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DISASTER RECOVERY

Recent Disasters Highlight Progress and Challenges

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GAO Highlights

Highlights of [GAO-20-183T](#), a testimony before the Subcommittee on Economic Development, Public Buildings, and Emergency Management, Committee on Transportation and Infrastructure, House of Representatives

Why GAO Did This Study

Recent hurricanes, wildfires, and flooding have highlighted the challenges the federal government faces in responding effectively to natural disasters. The 2017 and 2018 hurricanes and wildfires affected millions of individuals and caused billions of dollars in damages. In March 2019, the Midwest experienced historic flooding that affected millions of acres of agriculture and damaged infrastructure. Since 2005, federal funding for disaster assistance is at least \$450 billion. Increasing reliance on federal help to address natural disasters is a key source of federal fiscal exposure, particularly as certain extreme weather events become more frequent and intense.

This statement discusses, among other things, FEMA's and other federal agencies' progress and challenges related to disaster resilience, recovery programs, and workforce management. This statement is based on GAO reports issued from September 2012 through October 2019, and also includes preliminary observations from ongoing GAO reviews. GAO examined federal laws and documents; interviewed agency officials; and visited disaster damaged areas in California, Florida, South Carolina, North Carolina, Puerto Rico, Texas, and the U.S. Virgin Islands, where GAO also interviewed federal and local officials.

What GAO Recommends

GAO has made numerous recommendations in prior reports designed to address the challenges discussed in this statement. Federal agencies have taken steps to address these recommendations and GAO is monitoring agencies' ongoing efforts.

View [GAO-20-183T](#). For more information, contact Chris Currie at (404) 679-1875 or currie@gao.gov.

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What GAO Found

GAO's issued and ongoing work has identified progress and challenges in the Federal Emergency Management Agency's (FEMA) and other federal agencies' disaster recovery efforts, as discussed below.

Disaster Resilience. GAO found that federal and local efforts to improve resilience can reduce the effects and costs of future disasters. FEMA has made progress in this area, but in November 2017, GAO found that more consistent planning could help ensure that rebuilding efforts incorporate hazard mitigation, which would increase the resilience of infrastructure during future disasters. GAO recommended that FEMA take steps to consistently integrate hazard mitigation into its recovery process. FEMA is working to address these recommendations.

Aerial Photo of Wildfire Damage, Santa Rosa, California, October 11, 2017



Source: Department of Defense. | GAO-20-183T

Managing Long-Term Recovery. GAO's work has shown that federal recovery programs are complicated and can be slow to provide assistance. For example, in October 2019, GAO reported that local officials described onerous documentation requirements in FEMA's Public Assistance program and the unique challenge of removing debris following the 2017 wildfires. GAO recommended that FEMA assess its operations to identify actions to enhance future recovery from severe wildfires. In March 2019, GAO reported that the ad hoc nature of disaster recovery block grants from the Department of Housing and Urban Development delayed the availability of funding. GAO recommended, among other things, that Congress consider permanently authorizing this grant program to meet the needs of disaster survivors in a timely manner.

FEMA Workforce Management. GAO has previously reported on long-standing workforce management challenges, such as ensuring an adequately-staffed and trained workforce to provide effective assistance. For example, GAO reported in September 2018 that the 2017 disasters overwhelmed FEMA's workforce and a lack of trained staff with program expertise led to complications in its response efforts, particularly after Hurricane Maria. While FEMA has taken actions to address several of GAO's workforce management-related recommendations since 2016, a number of recommendations have not yet been implemented. GAO is currently reviewing FEMA's workforce management efforts and lessons learned from the 2017 disasters and will report its findings early next year.

Chairwoman Titus, Ranking Member Meadows, and Members of the Subcommittee:

Thank you for the opportunity to discuss our work on the Federal Emergency Management Agency's (FEMA) and other federal agencies' efforts related to disaster recovery.

Recent hurricanes, wildfires, and other events have highlighted the challenges the federal government faces in responding effectively to natural disasters—both in terms of immediate response and long-term recovery efforts. According to FEMA's 2017 after action report, the 2017 hurricanes and wildfires collectively affected 47 million people, and hurricanes Harvey, Irma, and Maria all rank among the top five costliest hurricanes on record.¹ The 2018 hurricane season followed with hurricanes Florence and Michael, causing nearly \$50 billion of damage, according to the National Oceanic and Atmospheric Administration. Furthermore, the deadly and destructive wildfires continued into 2018, including the Camp Fire in northern California, which destroyed more than 18,500 buildings and was the costliest and deadliest wildfire in the state's history.² In March 2019, the Midwest experienced historic flooding that affected millions of acres of agriculture, numerous cities and towns, and caused widespread damage to public infrastructure. Collectively, these extreme weather events have stretched and strained federal response and recovery efforts and staff.

The rising number of natural disasters and increasing state, local, and tribal reliance on federal disaster assistance is a key source of federal fiscal exposure—which can come from federal responsibilities, programs, and activities, such as national flood insurance, that may legally commit or create the expectation for future spending.³ Since 2005, federal funding for disaster

¹According to the *2017 Hurricane Season FEMA After-Action Report*, the National Oceanic and Atmospheric Administration identified the five costliest hurricanes on record being Hurricane Katrina at \$161 billion, Hurricane Harvey at \$125 billion, Hurricane Maria at \$90 billion, Hurricane Sandy at \$71 billion, and Hurricane Irma at \$50 billion.

²National Oceanic and Atmospheric Administration, *National Centers for Environmental Information U.S. Billion-Dollar Weather and Climate Disasters* (2019). <https://www.ncdc.noaa.gov/billions/>.

³GAO, *Fiscal Exposures: Improving Cost Recognition in the Federal Budget*, [GAO-14-28](#) (Washington, D.C.: Oct. 29, 2013).

assistance is at least \$450 billion,⁴ most recently for catastrophic hurricanes, flooding, wildfires, and other losses in 2017 and 2018.⁵ Disaster costs are projected to increase as extreme weather events become more frequent and intense due to climate change—as observed and projected by the U.S. Global Change Research Program and the National Academies of Sciences, Engineering, and Medicine.⁶



⁴This total includes, for fiscal years 2005 through 2014, \$278 billion that GAO found that the federal government had obligated for disaster assistance. See GAO, *Federal Disaster Assistance: Federal Departments and Agencies Obligated at Least \$277.6 Billion during Fiscal Years 2005 through 2014*, [GAO-16-797](#) (Washington, D.C.: Sept. 22, 2016). It also includes, for fiscal years 2015 through 2018, \$124 billion in select supplemental appropriations to federal agencies for disaster assistance, approximately \$7 billion in annual appropriations to the Disaster Relief Fund (a total of \$28 billion for the 4-year period). For fiscal years 2015 through 2018, it does not include other annual appropriations to federal agencies for disaster assistance. Lastly, on June 6, 2019, the Additional Supplemental Appropriations for Disaster Relief Act of 2019 was signed into law, which provides approximately \$19.1 billion for disaster assistance. See Pub. L. No. 116-20, 133 Stat. 871 (2019).

⁵GAO, *High-Risk Series: Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas*, [GAO-19-157SP](#) (Washington, D.C.: Mar. 6, 2019).

⁶GAO, *Climate Change: Information on Potential Economic Effects Could Help Guide Federal Efforts to Reduce Fiscal Exposure*, [GAO-17-720](#) (Washington, D.C.: Sept. 28, 2017). Managing fiscal exposure due to climate change has been on our high risk list since 2013, in part, because of concerns about the increasing costs of disaster response and recovery efforts. See [GAO-19-157SP](#); also http://www.gao.gov/highrisk/limiting_federal_government_fiscal_exposure/why_did_study.

One way to save lives, reduce future risk to people and property, and minimize federal fiscal exposure from natural disasters is to enhance resilience. For example, in September 2018, we reported that elevated homes and strengthened building codes in Texas and Florida prevented greater damages during the 2017 hurricane season.⁷ Further, in October 2018, the Disaster Recovery Reform Act of 2018 (DRRA) was enacted, which focuses on improving preparedness, mitigation, response and recovery.⁸ Specifically, the DRRA contains provisions that address many areas of emergency management, including wildfire mitigation, public assistance, and individual assistance, among others. Given the importance of planning for the risks and costs of future disasters, GAO is developing a disaster resilience framework to support analysis of federal opportunities to facilitate and promote resilience to natural disasters, and will publish this framework by the end of the year.

