pennsylvania, because of a lack of demand. Some shippers and business representatives we spoke with were concerned with the possibility that, given the weak demand in the market, some carriers may not be able to sustain the level of services they currently provide in the Puerto Rico market.

In certain specific markets, however, demand for Jones Act transportation between Puerto Rico and the United States may be increasing. For example, according to one shipper, there may be increased demand for shipping refined petroleum and gas products. For natural gas, this appears likely because the expected increased use of this fuel for electricity generation, while in the case of refined petroleum products this may be occurring because of a closure of the refinery on St. Croix, U.S. Virgin Islands that had previously provided petroleum products to Puerto Rico. However, several shippers in these markets told us that vessels are often not available to provide service. Where the supply of ships is limited relative to demand there will be upward pressure on freight rates. Typically in such a scenario, carriers and shipowners will respond to higher rates in the short term by repositioning existing capacity to serve that market, thus bringing supply and demand into balance. However, if qualified Jones Act vessels are not available, such adjustments may not occur since existing capacity operated by foreign-flag carriers cannot enter this market. Over the longer term, the market may adjust through new shipbuilding for the Jones Act trade, as long as expectations of demand and freight rates are sufficient to support that capital investment. Recent announcements from two Jones Act carriers concerning plans to build new containerships and tankers indicate that the U.S. flag industry is responding to the emergence of new market demand.

Operating costs for carriers are another supply factor that contributes to the determination of freight rates. Most of the carriers' operating costs (about 69 percent based on carrier data for 2011) are non-vessel operating costs, including such things as terminal and port costs, among others—and are not directly affected by Jones Act requirements, and would be similarly borne by any carrier operating between the United States and Puerto Rico. Vessel operating costs (which include crew costs, insurance, maintenance and repair, and fuel costs, among others) comprise about 31 percent of the carriers' operating costs on average. Some vessel operating costs are affected by rules and regulations related to the Jones Act and operating under the U.S. flag. Most significantly, Jones Act carriers must hire predominantly U.S.-citizen crews, and

according to data provided by the major Jones Act carriers, crew costs in this trade represented an average of about 20 percent of vessel operating costs in 2011. According to MARAD, the standard of living in the United States, labor agreements negotiated with mariner unions, benefits included in overall compensation, and government manning requirements, all affect crew costs. By contrast, foreign-flag carriers operating under an open registry have flexibility to hire crews from around the world, and can therefore avoid the higher costs associated with U.S.-crews. While not specific to the carriers or the vessels operating between the United States and Puerto Rico, according to a MARAD report, the combination of these various requirements and work rules can result in overall crewing costs for U.S. flag operators that are roughly 5 times greater than crewing costs for foreign-flag carriers, on average.[22] In addition, U.S.-flag vessels are subject to government safety inspections and vessels have to comply with a variety of construction, safety, and environmental regulatory requirements, which affect their costs. According to the MARAD report, the lack of government safety inspections of foreign-flag vessels operating under open registries helps provide such vessels with increased operating flexibility and lower operating costs.

According to Jones Act carriers and other stakeholders, some operating costs have been increasing. For example, fuel is one of the largest vessel operating cost for the Jones Act carriers in this market—representing an average of about 64 percent of the four major Jones Act carriers' vessel operating costs in 2011—and fuel costs have increased substantially over the last ten years. While fuel costs are not directly affected by Jones Act requirements, older vessels burn fuel faster and less efficiently compared to newer vessels, and the age of some of the Jones Act carriers' vessels has contributed to increasing fuel costs. However, MARAD noted that the majority of the Jones Act vessels are barges being towed by rebuilt tugboats at lower speeds than self-propelled containerships, which makes barges relatively fuel efficient compared to self-propelled vessels. Furthermore, older vessels require more maintenance and repair expenses than newer vessels. For the major carriers in the Puerto Rico market, this expense represented an average of about 4 percent of vessel

[22]The report further noted that in some other countries mariners do not have to pay income tax, which adds to cost differentials for U.S.-flag operators. See MARAD, *Comparison of U.S. and Foreign-Flag Operating Costs* (Washington, D.C.: September 2011).

operating costs in 2011. While the age of these vessels is not a direct result of the Jones Act, to some extent the U.S.-build requirement and the high costs of U.S. built vessels may delay recapitalization decisions, or render such decisions infeasible. Because foreign carriers can typically use vessels that are built anywhere in the world, rather than having to use generally more expensive U.S.-built vessels, they have more flexibility to recapitalize their fleets. As mentioned, on average, foreign-flag vessels are newer, and as such will generally benefit from lower overall fuel and ongoing maintenance costs.

According to shippers and carriers, several other factors not directly related to Jones Act requirements in the Puerto Rico market contribute to how freight rates are set, including the following:

- For approximately 85 percent of the cargo moving between the United States and Puerto Rico, freight rates are set on a negotiated basis under contract.[23] Although volume discounts are not unique to this market or the global maritime shipping industry, large volume shippers have more leverage to negotiate contracts with lower rates while small volume shippers or those that require infrequent service will likely pay higher rates. Based on our interviews with shippers, the negotiated rates vary substantially for shippers based on their companies' size and regularity of use of shipping services.

- The short travel distance between the United States and Puerto Rico makes it possible for barge operators to compete with self-propelled containership operators. As we noted, barge service takes longer to transport goods than self-propelled containerships.[24] However, barge vessels are less expensive to operate and maintain. As such, according to data provided by the four major Jones Act container carriers, freight rates for barge service from the United States to Puerto Rico are generally lower than rates for self-propelled containerships. For shippers with goods that are less time sensitive, barges offer a less expensive option for service between the United States and Puerto Rico. However, according to some shippers we interviewed, when they periodically require faster service or service

[23]For the remaining cargo, freight rates are based on the carriers' publicly filed tariffs.

[24]However, roll on/roll off barge services may offer some time savings in cargo loading and unloading relative to the lift on/lift off operations of containerships once in port.

from ports outside Florida there are fewer competitive alternatives, since only two carriers offer such service.

- Some of the cargo imported from the United States is temperature controlled perishable goods, such as dairy, meat, and agricultural products. According to representatives of the Puerto Rico Farm Bureau, the cost and reliability of shipping perishable food items is important because the island has less than a week's supply of perishables at any given time. Some shippers reported paying substantially more for service using refrigerated containers, sometimes a few thousand dollars more per container, compared to a non-refrigerated container. Although higher prices for refrigerated cargoes are not unique to this market or the global maritime shipping industry, these and other representatives of an association for food importers perceived less competition for this particular market segment.

- According to the four major Jones Act carriers, typically, vessels are about 80 percent full for their total container capacity moving southbound from the United States to Puerto Rico, and only 20 percent full for total container capacity moving northbound from Puerto Rico to the United States. The lower demand on return legs of the routes (known as "backhaul") results in relatively lower freight rates for this traffic. According to data provided by the four carriers, average freight rates for the return leg were about 55 percent less than the average rates from the United States to Puerto Rico in 2010. Some of the shippers we spoke with said low rates for the backhaul shipping services are beneficial to their business.

