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Preparedness, Response, and Recovery, Committee
on Homeland Security, House of Representatives

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EMERGENCY MANAGEMENT

FEMA's Disaster Recovery Efforts in Puerto Rico and the U.S. Virgin Islands

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GAO Highlights

Highlights of [GAO-19-662T](#), a testimony before the Subcommittee on Emergency Preparedness, Response, and Recovery, Committee on Homeland Security, House of Representatives

Why GAO Did This Study

In September 2017, two major hurricanes—Irma and Maria—struck Puerto Rico and the USVI, causing billions of dollars in damage to infrastructure, housing, and the economy. FEMA—a component of the Department of Homeland Security—is the lead federal agency responsible for assisting Puerto Rico and the USVI to recover from these natural disasters. Among other responsibilities, FEMA is administering the Public Assistance program in partnership with the governments of Puerto Rico and the USVI, providing them grant funding for response and recovery activities, including debris removal efforts, life-saving emergency protective measures, and the repair, replacement, or restoration of public infrastructure.

This statement describes (1) the status of FEMA's Public Assistance grant funding in Puerto Rico and the USVI in response to the 2017 hurricanes as of April 2019, (2) the establishment of recovery offices in Puerto Rico and the USVI, and (3) challenges in implementing the Public Assistance program and actions FEMA has taken to address them. This statement is based on GAO reports issued in February, March, and June 2019, and includes preliminary observations from ongoing GAO reviews of FEMA operations. For ongoing work, GAO analyzed program documents and data on obligations and expenditures; interviewed agency officials; and visited disaster-damaged areas in Puerto Rico and the USVI, where GAO also interviewed FEMA and local officials.

GAO will continue to monitor the progress of Puerto Rico's and the USVI's recovery as part of its ongoing work.

View [GAO-19-662T](#). For more information, contact Chris Currie at (404) 679-1875 or curriec@gao.gov.

July 11, 2019

EMERGENCY MANAGEMENT

FEMA's Disaster Recovery Efforts in Puerto Rico and the U.S. Virgin Islands

What GAO Found

GAO's prior and ongoing work found that the Federal Emergency Management Agency (FEMA) obligated about \$7.4 billion in Public Assistance grant funding to Puerto Rico and the U.S. Virgin Islands (USVI) as of April 2019, in response to the 2017 hurricanes. FEMA obligated about \$6.2 billion in Public Assistance grants for emergency work—debris removal activities, power restoration, and other emergency measures—and about \$965 million in Public Assistance grants for permanent work—including the repair or replacement of public infrastructure such as roads, electrical utilities, and damaged buildings. Further, FEMA is continuing to work with Puerto Rico and the USVI to develop additional permanent work projects to repair damaged public infrastructure, such as schools and hospitals (see figure).

2017 Hurricane Damage to a School in Puerto Rico and a Hospital in the U.S. Virgin Islands



Interior damages to a school in Puerto Rico from water infiltration with standing water and molded walls.

Source: GAO | GAO-19-662T



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

In 2017, Puerto Rico established the Central Office for Recovery, Reconstruction, and Resilience and in 2019 the USVI established the Office of Disaster Recovery to coordinate and oversee federal recovery efforts. Among other things, these recovery offices are responsible for monitoring and overseeing the Public Assistance program and developing internal controls to ensure it is implemented in accordance with applicable laws, regulations, and FEMA requirements.

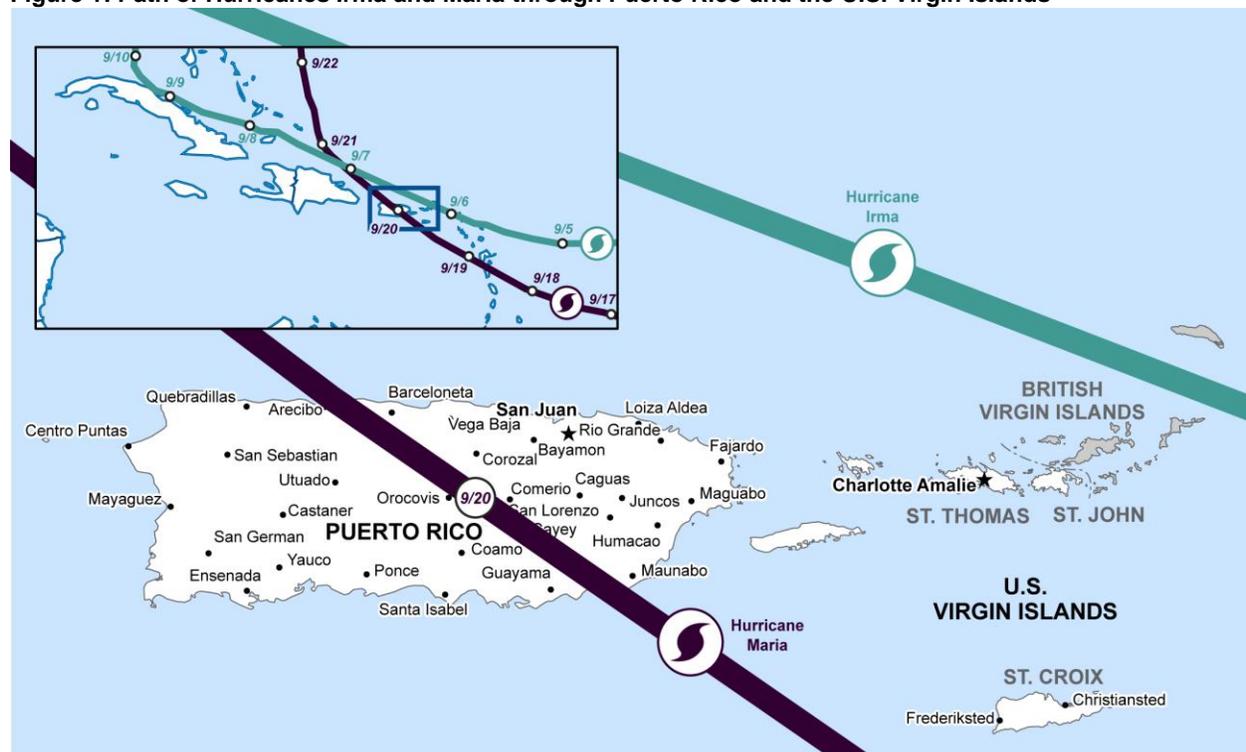
GAO's prior and ongoing work highlighted challenges with the Public Assistance program including concerns about the clarity of FEMA's guidance, and the time and resources needed to transition to a new Public Assistance delivery model in Puerto Rico. Further, Puerto Rico and USVI officials reported difficulties understanding FEMA's implementation of new statutory recovery flexibilities as well as delays in jointly developing cost estimates for long-term recovery projects such as the repair or replacement of hospitals, buildings, and other public infrastructure. FEMA has taken some actions to help address these issues, including developing additional guidance and specific training. However, it is too soon to determine the effectiveness of FEMA's actions. GAO will continue to evaluate the Public Assistance program in the USVI and Puerto Rico and plans to report its findings in late 2019 and early 2020, respectively.

