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# WILDFIRE DISASTERS

Opportunities to Improve Federal Response, Recovery, and Mitigation Efforts

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

# GAO Highlights

Highlights of GAO-24-107382, a testimony before the Committee on Homeland Security and Governmental Affairs, U.S. Senate

#### Why GAO Did This Study

In recent decades, the nation has witnessed an increase in the size and severity of wildfires as well as longer wildfire seasons. Demand for federal resources to prepare for, respond to, or recover from these wildfires is expected to increase.

This testimony discusses GAO's ongoing and prior work and recommendations on challenges related to (1) wildfire response and recovery, (2) recruitment and retention of wildland firefighters, and (3) interagency coordination.

This statement is based on GAO's ongoing work on FEMA's wildfire prevention and recovery efforts and prior reports, published from November 2022 through March 2023. For its ongoing work, GAO reviewed relevant FEMA policies, procedures, and guidance related to wildfires; conducted a site visit to Hawaii to observe response and recovery efforts; and interviewed relevant FEMA officials. Details about the scope and methodology for published GAO reports are included in those products.

#### What GAO Recommends

GAO made 10 recommendations in the reports covered by this statement, including ones aimed at improving agency coordination and addressing fragmentation in federal wildfire efforts. As of March 2024, five of these recommendations have been partially addressed, but all 10 remain open.

View GAO-24-107382. For more information, contact Chris Currie at (404) 679-1875 or curriec@gao.gov

## WILDFIRE DISASTERS

## Opportunities to Improve Federal Response, Recovery, and Mitigation Efforts

### What GAO Found

GAO's ongoing and prior work identified challenges that federal agencies face:

• Wildfire response and recovery. GAO has previously reported that the Federal Emergency Management Agency (FEMA) faces challenges in assisting state, local, and tribal governments after wildfire events. For example, securing temporary housing for survivors is difficult because disasters exacerbate pre-disaster shortages of affordable housing. Further, wildfires generally destroy entire structures and leave contaminated debris and soil that require lengthy clean-up before property is safe for habitation. FEMA is taking steps to address these post-disaster housing challenges and GAO will continue to assess these efforts in its ongoing work.

#### Residential Wildfire Debris, Lahaina, Hawaii, September 2023



Source: GAO. | GAO-24-107382

- **Recruitment and retention of wildland firefighters.** GAO's prior work identified barriers to the recruitment and retention of federal wildland firefighters, including low pay and opportunities for career advancement. Congress has authorized pay increases through fiscal year 2026, but longer-term solutions are needed, according to agency officials.
- Interagency coordination. GAO's prior work identified opportunities for improved interagency coordination in managing risks from wildfire smoke and in federal disaster recovery efforts. In March 2023, GAO made recommendations to help strengthen federal coordination between the Environmental Protection Agency and land management agencies in reducing risks to air quality and public health from wildfire smoke. As of March 2024, four of the six recommendations were partially addressed. Additionally, in November 2022, GAO reported that the federal approach to disaster recovery is fragmented across more than 30 federal agencies and departments and at least 32 congressional committees. GAO recommended that agencies identify and take steps to better manage this fragmentation and that Congress consider establishing an independent commission to recommend reforms to the federal government's approach to disaster recovery. As of March 2024, a commission has not been established.

Chairman Peters, Ranking Member Paul, and Members of the Committee:

Thank you for the opportunity to speak on the increasing threat of wildfires to communities and steps the federal government can take to improve disaster response, recovery, and mitigation efforts.

In August 2023, the U.S. experienced the deadliest wildfire in over a century on the island of Maui in Hawaii. Multiple fast-moving fires spread across Maui, devastating the town of Lahaina, claiming 100 lives, displacing nearly 10,000 survivors, and damaging or destroying more than 2,000 structures. In recent decades, much of the nation has witnessed an increase in the size and severity of wildfires as well as longer wildfire seasons. Smoke from these wildfires has created hazardous and unhealthy air quality conditions for tens of millions of Americans and, in some instances, for locations thousands of miles from the fires. For example, in July 2023, smoke from wildfires in the western United States and Canada prompted unhealthy air quality alerts for multiple days in East Coast cities, including New York City and Washington, D.C.