Another factor that could have affected freight rates in the past was conduct by certain carriers that led to a Department of Justice antitrust investigation. The investigation found that some Jones Act carriers conspired to fix rates at least as early as May 2002 until at least April 2008. In addition, with respect to a class action lawsuit against various Jones Act carriers, in August 2011, the United States District Court for the District of Puerto Rico granted final approval of settlement agreements. The settlement terms give class action members the option of freezing the base rates—not including other charges or fees, such as fuel

surcharges—of any shipping contract that exists with three of the Jones Act carrier defendants for a period of 2 years.[25]

Foreign Carriers Serving Puerto Rico Face Different Market Conditions and Costs than Jones Act Carriers Which Can Lead to Different Freight Rates for Similar Shipments and Affect Sourcing Decisions

Foreign carriers operate in a different market with different characteristics and, as mentioned, generally have lower vessel operating costs compared to Jones Act carriers.[26] As with the Jones Act market, rates for shipments between Puerto Rico and foreign countries are determined by various supply and demand factors. For example, some foreign carriers' longer trade routes allow them to spread their costs out over more containers or cargo and achieve economies of scale that are not available to Jones Act carriers providing dedicated service between the United States and Puerto Rico. In addition, while the recession has resulted in reduced demand in global shipping and put downward pressure on freight rates, because foreign carriers and shipowners operate in a global market, they may have more flexibility than Jones Act carriers to reposition vessel capacity in response to market- or product-specific fluctuations in demand.

According to representatives of several shippers we spoke with, freight rates offered by foreign carriers are often lower than Jones Act carriers for shipping the same or similar goods from more distant foreign locations. Shippers provided a number of examples of specific rate differentials, but we were unable to validate these rate differentials or estimate an average differential because we could not obtain necessary data since most cargo move under negotiated contract rates that are confidential and foreign carriers were not responsive to our requests for information. Furthermore, we were unable to determine specifics of the services being provided for the rate examples we were given (e.g., delivery times, reliability of the service, etc.), and therefore, in some instances, the rate examples may not be comparable.

Nonetheless, some companies operating in Puerto Rico told us that they may not purchase goods from U.S. sources because of higher transportation costs on Jones Act vessels compared to foreign-flag

[25]The ongoing investigation of shipping practices of various Jones Act carriers that serve Puerto Rico has led to, among other things, the imposition of about $46 million in criminal fines and guilty pleas in 2011 and 2012 by three of the four major Jones Act carriers.

[26]MARAD, *Comparison of U.S. and Foreign-Flag Operating Costs.*

vessels. In some instances, they may instead purchase the same or a closely substitutable good from a foreign country. This was particularly evident in the bulk shipping market. For instance, according to representatives of the Puerto Rico Farm Bureau, the rate difference between Jones Act carriers and foreign carriers has led farmers and ranchers on the island to more often source animal feed and crop fertilizers from foreign sources than from U.S. domestic sources, even though commodity prices were stated to be similar. They provided an example that shipping feed from New Jersey by Jones Act carriers costs more per ton than shipping from Saint John, Canada, by a foreign carrier—even though Saint John is 500 miles further away. According to the representatives, this cost differential is significant enough that it has led to a shift in sourcing these goods from Canada. Other companies involved in food importing gave additional examples of corn and potatoes being sourced from foreign countries rather than the United States, which they attributed to the lower cost of foreign shipping. However, data was not available to verify the extent to which changes in sourcing occurs because of higher transportation costs on Jones Act vessels.

Sourcing decisions in the market for petroleum products may also be affected by differences in freight rates between Jones Act vessels and foreign-flag vessels and the availability of qualified Jones Act vessels. An oil and gas importer in Puerto Rico told us that the company makes purchasing decisions based on the total price of oil or gas—including any applicable duties or other charges—plus transportation costs. The company looks at total prices from numerous suppliers around the world—including U.S. suppliers—but generally does not purchase from U.S. suppliers because the total cost is higher as a result of the differential in transportation costs. Representatives noted that the company does not purchase from U.S. suppliers in some case because of a lack of available Jones Act vessels to ship the product from U.S. ports. In another example, representatives of airlines purchasing jet fuel for use in Puerto Rico told us that they typically import fuel to the island from foreign countries, such as Venezuela, rather than from Gulf Coast refineries. They do so because of difficulty in finding available Jones Act vessels to transport jet fuel and, when vessels are available, the high cost of such shipments compared to shipping the product from foreign countries. These representatives noted that jet fuel availability in certain areas of the East Coast of the United States as well as in Puerto Rico was recently adversely affected by the closures of several refineries, including the one in St. Croix, U.S. Virgin Islands.

The cost and availability of vessels can also affect future sourcing decisions. For example, the Puerto Rico Electric Power Authority (PREPA) is planning to transition its primary power generation fuel from oil to natural gas and expects its natural gas consumption to increase substantially in the future. PREPA currently purchases most of its natural gas from Trinidad and Tobago and transports it on foreign-flag vessels, but is developing plans to purchase more natural gas from U.S. suppliers beginning in 2014, because of the expected lower price of natural gas from the United States. To do so, Jones Act-qualified LNG tankers would need to be available.[27] However, PREPA officials voiced concerns about the availability of eligible vessels, since none currently operates between the United States and Puerto Rico. They said the cost to build and operate a new LNG tanker under Jones Act requirements could result in high shipping costs that offset the savings from purchasing natural gas from the United States. Some foreign-flag LNG vessels are eligible to apply for an exemption under statute,[28] but PREPA officials were concerned that these vessels may not be available because they are currently under long-term contracts. Furthermore, because many of these vessels may be 16 years old or older, officials were concerned that they may not be as efficient or have the same level of safety that newer vessels may have.

We examined trade data for various commodities mentioned by shippers to see the extent to which these goods are sourced from other countries. Some commodities showed high percentages of foreign sourcing, while others were either split more evenly or mostly sourced domestically. It is difficult to discern the effect of any one factor, such as freight rates, on the sourcing of imports, because many factors can affect a business's sourcing decision at any given time, including the availability of ships and

[27]LNG is natural gas that has been liquefied for purposes of transport. To form, natural gas is cooled to below -260 degrees Fahrenheit to form a liquid. LNG is transported in double-hulled vessels specifically designed to handle the low temperature of LNG.

[28]In November 2011, a statute was enacted into law to authorize the Coast Guard to issue coastwise endorsements to three specific LNG vessels. These ships are currently operating in the Northeast. In addition, in 1996, a statute was enacted into law that created an exemption for non-Jones Act eligible vessels to transport LNG to Puerto Rico if the vessel (1) is a foreign built vessel built before October 19, 1996 or (2) was documented under the U.S. flag before October 19, 1996, even if the vessel then sailed under a foreign flag before being reflagged under the U.S. flag. According to MARAD and the White House's Domestic Policy Council, 37 such vessels exist—13 were built by U.S. shipyards and 24 were built in foreign shipyards.

the price of the goods. In any case, to the extent that the lack of available vessels may be causing shippers to seek foreign sources for some products, this lack of availability may signal the need for new Jones Act vessels to enter this trade. However, if carriers do not believe that the rates they will be able to charge in the future would be sufficient to support such investments, new vessels might not enter the trade and the products may continue to be sourced from non-U.S. sources. Recent announcements from two Jones Act carriers concerning plans to build new vessels indicate the willingness of the U.S. flag industry to respond to market demand.

