

NATION ON FIRE: RESPONDING TO THE INCREASING WILDFIRE THREAT

HEARING

BEFORE THE

COMMITTEE ON
HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE
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NATION ON FIRE: RESPONDING TO THE INCREASING WILDFIRE THREAT

THURSDAY, MARCH 14, 2024

U.S. SENATE,
COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS,
Washington, DC.

The Committee met, pursuant to notice, at 10 a.m., in room SD-342, Dirksen Senate Office Building, Hon. Gary Peters, Chair of the Committee, presiding.

Present: Senators Peters [presiding], Carper, Hassan, Sinema, Rosen, Blumenthal, Ossoff, Butler, Johnson, Lankford, Romney, Hawley, and Marshall.

OPENING STATEMENT OF SENATOR PETERS¹

Chairman PETERS. The Committee will come to order. Wildfires are an increasing threat to our country. They have gotten bigger, they have burned more land, and put more communities in danger.

Last year alone, wildfires affected Americans from Hawaii to the Great Smoky Mountains, and this year, they are likely to get worse. As we sit here today, communities in Texas just recently finished fighting the largest wildfire in the history of that State. It burned almost 1.4 million acres of land, taking lives, damaging houses, devastating agriculture, displacing families, and leaving property across the northern edge of the State in ruin.

Last August, the fire in Maui was absolutely catastrophic and even more deadly. It took the lives of over 100 people, and shattered countless communities. It was the deadliest wildfire in our country in over a century. The Council of Native Hawaiian Advancement (CNHA)² and the Mayor of Maui County³ have submitted written testimony regarding the ongoing recovery efforts in Maui, and I move to offer them into the hearing record without objection.

These are just a few of the examples of a new crisis, one that is putting even more Americans at risk. The effects of these fires are not only physical danger and property damage, they also bring a host of health risks to our communities even in locations hundreds of miles from the fire.

Last year, large swaths of the eastern United States were impacted by wildfire smoke from Canada, causing unhealthy air qual-

¹The prepared statement of Senator Peters appears in the Appendix on page 37.

²Testimony submitted by the Council of Native Hawaiian Advancement appears in the Appendix on page 97.

³Testimony submitted by the Mayor of Maui County appears in the Appendix on page 89.

ity from Detroit, to Washington, DC, to Boston. Inhaling such smoke causes lung disease, heart problems, as well as cancer. As wildfires grow more common in urban communities, they can burn dangerous synthetic materials. Even after the fire is over, the threat remains.

After effects, like floods, mudslides, and barren land can threaten public safety for years. But it does not stop there. Wildfires are also unbelievably expensive. They amount to billions of dollars in response and recovery costs, as well as economic losses every single year.

Our State and local governments have to spend already limited resources onto these disasters, often much more than they can afford. Businesses lose money, properties lose value, infrastructure gets damaged, and industries are changed for good.

This is not just a land management issue anymore. It is also an emerging crisis of public health, emergency management, and economic security. That's partly due to development. We are building more in the "wild land urban interface", a term for the transitional zone between unoccupied land and settled property, and that brings us closer to wildfires that in the past could have been contained within uninhabited land.

This problem is also exacerbated by climate change. We have higher temperatures, more droughts, and a host of other ecological factors that make wildfires more dangerous. They are one of the gravest consequences of global climate change. In short, this is a serious problem. Climate change is making it worse, and we have to improve our response, our recovery, and mitigation efforts.

We have a few key tools for that work. The Federal Emergency Management Agency (FEMA) is the government agency tasked with disaster relief and wildfires affecting communities falls under their purview. FEMA handles declarations and gives out key resources to communities affected by wildfires, but the increasing danger posed by wildfires has revealed gaps in this agency's infrastructure.

For instance, many of its programs were designed for other hazards like floods and hurricanes, and do not adequately meet the needs of wildfires. I look forward to hearing from our panel of witnesses on what FEMA needs to do in order to properly mitigate this threat. Our witnesses will also provide valuable insight on the Wildland Fire Mitigation and Management Commission.