At the same time, development occurring in and around wildland areas has increased, placing more people, businesses, and infrastructure at risk. Further, in some states, insurers have increased premiums or stopped issuing new policies altogether, due in part to increasing wildfire risk and associated costs.<sup>1</sup> Because of these trends, demand for federal resources to prepare for, respond to, or recover from these wildfires is expected to increase.

Numerous federal departments and agencies have roles in wildfire preparedness, response, and recovery. Among them, within the Department of Homeland Security, the Federal Emergency Management Agency (FEMA) is the lead federal agency responsible for assisting state, local, territorial, and tribal governments to prepare for, mitigate, respond to, and recover from natural disasters, including wildfires. FEMA provides direct assistance and administers grant programs to these entities as well as aid to individual survivors. FEMA also coordinates across federal agencies to help state, local, territorial, and tribal governments following wildfire disasters. For example, FEMA can assign the U.S. Army Corps of

<sup>&</sup>lt;sup>1</sup>Wildland Fire Mitigation and Management Commission, *On Fire: The Report of the Wildland Fire Mitigation and Management Commission*, (Sept. 2023), 45.

Engineers to conduct debris removal when local jurisdictions do not have the capacity to do the work themselves.<sup>2</sup>

The activities and resources required to suppress wildland fires generally belong to the states and federal agencies with land management missions or tribal trust responsibilities, such as the U.S. Department of Agriculture's Forest Service and four bureaus within the U.S. Department of the Interior: the Bureau of Land Management, the Bureau of Indian Affairs, the National Park Service, and the U.S. Fish and Wildlife Service. Through its mission to protect human health and the environment, the Environmental Protection Agency (EPA) has a primary role in managing risks to air quality and public health from air pollution sources, including risks from wildfire smoke.

In response to the challenges that wildfires pose for the nation, in 2021, the Infrastructure Investment and Jobs Act required the establishment of the Wildland Fire Mitigation and Management Commission.<sup>3</sup> This Commission was tasked with creating policy recommendations to address mitigation, management, and postfire rehabilitation and recovery. In its September 2023 report (the Commission report), the Commission issued a set of policy priorities calling for greater coordination, interoperability, collaboration, and simplification within the wildfire system.<sup>4</sup>

Our prior work has also identified opportunities for the federal government to improve wildfire disaster response, recovery, and mitigation efforts. For example, in 2019, we reported on challenges that communities faced that were more specific to and further complicated by the nature of wildfire disasters.<sup>5</sup> In anticipation that land use practices and climate trends would continue to increase the likelihood that severe and intense wildfires would affect people and communities, we recommended that FEMA

<sup>2</sup>See 42 U.S.C. § 5170a(a)(1). The Stafford Act authorizes the President to direct any federal agency, with or without reimbursement, to utilize its authorities and the resources granted to it under federal law in support of state and local response efforts. This tasking authority, delegated to the FEMA Administrator, is carried out through a mission assignment.

<sup>3</sup>Pub. L. No. 117-58, §§ 70201-70207, 135 Stat. 429, 1250-1258 (2021).

<sup>4</sup>Wildland Fire Mitigation and Management Commission, *On Fire: The Report of the Wildland Fire Mitigation and Management Commission.* Commission members will remain empaneled until March 27, 2024, which is 6 months after the final report was submitted to Congress. See Pub. L. No. 117-58, at § 70207, 135 Stat. at 1258.

<sup>5</sup>GAO, Wildfire Disasters: FEMA Could Take Additional Actions to Address Unique Response and Recovery Challenges, GAO-20-5 (Washington, D.C.: Oct. 9, 2019).

comprehensively assess how its policies and procedures work for largescale fires. In response, FEMA conducted an assessment in July 2021. It has also taken action to better align its operations to address wildfires.