Chairman Payne, Ranking Member King, and Members of the Subcommittee:

Thank you for the opportunity to discuss our work on the Federal Emergency Management Agency's (FEMA) recovery operations in Puerto Rico and the U.S. Virgin Islands (USVI).

In the span of 14 days in September 2017, two major hurricanes—Irma and Maria—struck Puerto Rico and the USVI, severely damaging critical infrastructure and causing tens of billions of dollars in damage. Specifically, on September 6, 2017, Hurricane Irma passed just north of the USVI islands of St. Thomas and St. John and Puerto Rico as a Category 5 hurricane, causing severe wind and rain inundation.¹ Less than 2 weeks later, on September 19, 2017, Hurricane Maria struck the USVI island of St. Croix as a Category 5 hurricane and, hours later on September 20, 2017, made a direct hit as a Category 4 hurricane on the main island of Puerto Rico (see fig. 1).

Figure 1: Path of Hurricanes Irma and Maria through Puerto Rico and the U.S. Virgin Islands



Source: GAO analysis of National Oceanic and Atmospheric Administration; Map Resources (map). | GAO-19-662T

¹The National Oceanic and Atmospheric Administration (NOAA) measures hurricanes on a scale from 1 to 5 with a Category 1 being the least intense and a Category 5 being the most intense. NOAA defines a Category 5 hurricane as one with winds above 157 miles per hour.

The storms caused extensive damage to roads, bridges, and other public infrastructure. Further, the hurricanes devastated Puerto Rico’s electrical system—it took roughly 11 months for power to be restored to all of the customers able to receive power, the longest blackout in U.S. history. In its recovery plan, Puerto Rico estimated that \$132 billion will be needed from 2018 through 2028 to repair and reconstruct the infrastructure damaged by the hurricanes.²

In the USVI, the storms damaged more than half of the territory’s housing units as well as its hospitals, schools, and water and wastewater facilities, according to a 2018 report from the USVI Hurricane Recovery and Resilience Task Force.³ Overall, this report estimated that the hurricanes caused approximately \$10.7 billion in total damages across the USVI.

The storms exacerbated the financial situations in the territories, which were operating under severe fiscal constraints prior to the hurricanes.⁴ See figure 2 for examples of hurricane damage to Puerto Rico and the USVI.

²Central Office for Recovery, Reconstruction and Resiliency, Government of Puerto Rico, *Transformation and Innovation in the Wake of Devastation: An Economic and Disaster Recovery Plan for Puerto Rico* (August 8, 2018).

³In October 2017, the Governor of the USVI called for the USVI Hurricane Recovery and Resilience Task Force to draft a report assessing the USVI’s hurricane response and guiding its efforts during the rebuilding process. The report was released in September 2018 and details recovery initiatives across 14 sectors, including the economy, energy, communications, transportation, and more. The report can be found at <https://www.usvihurricanetaskforce.org/>. We reported our observations on federal support for electricity grid restoration in Puerto Rico and the USVI as a result of the 2017 hurricanes in a separate report. See GAO, *2017 Hurricane Season: Federal Support for Electricity Grid Restoration in the U.S. Virgin Islands and Puerto Rico*, [GAO-19-296](#) (Washington, D.C.: Apr. 18, 2019).

⁴USVI’s total public debt outstanding increased between fiscal years 2005 and 2015 from \$1.4 billion to \$2.7 billion. The balance subsequently declined to \$2.6 billion in fiscal year 2016—the most recent year for which data were available—due to the repayment of existing debt. Further, the USVI has not been able to access capital markets at favorable interest rates since January 2017, when investors began to demand higher rates to compensate for what they perceived as increased risks in the territory. See GAO, *U.S. Territories: Public Debt Outlook – 2019 Update*, [GAO-19-525](#) (Washington, D.C.: June 28, 2019).

Figure 2: Examples of Hurricane Damage in Puerto Rico and the U.S. Virgin Islands



Interior damages to a school in Puerto Rico from water infiltration with standing water and molded walls. Damaged structure and ventilation system at a hospital in St. Croix.

Source: GAO | GAO-19-662T

FEMA—a component of the Department of Homeland Security (DHS)—is the lead federal agency responsible for disaster preparedness, response, and recovery, which includes assisting Puerto Rico and the USVI as they recover from these natural disasters.⁵ Among other responsibilities, FEMA administers the Public Assistance program through a partnership with the governments of Puerto Rico and the USVI to provide grant funding for a wide range of eligible response and recovery activities. These activities include debris removal efforts; life-saving emergency protective measures; and the repair, replacement, or restoration of disaster-damaged publicly-owned facilities, electrical utilities, roads and bridges; and more.

My testimony today discusses our prior and ongoing work on disaster recovery efforts in Puerto Rico and the USVI following Hurricanes Irma and Maria in 2017, including:

1. the status of Public Assistance grant funding in Puerto Rico and the USVI, as of April 2019;
2. the recovery offices Puerto Rico and the USVI have established to manage recovery efforts; and
3. the challenges FEMA, Puerto Rico, and the USVI have faced in implementing the Public Assistance program, and the actions FEMA has taken to address them.

⁵See 6 U.S.C. § 313.

My statement is based on reports we issued in February, March, and June 2019 as well as data and preliminary observations from our ongoing reviews of FEMA's recovery activities in Puerto Rico and the USVI for a number of congressional committees and subcommittees. To perform our prior work, we reviewed federal laws related to emergency management, analyzed FEMA data and documentation, and interviewed relevant agency officials. More detailed information on the scope and methodology for our prior work can be found in the issued reports listed in appendix I.

To develop our preliminary observations from ongoing work, we reviewed federal laws and documentation from FEMA, Puerto Rico, and the USVI, including policies, procedures, and guidance specific to emergency management. We also obtained and analyzed data from FEMA's Emergency Management Mission Integrated Environment and Integrated Financial Management Information System on Public Assistance program obligations and Puerto Rico's and the USVI's expenditures as of April 2019.⁶ We reviewed existing information about these systems, interviewed data users and managers responsible for these data, and cross-checked data across sources to ensure consistency. We determined these data to be reliable for the purposes of this statement. Moreover, we conducted site visits to Puerto Rico and the USVI to meet with federal, territorial, and local government and emergency management officials to discuss disaster recovery efforts and associated challenges. For a list of our ongoing emergency management reviews, see appendix II.

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.