My statement today discusses our prior and ongoing work on federal recovery efforts and continued challenges across three key areas: (1) disaster resilience and mitigation, (2) managing complex, long-term recovery assistance programs, and (3) FEMA workforce management challenges. My statement today is based on products we issued from September 2012 through October 2019, along with preliminary observations from our ongoing reviews on federal recovery related issues for a number of congressional committees and subcommittees.

To perform our prior work, we reviewed federal laws related to emergency management, analyzed documentation from FEMA and the Department of Housing and Urban Development (HUD), and interviewed relevant agency officials. More detailed information on the scope and methodology for our prior work can be found in each of the issued reports listed in appendix I. For our ongoing work, we reviewed federal laws such as the DRRA, and analyzed FEMA documents, including policies, procedures, and guidance specific to emergency management. See the list of our ongoing reviews in appendix II. We have conducted site visits to areas throughout the nation that were affected by disasters in 2017, 2018, and 2019, including California, Florida, North Carolina, South Carolina, Puerto Rico, Texas, and the U.S. Virgin Islands (USVI). During these visits, we met with federal, state, territorial, and local government and emergency management officials to discuss disaster response and recovery efforts for hurricanes Harvey, Irma, and Maria in 2017, and the California wildfires and hurricanes

⁷GAO, *2017 Hurricanes and Wildfires: Initial Observations on the Federal Response and Key Recovery Challenges*, [GAO-18-472](#) (Washington, D.C.: Sept. 4, 2018).

⁸Pub. L. No. 115-254, div. D, 132 Stat. 3186, 3438-70 (2018).

Florence and Michael in 2018. In addition, we regularly followed up with relevant officials to solicit updated information on agency actions taken in response to our recommendations.

We conducted the work on which this statement is based 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.

FEMA Has Taken Steps to Strengthen Disaster Resilience, but Additional Actions are Needed to Fully Address Remaining Challenges

We have previously reported on the extent to which FEMA programs encourage disaster resilience during recovery efforts and our prior and ongoing work also highlight opportunities to improve disaster resilience nationwide.⁹ Specifically, we reported on (1) federal efforts to strengthen disaster resilience, (2) FEMA's efforts to promote hazard mitigation through the Public Assistance program, and (3) crafting appropriate federal responses to the effects of climate change.

First, in July 2015, we found that states and localities experienced challenges when trying to use federal funds to maximize resilient rebuilding in the wake of a disaster.¹⁰ In particular, they had difficulty navigating multiple federal grant programs and applying federal resources toward their most salient risks because of the fragmented and reactive nature of the funding.¹¹ In our 2015 report, we recommended that the Mitigation Framework Leadership Group—an interagency body chaired by FEMA—create a National Mitigation Investment Strategy to help federal, state, and local officials plan for and prioritize disaster resilience efforts. In August 2019, FEMA took action to fully implement our recommendation by publishing this strategy.

⁹For example, see GAO, *Hurricane Sandy: An Investment Strategy Could Help the Federal Government Enhance National Resilience for Future Disasters*, [GAO-15-515](#) (Washington, D.C.: July 30, 2015); *Emergency Preparedness: Opportunities Exist to Strengthen Interagency Assessments and Accountability for Closing Capability Gaps*, [GAO-15-20](#) (Washington, D.C.: Dec. 4, 2014); and [GAO-18-472](#).

¹⁰[GAO-15-515](#).

¹¹[GAO-15-515](#). A provision of DRRA also created a grant in the Disaster Relief Fund for pre-disaster hazard mitigation. DRRA authorized the President to set aside 6 percent of the total grant awards for the Individual Assistance and Public Assistance programs (each discussed later in this statement) for each declared disaster to be used for pre-disaster hazard mitigation. From May 20 through July 15, 2019, FEMA collected public comments on the implementation of this provision through a program it has named the Building Resilient Infrastructure and Communities grant. 42 U.S.C. § 5133(i).

Second, in November 2017, we found that FEMA had taken some actions to better promote hazard mitigation as part of its Public Assistance grant program, which provides grant funding for cost-effective hazard mitigation measures to reduce or eliminate the long-term risk to people and property from future disasters and their effects.¹² However, we also reported that more consistent planning for, and more specific performance measures related to, hazard mitigation could help ensure that mitigation is incorporated into recovery efforts. We recommended, among other things, that FEMA (1) standardize planning efforts for hazard mitigation after a disaster and (2) develop performance measures for the Public Assistance grant program to better align with FEMA's strategic goal for hazard mitigation in the recovery process. The Department of Homeland Security (DHS) concurred with our recommendations, and officials reported taking steps to increase coordination across its Public Assistance, mitigation, and field operations to ensure hazard mitigation efforts are standardized and integrated into the recovery process. Additionally, FEMA officials reported taking actions to begin developing disaster-specific mitigation performance measures. However, FEMA has yet to finalize these actions, such as by proposing performance measures to FEMA senior leadership. As such, we are continuing to monitor FEMA's efforts to address these recommendations.

Third, in September 2017, we reported that the methods used to estimate the potential economic effects of climate change in the United States—using linked climate science and economics models—could inform decision makers about significant potential damages in different U.S. sectors or regions, despite the limitations.¹³ For example, for 2020 through 2039, one study estimated between \$4 billion and \$6 billion in annual coastal property damages from sea level rise and more frequent and intense storms. We found that the federal government has not undertaken strategic government-wide planning on the potential economic effects of climate change to identify significant risks and craft appropriate federal responses. As a result, we recommended the Executive Office of the President, among others, should use information on the potential economic effects of climate change to help identify significant climate risks facing the federal government and craft appropriate federal responses, such as establishing a strategy

¹²GAO, *Disaster Assistance: Opportunities to Enhance Implementation of the Redesigned Public Assistance Grant Program*, [GAO-18-30](#) (Washington, D.C.: Nov. 8, 2017). In addition to rebuilding and restoring infrastructure to its pre-disaster state, the Public Assistance program, under Section 406 of the Stafford Act, funds mitigation measures that will reduce future risk to the infrastructure in conjunction with the repair of disaster-damaged facilities. 42 U.S.C. § 5172. For example, a community that had a fire station damaged by a disaster could use Public Assistance grant funding to repair the facility and incorporate additional measures such as installing hurricane shutters over the windows to mitigate the potential for future damage.

¹³[GAO-17-720](#).

to identify, prioritize, and guide federal investments to enhance resilience against future disasters. However, as of June 2019, officials had not yet taken action to address this recommendation.

Federal Programs Provide Long-Term Disaster Recovery Assistance, but Challenges in Managing Complex Recovery Programs Exist

FEMA's Public Assistance Program



FEMA's Public Assistance program provides grants to repair public infrastructure such as water storage systems, roads, and power lines.

Source: GAO; Photos taken by GAO while on site in Florida. | GAO-20-183T

FEMA and other federal agencies provide multiple forms of disaster recovery assistance after a major disaster has been declared, including through FEMA's Public Assistance and Individual Assistance programs, HUD's Community Development Block Grant Disaster Recovery (CDBG-DR) program, and other efforts.¹⁴ Through these programs, the federal government obligates billions of dollars to state, tribal, territorial, and local governments, certain nonprofit organizations, and individuals that have suffered injury or damages from major disaster or emergency incidents, such as hurricanes, tornados, or wildfires. In September 2016, we reported that, from fiscal years 2005 through 2014, FEMA obligated almost \$46 billion for the Public Assistance program and over \$25 billion for the Individual Assistance program.¹⁵ According to FEMA's September 2019 Disaster Relief Fund report, total projected obligations through fiscal year 2019 for the Public Assistance and Individual Assistance programs since August 1, 2017, are approximately \$19 billion and \$9 billion, respectively.¹⁶ Further, in March 2019, we reported that in response to the 2017 disasters, HUD had awarded approximately \$32.9 billion in CDBG-DR funds to four grantees as of February 2019—\$19.9 billion to Puerto Rico, \$9.8 billion to Texas, \$1.9 billion to the USVI, and \$1.3 billion to Florida.¹⁷ As of September 2019, much of these awarded funds had been allocated to the grantees via *Federal Register* notices with the exception of Puerto Rico.¹⁸ HUD had not allocated the remaining \$10.2 billion it awarded to Puerto Rico as of September 10, 2019 due to recent concerns about the territory's governance and financial management challenges.¹⁹ Given the high cost of these programs, it is imperative that FEMA and HUD continue to make progress on the challenges we have identified in our prior and ongoing work regarding recovery efforts.