Many Factors Influence Prices of Goods in Puerto Rico and the Impact of Transportation Costs Likely Varies by Type of Good

The prices of goods sold in Puerto Rico are determined by a host of supply and demand factors, similar to freight rates, and therefore, the impact of any costs to ship between the United States and Puerto Rico on the average prices of goods in Puerto Rico is difficult, if not impossible, to determine with precision.[29] On the demand side, key factors include the state of the economy and associated level of income of consumers, the tastes of potential consumers for various goods, and the extent to which consumers have ready substitutes (of other goods or the same good from elsewhere) available to meet their needs. For example, if consumers have ready substitutes available to them, it may be more difficult for retailers to pass on transportation costs in prices. On the supply side, a host of cost factors is also important, transportation costs among them. Some shippers we interviewed told us that transportation costs to Puerto Rico from the United States represent a minimal portion of the costs of goods they sell in Puerto Rico, while other shippers stated that these costs were more significant. These differences in the impact of transportation costs appear to vary depending on the nature of the shipper, and the shipping requirements of the goods. In particular, we were told that prices for some goods that require fast delivery or refrigerated containers—particularly food products subject to spoilage—may be more affected by transportation costs, because transportation costs represent a higher proportion of the total cost of the goods. We were also told that other cost factors that may influence pricing are somewhat unique to Puerto Rico. Some shippers noted that doing business on the island is expensive relative to costs for similar

[29]Because of the complexities in how product prices are set, and because sufficient data on freight rate differentials and product prices are not available, we did not attempt to estimate the impact of any freight rate differentials on product prices in Puerto Rico.

businesses in the United States. In particular, some shippers stated that storage and distribution in Puerto Rico can be more costly than in the United States and are factors in the prices at which goods sell.

Some shippers told us that their decisions on pricing are influenced by the extent of competition in Puerto Rico for the goods they provide. For example, according to a major U.S. company doing business in Puerto Rico, its pricing strategy is dependent on the pricing of the local competitors on the island. Company representatives explained that their prices may or may not be similar in Puerto Rico compared to U.S. mainland stores, but that those prices are not driven by shipping costs. Further, for some larger chain stores, pricing decisions are made at a corporate level so that prices for goods often do not differ considerably from location to location, despite variances in transportation costs. For example, according to a major U.S. chain store operating in Puerto Rico, its merchants often want to be able to offer a consistent every day price in its stores. Thus, the company decides, in some cases, to price some goods in Puerto Rico the same as in U.S. stores at potentially reduced profitability for those goods sold in Puerto Rico.

Modifying the Jones Act in Puerto Rico Would Have Uncertain Effects and May Result in Difficult Trade-offs

Potential Effects and Trade-offs of a Full Exemption

Many of the shippers and other stakeholders we interviewed expressed the view that allowing foreign carriers to enter this trade would create a more competitive marketplace with lower freight rates, which could in turn, affect shippers' business decisions and product prices. For example, shippers told us that lower freight rates between the United States and Puerto Rico could result in shippers choosing to source more goods from the United States as opposed to foreign countries, and that lower rates could lead to lower prices for products sold to consumers in Puerto Rico. We were also told that a broader array of providers available in the international market would help to ensure that specific services and vessels are always available to meet shippers' needs.

However, the effect on competition and freight rates from allowing foreign carriers to enter this trade is uncertain and depends on a variety of factors. Foreign carriers operating in the U.S. coastwise trade could be required to comply with other U.S. laws and regulations, even if Puerto Rico were exempted from the Jones Act, which could increase foreign carriers' costs and may affect the rates they could charge. We reported in 1998[30] and continue to find that arriving at an accurate estimate of the costs to foreign carriers of complying with U.S. laws would be very difficult, in part, because the estimate would depend heavily on which laws are considered applicable and on how they are applied.[31] Federal agency stakeholders we talked with generally indicated that they were reluctant to speculate on the extent to which U.S. laws might be applicable to such foreign carriers in the absence of Jones Act requirements. However, we reported in 1998 that, in particular, additional taxes and labor costs might be incurred. Some stakeholders contend, albeit speculatively, that if these costs were estimated and included, any rate advantage foreign carriers may have over Jones Act carriers would be lessened. For example, income generated by foreign corporations operating foreign-flagged vessels in the domestic trade could be subject to U.S. taxation,[32] depending on the circumstances. In addition, if foreign-flagged vessels were to spend most of their time in U.S. waters—as they might if they were to provide dedicated service between the United States and Puerto Rico—it would be necessary to obtain for any foreign crewmembers an immigration status that permits them to engage in

[30]GAO, *Maritime Issues: Assessment of the International Trade Commission's 1995 Analysis of the Economic Impact of the Jones Act*, GAO/RCED-98-96R (Washington, D.C., Mar. 6 1998).

[31]As we reported in 1998, if the Jones Act was repealed and the Congress were not to amend other statutes to take repeal into account, the administrative agencies and the courts would be left to interpret the existing laws. The applicability of the laws may depend on the extent to which foreign vessels operated in U.S. domestic commerce. Intermittent or infrequent contacts might make the laws inapplicable. See GAO/RCED-98-96R.

[32]The Internal Revenue Code has special rules for "transportation income." If the transportation income is attributable to transportation that begins *and* ends in the United States, it is treated as income derived from sources in the United States. If it begins *or* ends in the United States, 50 percent of the transportation income is treated as income derived from sources in the United States. The Internal Revenue Code also excludes from the gross income of foreign corporations income derived from the international operation of vessels if their home countries grant an equivalent exemption from paying taxes to U.S. corporations.

employment in the United States, requirements that could increase costs.[33]

Regardless of the legal questions above, entry by foreign carriers could have a number of other consequences. Although complying with U.S. laws could lessen any cost advantage to foreign carriers, current Jones Act carriers could still be operating at a cost disadvantage. Economic theory would suggest that entry into a market by lower-cost providers would likely alter the market dynamics in a way that higher-cost producers may have difficulty continuing to compete in the market. To the extent that foreign carriers can use cost advantages to charge lower rates and take market share from the existing carriers, such entry could lead to lost service by Jones Act carriers, their exit from the market, or consolidation among carriers serving the market. Current Jones Act carriers might also opt to provide service under a foreign flag to avoid costs associated with the U.S. flag. According to MARAD officials, unrestricted competition with foreign-flag operators in the Puerto Rico trade would almost certainly lead to the disappearance of most U.S.-flag vessels in this trade. MARAD officials noted that U.S. carriers currently do not typically compete with foreign-flag carriers in other Caribbean markets under the U.S. flag. Where U.S. carriers do compete with foreign-flag carriers, they typically operate non-U.S.-flag vessels, suggesting that U.S.-flag vessels may not be able to successfully compete against foreign-flag vessels if Jones Act restrictions were lifted for Puerto Rico.

To the extent that the number of carriers operating under the U.S. flag decreases under this scenario, expectations for future orders for new vessels built in U.S. shipyards could be reduced or eliminated—which is discussed in more detail later in this report—and the number of U.S. mariners could likewise decrease. According to MARAD, up to 1,400 mariners were crewed full-time on Jones Act vessels in Puerto Rico in 2011, including on offshore service vessels, harbor tugs, ferries, and

[33]Aliens admitted as D nonimmigrant crewmembers may not be employed in connection with the domestic movement of vessels or aircraft in the United States. 8 C.F.R. § 214.2(d)(1). Thus, they may not be employed in connection with the transportation of goods between one U.S. port and another. An alien crewmember who is allowed to leave the vessel on the basis of a D nonimmigrant visa must leave the United States on the same vessel or, with permission, on another vessel, and may not remain ashore more than 29 days. 8 C.F.R. § 252.1(d). If a crewmember is not permitted to go ashore, the master or agent of the vessel or aircraft must keep the crewmember aboard at all times while the vessel or aircraft is in the United States. 8 C.F.R. § 252.1(a).

barge services in addition to the vessels we identified earlier (see tables 1 and 2). A decline in the number of U.S.-flag vessels would result in the loss of jobs that employ skilled mariners needed to crew the U.S. military reserve and other deep-sea vessels in times of emergency. Furthermore, according to MARAD, the loss of U.S.-flag service would reduce their ability to ensure that marine transportation serves the Puerto Rico economy.