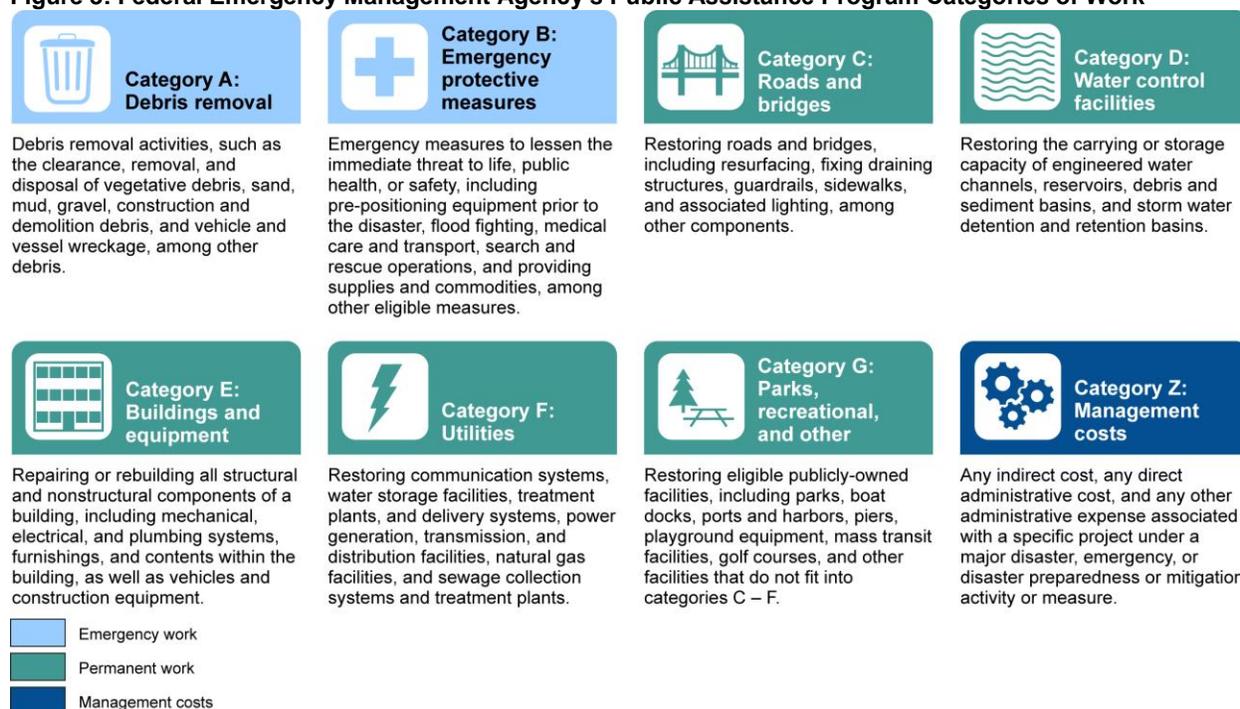
⁶An obligation is a definite commitment that creates a legal liability of the government for the payment of goods and services ordered or received. For the purposes of this statement, obligations represent the amount of grant funding FEMA provided through the Public Assistance program for specific projects in the USVI and Puerto Rico. An expenditure is an amount paid by federal agencies, by cash or cash equivalent, during the fiscal year to liquidate government obligations. For the purposes of this statement, an expenditure represents the actual spending by the USVI and Puerto Rico governments of money obligated by the federal government.

Background

FEMA's Public Assistance Program

FEMA's Public Assistance program provides grant funding to state, territorial, local, and tribal governments as well as certain types of private nonprofit organizations to assist with responding to and recovering from presidentially-declared major disasters or emergencies.⁷ As shown in figure 3, Public Assistance grant funds are categorized broadly as “emergency work” or “permanent work.” Within these broad categories are separate subcategories. In addition to the emergency work and permanent work categories, the program includes category Z, which represents indirect costs, direct administrative costs, and any other administrative expenses associated with a specific project.

Figure 3: Federal Emergency Management Agency's Public Assistance Program Categories of Work



Source: Federal Emergency Management Agency. | GAO-19-662T

⁷In 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. The Public Assistance program represents the largest share of the Disaster Relief Fund, which is the primary source of federal disaster assistance for state and local governments when a disaster is declared.

FEMA's Public Assistance program also provides grant funding for cost-effective hazard mitigation measures to reduce or eliminate the long-term risk to people and property from future natural and man-made disasters and their effects.⁸ 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.

FEMA, the state or territorial government (the recipient), and local or territorial entities (the subrecipient) work together to develop projects under the Public Assistance program. After a project has completed FEMA's review process and is approved, FEMA obligates funding for the project by placing money into an account where the recipient has the authority to draw down—or withdraw—funding to pay the subrecipient for eligible work upon completion.

The Public Assistance Alternative Procedures Program in Puerto Rico and the USVI

The Sandy Recovery Improvement Act of 2013 authorized the use of alternative procedures in administering the Public Assistance program, thereby providing new flexibilities to FEMA, states, territories, and local governments for debris removal, infrastructure repair, and rebuilding projects using funds from this program.⁹ 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.

Under these procedures, if the actual cost of the project exceeds the fixed-cost estimate agreed upon by FEMA and the recipient, the recipient or subrecipient is responsible for the additional costs at the time of the close-out process. However, if the actual cost of completing eligible work for a project is below the estimate, the recipient may use the remaining funds for additional cost-

⁸FEMA may fund hazard mitigation measures related to the damaged facilities receiving Public Assistance grant funding pursuant to section 406 of the Stafford Act, as amended. 42 U.S.C. § 5172; 44 C.F.R. § 206.226.

⁹The 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 at 42 U.S.C. § 5189f). The stated goals of the alternative procedures are to reduce the costs to the federal government, increase flexibility in the administration of the Public Assistance program, expedite the provision of assistance under the program, and provide financial incentives for recipients of the program for the timely and cost-effective completion of projects.

effective hazard mitigation measures to increase the resilience of public infrastructure. In addition, these funds may also be used for activities that improve the recipient's or subrecipient's future Public Assistance operations or planning.

In October 2017, Puerto Rico requested, and FEMA approved, the use of the alternative procedures program for all large-project funding for Public Assistance permanent work projects in categories C through G.¹⁰ Although FEMA had approved alternative procedure grants in 30 states as of April 2018, in these cases, alternative procedures were used on a project-by-project basis. Puerto Rico's recovery from the 2017 hurricanes is the first recovery to use alternative procedures for all large permanent work projects. In addition, in July 2018, FEMA approved a request from the Governor of the USVI to transition to using the Public Assistance alternative procedures program for permanent work in the territory. Unlike in Puerto Rico, the USVI may pursue the alternative procedures on a project-by-project basis.

FEMA Had Obligated \$5.6 Billion and \$1.8 Billion in Public Assistance Grant Funding in Puerto Rico and the USVI, Respectively, as of April 2019.