My statement today discusses various challenges related to (1) wildfire response and recovery, (2) recruitment and retention of wildland firefighters, and (3) interagency coordination in managing risks from wildfire smoke and the federal approach to disaster recovery. This statement is based on our ongoing work on FEMA's wildfire prevention and recovery efforts and prior reports that we issued from November 2022 through March 2023.<sup>6</sup> We plan to complete our ongoing work and issue a report by the end of the year.

Our work to understand challenges FEMA experiences in its efforts to assist state, local, and tribal governments in wildfire response and recovery is ongoing. We reviewed relevant FEMA policies, procedures, and guidance as it relates to wildfires; conducted a site visit to Hawaii in September 2023 to observe FEMA's more immediate response and recovery efforts after the Maui wildfire; and interviewed FEMA headquarters and region officials.

To perform our prior work, we reviewed relevant statutes and regulations, agency policies, and interagency coordination documents. We also interviewed relevant federal officials and selected experts and nonfederal stakeholders. More detailed information on the scope and methodology of our prior work can be found in each of the issued reports cited throughout this statement.

We made 10 recommendations in the reports covered by this statement, including three priority recommendations.<sup>7</sup> These include recommendations to improve agency coordination and address fragmentation in federal wildfire efforts. As of March 2024, five of these

<sup>6</sup>GAO, Disaster Recovery: Actions Needed to Improve the Federal Approach, GAO-23-104956 (Washington, D.C.: Nov. 15, 2022); GAO, Wildland Fire: Barriers to Recruitment and Retention of Federal Wildland Firefighters, GAO-23-105517 (Washington, D.C.: Nov. 17, 2022); and GAO, Wildfire Smoke: Opportunities to Strengthen Federal Efforts to Manage Growing Risks, GAO-23-104723 (Washington, D.C.: Mar. 13, 2023).

<sup>7</sup>Priority open recommendations are the GAO recommendations that warrant priority attention from heads of key departments or agencies because their implementation could save large amounts of money; improve congressional and/or executive branch decision-making on major issues; eliminate mismanagement, fraud, and abuse; or ensure that programs comply with laws and funds are legally spent, among other benefits.

	recommendations have been partially addressed, but all 10 remain open. GAO continues to monitor the agencies' progress in implementing them. We also recommended that Congress consider establishing an independent commission to recommend reforms to the federal government's approach to disaster recovery. As of March 2024, no commission has been established.
	We conducted this work 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.
Federal Agencies	
Face Challenges in	
Wildfire Response,	
Recovery, and	
Mitigation	
Preliminary Observations Indicate FEMA Continues to Face Challenges	Our preliminary analysis of FEMA's efforts to assist state, local, and tribal governments in addressing wildfire threats indicates FEMA continues to face challenges related to (1) wildfire debris removal and (2) a shortage of temporary housing for wildfire survivors, among other things. As part of our ongoing work, we will continue to discuss these issues with federal, state, local, and tribal officials and will review FEMA's policies and procedures to understand how FEMA is addressing the unique nature of wildfires.
Debris Removal	Wildfires create additional debris removal challenges for states and local jurisdictions, and we previously reported that the debris removal process for wildfires is often more costly and complicated than for other types of disasters. <sup>8</sup> For example, wildfires typically leave no remaining structure (see figure 1), and the resulting ash contains contaminants that must be carefully removed, wrapped, and disposed of before survivors can move back to their properties.

<sup>8</sup>GAO-20-5.



Figure 1: Examples of Residential Wildfire Debris, Lahaina, Hawaii, September 2023

Source: GAO. | GAO-24-107382

Preliminary observations from our ongoing work indicate that wildfire debris continues to pose challenges for state and local officials, including hazardous waste removal and private property debris. For example, state and federal officials described these and other challenges during our September 2023 visit to Maui. Hawaii faces unique challenges due to its remote location. Maui County officials needed to determine where to permanently dispose of an estimated 400,000 cubic yards of ash and debris from Lahaina. In February 2024, Maui County administered a survey to obtain public input on the three locations on the island that the county and other government officials determined meet the minimum environmental requirements and are potentially viable for debris disposal. Based in part on the survey results, Maui County announced it had selected a Central Maui location to build a permanent disposal site. The county reported that it is taking steps to acquire the land and design the site.