¹⁴In addition, FEMA's Hazard Mitigation Grant Program provides additional funds to states to assist communities in implementing long-term measures to help reduce the potential risk of future damages to facilities.

¹⁵[GAO-16-797](#).

¹⁶DHS, FEMA, *Disaster Relief Fund: Monthly Report as of August 30, 2019*, (Sept. 13, 2019).

¹⁷The \$32.9 billion excludes approximately \$2.5 billion awarded to states affected by 2017 disasters other than Hurricanes Harvey, Irma, and Maria or prior disasters. As of February 2019, HUD had allocated via *Federal Register* notices \$17.2 billion of the \$32.9 billion awarded to Puerto Rico, Texas, the USVI, and Florida. See *Allocations, Common Application, Waivers, and Alternative Requirements for 2017 Disaster Community Development Block Grant Disaster Recovery Grantees*, 83 Fed. Reg. 5844 (Feb. 9, 2018) and *Allocations, Common Application, Waivers, and Alternative Requirements for Community Development Block Grant Disaster Recovery Grantees*, 83 Fed. Reg. 40314 (Aug. 14, 2018). GAO, *Disaster Recovery: Better Monitoring of Block Grant Funds Is Needed*, [GAO-19-232](#) (Washington, D.C.: Mar. 25, 2019).

¹⁸In 2019, HUD allocated CDBG-DR funds via *Federal Register* notices for activities to mitigate disaster risks and reduce future losses. Specifically, in August 2019, HUD allocated approximately \$633 million to Florida and approximately \$4.3 billion to Texas. See *Allocations, Common Application, Waivers, and Alternative Requirements for Community Development Block Grant Mitigation Grantees*, 84 Fed. Reg. 45838 (Aug. 30, 2019). In September 2019, HUD allocated approximately \$774 million to the USVI. See *Allocations, Common Application, Waivers, and Alternative Requirements for Community Development Block Grant Mitigation Grantees; U.S. Virgin Islands Allocation*, 84 Fed. Reg. 47528 (Sept. 10, 2019).

¹⁹See 84 Fed. Reg. 45838.

FEMA's Public Assistance Program

FEMA's Public Assistance program provides grants to state, tribal, territorial, and local governments, as well as certain types of private nonprofit organizations, for debris removal; emergency protective measures; and the repair, replacement, or restoration of disaster-damaged, publicly owned facilities.²⁰ It is a complex and multistep program administered through a partnership among FEMA, state, and local officials. Prior to implementing the Public Assistance program, FEMA determines a state, territorial or tribal government's eligibility for the program using primarily the per capita damage indicator.²¹ In our September 2018 report on federal response and recovery efforts for the 2017 hurricanes and wildfires, we reported on FEMA's implementation of the Public Assistance program, which has recently undergone significant changes as a result of federal legislation and agency initiatives. Specifically, we reported on FEMA's use of its redesigned delivery model for providing grants under the Public Assistance program, as well as the alternative procedures for administering or receiving such grant funds that FEMA allows states, territories, and local governments to use for their recovery.²² Our prior and ongoing work highlight both progress and challenges with FEMA's Public Assistance program, including the agency's methodology for determining program eligibility, the redesigned delivery model, and the program's alternative procedures.

Criteria for Determining Public Assistance Eligibility

In September 2012, we found that FEMA primarily relied on a single criterion, the per capita damage indicator, to determine a jurisdiction's eligibility for Public Assistance funding.²³

²⁰In accordance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended, the President of the United States may declare that a major disaster or emergency exists in response to a governor's or tribal chief executive's request if the disaster is of such severity and magnitude that effective response is beyond the capabilities of a state, tribe, or local government and federal assistance is necessary. See 42 U.S.C. §§ 5170-5172.

²¹See 44 C.F.R. § 206.48. The per capita indicator is a set amount of funding, \$1.50 per capita in fiscal year 2019, that is multiplied by the population of the jurisdiction (for example, state) for which the governor is requesting a disaster declaration for Public Assistance, to arrive at a threshold amount, which is compared with the estimated amount of damage done to public structures.

²²[GAO-18-472](#). The Sandy Recovery Improvement Act of 2013 amended the Stafford Act by adding Section 428, which authorized FEMA to approve Public Assistance program projects under the alternative procedures provided by that section for any presidentially-declared major disaster or emergency. This section further authorized FEMA to carry out the alternative procedures as a pilot program until FEMA promulgates regulations to implement this section. Pub. L. No. 113-2, div. B, § 1102(2), 127 Stat. 39, amending Pub. L. No. 93-288, tit. IV, § 428 (codified as amended at 42 U.S.C. § 5189f).

²³GAO, *Federal Disaster Assistance: Improved Criteria Needed to Assess a Jurisdiction's Capability to Respond and Recover on Its Own*, [GAO-12-838](#) (Washington, D.C.: Sept. 12, 2012).

However, because FEMA's per capita indicator, set at \$1 in 1986, does not reflect the rise in (1) per capita personal income since it was created in 1986 or (2) inflation from 1986 to 1999, the indicator is artificially low. Our analysis of actual and projected obligations for 508 disaster declarations in which Public Assistance was awarded during fiscal years 2004 through 2011 showed that fewer disasters would have met either the personal income-adjusted or the inflation-adjusted Public Assistance per capita indicators for the years in which the disaster was declared.²⁴ Thus, had the indicator been adjusted annually since 1986 for personal income or inflation, fewer jurisdictions would have met the eligibility criteria that FEMA primarily used to determine whether federal assistance should be provided, which would have likely resulted in fewer federal disaster declarations and lower federal costs.

We recommended, among other things, that FEMA develop and implement a methodology that more comprehensively assesses a jurisdiction's capacity to respond to and recover from a disaster without federal assistance, including fiscal capacity and consideration of response and recovery capabilities. DHS concurred with our recommendation and, in January 2016, FEMA was considering establishing a disaster deductible, which would have required a predetermined level of financial or other commitment before FEMA would have provided assistance under the Public Assistance program. In September 2019, FEMA told us that it was considering options for alternative methodologies for, among other things, assessing a jurisdiction's independent capacity to respond to and recover from disasters. In addition, the DRRA includes a provision directing the FEMA Administrator to initiate rulemaking to update the factors considered when evaluating requests for major disaster declarations.²⁵ According to FEMA documentation, as of September 2019, the agency was working to implement this provision through rulemaking proposals, including increasing the per capita indicator to account for inflation. Until FEMA implements a new methodology, the agency will not have an accurate assessment of a jurisdiction's capabilities and runs the risk of recommending that the President award Public Assistance to jurisdictions that have the capacity to respond and recover on their own.

²⁴Specifically, our analysis showed that 44 percent of the 508 disaster declarations would not have met the Public Assistance per capita indicator if adjusted for the change in per capita personal income since 1986. Similarly, our analysis showed that 25 percent of the 508 disaster declarations would not have met the Public Assistance per capita indicator if adjusted for inflation since 1986.

²⁵Pub. L. No. 115-254, div. D, § 1239, 132 Stat. at 3466.

