



Testimony

Before the Subcommittee on Emergency
Preparedness, Response, and Recovery,
Committee on Homeland Security
House of Representatives

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DISASTER RESILIENCE

Opportunities to Improve National Preparedness

Statement of Chris P. Currie, Director, Homeland Security
and Justice

Accessible Version

Chairwoman Demings, Ranking Member Cammack, and Members of the Subcommittee:

Thank you for the opportunity to discuss our past work on federal efforts to better prepare for future disasters and create a more resilient nation.

Each year, disasters such as hurricanes, tornadoes, and fires, affect hundreds of American communities. In response, the federal government provides billions of dollars to communities who have suffered damages to help them rebuild infrastructure and make it more resilient to future damages.

According to the U.S. Global Change Research Program, certain extreme weather events are projected to become more frequent and intense in parts of the U.S. as a result of changes in the climate.¹ The rising number of natural disasters and increasing reliance on federal assistance by those in affected communities is a key source of federal fiscal exposure. Since 2005, federal funding for disaster assistance has totaled at least \$593 billion, which consists of obligations for disaster assistance from 2005 through 2014 totaling about \$278 billion² and select appropriations for disaster assistance from 2015 through 2021 totaling \$315 billion.³ As a result, we have included “Limiting the Federal Government’s Fiscal Exposure by Better Managing Climate Change Risks” on our list of high

¹The U.S. Global Change Research Program is a research coordinating body that spans 13 federal agencies. See U.S. Global Change Research Program, *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, vol. 2* (Washington, D.C.: 2018).

²See 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).

³This total includes \$240 billion in select supplemental appropriations to federal agencies for disaster assistance and approximately \$75 billion in annual appropriations to the Disaster Relief Fund for fiscal years 2015 through 2021. It does not include other annual appropriations to federal agencies for disaster assistance. Of the supplemental appropriations, \$97 billion was included in supplemental appropriations acts that were enacted primarily in response to the COVID-19 pandemic.

risk federal program areas since 2013.⁴ Moreover, the Federal Emergency Management Agency (FEMA)—the agency that coordinates disaster preparedness, response, and recovery support at the national level—reports that since 2002 it has provided over \$54 billion in preparedness grants intended to enhance various capabilities, including those related to disaster resilience.

Investments in disaster resilience are a promising avenue to address the federal fiscal exposure because such investments offer the opportunity to reduce the overall impact of future disasters. For example, in 2018 we reported that elevating homes and strengthening building codes in Texas and Florida prevented greater damages during the 2017 hurricane season.⁵ In addition, the National Institute of Building Sciences concluded that disaster resilience investments can save from \$3 to \$11 per dollar invested, depending on the circumstances and type of hazard.⁶

According to FEMA, individuals and communities, the private and nonprofit sectors, faith-based organizations, tribes, and all levels of government must work together to achieve the National Preparedness Goal. The Goal is for: “A secure and resilient Nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk.”⁷ To support this goal, FEMA provides various grant programs that support many communities’ preparedness, response, recovery, and disaster resilience efforts.

My testimony today discusses key findings from products we issued from 2015 through 2021 on (1) FEMA’s National Preparedness System and

⁴GAO, *High Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas*, [GAO-21-119SP](#) (Washington, D.C.: March 2, 2021).

⁵GAO, *2017 Hurricanes and Wildfires: Initial Observations on the Federal Response and Key Recovery Challenges*, [GAO-18-472](#) (Washington, D.C.: Sept. 4, 2018).

⁶Multihazard Mitigation Council, a council of the National Institute of Building Sciences, *Natural Hazard Mitigation Saves: 2018 Interim Report* (Washington, D.C.: December 2018).

⁷The White House released Presidential Policy Directive 8 on National Preparedness in March 2011. It directed the Secretary of Homeland Security to design a national preparedness system to address the threats posing the greatest risk to the security of the nation and issue various policy and planning documents designed to strengthen national preparedness. Additionally, it required the Secretary to develop a National Preparedness Goal that identifies the core capabilities necessary to achieve preparedness.