Officials from FEMA Region 9,<sup>9</sup> which includes Hawaii, also anticipated challenges in obtaining homeowners' permission to enter private property

<sup>&</sup>lt;sup>9</sup>FEMA consists of 10 regions in the continental United States and territories.

to conduct debris removal.<sup>10</sup> In February 2024, local, state, and FEMA officials were coordinating with the U.S Army Corps of Engineers to offer a government-sponsored debris removal program. Before the agencies could initiate this program, the EPA had to remove all hazardous materials.<sup>11</sup> As of February 7, 2024, FEMA reported that the EPA removed more than 220 tons of hazardous materials like paints, solvents, oils, and pesticides, as well as 30 tons of lithium batteries from electric vehicles and power walls from the burn zone.

The Wildland Fire Mitigation and Management Commission report identified other challenges related to wildfire debris, including post-wildfire flooding and debris flows, or fast-moving landslides that destroy objects in their paths, which often strike without warning.<sup>12</sup> We will continue to explore these issues in our ongoing work.

Post-Disaster HousingProviding effective and affordable temporary housing for disaster<br/>survivors is a longstanding challenge, and we have previously reported<br/>that disasters exacerbate pre-disaster shortages of affordable housing.13<br/>Further, wildfires pose additional challenges compared to other disasters,<br/>such as hurricanes and floods. This is because they generally destroy<br/>entire structures and leave piles of contaminated debris and soil that<br/>require lengthier cleanup before property is safe for habitation, as noted

<sup>10</sup>Per FEMA policy, private property debris removal may be eligible for Public Assistance if the debris on private property is of such magnitude that it poses a threat to public health and safety. FEMA's Public Assistance program provides assistance to state, local, territorial, and tribal governments and certain nonprofit organizations for emergency response as well as permanent work and mitigation efforts to restore community infrastructure after a declared disaster.

<sup>11</sup>See GAO, *Household Hazardous Waste Removal: EPA Should Develop a Formal Lessons Learned Process for Its Disaster Response*, GAO-22-104276 (Washington, D.C.: Mar. 17, 2022).

<sup>12</sup>Wildland Fire Mitigation and Management Commission, *On Fire: The Report of the Wildland Fire Mitigation and Management Commission*. In 2021, we reported on U.S. Department of Agriculture's Emergency Watershed Protection Program, which provides assistance following natural disasters to help reduce future damage to life or property, such as by implementing measures to reduce the risk of post-wildfire flooding. We made four recommendations—including that U.S. Department of Agriculture's Natural Resources Conservation Service clarify areas of limited guidance—all of which have been implemented. GAO, *Emergency Watershed Protection: Assistance Program Helps Meet Post-Disaster Needs and Could Be Improved with Additional Guidance*, GAO-22-104326 (Washington, D.C.: Oct. 28, 2021).

<sup>13</sup>GAO-20-5. Under a major disaster or emergency declaration, FEMA may provide temporary housing assistance for displaced disaster survivors generally for up to 18 months. 44 C.F.R. §§ 206.110(e), 117.

above. As previously described, this includes ensuring the property is clear of hazardous materials, as seen in figure 2. The contaminated ground that wildfires leave behind further limits the available sites to place temporary housing or manufactured housing units. This is particularly challenging in communities lacking ample rental properties outside the footprint of the wildfire.

Figure 2: Environmental Protection Agency Environmental Assessment Sign at Residential Property, Lahaina, Hawaii, September 2023



Source: GAO. | GAO-24-107382

Our preliminary observations and site visit indicate that post-wildfire housing for survivors continues to be a challenge. For example, following the August 2023 wildfires in Maui, Hawaii, that damaged or destroyed nearly 2,000 housing structures in the town of Lahaina, FEMA officials told us that finding housing for disaster survivors would be a top priority and a major challenge during recovery, due in part to the limited housing stock on Maui. According to these officials, they were considering factors such as speed of housing availability, cost, and land availability in identifying housing options beyond sheltering in hotels. Officials from one nonprofit that we spoke to expressed concerns about survivors being displaced from the community due to Maui's housing limitations. As of February 7, 2024, FEMA reported that 270 households were receiving financial rental assistance from FEMA to live in temporary housing units of their choosing, while 162 households had been placed in fully furnished properties FEMA had secured and leased under contracts with property managers. However, of the 8,000 survivors that sought emergency shelter from the Red Cross and FEMA, 4,984 were still being sheltered in 16 short-term housing sites in hotels and condominiums.