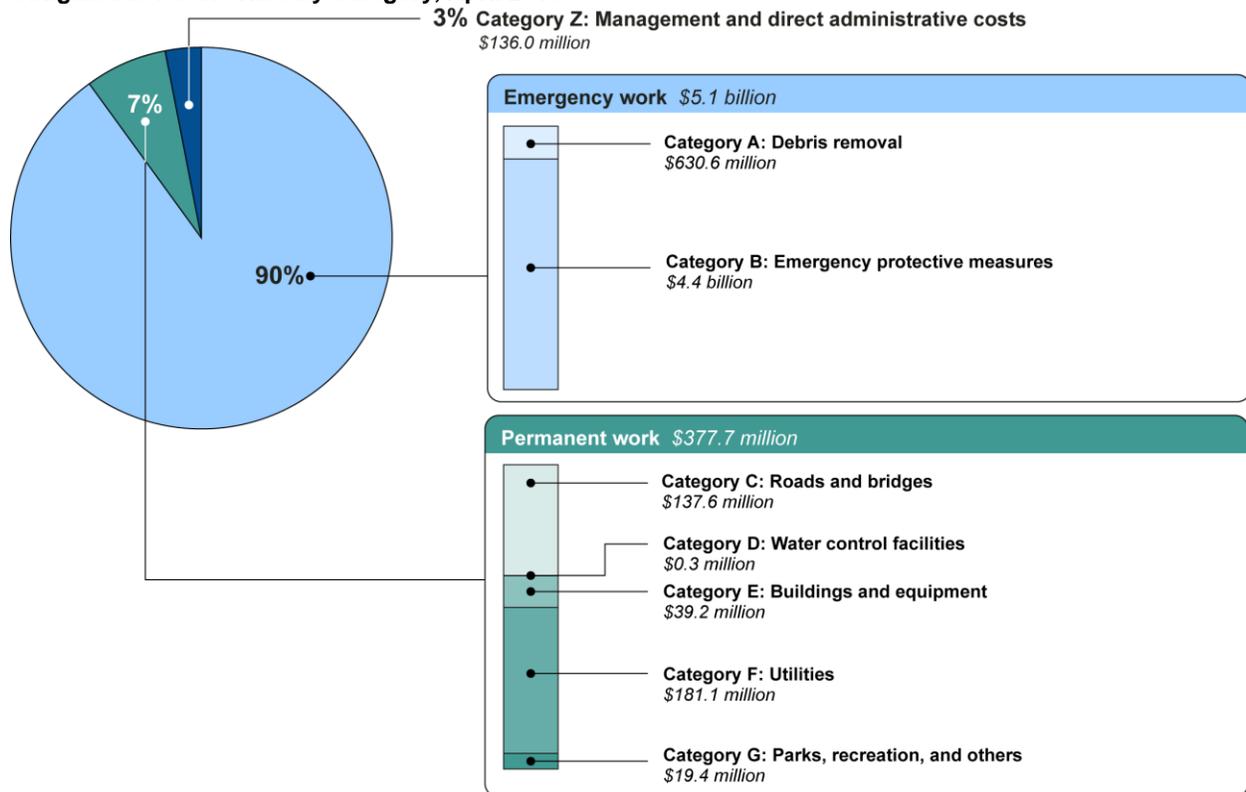
As of April 2019, FEMA had obligated a total of about \$7.4 billion in grant funds for Public Assistance projects in both Puerto Rico and the USVI.¹¹ Specifically, as shown in figure 4, FEMA obligated approximately \$5.6 billion for 1,264 Public Assistance projects in Puerto Rico, including approximately \$5.1 billion (90 percent) for emergency work (categories A and B) and \$377.7 million (7 percent) for permanent work in categories C through G).¹²

¹⁰According to a November 2017 amendment to Puerto Rico's major disaster declaration, due to the extraordinary level of infrastructure damage caused by Hurricane Maria, as well as the financial status of Puerto Rico, officials chose to use the alternative procedures for all large-project funding for Public Assistance categories C through G pursuant to section 428 of the Stafford Act. Puerto Rico; Amendment No. 5 to Notice of a Major Disaster Declaration, 82 Fed. Reg. 53,514 (Nov. 16, 2017). For fiscal year 2018, the large project threshold was \$125,500.

¹¹These data include Public Assistance grant funding only and do not include obligations and expenditures for, among other federal disaster assistance programs, direct federal mission assignments, in which a federal agency is tasked with providing eligible emergency work or debris removal services to a territory or state, or for other categories of mission assignments. In April 2019, we reported that FEMA had obligated an additional \$2 billion in Puerto Rico and \$63 million in the USVI for direct federal assistance through mission assignments for temporary emergency power and grid restoration efforts as of July 2018. See GAO, *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.)

¹²An additional \$136 million (3 percent) was obligated for management and direct administrative costs.

Figure 4: Federal Emergency Management Agency's \$5.6 Billion in Public Assistance Grant Funding Obligated to Puerto Rico by Category, April 2019



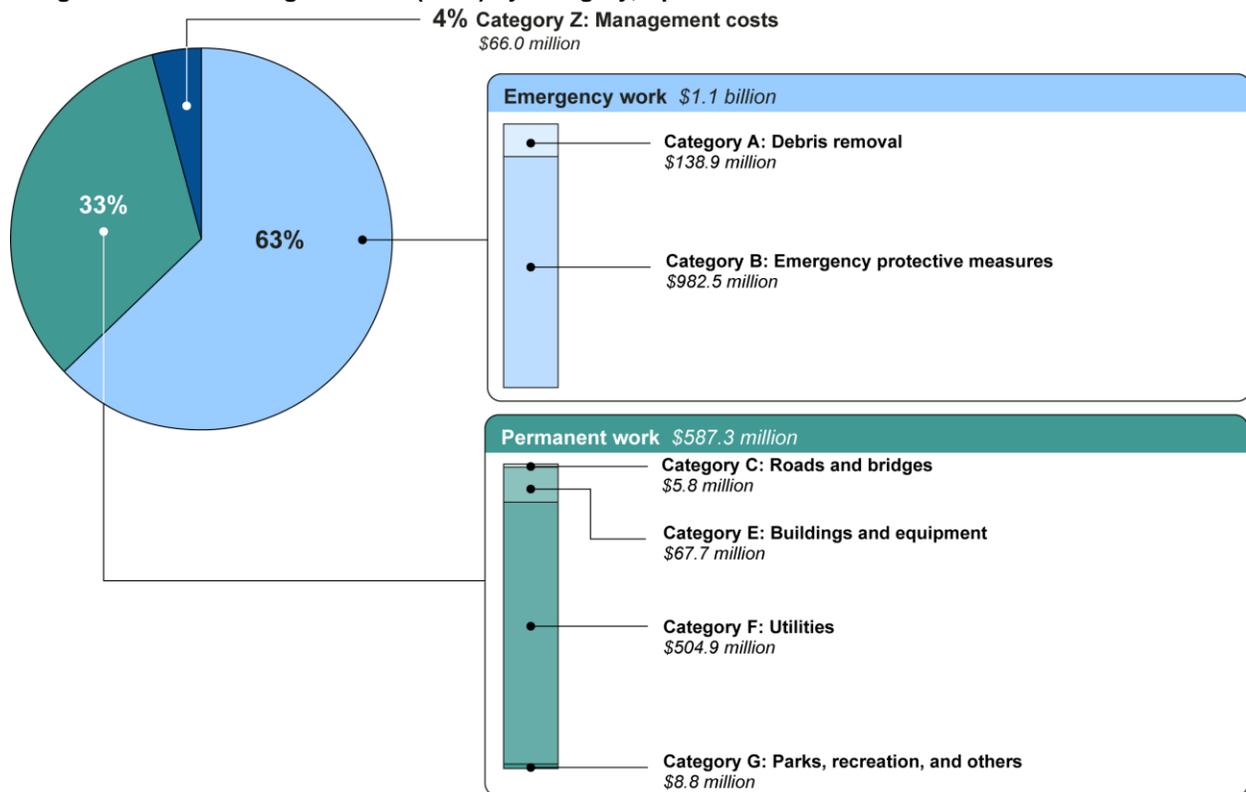
Source: Federal Emergency Management Agency's Emergency Management Mission Integrated Environment. | GAO-19-662T