The nature of the service provided between Puerto Rico and the United States could also be affected by a full exemption from the Jones Act. In particular, foreign carriers that currently serve Puerto Rico as part of a multiple-stop trade route would likely continue this model to accommodate other shipping routes to and from other Caribbean destinations or world markets rather than provide dedicated service between the United States and Puerto Rico, as the current Jones Act carriers provide. If this were to occur, some stakeholders expressed concerns about the effect that such an altered shipping service would have on the reliability of service to and from the United States. For example, longer multi-port trade routes make it difficult to ensure that scheduled service will be consistently reliable, because carriers are more likely to experience weather delays or delays at ports, and could even intentionally bypass ports on occasion to make up lost travel time. According to some shippers, reduced reliability of service could result in shippers needing to keep larger inventories of products, and could thus increase warehousing and inventory-related costs for companies in Puerto Rico. As we described previously, importers' inventory management relies on prompt and regular shipping and receipt of needed goods to stock shelves, which is less costly than warehousing goods on the island. Additionally, some stakeholders expressed concern about the possible loss of convenient and inexpensive backhaul service. If, under new market conditions, carriers choose not to provide dedicated service, then backhaul services from Puerto Rico to the United States would also be part of longer multi-port trade routes and may not be direct from Puerto Rico to the United States. Because of limited volumes in this market, the result could be sporadic service or higher rates.

Potential Effects and Trade-offs of an Exemption to the U.S.-Build Requirement

Rather than allowing foreign carriers to provide service between the United States and Puerto Rico, a different modification advocated by some stakeholders would be to allow vessels engaged in trade between the United States and Puerto Rico to be eligible for an exemption from the U.S.-build requirement of the Jones Act. This would allow U.S.-flag carriers to purchase or use foreign-built vessels for shipping between the

United States and Puerto Rico.[34] According to industry stakeholders we interviewed, foreign-built barges can be priced about 20 percent less than U.S.-built barges,[35] and foreign-built containerships can be priced 50 percent less than similar U.S.-built containerships.[36]

According to proponents of this change, the availability of lower cost vessels could encourage existing carriers to recapitalize their aging fleets. As previously mentioned, many of the Jones Act vessels in this trade are operating beyond the end of their expected useful life, and according to some stakeholders, the high cost of building new U.S. vessels, as well as decreased demand in the market, may result in carriers deferring recapitalization decisions. Proponents also point out that newer, more efficient vessels generally have lower operating costs than vessels currently operating in the trade and thus may reduce operating costs for carriers. In addition, according to proponents, the availability of lower cost vessels would encourage additional competition, particularly in those sectors where demand may be increasing and available vessels are lacking, such as in bulk cargo shipping.

Regardless of whether vessels are U.S.-built or foreign-built, the costs of any new vessels will need to be recouped over the life of the vessel through freight rates. Should carriers decide to move forward with recapitalizing their fleets, they will need to decide if expected freight rates over many years are sufficient to support the purchase of new vessels.[37] The vessels currently involved in the trade, because they have largely been paid for and depreciated, have negligible ongoing capital costs. Purchasing new vessels will result in higher ongoing capital costs for

[34]In this scenario, according to DHS, foreign-built vessels operated by U.S.-flag carriers would be required to be documented with a registry endorsement pursuant to 46 U.S.C. § 12111.

[35]According to one shipbuilder, this cost differential may be largely eliminated when factoring in delivery costs of moving a barge from shipyards in Asia to the United States.

[36]To some extent, current prices for foreign vessels could be unusually low because of a global slowdown in the shipbuilding markets, which has led to considerably reduced prices, according to industry publications and reports.

[37]Among the key factors, beyond the purchase price, that affect whether a carrier will be able to recover its capital investment in a newly built vessel, given expected freight rates, are 1) the expected useful life of the vessel, and 2) the rate of interest applicable on the funds used to finance the purchase of the vessel. A longer expected life for a vessel, and a lower interest rate would tend to lower the annual capital cost of a new vessel.

carriers, although these higher capital costs will be offset to some extent by reduced fuel, and vessel maintenance and repair costs. Given the current economic conditions in Puerto Rico and decreases in overall demand, it could be challenging for some carriers to invest in new vessels. The higher cost of U.S.-built vessels relative to foreign-built vessels—particularly containerships—exacerbates that challenge. However, one carrier recently placed an order for two new U.S.-built vessels for the Puerto Rico trade and another Jones Act carrier recently purchased two new tankers for use in the Gulf of Mexico, indicating that—despite the poor economic conditions currently—the higher cost of U.S.-built vessels is not a barrier in their case. Nonetheless, allowing carriers to purchase or charter new or existing foreign-built vessels would presumably reduce the expense of recapitalizing the fleet, and make it more likely that carriers would choose to invest in newer vessels because they will be able to recoup that investment.

Foreign shipyards can build vessels for less than U.S. shipyards for several reasons. For example, foreign shipyards—particularly large yards in China, Japan, and South Korea—enjoy considerable economies of scale because of long production runs of relatively standard vessel designs. Long production runs reduce labor costs per unit, as workers become more efficient because they repeat their job frequently due to the high volume of vessels being built, and support a strong industrial base of parts and material suppliers. U.S. shipyards typically build customized vessels, according to customer design specifications, which might only be used to build one or a few vessels.[38] Specifically, for self-propelled vessels such as containerships, which are manufactured in small volumes in the United States, U.S. shipyards often cannot take advantage of the efficiencies of scale afforded by large-series production and common design orders. According to one shipyard we interviewed, when they do have longer production runs, U.S. shipyards—like foreign shipyards—are able to develop efficiencies of scale and reduce costs. Some foreign shipyards also tend to be more operationally and cost efficient with the production steps of building a vessel and the amount of labor associated with those steps, according to representatives from one U.S. shipyard

[38]If the Jones Act carriers in this trade were permitted to use foreign-built vessels, any order from a Jones Act carrier is likely to be for a small number of vessels given the current fleet size and market; if these vessels are not part of a larger production run of vessels, the foreign shipyard may not be able to reach the higher production volumes that contribute to lower prices.

where we interviewed. However, because some U.S. shipyards are subsidiaries of, or partners with foreign shipyards, many of these types of efficient production processes—such as streamlined workflow and sequencing, and consistent workforce collaboration—are being adopted in these U.S. shipyards. Other factors such as lower wages in foreign shipyards and a variety of construction, safety, and environmental regulatory standards that exist in U.S. shipyards—such as required shipyard safety measures when using certain paints such as those containing lead—can also reduce costs for foreign shipyards compared to U.S. shipyards.

Because of these price differentials, eliminating the U.S.-build requirement and allowing Jones Act carriers to deploy foreign-built vessels to serve Puerto Rico could reduce or eliminate U.S. shipyards' expectations for future orders from this market and could have serious implications for the recent order for two U.S.-built ships for this market from one of the Jones Act carriers. According to MARAD and DOD officials, and representatives of U.S. shipyards, orders for commercial vessels have become significantly more important to retaining the industrial shipbuilding base because military and other non-commercial vessel orders have declined. Although the number of vessels that could likely be replaced is small, it would equate to a substantial order for U.S. shipbuilders that could help sustain their operations, as well as help them to retain a skilled workforce and supplier base. Absent new orders, that workforce could be put at risk.

Shipyards and other supporters of the Jones Act also raise concerns that allowing an exemption to Puerto Rico would open the possibilities of allowing an exemption for all noncontiguous markets subject to the Jones Act, such as Hawaii and Alaska, as well as coastal markets, a situation that could result in more significant effects on shipyards and the shipyard industrial base needed by DOD. According to DOD officials, to the extent that Jones Act markets are unable to sustain a viable reserve fleet, DOD would have to incur substantial additional costs to maintain and recapitalize a reserve fleet of its own.