FEMA has taken steps to improve its assistance to survivors, including those impacted by wildfires, and address post-disaster housing challenges. For example, in January 2024, FEMA announced planned updates to provide quicker access to needed funds, expanded eligibility for property and home repairs, and an easier application process for survivors.<sup>14</sup> According to FEMA's press release, among the planned updates are two new benefits to provide funding directly to survivors:

- Serious Needs Assistance is a cash relief program intended to provide \$750 for households with serious needs to help cover immediate expenses related to evacuation, sheltering, and meeting basic household needs.<sup>15</sup>
- 2. Displacement Assistance aims to provide survivors with greater flexibility in making the best decision for their immediate housing needs. Funds are provided up-front to assist eligible survivors with immediate housing options of their choice, such as costs associated with staying with family and friends, until they can secure a rental option. This benefit is designed for survivors who cannot return to their home following a disaster.

FEMA officials also noted two broader efforts to address post-disaster housing challenges: (1) a joint Pre-Disaster Housing Initiative with the U.S. Department of Housing and Urban Development that began a pilot phase in May 2023 and (2) placement of full-time employees to permanently fill direct housing leadership positions in the field. These

<sup>&</sup>lt;sup>14</sup>FEMA, *Biden-Harris Administration Reforms Disaster Assistance Program to Help Survivors Recover Faster.* (Washington, D.C.: Jan. 19, 2024). FEMA expects the changes to take effect for new disasters declared on or after Mar. 22, 2024.

<sup>&</sup>lt;sup>15</sup>This program will replace the Critical Needs Assistance Program, which was provided based on a disaster-by-disaster evaluation. Serious Needs Assistance will be available in all disasters receiving Individual Assistance, which provides assistance to eligible individuals and households who have uninsured or underinsured necessary expenses and serious needs as a direct result of a declared disaster.

efforts are in the early stages, and we will more fully assess them as we complete our work.

### Land Management Agencies Face Barriers to Recruiting and Retaining Wildland Firefighters

In November 2022, we identified seven commonly cited barriers to the recruitment and retention of federal wildland firefighters, as figure 3 shows.<sup>16</sup> The Wildland Fire Mitigation and Management Commission reported similar barriers.<sup>17</sup>

#### Figure 3: Commonly Cited Barriers to Recruitment and Retention of Federal Wildland Firefighters



Source: GAO analysis of information from the Departments of Agriculture and the Interior and selected nonfederal stakeholders. | GAO-24-107382

Our 2022 report describes the seven barriers in detail, including actions that the Forest Service and Department of Interior (Interior) agencies had taken to help address the barriers and suggestions from agency officials and selected stakeholders about additional actions that could be taken. All seven barriers are important and need to be addressed if the agencies are to make continued progress in their efforts to improve firefighter recruitment and retention.<sup>18</sup>

Pay was the most cited barrier during our review. Forest Service and Interior officials, and all 16 nonfederal stakeholders we interviewed (e.g., nongovernmental organizations involved in firefighting issues) stated that pay for federal wildland firefighters is low. Officials and eight stakeholders also noted that the pay does not reflect the risk or physical demands of the work.

<sup>18</sup>GAO-23-105517.

<sup>&</sup>lt;sup>16</sup>GAO-23-105517. We did not make recommendations to any of the agencies described in this report.