Note: Numbers might not add up due to rounding. Emergency protective measures include activities to lessen the immediate threat to life, public health, or safety such as search and rescue operations and providing medical care and transport. On October 5, 2018, the Disaster Recovery Reform Act of 2018 amended the definition of management costs to include any indirect cost, any direct administrative cost, and any other administrative expense associated with a specific project. See Pub. L. No. 115-254, § 1215, 132 Stat. 3186, 3449 (codified at 42 U.S.C. § 5165b(a)). Recipients and subrecipients for disasters or emergencies declared from Aug. 1, 2017 through Oct. 4, 2018 were able to opt to use FEMA's interim policy implementing the amended definition or to use previous existing options, which reimburse management (indirect) costs and direct administrative costs separately. Puerto Rico as a recipient opted to use the new interim policy, whereas several subrecipients opted to use previous options, such that the total obligations for Category Z include both management and direct administrative costs. These data include Public Assistance program grant funding and do not include obligations and expenditures for, among other things, direct federal mission assignments, in which a federal agency is tasked with providing eligible emergency work or debris removal services to a territory or state, or for other categories of mission assignments. For example, these data do not include obligations for direct federal assistance through mission assignments for temporary emergency power and grid restoration efforts in Puerto Rico.

Puerto Rico had expended approximately \$3.5 billion—about 61 percent of total Public Assistance grant obligations in Puerto Rico—as of April 2019. Ninety-six percent of the expended amount went toward emergency work projects in categories A and B while just over one percent went toward permanent work projects. The majority of FEMA's obligations and the funding Puerto Rico expended as of April 2019 are for emergency work because these projects began soon after the disasters struck and focused on debris removal and providing assistance to address immediate threats to life and property. In contrast, permanent work projects take time to identify, develop, and ultimately complete as they represent the longer-term repair and restoration of public infrastructure.

In the USVI, FEMA had obligated approximately \$1.8 billion for 583 Public Assistance projects across the territory, as of April 2019. Similar to Public Assistance grant funding in Puerto Rico, the majority of funding FEMA obligated and the USVI expended was in emergency work categories A and B. Specifically, FEMA obligated approximately \$1.1 billion (63 percent) for emergency work (categories A and B) and \$587.3 million (33 percent) for permanent work (categories C through G) in the territory (see fig. 5).¹³

Figure 5: Federal Emergency Management Agency's (FEMA) \$1.8 Billion in Public Assistance Grant Funding Obligated to the U.S. Virgin Islands (USVI) by Category, April 2019



Source: Federal Emergency Management Agency's Emergency Management Mission Integrated Environment. | GAO-19-662T

Note: Numbers might not add up due to rounding. As of April 2019, FEMA did not have any category D Public Assistance projects in the USVI. Emergency protective measures are activities to lessen the immediate threat to life, public health, or safety such as search and rescue operations and providing medical care and transport. Management costs are any indirect cost, any direct administrative cost, and any other administrative expense associated with a specific project. These data include Public Assistance program grant funding and do not include obligations and expenditures for, among other things, direct federal mission assignments, in which a federal agency is tasked with providing eligible emergency work or debris removal services to a territory or state, or for other categories of mission assignments. For example, these data do not include obligations for direct federal assistance through mission assignments for temporary emergency power and grid restoration efforts in the USVI.

Of the \$1.8 billion FEMA obligated for Public Assistance projects, the USVI had expended approximately \$982.4 million as of April 2019. Specifically, the USVI had expended about

¹³An additional \$66.0 million (4 percent) was obligated for management costs.

\$808.1 million (82 percent) for emergency work projects in categories A and B and \$163.1 million (17 percent) for permanent work projects in categories C through G.¹⁴

Emergency work. As of April 2019, FEMA had obligated a total of approximately \$6.2 billion for emergency work projects in Puerto Rico and the USVI—including about \$5.1 billion in Puerto Rico and \$1.1 billion in the USVI. These projects focused on debris removal activities and providing assistance to address immediate threats to life and property. For example, as of April 2019, FEMA had obligated \$138.9 million for projects focused on debris removal activities in the USVI under category A. This included \$45.9 million to the USVI Department of Public Works for USVI-wide debris removal efforts and \$39.1 million to the USVI Water and Power Authority for these activities in St. Croix (see fig. 6).

Figure 6: Organic Debris Storage Area in St. Croix, U.S. Virgin Islands



A drop-off and storage area in St. Croix, U.S. Virgin Islands for organic debris awaiting transportation to the continental United States for disposal.

Source: GAO. | GAO-19-662T

In another example, FEMA obligated more than \$140.0 million to the Puerto Rico Aqueducts and Sewer Authority under category B to fund emergency protective measures, including using back-up generators to supply water to the island after Hurricane Maria, among other things. Further, as of April 2019, FEMA had obligated \$1.1 billion in Puerto Rico and \$278 million in the USVI to fund the Sheltering and Temporary Essential Power pilot program. This program, which is implemented as a subprogram under Public Assistance program category B, is intended to

¹⁴The USVI also expended about \$11.2 million for management costs under category Z. As noted above, this category represents any indirect cost, any direct administrative cost, and any other administrative expense associated with a specific project.

provide essential repairs or restore power to private residences to allow affected individuals to return or remain in their homes, thereby reducing the demand for other shelter options. We are continuing to assess this program as part of our ongoing work on recovery efforts in the USVI.