Concluding Observations

The Jones Act was enacted nearly a century ago to help promote a viable maritime and shipbuilding industry that would, among other things, provide transportation for the nation's maritime commerce and be available to serve the nation in times of war and national emergency. The possible effects of the Act on Puerto Rico as well as U.S. businesses are manyfold. The Act may result in higher freight rates—particularly for

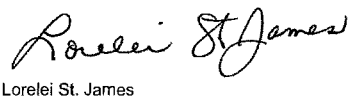
certain goods—than would be the case if service by foreign carriers were allowed. Nevertheless, at the same time, the law has helped to ensure reliable, regular service between the United States and Puerto Rico—service that is important to the Puerto Rican economy. Because of freight rate differentials or the lack of availability of Jones Act vessels for certain products, the Act may cause businesses in Puerto Rico to import goods from foreign locations when the same goods are readily available from U.S. providers. However, it is not possible to measure the extent to which rates in this trade are higher than they otherwise would be because the extent to which rules and regulations that would apply to international carriers' vessels that may serve this trade are not known, and so many factors influence freight rates and product prices that the independent effect and associated economic costs of the Jones Act cannot be determined. Finally, the original goal of the Act remains important to military preparedness and to the shipbuilding and maritime industries, but understanding the full extent and distribution of the costs that underlie these benefits is elusive. This circumstance results in a question as to whether the status quo presents the most cost effective way to achieve the goals expressed in the Jones Act. Ultimately, addressing these issues would require policymakers to balance complex policy trade-offs with the recognition that precise, verifiable estimates of the effects of the Act, or its modification, are not available.

Agency and Third-Party Comments

We provided a draft of this report to the departments of Commerce, Defense, Homeland Security, Justice, and Transportation for review and comment. Commerce, Defense, and Justice had no comments. Homeland Security and DOT provided technical clarifications, which we incorporated, as appropriate. DOT also generally agreed with the information presented in the report, but noted that many of the issues related to the Jones Act are both complex and multifaceted. In particular, DOT noted that while the report highlights issues that could affect the number of new vessels added to the Jones Act trade, carriers have recently purchased or announced plans to purchase new U.S.-built ships for the petroleum and container trades. DOT further noted that consideration of a ship's age, cost, efficiency, and their effect on the Jones Act trade is influenced by numerous factors such as the types of ships involved, their condition, and the way in which they are maintained and operated. In addition, to verify information, we sent relevant sections of the draft report to various shippers and stakeholders, the Shipbuilders Council of America, and the four major Jones Act carriers, which also provided technical comments that we incorporated, as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies of this report to other interested congressional committees and members; the Secretary of Commerce; the Secretary of Defense; the Secretary of Homeland Security; the U.S. Attorney General; the Secretary of Transportation; the Chairman of the Surface Transportation Board; the Chairman of the Federal Maritime Commission; the Director, Office of Management and Budget; and others. The report is also available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-2834 or by e-mail at stjamesl@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix III.



Lorelei St. James
Director, Physical Infrastructure Issues

Appendix I: Scope and Methodology

To address the two objectives, we reviewed relevant literature related to maritime shipping between the United States and Puerto Rico, and Puerto Rico and other foreign locations based on search results from databases, such as ProQuest®, as well as trade publications, industry stakeholder groups, and the Internet. We also reviewed and synthesized published reports from government sources that discussed and analyzed effects of the Jones Act,[1] including reports from GAO, U.S. International Trade Commission, Maritime Administration (MARAD), Customs and Border Protection (CBP), Congressional Research Service, Congressional Budget Office, U.S. Department of Energy, and Federal Reserve Bank. We also reviewed literature that described the nature and economics associated with global shipping markets. Furthermore, we synthesized information on the legal framework that governs U.S. domestic cargo shipping between U.S. and Puerto Rico and other domestic noncontiguous markets. This synthesis included information on the Jones Act, its requirements and pertinent legislative history, and other related laws and regulations. We also reviewed federal agency documentation of CBP and the Coast Guard responsible for enforcing and administering Jones Act provisions, U.S. vessel documentation laws and requirements, and the process for granting administrative waivers for Jones Act requirements.

We collected and analyzed data relevant to these markets and gathered the perspectives and experiences of numerous public and private sector stakeholders through interviews and written responses. We gathered information from the four major Jones Act carriers—Crowley Maritime Corporation; Horizon Lines, Inc.; Sea Star Line; and Trailer Bridge, Inc.—and Moran Towing Corporation about their business operations in providing shipping services between the United States and Puerto Rico, including information about the vessels used, the ports served, the routes operated, the frequency of service, and rates charged for shipping. We analyzed information on capital and operating costs for the four major carriers to understand how aspects of the Jones Act impact their costs of doing business. We interviewed representatives of these companies with respect to the economics of the market, differences between their services and services provided by foreign carriers, and implications associated with certain potential changes to the Jones Act. Nine of the

[1]Section 27 of the Merchant Marine Act of 1920, Pub. L. No. 66-261, 41 Stat. 988, 999 (1920) (codified as amended at 46 U.S.C. § 55102).

ten foreign carriers we contacted declined to be interviewed, although representatives from two foreign carriers participated in a larger meeting of stakeholders held in Puerto Rico. As a result, we were not able to gather detailed cost or rate information from foreign carriers that make port calls in Puerto Rico.

We interviewed numerous U.S. industry associations, and a selection of companies in the United States and Puerto Rico that purchase shipping services from Jones Act and foreign carriers, to obtain a range of different perspectives on these shipping markets, the impacts of those markets on their operations, and to understand different perspectives on the implications associated with changes to the Jones Act. We interviewed representatives of the American Maritime Partnership, American Maritime Congress, and Chamber of Shipping of America. We interviewed representatives of 10 U.S. and 6 Puerto Rico companies that ship products between the United States and Puerto Rico that included a range of major business areas, such as pharmaceutical, biotechnology, personal and household consumer products, food and beverage products, and large retail industries. We obtained information and discussed their perspectives on the nature of the maritime trade markets in Puerto Rico and the Caribbean Basin, the reliability of shipping service, volume and products being shipped, how they determine product prices and how shipping costs may or may not affect those prices, and how the Jones Act may affect these markets.

We selected the U.S. companies within the major business areas by assembling a list from Internet searches and from a customer list provided by one Jones Act carrier that purchases shipping services in the Puerto Rico trade. We divided the list into five industry categories and randomly selected six in each category for a total of 30 companies to contact. We conducted semistructured telephone interviews with the 10 companies that agreed to talk to us. We selected the Puerto Rico companies by requesting representatives of six of the Puerto Rico trade associations we met with while visiting Puerto Rico to provide a diverse list of about 20 businesses based on their unique knowledge of their members and those they considered generally representative of the different business sectors within their association's membership base. We requested that the list included a size range of large, medium, and small companies in terms of the number of monthly shipments imported or exported. We received a list of 20 companies from three of the six associations. In consultation with a GAO design methodologist, we randomly selected 15 companies, five within each list, to contact. We conducted semistructured telephone interviews with the 6 Puerto Rico

companies that agreed to talk to us. Because we selected a nonprobability sample of the companies to interview, the information we obtained from these interviews cannot be generalized to all U.S. and Puerto Rico companies (shippers) that purchase shipping services from Jones Act carriers between the United States and Puerto Rico.