Redesigned Public Assistance Delivery Model

In November 2017, we reported that FEMA redesigned its delivery model for providing grants under the Public Assistance program.²⁶ As part of the redesign effort, FEMA developed a new, web-based case management system to address past challenges, such as difficulties in sharing grant documentation among FEMA, state, and local officials and tracking the status of Public Assistance projects. Both FEMA and state officials involved in testing the redesigned delivery model stated that the new case management system's capabilities could lead to greater transparency and efficiencies in the program. However, we found that FEMA had not fully addressed two key information technology management controls that are necessary to ensure systems work effectively and meet user needs. We recommended, among other things, that FEMA (1) establish controls for tracking the development of system requirements, and (2) establish system testing criteria, roles and responsibilities, and the sequence and schedule for integration of other relevant systems. DHS concurred with these recommendations and, as of October 2019, has fully implemented both. FEMA's original intention was to implement the redesigned delivery model for all future disasters beginning in January 2018. However, in September 2017, FEMA expedited full implementation of the redesigned model shortly after Hurricane Harvey made landfall. In September 2018, we reported that local officials continued to experience challenges with using the new Public Assistance web-based, case management system following the 2017 disasters, such as not having sufficient guidance on how to use the new system and delays with FEMA's processing of their projects.²⁷

Public Assistance Alternative Procedures in the U.S Virgin Islands and Puerto Rico

Our prior and ongoing work highlight the challenges with implementing the Public Assistance program, including the alternative procedures, in Puerto Rico and the USVI.²⁸ In particular, our work has identified challenges related to (1) developing fixed-cost estimates and (2)

²⁶GAO-18-30.

²⁷GAO-18-472.

²⁸Under the standard Public Assistance program, FEMA will fund the actual cost of a project. However, the Public Assistance alternative procedures allow recipient governments to choose to receive awards for permanent work projects based on fixed-cost estimates, which can provide financial incentives for the timely and cost-effective completion of work. GAO, *U.S. Virgin Islands Recovery: Status of FEMA Public Assistance Funding and Implementation*, GAO-19-253 (Washington, D.C.: Feb. 25, 2019) and GAO, *Puerto Rico Hurricanes: Status of FEMA Funding, Oversight, and Recovery Challenges*, GAO-19-256 (Washington, D.C.: Mar. 14, 2019).

implementing flexibilities provided by the Bipartisan Budget Act of 2018.²⁹ This Act allows FEMA, the USVI, and Puerto Rico to repair and rebuild critical services infrastructure—such as medical and education facilities—so it meets industry standards without regard to pre-disaster condition (see fig. 1).

Figure 1: Hurricane Damage to a Hospital in the U.S. Virgin Islands and School in Puerto Rico



Damaged structure and ventilation system of the Governor Juan F. Luis Hospital and Medical Center in St. Croix, U.S. Virgin Islands.

Classroom with molded floors and water damage on the walls at the Berwind Intermediate School in San Juan, Puerto Rico.

Source: GAO; photos taken by GAO while on site in the U.S. Virgin Islands and Puerto Rico. | GAO-20-183T

Unlike in the standard Public Assistance program where FEMA will fund the actual cost of a project, the Public Assistance alternative procedures allow awards for permanent work projects to be made on the basis of fixed-cost estimates to provide financial incentives for the timely and cost-effective completion of work. FEMA officials in Puerto Rico and the USVI stated that the development of a “cost factor” for use in the fixed-cost estimating process had slowed the pace of FEMA obligations for permanent work projects. Specifically, these factors are intended to ensure that the costs associated with implementing projects in Puerto Rico and the USVI are sufficiently captured when developing the fixed-cost estimates for alternative procedures projects. Since incorporating the cost factor into the fixed-cost estimating process will increase the amount of funding obligated for any given permanent work project, FEMA officials explained

²⁹The Bipartisan Budget Act of 2018 authorized FEMA, when using the Public Assistance alternative procedures, to provide assistance to fund the replacement or restoration of disaster-damaged infrastructure that provide critical services to industry standards without regard to pre-disaster condition. Pub. L. No. 115-123, § 20601(1), 132 Stat. 64 (2018). Critical services include public infrastructure in the following sectors: power, water, sewer, wastewater treatment, communications, education, and emergency medical care. See 42 U.S.C. § 5172(a)(3)(B). Section 20601 applies only to assistance provided through the Public Assistance alternative procedures program for the duration of the recovery for the major disasters declared in Puerto Rico and the USVI following hurricanes Irma and Maria. Further, the Additional Supplemental Appropriations for Disaster Relief Act of 2019, which was signed into law on June 6, 2019, provides additional direction to FEMA in the implementation of section 20601. Pub. L. No. 116-20, tit. VI, § 601, 133 Stat. 871, 882 (2019). For the purposes of our report, discussion of the Bipartisan Budget Act of 2018 refers specifically to section 20601.

that Puerto Rico and the USVI had an incentive to delay the obligation of individual projects until this factor was finalized. For example, FEMA officials in the USVI told us in May 2019 that obligations for permanent work projects in the territory had been mostly on hold since October 2018 while an independent contractor worked to develop the USVI-specific cost factor.

FEMA officials told us that USVI officials disagreed with the initial USVI-specific cost factors the independent contractor proposed. USVI officials contended that the cost factors were insufficient in accurately capturing the unique circumstances that influence construction costs in the territory, such as the limited availability of local resources and the need to import materials and labor. In May 2019, the contractor proposed a new cost factor, which FEMA approved on an interim basis pending further analysis.³⁰ In July 2019, FEMA officials told us that while additional analyses are required to ensure its final process for developing fixed-cost estimates in the USVI accurately captures construction costs, using this interim cost factor in the meantime allows FEMA and USVI officials to move forward with the development and final approval of alternative procedures projects.³¹ In August 2019, a senior USVI official told us the territory plans to begin using the interim cost factor, where appropriate, to keep projects progressing forward. However, this official stated that the USVI questioned whether the interim cost factor did, in fact, sufficiently capture the actual costs of construction in the USVI.³² Given the uncertainty around these fixed-cost estimates, USVI officials told us the territory will need to balance the potential flexibilities provided by the alternative procedures program with the financial risk posed by cost overruns when deciding whether to use the alternative procedures or the standard Public Assistance program for any given permanent work project. Specifically, these officials stated that the USVI plans to pursue alternative procedures projects that do not

³⁰FEMA approved an interim cost factor of 1.51 until additional analysis can be completed. To develop a fixed-cost estimate using this interim cost factor, FEMA first uses the agency's standard cost estimating process to determine the initial estimate for any given permanent work project. Next, FEMA multiplies this estimate by the USVI-specific cost factor of 1.51 to determine the fixed-cost estimate for the alternative procedures project. For example, if FEMA determined through its cost estimating process that a project would cost \$1 million, applying the interim cost factor would result in a final fixed-cost estimate of \$1.51 million for this alternative procedures project.

³¹According to agency documentation, these additional analyses include the development of a specific "future price factor" to capture the potential variances in the cost of construction over time. This factor is to be incorporated into FEMA's process for developing fixed-cost estimates and is to be applied based on the anticipated construction schedule for any given project.

³²Further, according to this official, the USVI requested that FEMA retroactively amend all fixed-cost estimates using the interim factor once FEMA's process for developing these estimates in the USVI was finalized.

include high levels of complexity or uncertainty to reduce the risk of cost overruns, especially given its already difficult financial situation.³³

In addition, according to FEMA guidance, the Puerto Rico-specific cost factor was developed by a third-party center of excellence comprising personnel selected by FEMA and Puerto Rico.³⁴ Through our ongoing work we learned that FEMA convened a panel of FEMA engineers to assess the cost factor methodologies proposed by the center of excellence. In July 2019, FEMA approved the use of a cost factor designed to account for location-specific construction costs in Puerto Rico to ensure that fixed-cost estimates for alternative procedures projects are accurate. This cost factor consists of cost indices to apply to urban, rural, and insular (the islands of Vieques and Culebra) areas of Puerto Rico. According to FEMA officials, these cost indices will compile location-specific construction costs for each of these three areas. We are currently assessing FEMA's process for developing cost estimates for projects under both the standard and alternative procedures programs, and plan to report our results in early 2020.