Homeland Security Grants, (2) FEMA’s Hazard Mitigation Programs, and (3) GAO’s Disaster Resilience Framework for identifying opportunities to enhance climate resilience. To conduct our prior work, we reviewed relevant documents, including agency policies, strategic plans, and other reports, such as FEMA’s Summary of Stakeholder Feedback and the U.S. Global Change Research Program’s Fourth National Climate Assessment reports.⁸ We also interviewed federal and state officials, and a range of relevant stakeholders. More information on our scope and methodology can be found in each of the reports cited throughout this statement. In addition, after the issuance of our reports and through March 2022, we contacted officials at the Department of Homeland Security to obtain updated information and documentation, as appropriate, on the status of the recommendations we made in our prior products.

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 the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The National Preparedness System and FEMA Grants Have Helped Strengthen Capabilities, but Gaps Remain

We have reported that FEMA uses the National Preparedness System to help assess the nation’s emergency management capabilities.⁹ Specifically, the National Preparedness System is designed to help communities measure and assess distinct emergency management capabilities (“core capabilities”). Capabilities fall in five mission areas: (1) prevention—preventing imminent acts of terrorism; (2) protection—protecting citizens and assets; (3) mitigation—mitigating the loss of life

⁸FEMA, *Summary of Stakeholder Feedback: Building Resilient Infrastructure and Communities*. (Washington D.C.: Mar. 2020). and U.S. Global Change Research Program, *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment*, vol. 2. (Washington, D.C.: 2018).

⁹GAO, *National Preparedness: Additional Actions Needed to Address Gaps in the Nation’s Emergency Management Capabilities*, [GAO-20-297](#) (Washington, D.C.: May 4, 2020).

and property; (4) response—responding quickly to save lives; and (5) recovery—timely restoration of infrastructure and housing; among other things. In the mitigation mission area, for example, the core capabilities include community resilience; long-term vulnerability reduction; risk and disaster resilience assessment; and threats and hazard identification.

We further reported that FEMA has used the National Preparedness System to help prioritize its preparedness grants to help state, local, tribal, and territorial communities address gaps in their emergency management capabilities. FEMA has traditionally provided three primary preparedness grants that jurisdictions can use to strengthen the core capabilities.¹⁰

- **State Homeland Security Grant Program.** Helps support states' implementation of homeland security strategies to address the identified planning, organization, equipment, training, and exercise needs at the state and local levels. For fiscal year 2022, the total funding available to all 50 states, the District of Columbia, and 5 territories is \$415 million.
- **Urban Area Security Initiative.** Provides federal assistance to address the unique needs of high-threat, high-density urban areas, and assists the areas in building a capacity to prevent, prepare for, protect against, and respond to acts of terrorism. For fiscal year 2022, the total funding available to the 31 urban areas is \$615 million.
- **Emergency Management Performance Grant.** Provides federal assistance to states to assist state, local, and tribal governments in preparing for all hazards. In fiscal year 2022, the total funding available to states, local governments, and tribes is \$405 million.

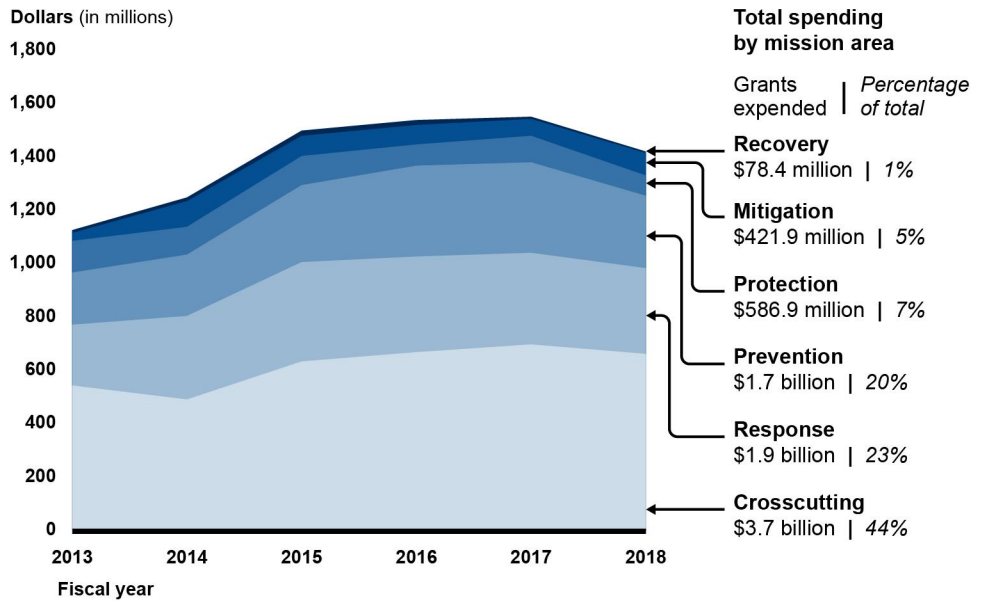
Since 2012, the Department of Homeland Security has annually produced a National Preparedness Report, which assesses progress toward the National Preparedness Goal of achieving a secure and resilient nation. A key element of the National Preparedness Report is that it evaluates and measures (1) the extent to which jurisdictions have strengthened their core capabilities and (2) which capabilities have the largest gaps. We previously found that according to National Preparedness Reports since calendar year 2012, states and territories generally have rated their