We also interviewed representatives from five shipyards in the United States to understand their capabilities to build vessels for the Puerto Rico trade, how the Jones Act affects their operations, and differences in costs associated with shipbuilding in the United States and shipyards abroad. We selected the shipyards based on size of operations, type of vessels built, and recommendations from the representatives of the Shipbuilders Council of America. They included Bay Shipbuilding Co., Gladding-Hearn Shipbuilding, Kvichak Marine Industries, National Steel and Shipbuilding Company (NASSCO), and VT Halter Marine shipyards. We also visited the NASSCO shipyard in San Diego, California, to meet with representatives. Furthermore, we interviewed representatives from General Dynamics' American Overseas Marine to discuss the market and availability of LNG tankers for transporting LNG cargo from the United States to Puerto Rico currently and in the future. Because we selected these shipyards as part of a nonprobability sample, our findings cannot be generalized to all U.S. shipyards.

We also visited Puerto Rico to meet with a range of stakeholders to obtain information and perspectives on the range of views regarding how the Jones Act affects Puerto Rico, the shipping market, and the broader economy. We met with government officials from CBP responsible for San Juan and Ponce entry ports, Government Development Bank, Puerto Rico Electric Power Authority, Department of Economic Development and Commerce, Puerto Rico Port Authority, the City of Ponce (along with officials associated with the former Port of the Americas Authority), as well as economists in Puerto Rico who have analyzed the Jones Act in relation to Puerto Rico's economy, to understand their perspectives on these issues. We also met with representatives of nine trade associations: the Puerto Rico Shipping Association, the Puerto Rico Manufacturers Association, the Puerto Rico Chamber of Commerce, the Puerto Rico Pharmaceutical Industry Association, the Puerto Rico Products Association, the Puerto Rico Chamber of Food Marketing, Industry & Distribution, the Puerto Rico Farm Bureau, the Puerto Rico United Retailers Association, and the Gasoline Retailers Association. Because we selected various stakeholders as part of a nonprobability sample, our findings cannot be generalized to all Puerto Rico stakeholders.

We collected data and information and discussed the Puerto Rico market and implications of changes to the Jones Act with officials from MARAD and several other federal government agencies. For example, we discussed the process for documenting Jones Act vessels with the U.S. Coast Guard; how tax laws may apply given changes to the act with the Internal Revenue Service; and information about federal antitrust actions taken in connection with an ongoing investigation, by the Department of Justice, of price fixing in the shipping market between the United States and Puerto Rico.[2] We collected data on waterborne commerce between the United States and Puerto Rico, and between Puerto Rico and the rest of the world, from the U.S. Census Bureau. We reviewed related documentation and interviewed knowledgeable agency officials about the data and determined the data to be sufficiently reliable for our reporting purposes. We discussed the process for granting waivers to the Jones Act with Department of Homeland Security (DHS) and CBP officials, and discussed administration and enforcement of the Jones Act and implications of changes to the act with CBP officials in Puerto Rico. We interviewed officials from the Department of Defense (DOD) to understand how the Jones Act supports its strategic and mission objectives, and to understand the agency's perspectives on the implications of making changes to the Jones Act specifically with respect to Puerto Rico and more broadly.

Undertaking an analysis to measure the economic impact of the Jones Act on Puerto Rico requires a credible estimate of the differences in freight rates between Jones Act carriers and prospective international carriers that could serve this market. We did not attempt to develop a model to provide such estimates because the necessary data on routes, carriers, vessels, shippers, cargo, and rates, were not available to us.[3] If we had been able to obtain all the necessary data, we could have

[2]An ongoing investigation by the Department of Justice's Antitrust Division has led to, among other things, guilty pleas in 2011 and 2012 by three of the four Jones Act carriers that serve Puerto Rico. In general, the three carriers each separately pled guilty to conspiracy to suppress and eliminate competition by agreeing to fix rates and surcharges for certain water freight transportation services between the continental United States and Puerto Rico. In addition, to date, the three shipping companies have been sentenced to pay about $46 million in criminal fines and six executives have been sentenced to serve prison time totaling more than 11 years.

[3]Necessary data, particularly for foreign carriers, are not publicly available, and would be considered proprietary. Foreign carriers are under no obligation to provide data to us and were not responsive to our requests for information.

conducted an analysis that would attempt to reveal whether and to what extent freight rates are higher on Jones Act routes to Puerto Rico compared to similar service in the international shipping market. We would have also been able to hold constant other key factors that would influence rates such as distance travelled, size and age of vessel, and characteristics of shippers and cargo. However, a further step in this analysis would require a series of assumptions about the extent to which U.S. laws would be applicable to foreign carriers providing service between the United States and Puerto Rico. These assumptions would allow us to better gauge whether foreign carriers entering this trade would have higher costs than they currently do in providing their international services. Federal stakeholders we talked with indicated that they were, in general, reluctant to speculate on the extent to which U.S. laws might be applicable to such foreign carriers in the absence of Jones Act requirements. Ultimately, even if the necessary data for these analyses were available and even if we could develop alternative scenarios about how international carriers' costs might be affected by the application of U.S. law, it would still remain uncertain how those costs would be manifested in freight rates. Finally, there are also many uncertainties about how any change in freight rates would affect the Puerto Rico economy—and in particular how they would affect product prices—under varied circumstances.

We conducted this performance audit from October 2011 through February 2013 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Federal Agency Roles in Relation to the Jones Act

The Maritime Administration's (MARAD) mission is to promote the maintenance of an adequate, well-balanced U.S. merchant marine to ensure that the United States maintains adequate shipbuilding and repair services, efficient ports, and a pool of merchant marines for both domestic commerce and national defense. In support of that mission, MARAD administers (1) the Federal Ship Financing Program that guarantees private loans to commercial shipowners and shipyards for ship and shipyard building and modernization, (2) the Small Shipyards Grant Program that funds capital and related improvements for qualified small shipyard facilities, (3) the Capital Construction Fund Program that assists owners and operators of U.S.-flag vessels to help modernize and expand the U.S. merchant marine through construction, reconstruction, or acquisition of vessels, and (4) the Construction Reserve Fund that provides financial assistance as tax deferral benefits to eligible U.S.-flag operators whereby gains attributable to the sale or loss of a vessel may be deferred as long as the proceeds are used to expand or modernize the U.S. merchant fleet.

Within the DHS, the U.S. Coast Guard is responsible for administering and enforcing documentation requirements for U.S.-flag registry (e.g., determining whether vessels meet U.S.-ownership and build requirements), and CBP is responsible for enforcing and administering laws and regulations pertaining to the coastwise trade, including the Jones Act. The Surface Transportation Board (STB) has regulatory oversight of certain domestic shipping-freight rates, including noncontiguous ocean shipping freight rate matters, and Jones Act carriers are required to file tariff rates with STB as well as terms and conditions of contracts they execute with shippers.[1] Foreign maritime carriers operating in the United States come under the jurisdiction of the Federal Maritime Commission (FMC), which exercises regulatory oversight of foreign trade, and requires common carriers involved in foreign-U.S. trade to file tariffs and service agreements. Section 7 of the Shipping Act of 1984, as

[1]Carriers providing transportation or service in noncontiguous domestic trade, such as Jones Act carriers, are required by statute and associated regulations to file tariffs showing their rates and service terms and joint rates that they establish with other carriers including motor carriers, water carriers, and freight forwarders. STB has the authority to determine the "reasonableness" of a rate for a movement by or with a water carrier in noncontiguous domestic trade, among other things. A complaint can be filed with STB that a rate, classification, rule, or practice in noncontiguous domestic trade violates the requirements related to transportation or service provided by a carrier subject to this jurisdiction. See 49 U.S.C. Chapter 137.

amended, exempts agreements between foreign common carriers from U.S. antitrust law so long as the carriers file with FMC, and allows foreign carriers to discuss and set rates and service terms and conditions.[2]

In general, with respect to navigation and vessel inspection laws, such as the Jones Act, statutorily authorized administrative waivers may occur in the interest of national defense. More specifically, such waivers are to occur upon request of the Secretary of Defense whereby the head of the agency responsible for the administration of the particular navigation or inspection laws at issue is required by statute to waive compliance with those laws to the extent the Secretary of Defense considers necessary in the interest of national defense.[3] National defense waivers may also occur where the head of the agency responsible for the administration of such navigation or vessel inspection laws, (i.e., DHS), considers it necessary in the interest of national defense to waive such compliance, following a determination by the Maritime Administrator on the non-availability of qualified U.S.-flag capacity to meet national defense requirements.[4] In November 2012, for example, following the effects of Hurricane Sandy, the Secretary of Homeland Security issued a temporary waiver of the Jones Act to allow non-Jones Act oil tankers to transport oil from U.S. ports in the Gulf of Mexico to Northeastern ports to provide additional fuel resources to the region. This waiver provided, in part, that the lost production, refining, and transportation capacity had resulted in the imminent unavailability of petroleum products, including gasoline, and threatened the nation's economic and national security.