The Commission, which I want to thank Senator Romney for championing, was marked up in this Committee and signed into law as part of the Bipartisan Infrastructure Law (BIL). It offered a sweeping review of our government's response to wildfires and what we need to improve. It was co-chaired by FEMA, the Department of Agriculture (USDA), and the Department of Interior (DOI), and released nearly 150 recommendations this past September.

The report outline ways we can expand our workforce to fight fires, modernize the tools we use, invest in resilient infrastructure, and adopt a proactive approach so that our communities can be better prepared to face this problem in the future.

Our Committee has taken some key steps related to the report's recommendation. Last year, the Senate passed my bipartisan Disaster Assistance Simplification Act, which makes it easier for peo-

ple to get help they need after wildfires, as well as other serious natural disasters.

This Congress, the Senate, passed the Fire Grants and Safety Act, which will help expand our workforce and support firefighters all across America. This Committee has also passed the Wildland Firefighter Paycheck Protection Act, led by Senator Sinema to establish a permanent updated pay scale for Federal firefighters. We will continue working to advance this bipartisan legislation through Congress to prevent a pay cliff for wildland firefighters at the end of this fiscal year (FY).

But there is still so much more we need to do. Wildfires have become a crisis for our country, and one that calls for bold and comprehensive solutions. This threat is not just going to go away, and this Committee must play a central role in our Federal Government's response. Today's discussion with our expert witnesses represents a meaningful step toward that goal.

I would now like to invite Senator Romney to share some opening remarks.

OPENING STATEMENT OF SENATOR ROMNEY

Senator ROMNEY. Thank you, Mr. Chair, and thank you for holding this hearing.

This is a national priority. It is tragic that we continue to have wildfires of the nature we have. Some have become conflagrations. There has been massive loss of life, and this is a problem from Hawaii, to Canada, to the Southern Border across the country. More and more States are being affected by wildfires. It is not just a few States in the American West, as we sometimes think is the case. It is a national concern.

I particularly want to thank Utah's Director of Forestry, Jamie Barnes, for being here and being willing to share her expertise with this Committee. We have some 800 to 1,000 wildfires per year just in Utah. When you think about the impact of these fires, I go back to 2018. We had one called the Dollar Ridge Fire. What was most unusual about that is that it dramatically impacted the watershed, going into rivers, and streams, and lakes, killed wildlife, fish, threatened the drinking supply of people in Panguitch, Utah.

The challenge is not just that we are putting CO₂ and smoke in the air, and threatening structures and life, but we are also affecting our drinking water and the life of wildlife.

In 2021, the Parley Canyon fire forced the evacuation of 8,000 residents along the Wasatch Front for an extended period of time. I went and met with people there, and they were angry asking why couldn't we do a better job preventing these things from happening, and I did not have a lot of answers. We were actually even considering closing down Interstate 80 as a result of that fire.

Back in 2021, Senator Mark Kelly of Arizona and I introduced the Wildland Fire Mitigation and Management Commission Act. It put together, as you know, some 50 individuals, Federal, State, local, private sector, public sector, FEMA. This group came together. They have put together a report as of September of last year with some 148 different recommendations.

Senator Kelly and I are working on legislation to take these recommendations and turn them into law. That is one of the reasons

we wanted to have this hearing today, to get your perspectives on what things we might want to turn into law.

I appreciate very much the work that you are doing. It is a national priority. I recognize that we cannot keep on doing the way we have in the past. We are going to have to have some changes. It is going to require additional funding, we may need additional fixed wing aircraft, different monitoring systems, different remediation, different forestry management, different prescribed burns processes. There are a lot of things that we are going to have to do differently than we have in the past.

I look forward to the testimony today, particularly from Director Barnes, and the rest of you, and appreciate the willingness of Members of our Committee to come together to focus on this important issue.