¹⁰Two of the three grants, the State Homeland Security Grant Program and the Urban Area Security Initiative, were established after the terrorist attacks of September 11, 2001. As established by federal law, these grants are intended to help states and localities prevent, prepare for, protect against, and respond to acts of terrorism. 6 U.S.C. §§ 604, 605.

capabilities within the prevention and response mission areas, as well as their crosscutting capabilities—which involve all five mission areas—as having the highest preparedness levels. We also reported that by contrast, states and territories generally have rated their capabilities in the recovery and protection mission areas as having lower preparedness levels. These lower preparedness ratings showed little to no improvement from 2013 to 2017.

From 2013 to 2018, jurisdictions have directed about 87 percent (about \$7.3 billion) of their FEMA preparedness grants to the highest rated mission areas—crosscutting, prevention, and response. They directed 13 percent (about \$1.1 billion) to the lowest-rated mission areas—mitigation, protection, and recovery. (See fig. 1.)

Figure 1: FEMA Preparedness Grants by Mission Area, Fiscal Years 2013 through 2018



Source: GAO analysis of Federal Emergency Management Agency data. | GAO-22-106046

Accessible Data Table for Figure 1

Fiscal year	Cross-Cutting (Dollars in millions)	Response (Dollars in millions)	Prevention (Dollars in millions)	Protection (Dollars in millions)	Mitigation (Dollars in millions)	Recovery (Dollars in millions)
2013	536.6	228.0	195.4	118.7	29.8	11.0
2014	484.1	313.1	230.1	104.1	96.3	14.2
2015	626.8	372.5	288.6	109.2	75.5	20.0
2016	661.5	358.7	340.6	79.6	73.0	18.7
2017	690.6	343.5	339.4	99.3	63.2	8.6
2018	655.1	321.4	271.5	76.0	84.1	5.9
Total spending by mission area	3654.7	1937.2	1665.6	586.9	421.9	78.4
Percentage of total	44%	23%	20%	7%	5%	1%

FEMA has encouraged jurisdictions to invest future preparedness grants to strengthen their capabilities that have lower preparedness ratings and to address emerging threats, such as cybersecurity. However, at the time of our review, FEMA officials told us their efforts to help jurisdictions enhance their capabilities, including the distribution of existing preparedness grants, would likely not be sufficient to address the capability gaps that have been identified by jurisdictions.

In May 2020, we recommended that FEMA—following the completion of the 2021 National Preparedness Report—determine what steps are needed to address the nation’s emergency management capability gaps across all levels of government and inform key stakeholders, such as the Office of Management and Budget and Congress, about what level of resources would be necessary to address the known gaps. FEMA agreed with our recommendation, published the National Preparedness Report in December 2021, and plans to complete review of the national risk and capability assessment in June 2022.¹¹

Further, FEMA plans to develop a preparedness investment strategy, which is to establish priorities that align resources with the capability gaps. In 2020, FEMA established national response and recovery capability targets. These targets represent estimates of the capabilities