In addition to administrative waivers, special legislation has been enacted which permits the Coast Guard to issue limited coastwise endorsements to specific vessels, or for specific purposes, and some for limited periods of time, that allows specific vessels to engage in coastwise transportation. For example, the America's Cup Act of 2011 authorized the issuance of coastwise endorsements for three specified vessels as well as for three

[2]See Pub. L. No. 98-237, 98 Stat. 73 (codified at 46 U.S.C. § 40307). Under this exemption, antitrust immunity is not, however, extended to such agreements relating to transportation within the United States.

[3]See, 46 U.S.C. § 501(a).

[4]See, 46 U.S.C. § 501(b). December 2012 amendments to this authority additionally require MARAD to identify any actions that could be taken to enable qualified U.S.-flag capacity to meet national defense requirements, among other new notification duties.

liquefied gas tankers, under certain specified conditions. Also, such legislation has been enacted specifically in relation to the Puerto Rico trade. The most recent legislation specific to Puerto Rico was enacted in 2006 to authorize DHS, through the Coast Guard, to issue a coastwise endorsement to allow, for example, foreign-built liquefied gas tankers built before 1996 to transport LNG or liquefied petroleum gas to Puerto Rico from other ports in the United States.[5]

Although DOD does not administer or enforce the Jones Act, the military strategy of the United States relies on the use of commercial U.S.-flag ships and crews and the availability of a shipyard industrial base to support national defense needs. MARAD and DOD jointly manage the VISA program, which was established for emergency preparedness and which includes over 300 commercial U.S.-flag vessels to provide DOD assured access to emergency sealift capacity that complements its sealift capabilities in transition to wartime operations.[6] DOD needs vessels with specific requirements, such as speed capability, cargo capacity, and capability of carrying specialized equipment and supplies without significant modification. Whether or not the vessel is militarily useful, commercial U.S.-flag vessels provide employment to trained officers and unlicensed seamen, many of whom could be available to crew government-owned sealift vessels in times of war or national emergency. Having such vessels and crews available in times of emergency is beneficial to DOD and limits its need for procuring and maintaining comparable vessels in the government-owned fleet of cargo vessels, which could constitute a significant additional cost to the agency.

Similar to the continued decline in the pool of vessels and U.S. mariners, the U.S. shipyard industrial base has also been declining, according to DOD officials. DOD relies on commercial shipyards and an adequate

[5]Pub. L. No. 109–304, 120 Stat. 1485, 1504 (2006) (codified at 46 U.S.C. § 12120).

[6]In addition to the VISA program, other programs exist to ensure sealift capability using a mix of government and commercial vessels. MARAD operates the Ready Reserve Force, consisting of a fleet of 46 government-owned cargo vessels, which is activated only upon the request of the DOD and supports the transport of unit and combat support equipment during the initial military mobilization period before commercial vessels can be marshaled. MARAD also administers the Maritime Security Program which enrolls 60 modern, militarily-useful, U.S.-flag commercial ships—operating in the international trades—where owners receive a fixed retainer payment in exchange for providing DOD with access to their vessels during times of war, national emergency, or when deemed necessary by the Secretary of Defense.

shipyard industrial base to service and repair military vessels, and build new vessels to replace or expand the military fleet. Seven major shipyards currently construct the vast majority of military vessels, and some of these also construct a small number of commercial vessels, and according to industry representatives, are generally capable of building larger oceangoing vessels such as those used in the Puerto Rico trade and other noncontiguous and coastwise trades. About 280 medium and small commercial U.S. shipyards are engaged in repairing government ships and producing the large majority of smaller commercial vessels such as tugboats, barges, and service boats engaged in Jones Act trade. Some of the larger yards are also capable of building large oceangoing vessels, according to the Shipbuilders Council of America and a shipyard we interviewed. According to DOD, these shipyards play an important role in sustaining industries that support shipbuilding. Overall, the number of oceangoing commercial vessels produced in the United States is low in comparison to the production from foreign shipyards, which typically specialize in building certain types of large containerships, tankers, LNG carriers, or bulk carriers. Most large, commercial cargo vessels that supply the world shipping industry are being built in China, Japan, and the Republic of Korea, as discussed earlier.

In an effort to address these declines, the U.S. Navy partnered with MARAD in November 2011, through memorandum of agreement, for supporting the objectives relating to the American Marine Highway Program, particularly in the development, design, construction, and operation of U.S- built and U.S.-crewed dual-use vessels that can serve in peacetime in the Jones Act trade and also provide sealift capability for DOD in time of national emergency.[7] The purpose of the American Marine Highway Program is to expand the use of the inland and coastal waterways for transporting cargo to reduce congestion in other transportation modes, thus expanding the domestic waterborne-transportation markets that would be served by Jones Act vessels. The program is expected to help generate commercial work for U.S. shipyards

[7]Under the American Marine Highway Program, the goal is to focus on designing vessel types best suited for transporting trailers and cargoes, normally driven over U.S. highways, on the marine highways to contribute to the national goals of reducing congestion, pollution, and wear and tear from large tractor-trailers on the nation's highway system. The military dual-use goal of the program will require the design of applicable ship types to meet minimum speed, size, and range requirements to meet DOD's needs. See MARAD, *American Marine Highway Design Project Final Report*, (Annapolis, MD: Oct. 28, 2011).

and jobs for U.S. mariners. In support of the American Marine Highway program, the National Defense Authorization Act for Fiscal Year 2010 required the establishment and implementation of the Marine Highway Grants program,[8] and $7 million in funds was congressionally directed to the new grants program in committee reports[9] accompanying the Consolidated Appropriations Act, 2010.[10] Grants under the Marine Highway Grants program could extend to the purchase or lease of equipment used at port terminals and facilities, and construction or modification of vessels to increase energy efficiency and meet environmental standards. According to the Navy, the American Marine Highway Program and dual-use vessel concept is likely to be the most cost-effective means of addressing future recapitalization of the government-owned and commercial vessels on which they rely. Many of the vessels in the Ready Reserve Force are nearing the end of their practical service life and must be replaced by newer ships. The estimated cost for the recapitalization for the entire Ready Reserve Force is in the billions of dollars.[11]

[8]Pub. L. No. 111-84, 123 Stat. 2190, 2724-25 (2009).

[9]See, H. R. Conf. Rep. No. 111-366, at 425 (2009), and S. Rep. No. 111-69, at 97-98 (2009).

[10]Pub. L. No. 111-117, 123 Stat. 3034 (2009).

[11]See MARAD, *America's Marine Highway Report to Congress*, April 2011.