As of September 2019, FEMA officials told us the agency had obligated funding for 14 alternative procedures projects in Puerto Rico out of approximately 9,000 projects FEMA and Puerto Rico are working to develop for inclusion in the program. According to FEMA guidance, Puerto Rico must use the alternative procedures for all large permanent work projects and its deadline for finalizing the fixed-cost estimates for these projects was October 11, 2019.³⁵ However, on October 8, 2019, Puerto Rico requested that FEMA extend this deadline. In response, FEMA acknowledged that Puerto Rico and FEMA have significant work remaining to develop and finalize the fixed-cost estimates for alternative procedures projects. As a result, FEMA authorized all parties to continue developing these projects while FEMA works to establish a new deadline for finalizing fixed-cost estimates in Puerto Rico.

Unlike Puerto Rico, the USVI has the flexibility to pursue either the alternative procedures or the standard procedures on a project-by-project basis. As of September 2019, FEMA had obligated funding for two alternative procedures projects in the USVI. As the USVI's deadline for finalizing

³³Under the standard Public Assistance program, FEMA will reimburse the USVI for the actual cost of completed work for any given project.

³⁴According to FEMA guidance, as part of the alternative procedures process in Puerto Rico, FEMA and Puerto Rico must agree on a group of personnel with cost estimation expertise who will serve as part of a center of excellence.

³⁵FEMA, *Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR*, (April, 2018).

these projects is in March 2020, it is too early gauge the extent to which the alternative procedures will play a role in the USVI's long-term recovery strategy.

In addition, our preliminary observations indicate that FEMA, USVI, and Puerto Rico officials have reported challenges with the implementation of the flexibilities authorized by section 20601 of the Bipartisan Budget Act. This section of the Act allows for the provision of assistance under the Public Assistance alternative procedures to restore disaster-damaged facilities or systems that provide critical services to an industry standard without regard to pre-disaster condition. Officials from Puerto Rico's central government stated that they disagreed with FEMA's interpretation of the types of damages covered by section 20601 of the Bipartisan Budget Act of 2018. In response, FEMA officials in Puerto Rico stated they held several briefings with Puerto Rico's central recovery office to explain FEMA's interpretation of the section.³⁶ Further, FEMA officials in the USVI told us that initially, they had difficulty obtaining clarification from FEMA headquarters regarding how to implement key components of section 20601 of the Act. In June 2019, the Additional Supplemental Appropriations for Disaster Relief Act of 2019 was signed into law and provides additional direction to FEMA regarding the implementation of section 20601.³⁷ Among other things, this legislation includes a provision directing FEMA to change its process for determining whether a disaster-damaged facility is eligible for repair or replacement.³⁸ FEMA evaluated this and other provisions of the Act and, in September 2019, issued an updated policy to provide clear guidance moving forward, according to agency officials.³⁹ We will continue to evaluate these identified challenges and any efforts to address them, as well as other aspects of recovery efforts in the USVI and Puerto Rico, and plan to report our findings in November 2019 and January 2020, respectively.

³⁶In September 2018, FEMA issued guidance for implementing section 20601 of the 2018 Bipartisan Budget Act of 2018 through the Public Assistance alternative procedures program.

³⁷See Pub. L. No. 116-20, tit. VI, § 601, 133 Stat. at 882.

³⁸This legislation directs FEMA to "include the costs associated with addressing pre-disaster condition, undamaged components, codes and standards, and industry standards in the cost of repair" when calculating the 50 percent rule to determine whether a facility should be repaired or replaced.

³⁹FEMA Recovery Policy FP 104-009-5 Version 2, *Implementing Section 20601 of the 2018 Bipartisan Budget Act through the Public Assistance Program*.

FEMA's Individual Assistance Program

The Individual Assistance program provides financial and direct assistance to disaster victims for expenses and needs that cannot be met through other means, such as insurance. In May 2019, we reported on FEMA's efforts to provide disaster assistance under the Individual Assistance program to older adults and people with disabilities following the 2017 hurricanes.⁴⁰ We found that aspects of the application process for FEMA assistance were challenging for older individuals and those with disabilities. Further, according to stakeholders and FEMA officials, disability-related questions in the Individual Assistance registration materials were confusing and easily misinterpreted. While FEMA had made some efforts to help registrants interpret the questions, we recommended, among other things, that FEMA (1) implement new registration-intake questions that improve FEMA's ability to identify and address survivors' disability-related needs,⁴¹ and (2) improve communication of registrants' disability-related information across FEMA programs. DHS concurred with the first recommendation, and officials reported that in May 2019 the agency updated the questions to directly ask individuals if they have a disability. The agency has taken actions to fully implement this recommendation and, according to FEMA's analysis of applications for assistance following recent disasters—which used the updated questions—the percentage of registrants who reported having a disability increased.

However, DHS did not concur with the second recommendation, noting that it lacks specific funding to augment its legacy data systems. FEMA officials stated that they began a long-term data management improvement initiative in April 2017, which they expect will ease efforts to share and flag specific disability-related data. While we acknowledge FEMA's concerns about changing legacy systems when it has existing plans to replace those systems, we continue to believe there are other cost-effective ways that are likely to improve communication of registrants' disability-related information prior to implementing the system upgrades. For example, FEMA could revise its guidance to remind program officials to review the survivor case file notes to identify whether there is a record of any disability-related needs.

⁴⁰GAO, *Disaster Assistance: FEMA Action Needed to Better Support Individuals Who Are Older or Have Disabilities*, [GAO-19-318](#) (Washington, D.C.: May 14, 2019).

⁴¹For the purposes of this report, we used the term "disability-related needs" broadly to include all needs individuals may have that are related to a disability or access or functional need. For example, this may include replacement of a damaged wheelchair or other durable medical equipment, fixing an accessible ramp to a house, or any needed assistance to perform daily activities—such as showering, getting dressed, walking, and eating.

We also have work underway to assess FEMA's Individuals and Households Program, a component program of Individual Assistance. Through this program, as of April 2019, FEMA had awarded roughly \$4.7 billion in assistance to almost 1.8 million individuals and households for federally-declared disasters occurring in 2017 and 2018. Specifically, we are analyzing Individuals and Households Program expenditures and registration data for recent years; reviewing FEMA's processes, policies, and procedures for making eligibility and award determinations; and examining survivors' reported experiences with this program, including any challenges, for major disaster declarations occurring in recent years. We plan to report our findings in early 2020.

FEMA's Individuals and Households Program



FEMA's Individuals and Households Program provides individuals with financial assistance, such as grants to help repair or replace damaged homes, and temporary direct housing assistance, such as recreational vehicles.

Source: GAO; photos taken by GAO while on site in California (top) and Florida (below). | GAO-20-183T

HUD Community Development Block Grant Disaster Recovery Funds

HUD CDBG-DR grants provide funding that disaster-affected communities may use to address unmet needs for housing, infrastructure, and economic revitalization. In March 2019, we reported on the status of CDBG-DR grants following the 2017 disasters, plans for monitoring the

program, and challenges HUD and grantees faced in administering these grants.⁴² We found that HUD lacked adequate guidance for staff reviewing key information, such as the quality of grantees' financial processes and procedures and assessments of grantees' capacity and unmet needs. Further, we found HUD had not completed monitoring or workforce plans that identify key risk factors and critical skills and competencies required for program implementation, among other things. In addition, we found that Congress has not established permanent statutory authority for CDBG-DR but rather has used supplemental appropriation legislation to authorize HUD to establish requirements via *Federal Register* notices.⁴³ Without such permanent statutory authority, HUD must customize grantee requirements for each disaster. The ad hoc nature of CDBG-DR has created challenges for CDBG-DR grantees, such as lags in accessing funding and coordinating these funds with other disaster recovery programs. For example, it took 154 days (or 5 months) for HUD to issue the requisite *Federal Register* notice after the first appropriation for the 2017 hurricanes. According to HUD officials, they delayed issuance of the first notice for the 2017 hurricanes because they expected a second appropriation and wanted to allocate those funds in the same notice. However, because the second appropriation took longer than HUD expected, the first notice allocated only the first appropriation.