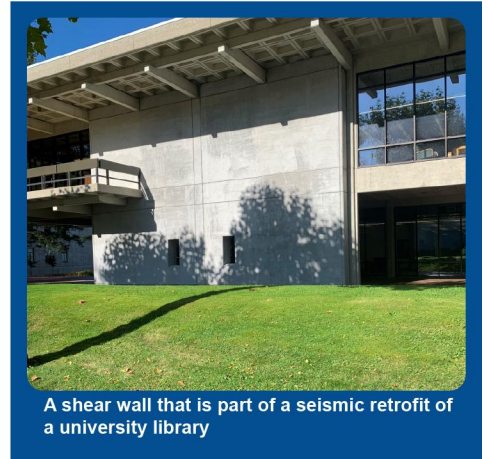
¹¹The Disaster Recovery Reform Act of 2018 requires that FEMA submit a report to relevant congressional committees every 6 months on its progress in completing a national preparedness assessment of capability gaps at each level of government based on tiered, capability-specific performance objectives. FEMA developed the National Risk and Capability Assessment, a suite of preparedness assessments that measure risk and capability across the Nation in a standardized and coordinated way.

required to manage the Nation's realistic worst-case scenarios, using standardized language. According to FEMA, the national response and recovery capability targets are to include those that were most stressed by the COVID-19 pandemic; as well as those which would be most stressed by hurricanes, floods, and wildfires. FEMA plans to identify the federal resources and capabilities needed to address the national gaps by the end of 2022. These steps, if implemented effectively, should address the intent of our May 2020 recommendation.

FEMA Encourages Disaster Resilience through Hazard Mitigation Grants, but Jurisdictions Have Reported Challenges

One way to save lives and reduce future risk to people and property from extreme weather events and other natural disasters is to enhance disaster resilience through investment in hazard mitigation. Hazard mitigation projects can include acquiring and demolishing properties in floodplains, seismic retrofits to reduce earthquake damage, and removing flammable vegetation around residential areas at risk of wildfires. Figure 2 shows additional examples of hazard mitigation projects. FEMA serves as the primary source of federal grant funding for state, local, tribal, and territorial investments in hazard mitigation to prevent future damage.

Figure 2: Examples of Hazard Mitigation Projects



Source: GAO. | GAO-22-106046

Through fiscal year 2019, FEMA administered four grant programs to provide funding to states, territories, federally-recognized tribes, and local communities for hazard mitigation planning, projects, and management costs. The four programs are Pre-Disaster Mitigation (replaced with the Building Resilient Infrastructure and Communities program in fiscal year

2020), Flood Mitigation Assistance, Hazard Mitigation Grant Program, and Public Assistance.¹²

In February 2021, we found that state and local officials from selected jurisdictions reported challenges with these hazard mitigation grant programs.¹³

- **Length and complexity of application processes.** Officials we interviewed from 10 of 12 selected state and local jurisdictions we met with said grant application processes were complex and lengthy. For example, some officials stated that the applications were cumbersome, required excessive documentation, that different programs used different grants systems, and that the applications went through multiple rounds of review with different reviewers. In February 2021, we recommended that FEMA establish a plan to assess hazard mitigation grant processes to identify and implement steps to reduce the complexity of and time required for grant applications. FEMA agreed with this recommendation. As of March 2022, FEMA officials stated it had several ongoing efforts to address the recommendation, such as drafting strategic plans and roadmaps meant to reduce complexity, but it had not yet fully developed these plans.
- **Technical capacity needed to successfully apply for grants.** Technical capacity—having access to the technical skills needed to successfully apply for hazard mitigation grants—was cited as a challenge by officials from eight of the 12 state and local jurisdictions we interviewed. We reported that some communities could hire contractors or leverage technical expertise of staff to develop and manage grant applications. However, other communities did not have technical staff, such as engineers, and lack dedicated grant managers or funding to hire contractors to develop hazard mitigation projects and grant applications. To address this, FEMA developed training and guidance, but we found that these resources were listed on different parts of FEMA’s website, which could be difficult for state and local

¹²In response to the Disaster Recovery Reform Act of 2018, FEMA replaced the Pre-Disaster Mitigation grant program with the Building Resilient Infrastructure and Communities program in fiscal year 2020. See 42 U.S.C. § 5133.

¹³GAO, *Disaster Resilience: FEMA Should Take Additional Steps to Streamline Hazard Mitigation Grants and Assess Program Effects*, [GAO-21-140](#) (Washington, D.C.: Feb. 2, 2021). In addition to the three recommendations included here, we also made three additional recommendations that FEMA agreed with and is in the process of addressing.

officials to locate. We recommended that FEMA create a centralized inventory of hazard mitigation resources on its website. FEMA agreed with this recommendation and, as of March 2022, FEMA officials stated they were in the process of updating FEMA's web pages and guidance.