Appendix III: GAO Contacts and Staff Acknowledgments

GAO Contact	Lorelei St. James, (202) 512-2834 or stjamesl@gao.gov
Staff Acknowledgments	In addition to the contact named above, the following individuals made important contributions to this report, Andrew Von Ah, Assistant Director; Amy Abramowitz; Ken Bombara; Stephen L. Caldwell; Vashun Cole; Laura Erion; Emil Friberg; Geoffrey Hamilton; Sarah Jones; Hannah Laufe; Thanh Lu; Joshua Ormond; Amy Rosewarne; and Shana Wallace.

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CONGRESSWOMAN JENNIFFER GONZÁLEZ-COLÓN
Puerto Rico - At Large

Puerto Rico FHWA/FEMA eligible road repair estimate.

The $198,089,558 figure are the basis for use of the initial $42.5 million "quick release" funds and the $30 milion additional request. A third request would be forthcoming based upon what is learned in the field (sources: FEMA/PRDTOP).

Roadway Element/Category	Budget	FHWA Corridors Preliminary Reconstruction Budget	FEMA Corridors Preliminary Reconstruction Budget
Reconstruction			
Traffic Signal Intersection	$ 21,576,905	$ 21,576,905	$ -
Traffic Signs & Safety	$ 26,000,000	$ 21,320,000	$ 4,680,000
Collapsed Bridges (Acrow)	$ 5,016,894	$ 4,156,894	$ 860,000
Collapsed Bridge (Replacement)	$ 32,500,000	$ 24,375,000	$ 8,125,000
Bridges w/ Severe Scouring	$ 14,000,000	$ 10,500,000	$ 3,500,000
Bridges w/ Scouring	$ 39,000,000	$ 27,300,000	$ 11,700,000

Bridges (Approach Embankment)	$ 3,000,000	$ 3,000,000	$ -
Roadway Collapse (partial or Full) due to Landslides, Drainage, etc	$ 92,658,228	$ 64,860,759	$ 27,797,468
Preliminary Engineering			
Private Consulting Firms Support	$ 15,000,000	$ 15,000,000	$ -
PRHTA's In-house Administration / Eng Support	$ 6,000,000	$ 6,000,000	$ -
SUBTOTAL	**$ 254,752,026**	**$ 198,089,558**	**$ 56,662,468**

Puerto Rico – Bridge Damage Assessment - 30 October 2017

Bridge Number	Road	Km marker	Over	Location	Municipality	Bridge Access (Open/Closed)	Comments
37	PR 2	22.40	LA PLATA RIVER	3 KM NORTH OF TOA ALTA	TOA BAJA	Partly Open	Channel Partially Obstructed. Collapsed Access Roadway. Bridge partially opened on Oct/30/2017. Repair works ongoing.
38	PR 2	22.80	LA PLATA RIVER	3 KM N W OF TOA ALTA	TOA BAJA	Partly Open	Wingwall Backfill lost. Approach Slab Undeminined, No transit over it recommended. Collapsed Access roadway. Repair works ongoing.
256	PR 119	35.20	CULEBRINAS RIVER	0.5 KM S E SAN SEBASTIAN	SAN SEBASTIÁN	Closed	On schedule for detailed structural inspection.
505	PR 6103	0.07	GRANDE DE ARECIBO RIVER	0.07 KM FROM INT PR 10	UTUADO	Closed	Based upon findings an Acrow Bridge shall be installed. Acrow PO preparation in progress.
599	PR 615	4.05	TORO NEGRO RIVER	4 MILES S W OF CIALES	CIALES	Open	Bridge open, no damage found.
635	PR 165	25.40	COCAL RIVER	7 KM EAST OF TOA BAJA	TOA BAJA	Open	Approach Slab damaged. Repair works ended on Oct/27/2017. The bridge is opened to traffic.

653	PR 957	0.10	CANOVANAS RIVER	5 KM SOUTH OF CANOVANAS	CANOVANAS	Closed	Temporary Acrow Bridge already purchased by PRHTA. Bid for installation and minor improvements was completed on Oct/30/2017. Installation of Acrow bridge to be done in three months.
672	PR 752	0.80	JACANAS CREEK	3 MILES NORTH OF ARROYO	ARROYO	Open	This project shall be continued by PRHTA with a modification to existing design contract. When second inspection was done on site PRHTA's personnel found the road was apparently opened by locals.
679	PR 404	4.10	CULEBRINAS RIVER	3.5 KM SOUTH EAST OF MOCA	MOCA	Closed	PW in progress. Detour is available. Currently evaluating improvements to the existing detour as an emergency repair. Proposed bridge will be designed and constructed as a permanent repair.
872	PR 857	10.10	CANOVANILLAS RIVER	5 MILES SOUTH OF CAROLINA	CAROLINA	Open	On schedule for detailed structural inspection.
944	PR 2 EASTBOUND	208.70	WATERWAY	3.5 KM S E OF GUAYANILLA	GUAYANILLA	Open	On schedule for detailed structural inspection.
1078	PR 52 SOUTHBOUND	93.90	INABON RIVER	3 KM S W OF JUANA DIAZ	JUANA DIAZ	Closed	Traffic on PR-52 managed with a crossover to opposite span. Contractor working under the bridge to mitigate damages.
1130	PR 145	1.00	GRANDE DE MANATI RIVER	1 KM NORTH EAST OF CIALES	CIALES	Closed	Based upon findings, Acrow Bridge, 77 mts long, shall be installed. Acrow PO preparation in progress.
1352	PR 146	12.10 (New 28.0)	CIALITOS RIVER	0.5 KM NORTH OF CIALES	CIALES	Open	On schedule for detailed structural inspection.
1374	PR 149	12.40	GRANDE DE MANATI RIVER	1 KM NORTH EAST OF CIALES	CIALES	Open	On schedule for detailed structural inspection.
1385	PR 476	0.50	GUAJATACA RIVER	0.5 KM INT PR119 & PR476	QUEBRADILLAS	Closed	On schedule for detailed structural inspection.

1462	PR 567	11.70	GRANDE DE MANATI RIVER	4.7 KM S W OF CIALES, BARRIO SAN LORENZO	MOROVIS	Closed	Based upon findings, Acrow Bridge shall be installed. Acrow PO and Design in progress. Three-spans Bridge shall be installed as a temporary solution.
1485	PR 802	5.05	GRANDE DE MANATI RIVER	7 KM S W OF NARANJITO	NARANJITO	Open	Bridge open, no damage found.
1657	PR 861	11.00	LA PLATA RIVER	1 KM SOUTH OF TOA ALTA	TOA ALTA	Open	DDIR in progress, debris on piers but bridge in good condition
1733	PR 111	13.10	EL SALTO CREEK	5 KM N W OF SAN SEBASTIAN	SAN SEBASTIÁN	Closed	Based upon findings, Acrow Bridge shall be installed. Acrow PO and Design in progress.
1917	PR 627	1.00	GRANDE DE ARECIBO RIVER	11 KM S E OF ARECIBO	ARECIBO	Closed	Out of PRHTA and DTOP Jurisdiction. (Municipal Road) Technical Assistance from the PRHTA will be provided as required.
1962	PR 151	0.17	JACAGUAS RIVER	EAST SIDE OF VILLALBA	VILLALBA	Closed	Based upon findings, Acrow Bridge shall be installed. Currently in Bid Process.
2401	PR 127	9.10	GUAYANILLA RIVER	0.1 KM EAST OF GUAYANILLA	GUAYANILLA	Closed	On schedule for detailed structural inspection.
2766	Ave Peñoncillo	1.00	INABON RIVER	3 KMS SWEST OF J DIAZ	JUANA DIAZ	Closed	Out of PRHTA and DTOP Jurisdiction. (Municipal Road) PRHTA providing assistance in PW preparation.

Source: Puerto Rico Highways and Transportation authority