We recommended that Congress consider permanently authorizing a disaster assistance program to address unmet needs in a timely manner. In addition, we made five recommendations to HUD. Specifically, we made two recommendations to HUD regarding developing additional guidance for staff to use when reviewing grantees' planning documentation. HUD partially agreed with these two recommendations, stating that some of this guidance was already in place. Because HUD acknowledged that providing additional guidance would improve its review process, we revised these two recommendations accordingly to reflect the need for additional guidance. We also made three additional recommendations to HUD, including that the agency should develop a monitoring plan for grants and conduct workforce training. HUD generally agreed with these recommendations and indicated it planned to develop monitoring strategies. HUD also stated that it had developed a staffing plan, but we noted the agency still needed to conduct workforce planning to determine if the number of staff the agency

⁴²[GAO-19-232](#).

⁴³See, e.g., Pub. L. No. 155-56, 131 Stat. 1129 (2017); Pub. L. No. 115-123, 132 Stat. 64; 83 Fed. Reg. 5844 (Sept. 8, 2017); 83 Fed. Reg. 40,314-01 (Aug. 14, 2018).

planned to hire was sufficient. We are continuing to monitor HUD's efforts to address these recommendations.

Additional Challenges in Federal Response and Recovery Efforts

In addition to those described above, we reported on challenges FEMA faced in (1) providing mass care to disaster survivors, (2) assisting jurisdictions affected by wildfires, and (3) supporting electricity grid recovery efforts in Puerto Rico.

Mass Care

In September 2019, we reported on FEMA's and the American Red Cross' efforts to coordinate mass care—which includes sheltering, feeding, and distributing emergency supplies—following the 2017 hurricanes.⁴⁴ We found that some needs related to mass care were unmet. For example, local officials in Texas said flooded roads prevented trucks from delivering supplies. Further, mass care providers encountered challenges in part because state and local agreements with voluntary organizations that help to provide mass care to disaster survivors did not always clearly detail what services these organizations were capable of providing. Among other things, we also found that while state, territorial, and local grantees of federal disaster preparedness grants are required to regularly submit information on their capabilities to FEMA, the mass care information some grantees provided to FEMA was not specific enough to aid its response in 2017. Moreover, as FEMA does not require grantees to specify the organizations providing mass care services in their capabilities assessments, grantees and FEMA may not be collecting reliable information on capabilities.

As a result of our findings in this report, we made one recommendation to DHS, four recommendations to FEMA, and one recommendation to the American Red Cross.⁴⁵ Specifically, among other things, we recommended that FEMA should emphasize the importance of defining roles and responsibilities in its guidance to grantees in states and localities and require them to solicit key capabilities information from mass care providers. DHS

⁴⁴GAO, *Disaster Response: FEMA and the American Red Cross Need to Ensure Key Mass Care Organizations are Included in Coordination and Planning*, [GAO-19-526](#) (Washington, D.C.: Sept. 19, 2019).

⁴⁵We recommended that the American Red Cross develop mechanisms for itself and its partners to leverage local community groups, such as conducting regular outreach and information sharing.

concurrent with four recommendations, but did not concur with our recommendation requiring grantees to solicit key information from organizations providing mass care services and to specify these organizations in capability assessments. Specifically, DHS and FEMA stated that requiring grantees to include this information is not the most effective approach and would increase their burden. We modified our recommendation to address this concern and continue to believe that grantees should make an effort to include mass care providers in assessing capabilities. We will continue to monitor FEMA's progress in fully addressing these recommendations.

Wildfire Recovery

Further, in October 2019, we reported on the assistance FEMA provided to jurisdictions in response to major disaster declarations stemming from wildfires from 2015 through 2018 (see fig. 2).⁴⁶ We found that FEMA helped state and local officials obtain and coordinate federal resources to provide for the needs of wildfire survivors and provided more than \$2.4 billion in federal assistance. However, state and county officials also described challenges in responding to wildfire disasters. For example, onerous documentation requirements for FEMA's Public Assistance grant program, a shortage of temporary housing for survivors, and the unique challenge of removing wildfire debris led to over-excavation on some homeowners' lots and lengthened the rebuilding process. We also found that while FEMA had developed an after-action report identifying lessons learned from the October and December 2017 wildfires, the agency could still benefit from a more comprehensive assessment of its operations to determine if any changes are needed to better respond to the threat posed by increased wildfire activity.

We recommended that FEMA assess operations to identify any additional updates to its management controls—such as policies, procedures, or training—that could enhance future response and recovery from large-scale and severe wildfires. DHS agreed with our recommendation and described a number of ongoing and planned actions it would take to address it, including supporting states' efforts to house disaster survivors, developing guidance for housing grants authorized by the DRRA, and taking steps to identify areas of innovation in response to wildfire disasters. DHS anticipates that these efforts will be put into effect by

⁴⁶GAO, *Wildfire Disasters: FEMA Could Take Additional Actions to Address Unique Response and Recovery Challenges*, [GAO-20-5](#) (Washington, D.C.: Oct. 9, 2019).

December 2020 and we will continue to monitor DHS and FEMA’s progress in addressing this recommendation.

Figure 2: Aerial Photograph of Damage from Tubbs Fire, Santa Rosa, California, October 11, 2017



Source: Department of Defense. | GAO-20-183T

Puerto Rico Electricity Grid Recovery

In October 2019, we reported on federal efforts to support electricity grid recovery in Puerto Rico.⁴⁷ We found that FEMA and other federal agencies can support long-term electricity grid recovery efforts and incorporate resilience through three primary roles—providing funding and technical assistance and coordinating among local and federal agencies. However, we found that zero permanent, long-term grid recovery projects in Puerto Rico had received funding as of July 2019 as Puerto Rico was still establishing priorities for permanent work. Further, we found that certain challenges are hindering progress on electricity grid recovery efforts in Puerto Rico, including uncertainty about the kinds of projects that may be eligible for federal funding, local capacity constraints, uncertainty about available federal funding, and the need for coordination among local and federal stakeholders.

⁴⁷GAO, *Puerto Rico Electricity Grid Recovery: Better Information and Enhanced Coordination is Needed to Address Challenges*, [GAO-20-141](#) (Washington, D.C.: Oct. 8, 2019).

As a result of our findings, we made three recommendations to FEMA and one recommendation to HUD. Specifically, we recommended that FEMA should provide clear written policies, guidance, or regulations to clarify its plans for implementing new authorities provided by the Bipartisan Budget Act of 2018 and take steps to enhance coordination among local and federal entities. DHS concurred with these recommendations and stated it is working to address them. In addition, we recommended that HUD establish timeframes and a plan for publication of the grant process and requirements specifically for CDBG-DR funding for improvements to Puerto Rico's electricity grid. In its response to this recommendation, HUD stated that it is closely working with its federal partners on the requirements for this funding in Puerto Rico, but did not specifically state whether it would establish the timeframes and a plan for publication of the grant process and requirements as we recommended. We continue to believe that this action is needed since without this information, local entities will continue to be uncertain regarding what is eligible for CDBG-DR funding. We will continue to monitor FEMA's and HUD's progress in addressing these recommendations.

Longstanding Workforce Management Challenges Exacerbate Key Issues with Response and Recovery Operations

FEMA's experiences during the 2017 disasters highlight the importance of continuing to make progress on addressing the long-standing workforce management challenges we have previously reported on and continue to observe in our ongoing work. In particular, our work has identified challenges related to (1) recruiting, maintaining, and deploying a trained workforce, (2) the Incident Management Assistance Team program, (3) Public Assistance program staffing, (4) contracting workforce shortages, (5) assistance to older adults and people with disabilities, and (6) workforce capacity and training.

Recruiting, Maintaining, and Deploying a Trained Workforce. In September 2018, we reported that the 2017 disasters—hurricanes Harvey, Irma, and Maria, as well as the California wildfires—resulted in unprecedented FEMA workforce management challenges, including recruiting, maintaining, and deploying a sufficient and adequately-trained FEMA disaster workforce.⁴⁸ FEMA's available workforce was overwhelmed by the response needs caused by the sequential and overlapping timing of the three hurricanes. For example, at the height of FEMA workforce deployments in October 2017, 54 percent of staff were serving in a capacity in

⁴⁸[GAO-18-472](#).

which they did not hold the title of “Qualified”—according to FEMA's qualification system standards—a past challenge we identified. FEMA officials noted that staff shortages and lack of trained personnel with program expertise led to complications in its response efforts, particularly after Hurricane Maria.