Chairman PETERS. Thank you, Senator Romney. I would like now to invite Senator Lankford to share some opening remarks.

OPENING STATEMENT OF SENATOR LANKFORD

Senator LANKFORD: Mr. Chair, thank you. Sometimes when people think about wildfires, they do not think about Oklahoma. They think about some of the areas of tall timber. I do want to remind folks, we do have tall timber in Oklahoma as well, on the eastern side of our State, and we have great areas of prairie grass on the west.

February the 26th, just a few weeks ago wildfires broke out in the State of Oklahoma. According to our forestry services, we had 152,000 acres that were burned just on February 26th. In the days that are following that, we had a high fire danger day even yesterday.

As that is continuing to be able to come, just in that fire on February 26th, and the time after that, we had 19 homes destroyed. We had four injuries that were there, a lot of livestock, and a lot of fence line through that area. Our neighbors in Texas, where one of the fires actually started and moved into Oklahoma, lost over 1,000,000 acres just at the end of February and early in March.

This is wildfire season in Oklahoma. It is when we see a lot of the fires actually take off quickly with the dry vegetation and high winds coming through. That is why Senator Barrasso and Senator Manchin are holding hearings on wildfires as well this week as we continue to be able to talk through the other issues that we can try to resolve as many things as we can.

We do have to address areas of mitigation. That is grazing, that is prescribed burns, that is timber harvesting, that is removal of hazardous fuels, and the hazardous fuels for us in Oklahoma is actually the red cedar which actually just explodes when fire gets near them as well. It is a big issue for us. It is an invasive tree. It takes off quickly, and if they are not actually mitigated when a wildfire breaks out, it becomes a major issue for us to be able to spread the fire and to be able to accelerate it.

You may not know this, but Oklahoma occasionally has severe weather. I know that may be a shock to everybody. Occasionally, when we have severe weather, that lightning will also break out a fire, and that has become a long-term issue for us as well. A lot

of our critical infrastructure continues to be able to deal with how they can manage those issues.

We also have fires that break out, like it happens, at times with our electrical power grid. That is an issue that we still need to be able to resolve, and then will be, hopefully, a part of our conversation today; on grid wildfires as well as occasionally a lightning strike that hits an oil battery or whatever it may be, or just to be able to catch some of the grass on fire, and it takes off from there.

Among our witnesses today, they are coming from States with a lot of Federal land. Federal bureaucracy, I would say, should not prevent us from quickly responding to wildfires. We do have some additional contracting issues as far as the date of contract. For instance, in Oklahoma, our date of contracting for wildfire assistance begins on March the first. Did I mention that our wildfires came in on the end of February this year?

Just getting Federal assistance to be able to come in because for our wildfires happened to come in before the contracting dates, that created additional problems for us. We do have some red tape we have to be able to work through. When disaster strikes, we should be able to respond to those.

One of the issues that Senator Daines, Representative Issa, and I are working on to remove some of the red tape is on the hiring issues. We have a bill called Direct Hire to Fight Fires Act that we are working to be able to make sure that we can actually get to some of those firefighters faster, to the task on it, to be able to resolve some of the hiring issues so we are not having to have those delays just in the hiring to be able to get folks on the ground.

So, appreciate the hearing. This is a big issue for us nationally. It is a tremendous cost to the Federal taxpayer, but it is a bigger cost to those that are actually impacted by the fire on the ground.

Chairman PETERS. Thank you, Senator Lankford. It is the practice of the Homeland Security and Governmental Affairs Committee (HSGAC) to swear in witness. If each of you would please stand and raise your right hands. Do you swear that the testimony that you will give before this Committee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Ms. MOORE-MERRELL. I do.

Mr. FOGERSON. I do.

Ms. BARNES. I do.

Ms. ANDREANI. I do.

Mr. CURRIE. I do.