<sup>&</sup>lt;sup>17</sup>Wildland Fire Mitigation and Management Commission, *On Fire: The Report of the Wildland Fire Mitigation and Management Commission.* 

Agencies and Congress have taken steps to address the pay issue. In August 2021, the Forest Service and Interior implemented an administration initiative to increase the minimum hourly wage for federal wildland firefighters from \$13 to \$15 per hour.<sup>19</sup> Further, in June 2022, the agencies worked with the Office of Personnel Management (OPM) to address a provision of the Infrastructure Investment and Jobs Act directing the agencies to increase firefighter salaries by the lesser of \$20,000 or 50 percent of base salary in locations where it is difficult to recruit or retain wildland firefighters.<sup>20</sup> The act authorized funding for the wildland firefighter provisions under the act, including those related to salary increases, for fiscal years 2022 through 2026.<sup>21</sup>

Forest Service and Interior officials and four stakeholders we interviewed said that while steps to increase federal wildland firefighter pay were positive, they believed that pay still did not reflect the demands of the job and was not competitive with nonfederal firefighting entities. Officials and two stakeholders also pointed out that the funding for pay increases in the Infrastructure Investment and Jobs Act is only authorized through fiscal year 2026 and that longer-term solutions are needed. Officials said that they were looking at a long-term pay solution, such as establishing a higher pay rate nationwide for federal wildland firefighters. Further, the Commission report stated that the most frequent public recommendation

<sup>19</sup>The agencies' implementation of the initiative increased the pay—through the payment of special awards—for more than 11,300 firefighters at the Forest Service and approximately 3,500 firefighters at Interior. In January 2022, the Office of Personnel Management established a nationwide special rate schedule that provided a \$15 minimum hourly rate and pay increases at General Schedule grades 1 through 4 for General Schedule employees stationed in the United States, which ensured a \$15 minimum hourly rate of basic pay for wildland firefighters. See Office of Personnel Management, Memorandum for Heads of Executive Departments and Agencies, *Achieving a \$15 Per Hour Minimum Pay Rate for Federal Employees*, CPM 2022-02 (Washington, D.C.: Jan. 21, 2022).

<sup>20</sup>Pub. L. No. 117-58, § 40803(d)(4)(B), 135 Stat 429, 1101 (2021). For more information on the implementation of this provision, see Department of the Interior, Office of Personnel Management, and U.S. Department of Agriculture, *Frequently Asked Questions: Implementation of Section 40803 of the Bipartisan Infrastructure Law* (Public Law 117-58) (Washington D.C.: June 21, 2022). Beginning on July 3, 2022, eligible wildland firefighters at the Forest Service and Interior received the supplemental salary increase, which will remain in place until September 30, 2026, or until the funds are depleted, whichever comes first. Firefighters also received retroactive payments covering October 1, 2021, through July 2, 2022. The wildland firefighter pay increase provided by the Infrastructure Investment and Jobs Act was paid on top of these special rates, according to agency officials.

<sup>21</sup>The act also appropriated some funding for the provisions, although not in the full amounts authorized.

it received on its public comment portal was to make the temporary pay increase permanent.<sup>22</sup> Continuing resolutions for fiscal year 2024 allow the agencies to continue to fund the firefighter base salary increase at the same level provided by the Infrastructure Investment and Jobs Act. In addition, Congress continues to consider long-term options for increasing federal wildland firefighter pay.<sup>23</sup>

Other barriers to recruiting and retaining federal wildland firefighters include career advancement challenges and poor work-life balance. As directed by the Infrastructure Investment and Jobs Act, the Forest Service and Interior worked with OPM to develop a new occupational series for federal wildland firefighters aimed at better reflecting the duties related to fighting fires and providing a clearer path for firefighters to advance their careers.<sup>24</sup> OPM announced the new series in June 2022, and the Forest Service and Interior are in the process of applying it. Regarding poor work-life balance, federal officials said that longer and more intense fire seasons have increased the number of times that firefighters are deployed during the year, which can make it difficult for firefighters to spend time with family or attend to personal matters.

Better Interagency Coordination Could Improve Federal Wildfire Response, Recovery, and Mitigation Efforts Our prior work identified opportunities for improved interagency coordination in (1) managing risks from wildfire smoke and (2) the federal approach to disaster recovery.