Permanent work. As of April 2019, FEMA had obligated approximately \$965.0 million for permanent work projects in Puerto Rico and the USVI—including about \$377.7 million in Puerto Rico and \$587.3 million in the USVI. These projects focused on the restoration of disaster-damaged infrastructure or systems. For example, under category C, FEMA obligated \$137.6 million for projects in Puerto Rico focused on the permanent repair of roads and bridges, such as the severely damaged road shown in figure 7 below.

Figure 7: Collapsed Segment of Road Near Maricao, Puerto Rico, September 2018



Source: GAO. | GAO-19-662T

In addition, under category E, FEMA obligated \$39.2 million and \$67.7 million for projects in Puerto Rico and the USVI, respectively, focused on repairing and rebuilding damaged public buildings and equipment, such as the schools shown in figure 8 below.

Figure 8: Hurricane Damage to Schools in Puerto Rico and the U.S. Virgin Islands



Classroom with mold on floors and water damage on the walls at a school in San Juan, Puerto Rico.
Source: GAO. | GAO-19-662T

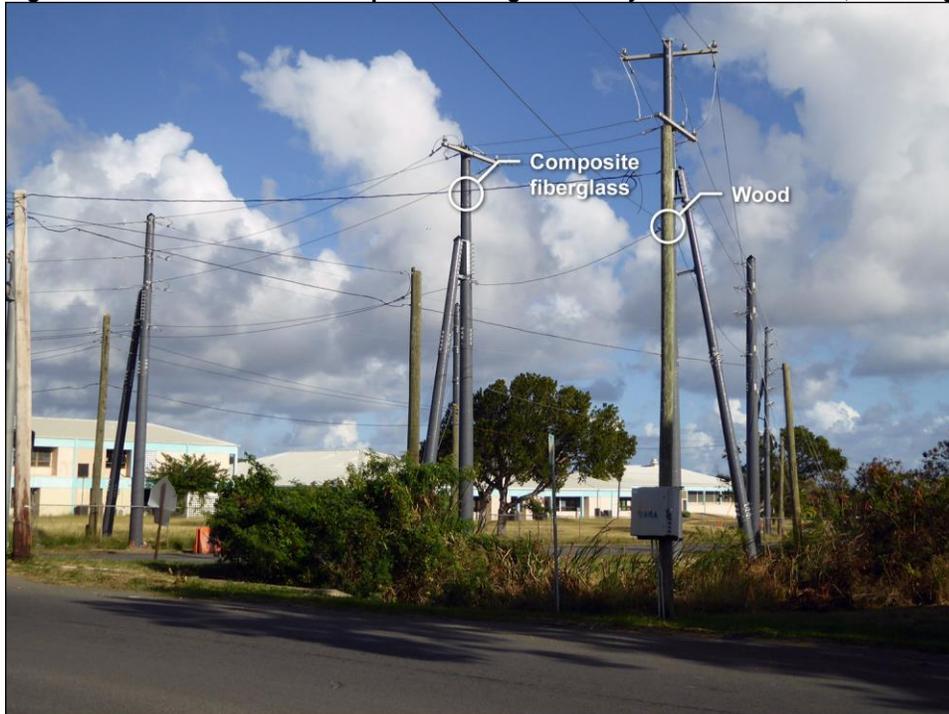


This school building in St. Croix sustained severe hurricane damage, including a collapsed roof.

Further, under category F, FEMA obligated \$504.9 million for projects in the USVI to repair damaged utilities. Specifically, FEMA obligated \$481.8 million—or 95 percent of this total—through the standard Public Assistance program for projects focused on territory-wide permanent electrical distribution system repairs. This includes replacing damaged wooden utility poles with more resilient composite fiberglass poles that can withstand 200 mile per hour winds as well as power transmission lines and transformers (see fig. 9).¹⁵

¹⁵In April 2019, we reported that the 2017 hurricanes caused widespread devastation to both Puerto Rico’s and the USVI’s electrical grid and that federal agencies—including FEMA—provided both traditional support to restore electricity in the territories as well as unprecedented support in Puerto Rico in coordinating and assisting with the territory’s grid restoration. See GAO, *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.)

Figure 9: Wooden and New Composite Fiberglass Utility Poles in St. Croix, U.S. Virgin Islands



Damaged wooden utility poles for electricity distribution are being replaced by composite fiberglass poles that can withstand 200 mile per hour winds.

Source: GAO. | GAO-19-662T

Puerto Rico and the USVI Have Established Recovery Offices to Oversee and Monitor Recovery Efforts

As the recipients of federal disaster funding, Puerto Rico and the USVI are responsible for monitoring and overseeing the Public Assistance program to ensure it is implemented in compliance with applicable laws, regulations, and requirements as well as FEMA policies and guidance. To address these responsibilities, Puerto Rico and the USVI established recovery offices to manage recovery activities and funding, including through the Public Assistance program.

Puerto Rico's Central Office for Recovery, Reconstruction, and Resilience Has Developed Internal Controls to Oversee Recovery Funds

In March 2019, we reported that Puerto Rico, in accordance with Amendment 5 to the President's disaster declaration, established the Central Office for Recovery, Reconstruction, and Resilience (COR3) to oversee federal recovery funds.¹⁶ We also reported that COR3 was developing an internal controls plan to help ensure better management and accountability of the

¹⁶Puerto Rico; Amendment No. 5 to Notice of a Major Disaster Declaration, 82 Fed. Reg. 53,514 (Nov. 16, 2017).

funds.¹⁷ According to FEMA officials, FEMA instituted a manual reimbursement process due to Puerto Rico's financial situation, weaknesses in internal controls, and the large amount of recovery funds, among other things, to mitigate risk and help ensure financial accountability. However, from our ongoing work on Puerto Rico's disaster recovery efforts, we have learned that, on April 1, 2019, FEMA removed the manual reimbursement process and began a transition to allow the central recovery office to take responsibility for the review and reimbursement approval of federal recovery funds.

We have also learned from our ongoing work that, in March 2019, COR3 released the Disaster Recovery Federal Funds Management Guide. Among other things, the guide outlines COR3's roles and responsibilities and the internal controls COR3 put in place to oversee the recovery. For example, COR3 will identify, procure, and administer all federal, territorial, and private resources available to Puerto Rico related to recovery. In addition, it will provide oversight of subrecipients using risk-based monitoring, offer technical assistance, and advise Puerto Rico's governmental agencies and municipalities regarding any matter related to recovery. COR3 continues to update its online transparency portal intended to provide a breakdown of FEMA Public Assistance and other federal funding obligated for disaster recovery in Puerto Rico.