FEMA’s Incident Management Assistance Team Program. In February 2016, we reported on, among other things, FEMA’s efforts to implement, assess, and improve its Incident Management Assistance Team program.⁴⁹ We found that while FEMA used some leading practices in managing the program, it lacked a standardized plan to ensure that all national and regional Incident Management Assistance Team members received required training. Further, we found that the program had experienced high attrition since its implementation in fiscal year 2013. We recommended, among other things, that FEMA develop (1) a plan to ensure that Incident Management Assistance Teams receive required training, and (2) a workforce strategy for retaining Incident Management Assistance Team staff. DHS concurred with the recommendations. FEMA implemented our first recommendation by developing an Incident Management Assistance Team Training and Readiness Manual and providing a training schedule for fiscal year 2017. In response to the second recommendation, FEMA officials stated in July 2018 that they plan to develop policies that will provide guidance on a new workforce structure, incentives for Incident Management Assistance Team personnel, and pay-for-performance and all other human resource actions. We are continuing to monitor FEMA’s efforts to address this recommendation.

Public Assistance Program Staffing. In November and December 2017, we reported on staffing challenges in FEMA’s Public Assistance program. In November 2017, we reported on FEMA’s efforts to address past workforce management challenges through its redesigned Public Assistance delivery model.⁵⁰ As part of the redesign effort, FEMA created consolidated resource centers to standardize and centralize Public Assistance staff responsible for managing grant applications, and new specialized positions to ensure more consistent guidance to applicants. However, we found that FEMA had not assessed the workforce needed to fully

⁴⁹The three national and 13 regional Incident Management Assistance Teams are comprised of FEMA emergency management staff in areas such as operations, logistics, planning, and finance and administration. These teams are among the first FEMA officials to arrive at the affected jurisdiction and provide leadership to identify what federal support may be required to respond to the incident, among other things. GAO, *Disaster Response: FEMA Has Made Progress Implementing Key Programs, but Opportunities for Improvement Exist*, [GAO-16-87](#), (Washington, D.C.: Feb. 5, 2016).

⁵⁰[GAO-18-30](#).

implement the redesigned model, such as the number of staff needed to fill certain new positions, or to achieve staffing goals. Further, in December 2017, we reported on FEMA's management of its Public Assistance appeals process, including that FEMA increased staffing levels for the appeals process from 2015 to 2017.⁵¹ However, we found that FEMA continued to face a number of workforce challenges, such as staff vacancies, turnover, and delays in training, which contributed to processing delays.

Based on our findings from our November and December 2017 reports, we recommended, among other things, that FEMA (1) complete workforce staffing assessments that identify the appropriate number of staff needed to implement the redesigned Public Assistance delivery model, and (2) document steps for hiring, training, and retaining key appeals staff, and address staff transitions resulting from deployments to disasters. DHS concurred with our recommendations to address workforce management challenges in the Public Assistance program and have reported taking some actions in response. For example, to address the first recommendation, FEMA officials have developed preliminary models and estimates of staffing needs across various programs, including Public Assistance. However, as of October 2019, the agency has not yet taken actions to implement this recommendation. To address the second recommendation, FEMA has collected information on the amount of time regional appeals analysts spend on appeals, and the inventory and timeliness of different types of appeals. FEMA officials stated in September 2018 that they plan to assess this information to prepare a detailed regional workforce plan. In May 2019, FEMA sent us additional information and documentation involving their analysis of appeal inventory and timeliness. As of October 2019, we are evaluating the information provided by FEMA to determine if they have addressed this recommendation.

Contracting Workforce Shortages. In April 2019, we reported on the federal government's contracting efforts for preparedness, response, and recovery efforts related to the 2017 hurricanes and California wildfires.⁵² We found, among other things, that contracting workforce shortages continue to be a challenge for disaster response and recovery. Further, although FEMA's 2017 after-action report recommended increasing contract support capacities, it did not provide a specific plan to do so. We also found that while FEMA evaluated its contracting

⁵¹GAO, *Disaster Recovery: Additional Actions Would Improve Data Quality and Timeliness of FEMA's Public Assistance Appeals Processing*, [GAO-18-143](#), (Washington, D.C.: Dec. 15, 2018).

⁵²[GAO-19-281](#).

workforce needs in a 2014 workforce analysis, it did not specifically consider contracting workforce needs in the regional offices or address Disaster Acquisition Response Team employees.⁵³ In our April 2019 report, we recommended, among other things, that FEMA assess its workforce needs—including staffing levels, mission needs, and skill gaps—for contracting staff, to include regional offices and Disaster Acquisition Response Teams, and develop a plan, including timelines, to address any gaps. DHS concurred with this recommendation and estimates that it plans to implement it in the fall of 2019.

Assistance to Older Adults and People with Disabilities. In our May 2019 report on FEMA disaster assistance to older adults and people with disabilities following the 2017 hurricanes, we found that FEMA began implementing a new approach to assist individuals with disabilities in June 2018, which shifted the responsibility for directly assisting individuals with disabilities from Disability Integration Advisors—which are staff FEMA deploys specifically to identify and recommend actions needed to support survivors with disabilities—to all FEMA staff.⁵⁴ To implement this new approach, FEMA planned to train all of the agency’s deployable staff and staff in programmatic offices on disability issues during response and recovery deployments. According to FEMA, a number of Disability Integration Advisors would also deploy to advise FEMA leadership in the field during disaster response and recovery. We found that while FEMA has taken some initial steps to provide training on the changes, it had not established a plan for delivering comprehensive disability-related training to all staff who will be directly interacting with individuals with disabilities. We recommended, among other things, that FEMA develop a plan for delivering training to FEMA staff that promotes competency in disability awareness and includes milestones and performance measures, and outlines how performance will be monitored. DHS concurred with this recommendation and reported plans to update FEMA’s position task books for all deployable staff with information that promotes competency in disability awareness. In July 2019, officials told us FEMA plans to hire new staff to focus on integrating the disability competency FEMA-wide and work with FEMA’s training components to ensure that disability-related training is consistent with the content of the position task books. We will continue to monitor FEMA’s efforts to address our recommendation.⁵⁵

⁵³The primary purpose of Disaster Acquisition Response Team employees is to support contract administration for disasters.

⁵⁴[GAO-19-318](#).

⁵⁵We continue to believe that FEMA should develop a plan that includes how it will deliver training to promote competency in disability awareness among its staff. The plan for delivering such training should include milestones, performance measures, and how performance will be monitored.

FEMA’s Workforce Capacity and Training. In addition to our prior work on FEMA’s workforce management challenges related to specific programs and functions, we are continuing to evaluate FEMA’s workforce capacity and training efforts during the 2017 and 2018 disaster seasons. Our preliminary observations indicate that there were challenges in FEMA’s ability to deploy staff with the right kinds of skills and training at the right time to best meet the needs of various disaster events. For example, according to FEMA field leadership we interviewed, for some of the functions FEMA performs in the field, FEMA had too few staff with the right technical skills to perform their missions—such as inspections of damaged properties—efficiently and effectively. For other functions, these managers also reported that they had too many staff in the early stages of the disaster, which created challenges with assigning duties and providing on-the-job training. For example, some managers reported that they were allocated more staff than needed in the initial phases of the disaster, but many lacked experience and were without someone to provide direction and mentoring to ensure they used their time efficiently and gained competence more quickly. In focus group discussions and interviews with field managers, FEMA officials told us that difficulties deploying the right mix of staff with the right skills led to challenges such as delays in making purchases to support FEMA operations, problems with properly registering applicants for FEMA programs, or poor communication with nonfederal partners. Nonetheless, FEMA staff have noted that, despite any suboptimal circumstances during disaster response, they aimed to and have been able to find a way to deliver the mission.