- **Challenges with benefit-cost analyses.** FEMA-funded mitigation activities are required to be cost-effective, and FEMA generally requires applicants to conduct a benefit-cost analysis to demonstrate that the estimated benefits of a project exceed the costs.¹⁴ Officials from all 12 state and local jurisdictions we met with said that the benefit-cost analysis for hazard mitigation grants was a challenge due, in part, to the amount of resources and data needed. For example, some of the officials said that project benefits, such as lost revenue avoided, can be difficult to calculate and may require hundreds of pages of data or technical project information to support. FEMA has taken some steps to make it easier for applicants to complete benefit-cost analyses, including developing pre-calculated benefits that allow prospective applicants to forego performing a detailed benefit-cost analysis for certain project types. Several stakeholders agreed that the pre-calculated benefits had helped. FEMA officials said they would like to develop pre-calculated benefits for additional project types such as electrical infrastructure and telecommunications but they did not have a plan to do so.

We recommended that FEMA establish a plan with time frames to develop pre-calculated benefits for additional project types, where appropriate. FEMA agreed, and in January 2022, FEMA provided documentation showing that it had developed an additional pre-calculated benefit for hospital generators, updated the acquisition and elevation pre-calculated benefit, and established a plan with timeframes to develop pre-calculated benefits for additional project types. As a result of these actions, FEMA is better positioned to simplify the mitigation grant application process while ensuring mitigation investments are cost-effective.

¹⁴See 42 U.S.C. §§ 4104c(c)(2)(A), 5133(f)(1), 5170c(a); 44 C.F.R. § 206.226(e).

GAO's Disaster Resilience Framework Identifies Opportunities to Enhance Climate Resilience

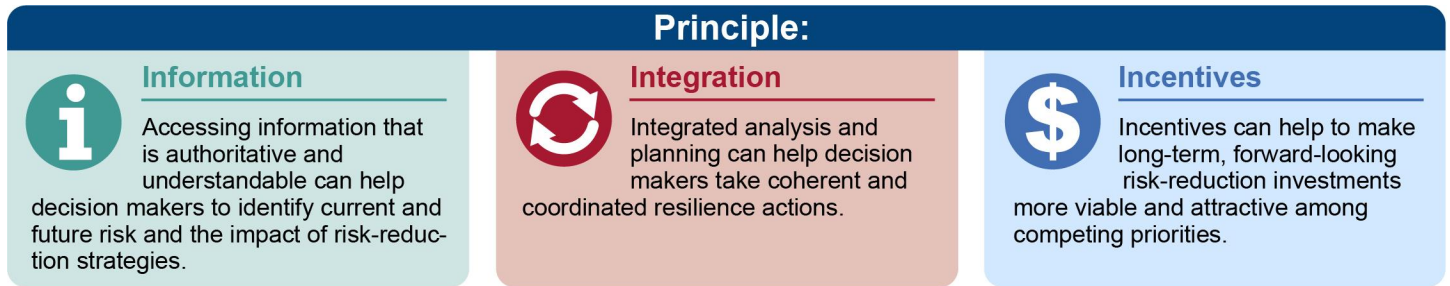
We have previously reported that the federal government has primarily funded disaster resilience projects in the aftermath of disasters—when damages have already occurred and opportunities to pursue future risk reduction may conflict with the desire for the immediate restoration of critical infrastructure.¹⁵ In October 2019, we issued the Disaster Resilience Framework to serve as a guide for analysis of federal actions to facilitate and promote resilience to natural disasters and changes in the climate.¹⁶ According to the framework, investments in disaster resilience are a promising avenue to address federal fiscal exposure because such investments offer the opportunity to reduce the overall impact of disasters. Users of the Disaster Resilience Framework can consider its principles and questions to analyze any type of existing federal effort, identify gaps in existing federal efforts, or consider the federal role. Specifically, this framework can be used to identify opportunities to address gaps in federal efforts by, for example, supporting identification of options to address government-wide challenges that are of a scale and scope not addressed by existing programs.