The USVI Established the Office of Disaster Recovery to Monitor and Oversee Recovery Efforts

According to our preliminary observations, in February 2019, the USVI established the new Office of Disaster Recovery. This office serves as the primary territorial agency responsible for overseeing all disaster recovery efforts and funding in the territory, and coordinates across all USVI governmental agencies and other pertinent entities.¹⁸ According to USVI officials, following the 2017 hurricanes, key USVI agencies did not have enough employees with the knowledge and expertise necessary to staff recovery-related positions and effectively manage the implementation of recovery efforts. To address this challenge in the short-term, the USVI government hired two contractors in December 2017—Witt O'Brien's, LLC and Ernst & Young Puerto Rico, LLC—to assist the territory in planning, developing, implementing, and overseeing Public Assistance program projects, among other responsibilities. The Director of the Office of Disaster Recovery told us that while contractor personnel had been valuable in augmenting the

¹⁷[GAO-19-256](#).

¹⁸Prior to the Office of Disaster Recovery's establishment in February 2019, the U.S. Virgin Islands Territorial Emergency Management Agency was responsible for managing and overseeing the implementation of federal recovery programs in the USVI, including the Public Assistance program.

USVI's management capacity in the short term, the territory's longer-term vision included the establishment of the Office of Disaster Recovery to centrally manage all aspects of federal recovery in the territory.

Among other things, the Office of Disaster Recovery is responsible for taking on the USVI's monitoring and oversight responsibilities for the Public Assistance program in the long term. This includes tracking and reporting on the progress of projects and overseeing reimbursement requests for completed work to ensure compliance with applicable laws and FEMA policies. As of March 2019, the Director of the Office of Disaster Recovery told us the priority is to quickly hire and train qualified individuals to staff the new agency. FEMA officials in the USVI stated that the establishment of the Office of Disaster Recovery and the USVI's ongoing efforts to hire local residents into recovery-related positions represented a positive step forward in increasing the territory's capacity to oversee recovery efforts. We will continue to review the monitoring and oversight of recovery efforts in Puerto Rico and the USVI in our ongoing work.

Public Assistance Challenges Remain in Puerto Rico and USVI, However FEMA has Taken Some Actions to Improve Program Implementation

Our prior and ongoing work highlight the challenges with implementing the Public Assistance program—and the alternative procedures—in Puerto Rico and the USVI. In particular, our prior and ongoing work have identified challenges related to (1) the clarity of FEMA's guidance for the Public Assistance program, (2) the time and resources needed to transition to FEMA's new Public Assistance program delivery model in Puerto Rico, (3) the implementation of flexibilities provided by the Bipartisan Budget Act of 2018, and (4) developing fixed-cost estimates. FEMA has taken some actions, including issuing additional guidance and developing specific training, among other things, to improve Public Assistance implementation in Puerto Rico and the USVI. However, it is too soon to assess their effectiveness in addressing these issues.

Clarity of Guidance. In March 2019, we reported that officials from FEMA, COR3, and municipalities said they experienced initial challenges with the recovery process, including concerns about lack of experience and knowledge of the alternative procedures; and concerns about missing, incomplete, or conflicting guidance from FEMA on the alternative procedures.¹⁹ In addition, in our June 2019 testimony statement we continued to report on these challenges

¹⁹[GAO-19-256](#).

and preliminary observations from our ongoing work indicate that these challenges continue.²⁰ For example, officials from Puerto Rico’s government agencies told us they did not feel they had sufficient guidance on the FEMA Public Assistance program and where they did, written and verbal FEMA guidance was inconsistent or conflicting. For instance, officials from one agency expressed their desire for more FEMA guidance communicated in writing as FEMA officials would frequently interpret existing guidance differently. Similarly, officials from two agencies described situations where they had initially been directed to follow one interpretation of a policy, only to be directed to follow a different, conflicting interpretation in the subsequent months. Puerto Rico agency officials also stated that the lack of sufficient instruction led to a “back and forth” with FEMA for clarifications, which led to delays in the phases of project development. For example, officials from one Puerto Rico government agency stated that conflicting verbal instructions from several FEMA officials contributed to delays in opening the bidding process for recovery-related contracts. FEMA officials in Puerto Rico stated that the agency has developed specific guidance for disaster recovery in Puerto Rico and that there are various ways, such as in-person meetings, where officials from Puerto Rico can obtain clarification. FEMA officials also reported that they developed additional training for new FEMA employees. We are continuing to examine this issue as part of our ongoing review of Puerto Rico’s recovery.

FEMA’s new delivery model in Puerto Rico. In May 2019, FEMA’s Federal Disaster Recovery Coordinator for Puerto Rico announced that FEMA was transitioning to using the new Public Assistance program delivery model in Puerto Rico beginning on June 3, 2019. Among other things, the implementation of the new delivery model establishes a new Consolidated Resource Center in Puerto Rico to support grant development for disaster recovery across all recovery sectors and geographic branches.²¹ Following the hurricanes, FEMA implemented a program delivery model developed specifically for Puerto Rico which included, among other things, a sector-based approach which coordinated recovery resources across the federal interagency,

²⁰GAO, *Emergency Management: FEMA Has Made Progress, but Challenges and Future Risks Highlight the Imperative for Further Improvements*, GAO-19-594T (Washington, D.C.: Wednesday, June 12, 2019).

²¹In 2015, FEMA awarded a contract for program support to help Public Assistance officials implement a redesigned Public Assistance program, known as the new delivery model. This included a new process to develop and review grant applications, and obligate program funds to states affected by disasters; new positions, such as a new program delivery manager who is the single point of contact throughout the grant application process; a new Consolidated Resource Center to support field operations by supplementing project development, validation, and review of proposed Public Assistance project applications; and a new information system to maintain and share Public Assistance grant application documents.

private sector, and nongovernmental organizations to identify and complete proposed work. According to FEMA officials, the decision to transition from the initial delivery model to the new delivery model in Puerto Rico was due to improvements made since its nationwide deployment in 2017. In response, COR3 officials raised concerns about the scope of the changes and potential challenges with the amount of time and resources needed to transition to the new delivery model.

The Bipartisan Budget Act of 2018. We reported in June 2019 that in both Puerto Rico and the USVI, FEMA and local officials have reported challenges with the implementation of the flexibilities authorized by section 20601 of the Bipartisan Budget Act.²² 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—such as medical and educational facilities—to an industry standard without regard to pre-disaster condition.²³ 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.²⁴ In addition, 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. Further, USVI officials stated that at times, the appropriate process for implementing components of the Act was not clear and that ensuring program participants understood its key components was difficult. However, FEMA officials in the USVI stated that they continue to move forward with developing alternative procedures projects. USVI officials also told us that

²²GAO-19-594T.

²³The 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.

²⁴In September 2018, FEMA issued guidance for implementing section 20601 of the Bipartisan Budget Act of 2018 through the Public Assistance alternative procedures program.

FEMA had been responsive and helpful in identifying its options for using the new flexibilities the Act provides.