Chairman PETERS. You may be seated.

Our first witness is Lori Moore-Merrell. She is the U.S. Fire Administrator (USFA) for FEMA. She oversees efforts to support and strengthen fire and emergency medical services to prepare for, prevent, mitigate, and respond to all hazards.

Prior to that role Dr. Moore-Merrell has served at the helm of the International Public Safety Data Institute and worked as a senior executive in the International Association of Firefighters (IAFF).

Since beginning her career as a paramedic for the city of Memphis Fire Department 37 years ago, she has become a renowned expert on public safety and fire service.

Dr. Merrell, you are now recognized for your opening remarks.

**TESTIMONY OF LORI MOORE-MERRELL,¹ ADMINISTRATOR,
U.S. FIRE ADMINISTRATION, FEDERAL EMERGENCY MAN-
AGEMENT AGENCY, U.S. DEPARTMENT OF HOMELAND SEC-
URITY**

Dr. MOORE-MERRELL. Thank you, Senator Peters, and recommend Paul, Senator Romney, and the Members of the Committee. Certainly, thank you for your well-informed opening statements.

I am Lori Moore-Merrell, the U.S. Fire Administrator within the Federal Emergency Management Agency. Thank you for the opportunity to testify today, and to discuss the continuous and evolving wildfire threat.

Before we can effectively examine the impact on wildfire on the Nation, we must first clarify terminology however. Historically, there has been a propensity for Federal decisionmaking to refer to wildland fire in laws intended to reduce the impact on communities.

To clarify, wildland is a location made up of vegetation, while wildland urban interface (WUI) and wildland intermixed communities are referred to as the interface. These are areas where human development meets inner or intermingles with underdeveloped wildland vegetative fuels that are both fire dependent and fire prone.

Ultimately, this confusion in terminology has led to limited resources to address the threat of wildfire before it occurs in the built environment.

Throughout much of the United States and globally, wildfires are growing in intensity, size, and destructiveness, as you have noted. The expansion of our communities into new locations also contributes to the risk we face. It is imperative that the States and local officials adopt, implement, and enforce national wildland urban interface building codes.

In response to these challenges, the Department of Homeland Security (DHS), FEMA, and the U.S. Fire Administration, the U.S. Department of Agriculture, Forest Service, the Department of Interior, were directed by Congress, as you know, through the Bipartisan Infrastructure Law to lead the Wildland Fire Mitigation and Management Commission.

The Wildland Fire Mitigation and Management Commission was charged with recommending improvements on how Federal agencies manage wildfire across the landscapes. The Commission's final report of 148 recommendations covering several themes, including putting significantly more focus on resources toward proactive pre-fire and post-fire planning to break the current cycle of increasingly severe wildfire risk, damages, and losses.

Another theme of the report was modernizing tools to inform in decisionmaking, including several measures that would better coordinate, integrate, and strategically align fire-related science data and technology. A major commission recommendation for the United States Fire Administration is that we provide expanded community-based wildfire training, and engagement of the nation's non-Federal fire service to promote fire-adapted communities, to

¹ The prepared statement of Ms. Moore-Merrell appears in the Appendix on page 40.

build community resilience, and improve coordination with wildfire management in the interface.

These recommendations and actions would have been particularly valuable to address the Lahaina Maui fire before the fire occurred. I accompanied the FEMA Administrator to Laina Maui 48 hours after the fire. My overall focus on the ground was to get a firsthand look at the indications of how the fire moved, likely wind impact, the fuel load that enabled rapid and extensive fire spread, indications of human behavior during evacuation, and overall firefighter wellbeing.

USFA's focus is now on the post-fire mitigation opportunities through the FEMA mitigation assessment team, and increasing resilience during the build back in Lahaina. To assist with building resilience, USFA in coordination with the Department of Homeland Security Science and Technology (S&T) is deploying several wildfire sensors on Maui, along with the other fire-prone islands in the State.