<sup>23</sup>See e.g., Pub. L. No. 118-15, § 132, 137 Stat. 71, 79 (2023).

<sup>&</sup>lt;sup>22</sup>Wildland Fire Mitigation and Management Commission, *On Fire: The Report of the Wildland Fire Mitigation and Management Commission*, 157.

<sup>&</sup>lt;sup>24</sup>The Infrastructure Investment and Jobs Act provides that, subject to the availability of appropriations, the secretaries of Agriculture and the Interior are to coordinate with the Director of OPM to develop a distinct "wildland firefighter" occupational series. See Pub. L. No. 117-58, § 40803(d)(1), 135 Stat 429, 1100 (2021).

# Managing Risks from Wildfire Smoke

In March 2023, we reported that EPA and the Forest Service and Interior's land management agencies have opportunities to strengthen federal coordination to reduce smoke risks through wildfire risk mitigation.<sup>25</sup> We found that the agencies' respective missions and goals for wildfire risk management are not aligned. For example, land management agency officials said that EPA's air quality requirements can limit the use of certain land management methods, such as prescribed fires, that have the potential to reduce smoke from future wildfires.<sup>26</sup> However, EPA officials said that risks to air quality and public health from wildfire smoke are often overshadowed in national-level discussions about wildfire risk mitigation.

Our report found that by better aligning their goals for wildfire risk mitigation, EPA and land management agencies can more effectively reduce risks to air quality and public health from wildfire smoke over the long term. The Commission report acknowledged both the impacts from smoke and the need for fire to reduce future impacts: "fire is both central to the crisis and one essential part of the solution."<sup>27</sup>

We made six recommendations in our March 2023 report, including one recommendation each to EPA, U.S. Department of Agriculture, and the Department of the Interior to work with one another to better align air quality and land management goals for wildfire risk mitigation and establish joint strategies for achieving those goals. The agencies generally agreed with the recommendations and noted various actions they planned to take. In a November 2023 memorandum of understanding, the agencies committed to work together under existing laws to clarify and align regulations, policies, and practices to promote the mutual objectives of protecting public health from the impacts of smoke, as well as enabling land management practices that may reduce the risk of future large, high severity fire events. The memorandum also includes a workplan defining the agencies' intended areas of focus.

These are important steps toward addressing our recommendations. To better align their goals and establish joint strategies for achieving those

<sup>25</sup>GAO-23-104723.

<sup>26</sup>For more information, see GAO, *Wildland Fire: Federal Agencies' Efforts to Reduce Wildland Fuels and Lower Risk to Communities and Ecosystems*, GAO-20-52 (Washington, D.C.: Dec. 19, 2019).

<sup>27</sup>Wildland Fire Mitigation and Management Commission, *On Fire: The Report of the Wildland Fire Mitigation and Management Commission*, 84.

goals, the agencies need to ensure that they act on the memorandum by undertaking efforts outlined in it, such as conducting joint projects to develop and document a shared understanding of how smoke from wildfire and prescribed fire is treated in federal air quality management programs. As of March 2024, these three recommendations have been partially addressed.<sup>28</sup>

Federal Approach to Disaster Recovery The number of federal agencies and bureaus involved in wildfire preparedness, response, and recovery efforts highlight the broader issue of the federal approach to disaster recovery. In November 2022, we reported that the federal approach to disaster recovery is fragmented, and no single federal agency or Congressional committee has responsibility for managing or overseeing the entire system.<sup>29</sup> There are over 30 federal agencies and departments involved in disaster recovery and at least 32 congressional committees with responsibility for overseeing federal disaster recovery programs.<sup>30</sup> This approach is the product of over 40 years of incremental efforts to address emerging issues in disaster recovery through legislative reform as well as differing agency regulations and policies.