Developing Fixed-Cost Estimates. Preliminary observations from our ongoing work indicate that as of May 2019, FEMA had obligated funding for four alternative procedures program projects in Puerto Rico and two projects in the USVI. FEMA officials in Puerto Rico and the USVI stated that the ongoing development of a “cost factor” for use in the fixed-cost estimating process has 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 that Puerto Rico and the USVI have an incentive to delay the obligation of individual projects until this factor is finalized. For example, FEMA officials in the USVI told us in May 2019 that obligations for permanent work projects in the territory were mostly on hold until the USVI-specific cost factor was finalized. As of June 2019, the cost factors for use in both Puerto Rico and the USVI had not yet been finalized.

According to FEMA guidance, the Puerto Rico-specific cost factor is being developed by a third-party center of excellence comprising personnel selected by FEMA and Puerto Rico, through COR3.²⁵ In March 2019, we reported that while FEMA had identified and chosen personnel, COR3 had not yet finalized its hiring of personnel to staff the center of excellence, which resulted in delaying the cost estimation process.²⁶ Through our ongoing work we learned that, as of June 2019, COR3 had identified and hired personnel to staff the center; however, FEMA and COR3 have not come to agreement on a cost estimation approach. Further, according to FEMA officials, no timeline has been established for the completion of the center of excellence’s standard operating procedures for developing fixed-cost estimates for permanent work projects in Puerto Rico. In addition, according to FEMA officials, the USVI-specific factor is being developed by an independent contractor. FEMA officials told us that territorial officials disagreed with the initial cost factors this contractor proposed and contended the factors were insufficient in accurately capturing the unique circumstances that influence construction costs in the

²⁵According 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.

²⁶[GAO-19-256](#).

territory, such as the limited availability of local resources and the need to import materials and labor. As of June 2019, these officials told us the contractor was developing a third and final cost factor for potential incorporation into the fixed-cost estimation process in the USVI. Despite these delays, FEMA officials in the USVI stated that they continue to work with territorial officials to develop alternative procedures projects in the territory. They added that once the cost factor is finalized and incorporated into FEMA's fixed-cost estimating process, FEMA and the USVI will be well positioned to quickly finalize these projects and obligate funding. However, we reported in June 2019 that the territory plans to take a cautious approach in pursuing permanent work projects using the Public Assistance alternative procedures program. Specifically, USVI officials we interviewed told us that developing fixed-cost estimates for alternative procedures projects that accurately incorporate the future impact of inflation and increases in materials and labor costs for certain projects was difficult. Further, these officials stated that since the territory is financially responsible for any costs that exceed these fixed-cost estimates, the USVI plans to pursue alternative procedures projects that do not include high levels of complexity or uncertainty to reduce the risk of cost overruns, especially given its already difficult financial situation.²⁷

As established in FEMA guidance, Puerto Rico's deadline for finalizing fixed-cost estimates for permanent work projects using the alternative procedures—and the Bipartisan Budget Act, as applicable—is October 2019.²⁸ Since Puerto Rico must use the alternative procedures for all large permanent work, all fixed-cost estimates for Public Assistance program permanent work projects in Puerto Rico must be finalized by this date, or, according to FEMA officials, Puerto Rico must request that FEMA extend this deadline on a project-by-project basis. In contrast, the USVI has the flexibility to pursue either the alternative procedures or the standard procedures on a project-by-project basis. As the USVI's deadline for finalizing 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.

²⁷Under the standard Public Assistance program, FEMA will reimburse the USVI for the actual cost of completed work for any given project.

²⁸FEMA, *Public Assistance Alternative Procedures (Section 428) Guide for Permanent Work FEMA-4339-DR-PR*, (April, 2018).

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 late 2019 and early 2020, respectively.

Thank you, Chairman Payne, Ranking Member King, and Members of the Subcommittee. This concludes my prepared statement. I would be happy to respond to any question you may have at this time.

GAO Contact and Staff Acknowledgments

If you or your staff has any questions concerning this testimony, 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, Aaron Gluck, Taylor Hadfield, Brian Lipman, and Amanda Prichard. In addition, Eric Hauswirth, Susan Hsu, Tracey King, Taylor Matheson, Amanda Miller, Heidi Nielson, and Kevin Reeves made contributions to this statement. Key contributors for the previous work on which this statement is based are listed in each product.

Appendix I: GAO Products Previously Issued on Emergency Management

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 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).

Disaster Assistance: Opportunities to Enhance Implementation of the Redesigned Public Assistance Grant Program. [GAO-18-30](#) (Washington, D.C.: November 8, 2017).

Climate Change: Information on Potential Economic Effects Could Help Guide Federal Efforts to Reduce Fiscal Exposure. [GAO-17-720](#) (Washington, D.C.: September 28, 2017).

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.: September 22, 2016).

Disaster Recovery: FEMA Needs to Assess Its Effectiveness in Implementing the National Disaster Recovery Framework. [GAO-16-476](#) (Washington, D.C.: May 26, 2016).

Disaster Response: FEMA Has Made Progress Implementing Key Programs, but Opportunities for Improvement Exist. [GAO-16-87](#) (Washington, D.C.: February 5, 2016).

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).

Budgeting for Disasters: Approaches to Budgeting for Disasters in Selected States. [GAO-15-424](#) (Washington, D.C.: March 26, 2015).

High-Risk Series: An Update. [GAO-15-290](#) (Washington, D.C.: February 11, 2015).

Emergency Preparedness: Opportunities Exist to Strengthen Interagency Assessments and Accountability for Closing Capability Gaps. [GAO-15-20](#) (Washington, D.C.: December 4, 2014).

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

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.: September 12, 2012).

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 on Emergency Management

1. Review of U.S. Virgin Islands recovery planning and progress;
2. Puerto Rico disaster recovery planning and progress;
3. 2017 wildfire response and recovery;
4. Puerto Rico electricity grid recovery after the 2017 hurricane season;
5. Mass care sheltering and feeding challenges during the 2017 hurricanes;
6. Department of Transportation highway and transit emergency relief funding;
7. Drinking water and wastewater utility resilience;
8. Review of disaster death count information in selected states and territories;
9. Department of Health and Human Services disaster response efforts;
10. Disaster and climate change impacts on Superfund sites;
11. FEMA Public Assistance program fraud risk management efforts;
12. Wildland fire fuel reduction efforts;
13. Preparedness challenges and lessons learned from the 2017 disasters;
14. FEMA workforce management and challenges;
15. Small Business Administration response to 2017 disasters;
16. Development of the GAO disaster resilience framework;
17. FEMA Individuals and Households Program operations and challenges;
18. National Flood Insurance Program post-flood enforcement;
19. Emergency alerting capabilities and progress;
20. National Flood Insurance Program buyouts and property acquisitions;
21. Economic costs of large-scale natural disasters and impacts on community recovery;
22. Community Development Block Grants – disaster recovery; and
23. Disaster Housing Assistance Program.

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