The framework is organized around three guiding principles—information, integration, and incentives—and a series of questions that can help identify opportunities to enhance federal efforts to promote disaster resilience. (See fig. 3.) These principles can be applied to any federal effort to help federal agencies and policymakers consider what kinds of actions to take if they seek to promote and facilitate disaster risk reduction.

¹⁵See GAO, *Disaster Resilience Framework: Principles for Analyzing Federal Efforts to Facilitate and Promote Resilience to Natural Disasters*, [GAO-20-100SP](#) (Washington, D.C.: Oct. 23, 2019) and, for example, 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).

¹⁶[GAO-20-100SP](#).

Figure 3: GAO’s Disaster Resilience Framework



Source: GAO. | GAO-22-106046

Information. We have found that accessing information that is authoritative and understandable can help decision makers identify current and future disaster and climate-related risks. Moreover, natural and climate disaster risk information that is accurate, comprehensive, and produced or endorsed by an authoritative source can help decision makers better assess their risk. However, this has historically been a challenge. For example, in November 2015, we reported that the climate information needs of federal, state, local, and private sector decision makers were not being fully met. In addition, the federal government’s own climate data—composed of observational records from satellites and weather stations and projections from climate models—were fragmented across individual agencies that use the information in different ways to meet their missions.¹⁷ We recommended that the Executive Office of the President direct a federal entity to develop a set of authoritative climate change projections and observations and create a national climate information system with defined roles for federal agencies and nonfederal entities. As of April 2022, the Office has not yet taken action to implement these recommendations.

Integration. In addition, we have found that integrated analysis and planning can help decision makers take coherent and coordinated actions to promote disaster and climate-related resilience. For example, in October 2019 we reported that no federal agency, interagency collaborative effort, or other organizational arrangement had been established to implement a strategic approach to climate resilience

¹⁷GAO, *Climate Information: A National System Could Help Federal, State, Local, and Private Sector Decision Makers Use Climate Information*, [GAO-16-37](#) (Washington, D.C.: Nov. 23, 2015).

investment that included periodically identifying and prioritizing projects.¹⁸ Such an approach could supplement individual agency climate resilience efforts and help target federal resources toward high-priority projects. We recommended that Congress consider establishing a federal organizational arrangement to periodically identify and prioritize climate resilience projects for federal investment. As of April 2022, such a federal organizational arrangement has not yet been established.

Incentives. We have also found that incentives can lower the costs or increase the benefits of disaster and climate resilience efforts. Because much of the nation's infrastructure is not owned and operated by the federal government, many resilience-related decisions ultimately are made by nonfederal actors, and those decision makers can face competing priorities. Incentives, such as conditions attached to available federal funding, can help promote investments in disaster risk reduction and encourage disaster resilience decision making for infrastructure. An example of this is requiring building codes and standards based on the best available information for infrastructure that is built or repaired with federal funds. As we reported in November 2016, design standards, building codes, and voluntary certifications play a role in ensuring the resilience of federal and nonfederal infrastructure to the effects of natural disasters and extreme weather.¹⁹ We recommended a government-wide approach in which the National Institute of Standards and Technology convenes an ongoing government-wide effort to provide forward-looking climate information to standards organizations. In January 2021, the Institute held a workshop aimed at connecting the U.S. building codes and standards development communities with agencies and organizations collecting and disseminating climate change information. However, as of February 2022, the National Institute of Standards and Technology had not yet taken action to implement this recommendation.

Chairwoman Demings, Ranking Member Cammack, and Members of the Subcommittee, this completes my

¹⁸GAO, *Climate Resilience: A Strategic Investment Approach for High-Priority Projects Could Help Target Federal Resources*, [GAO-20-127](#) (Washington, D.C.: Oct. 23, 2019).

¹⁹GAO, *Climate Change: Improved Federal Coordination Could Facilitate Use of Forward-Looking Climate Information in Design Standards, Building Codes, and Certifications*, [GAO-17-3](#) (Washington, D.C. Nov. 30, 2016).

prepared statement. I would be pleased to respond to any questions that you may have at this time.

GAO Contact and Staff Acknowledgments

If you or your staff have any questions about this testimony, please contact me 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.

GAO staff who made key contributions to this testimony are Aditi Archer, Claudia Becker, Tracey King, James Lawson, and Hadley Nobles. Other staff who made key contributions to the reports cited in the testimony are identified in the source products.

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