As part of this ongoing work, FEMA field leadership and managers also reported challenges using agency systems to ensure the availability of the right staff with the right skills in the right place and time. FEMA uses a system called the Deployment Tracking System to, among other things, help identify staff available to be deployed and activate and track deployments. To help gauge the experience level and training needs of its staff, the agency established the FEMA Qualification System (FQS), which is a set of processes and criteria to monitor staff experience in competently performing tasks and completing training that correspond to their job titles. According to the FQS guidance, staff who have been able to demonstrate proficient performance of all the relevant tasks and complete required training receive the designation “qualified,” and are expected to be ready and able to competently fulfill their responsibilities. Those who have not, receive the designation “trainee,” and can be expected to need additional guidance and on-the-job training. FQS designations feed into the Deployment Tracking System as one key variable in how the tracking system deploys staff. Among other challenges with

FEMA's Deployment Tracking System and Qualification System, FEMA managers and staff in the field told us in focus group discussions that an employee's recorded qualification status was not a reliable indicator of the level at which deployed personnel would be capable of performing specific duties and responsibilities or their general proficiency in their positions, making it more difficult for managers to know the specialized skills or experience of staff and effectively build teams. We are continuing to assess these and other reported workforce challenges and plan to report our findings in spring 2020.

Thank you, Chairwoman Titus, Ranking Member Meadows, and Members of the Subcommittee. This concludes my prepared statement. I would be happy to respond to any questions you may have at this time.

GAO Contact and Staff Acknowledgments

If you or your staff have any questions concerning this statement, please contact Christopher P. Currie at (404) 679-1875 or curriec@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Key contributors to this statement were Joel Aldape (Assistant Director), Bryan Bourgault (Analyst-in-Charge), Amanda Miller, and Heidi Nielson. In addition, Aditi Archer, Anthony Bova, Janice Ceperich, James Cook, Adam Couvillion, Lorraine Ettaro, Eric Hauswirth, Tracey King, Caryn Kuebler, Amy Moran Lowe, Amanda Parker, Sara Pelton, Josephine Perez, Amanda Prichard, Paige Smith, and Johanna Wong made contributions to this statement. Key contributors to the previous work discussed in this statement are listed in each of the cited reports.

Appendix I – Related GAO Products Previously Issued

Highway Emergency Relief: Federal Highway Administration Should Enhance Accountability over Project Decisions. GAO-20-32 (Washington, D.C.: October 17, 2019).

Wildfire Disasters: FEMA Could Take Additional Actions to Address Unique Response and Recovery Challenges. [GAO-20-5](#) (Washington, D.C.: October 9, 2019).

Puerto Rico Electricity Grid Recovery: Better Information and Enhanced Coordination Is Needed to Address Challenges. GAO-20-141 (Washington, D.C.: October 8, 2019).

Disaster Response: HHS Should Address Deficiencies Highlighted by Recent Hurricanes in the U.S. Virgin Islands and Puerto Rico. [GAO-19-592](#) (Washington, D.C.: September 20, 2019).

Disaster Response: FEMA and the American Red Cross Need to Ensure Key Mass Care Organizations are Included in Coordination and Planning. [GAO-19-526](#) (Washington, D.C.: September 19, 2019).

Disaster Response: Federal Assistance and Selected States and Territory Efforts to Identify Deaths from 2017 Hurricanes. [GAO-19-486](#) (Washington, D.C.: September 13, 2019).

Emergency Management: FEMA's Disaster Recovery Efforts in Puerto Rico and the U.S. Virgin Islands. [GAO-19-662T](#) (Washington, D.C.: July 11, 2019).

2017 Disaster Relief Oversight: Strategy Needed to Ensure Agencies' Internal Control Plans Provide Sufficient Information. [GAO-19-479](#) (Washington, D.C.: June 28, 2019).

Emergency Management: FEMA Has Made Progress, but Challenges and Future Risks Highlight Imperative for Further Improvements, [GAO-19-617T](#) (Washington, D.C.: June 25, 2019).

Emergency Management: FEMA Has Made Progress, but Challenges and Future Risks Highlight the Imperative for Further Improvements, [GAO-19-594T](#) (Washington, D.C.: June 12, 2019).

Disaster Assistance: FEMA Action Needed to Better Support Individuals Who Are Older or Have Disabilities. [GAO-19-318](#) (Washington, D.C.: May 14, 2019).

Disaster Contracting: Actions Needed to Improve the Use of Post-Disaster Contracts to Support Response and Recovery. [GAO-19-281](#) (Washington, D.C.: April 24, 2019).

2017 Hurricane Season: Federal Support for Electricity Grid Restoration in the U.S. Virgin Islands and Puerto Rico. [GAO-19-296](#) (Washington, D.C.: April 18, 2019).

FEMA Grants Modernization: Improvements Needed to Strengthen Program Management and Cybersecurity. [GAO-19-164](#) (Washington, D.C.: April 9, 2019).

Disaster Recovery: Better Monitoring of Block Grant Funds Is Needed. [GAO-19-232](#) (Washington, D.C.: March 25, 2019).

Puerto Rico Hurricanes: Status of FEMA Funding, Oversight, and Recovery Challenges. [GAO-19-256](#) (Washington, D.C.: March 14, 2019).

Huracanes de Puerto Rico: Estado de Financiamiento de FEMA, Supervisión y Desafíos de Recuperación. [GAO-19-331](#) (Washington, D.C.: March 14, 2019).

High-Risk Series: Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas. [GAO-19-157SP](#) (Washington, D.C.: March 6, 2019).

U.S. Virgin Islands Recovery: Status of FEMA Public Assistance Funding and Implementation. [GAO-19-253](#) (Washington, D.C.: February 25, 2019).

2017 Disaster Contracting: Action Needed to Better Ensure More Effective Use and Management of Advance Contracts. [GAO-19-93](#) (Washington, D.C.: December 6, 2018).

Continuity of Operations: Actions Needed to Strengthen FEMA's Oversight and Coordination of Executive Branch Readiness. [GAO-19-18SU](#) (Washington, D.C.: November 26, 2018).

Homeland Security Grant Program: Additional Actions Could Further Enhance FEMA's Risk-Based Grant Assessment Model. [GAO-18-354](#) (Washington, D.C.: September 6, 2018).

2017 Hurricanes and Wildfires: Initial Observations on the Federal Response and Key Recovery Challenges. [GAO-18-472](#) (Washington, D.C.: September 4, 2018).

Federal Disaster Assistance: Individual Assistance Requests Often Granted but FEMA Could Better Document Factors Considered. [GAO-18-366](#) (Washington, D.C.: May 31, 2018).

2017 Disaster Contracting: Observations on Federal Contracting for Response and Recovery Efforts. [GAO-18-335](#) (Washington, D.C.: February 28, 2018).

Disaster Recovery: Additional Actions Would Improve Data Quality and Timeliness of FEMA's Public Assistance Appeals Processing. [GAO-18-143](#) (Washington, D.C.: December 15, 2017).

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Opportunities to Reduce Potential Duplication in Government Programs, Save Tax Dollars, and Enhance Revenue. [GAO-11-318SP](#) (Washington, D.C.: March 1, 2011).

Appendix II – Ongoing GAO Reviews

1. Review of U.S. Virgin Islands recovery planning and progress;
2. Puerto Rico disaster recovery planning and progress;
3. Drinking water and wastewater utility resilience;
4. Disaster and climate change impacts on Superfund sites;
5. FEMA Public Assistance program fraud risk management efforts;
6. Wildland fire collaboration on fuel reduction efforts;
7. Preparedness challenges and lessons learned from the 2017 disasters;
8. FEMA workforce management and challenges;
9. Small Business Administration response to 2017 disasters;
10. Development of the GAO disaster resilience framework;
11. FEMA Individuals and Households Program operations and challenges;
12. National Flood Insurance Program post-flood enforcement;
13. Emergency alerting capabilities and progress;
14. National Flood Insurance Program buyouts and property acquisitions;
15. Economic costs of large-scale natural disasters and impacts on community recovery;
16. Community Development Block Grants – disaster recovery;
17. Disaster Housing Assistance Program;
18. Contracting workforce and purchase card use for disaster response and recovery;
19. Power grid and water projects;
20. National Earthquake Hazards Reduction Program (NEHRP); and
21. Disaster resilience and hazard mitigation.