There have been benefits to having multiple entities involved in disaster recovery, but it has also created challenges. Specifically, state and local officials that GAO met with said that they experienced challenges navigating multiple federal recovery programs (including their differing requirements and time frames), multiple federal authorities, and limited data sharing. They noted that these challenges could make it harder for communities—and particularly vulnerable communities, such as lower income areas—to successfully navigate multiple federal programs. The Commission report also identified a need to better integrate pre-and postwildfire activities across federal agencies, stating that "the current level of fragmentation has left significant gaps and unmet needs and lacks

<sup>29</sup>GAO-23-104956.

<sup>&</sup>lt;sup>28</sup>As of March 2024, four of the six recommendations we made in this report have been partially addressed. See GAO-23-104723.

<sup>&</sup>lt;sup>30</sup>This count includes full committees only. However, each of the 32 committees may also have multiple subcommittees with jurisdiction over disaster recovery programs. For example, the House and Senate Committees on Appropriations each have 12 subcommittees that oversee disaster recovery programs.

overarching accountability [...].<sup>"31</sup> Congress and federal agencies have taken steps to address aspects of these challenges—by creating interagency agreements to increase communication and by reducing program complexity—but challenges remain.

Based on a literature review; interviews with federal, state, and local officials; and a panel of experts, we identified 11 options that could improve the federal approach to disaster recovery, summarized in table 1. Our November 2022 report describes these options in detail, as well as identifies ways the options could be implemented and the strengths and limitations of each. Determining the best option is a policy choice and requires complex tradeoff decisions. GAO did not endorse any specific options identified.

#### Table 1: Options to Improve the Federal Government's Approach to Disaster Recovery

1. Develop new coordinated efforts to clearly and consistently communicate about recovery programs.

2. Provide coordinated technical assistance throughout disaster recovery.

3. Develop models to more effectively coordinate across disaster recovery programs.

4. Develop a single, online application portal for disaster recovery that feeds into one repository.

5. Standardize requirements of federal disaster recovery programs.

**6.** Simplify requirements of federal disaster recovery programs.

7. Further incentivize investments in disaster resilience as part of federal recovery programs.

8. Identify desired recovery outcomes and develop a mechanism to track these across programs.

9. Prioritize disaster recovery funding for vulnerable communities across all federal programs.

**10.** Consolidate federal disaster recovery programs.

**11.** Adjust the role of the federal government in disaster recovery.

Source: GAO analysis of relevant literature; interviews with federal, state, and local officials; and our panel of experts. | GAO-24-107382.

<sup>&</sup>lt;sup>31</sup>Wildland Fire Mitigation and Management Commission, *On Fire: The Report of the Wildland Fire Mitigation and Management Commission*, 129. The Commission made recommendations to address fragmentation in federal wildfire efforts. For a full list of its recommendations, see Appendix E in the Commission report.

	We recommended that Congress consider establishing an independent commission to recommend reforms to the federal government's approach to disaster recovery. <sup>32</sup> Establishing an independent commission to reform disaster recovery—including consideration of the 11 options on which we reported—could help Congress and federal agencies identify actions they could take to improve the effectiveness of the federal approach. An improved approach could reduce the federal government's fiscal exposure, improve service delivery to disaster survivors and state and local governments, and increase the speed of disaster recovery. A commission could also identify ways to further incentivize disaster resilience and address concerns about the equity of benefits provided after disasters. As of March 2024, no proposal to establish such a commission has been enacted.
	Thank you, Chairman Peters, Ranking Member Paul, and Members of the Committee. 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 members 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. Key contributors to this statement include Caryn Kuebler (Assistant Director), Hannah Weigle (Analyst-in-Charge), Michael del Campo II, Ben Crossley, Jonathan Dent, Elizabeth Dretsch, Haley Dunn, Anne Hobson, Tracey King, Patricia Moye, Kevin Reeves, and Lesley Rinner. Key contributors to the previous work discussed in this statement are listed in each of the cited reports.

<sup>&</sup>lt;sup>32</sup>We also made two recommendations to FEMA and one each to the Departments of Transportation and Housing and Urban Development to identify and take steps to better manage this fragmentation across these programs. These four recommendations remain open. See GAO-23-104956.

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