Sensory technology as a critical part of the effective wildfire response, providing real time, accurate information on these fires as early as possible post ignition so that resources can be quickly deployed to engage in suppression. However, we need continual investments and updates on existing wildfire models, as well as additional training for firefighters to respond to these events.

The increasing incidents of wildfire that affect communities means that more municipal fire departments are responsible for firefighting in the wildland and in the interface. The reality is that local firefighters must add interface and suburban conflagration, wildfire strategies and tactics to their operational skillset.

Last, fire departments cannot safely and effectively respond to the wildland or the interface fires without proper protective equipment. The USFA, along with the Federal, State, and local partners, are actively participating in preparedness, including community risk reduction, where we are engaging with individuals and their communities through fire stop tours across the Nation.

It is a goal to prepare all local firefighters, structural firefighters, and communities for increase in wildfires in the interface and the rural and suburban communities. We anticipate challenges ahead. FEMA and the USFA looks forward to working with the members of this community and this committee to build more resilient nation.

I want to thank you again for the opportunity to testify, and I look forward to your questions.

Chairman PETERS. Thank you.

I would like to now recognize Senator Rosen to introduce our second witness.

OPENING STATEMENT OF SENATOR ROSEN¹

Senator ROSEN: Thank you, Chair Peters, and it is my distinct honor and pleasure to introduce Nevada's own David Fogerson, the Chief of the Nevada Division of Emergency Management and Office of Homeland Security. Welcome, Chief.

¹ The prepared statement of Senator Rosen appears in the Appendix on page 39.

Chief Fogerson has over 30 years of experience in public safety, serving in a number of different roles, including as a wildland firefighter himself and as deputy fire chief and emergency manager for Nevada.

In our State of Nevada, the unique landscape, the changing climate, the amount of land owned by the Federal Government, over 80 percent, by the way, make wildfire mitigation and recovery all the more challenging. That is why we need strong leaders like Chief Fogerson, who create collaborative partnerships and encourage innovation in our approach to addressing wildfires.

We are so lucky to have someone with as much experience and insight as Chief Fogerson leading Nevada's response to devastating wildfires, and working with leaders across the country to address the increasing challenges that wildfires are now presenting. Nevada needs to be. We must be at the table in these important conversations.

It is why I am pleased that Chief Fogerson represented our State on the Wildland Fire Mitigation Management Commission which was charged with making these important recommendations to Congress on wildfire strategies and response, and I think you will not find a State in the Nation anymore that is immune from wildfires.

I am so glad to have you here today testifying before this Committee. We thank you for their service to our State, and I think the Chair will recognize you for your opening remarks.

Chairman PETERS. Mr. Fogerson, you are now recognized for your opening comments.

TESTIMONY OF DAVID W. FOGERSON,¹ CHIEF, NEVADA DIVISION OF EMERGENCY MANAGEMENT AND OFFICE OF HOMELAND SECURITY DEPARTMENT OF PUBLIC SAFETY OF NEVADA

Mr. FOGERSON. Chair Peters, Ranking Member Paul, Nevada Senator, Rosen, and distinguished Members of this Committee, it is my esteemed pleasure to speak with you about our nation to wildfire threat.

This is my 30th Nevada wildfire season. I was a deputy fire chief responsible for negotiating a cooperative fire protection agreement with both the Forest Service and the Bureau of Land Management (BLM) based upon the Reciprocal Fire Protection Act of 1954. As with all western States' emergency managers, wildfire continues to be my life's work.

I am before you today as a member of the Wildfire Commission. I believe the Commission was empowered and envisioned to rethink the path on wildfire. Fifty diverse commissioners agreed upon 148 recommendations with 100 percent consensus. That should add weight to our story.

We want to abide down our risks. This occurs when we treat wildfire as we do a hurricane, with the whole community approach. This occurs when we support partnerships to ensure everyone has a seat at the table. This occurs when we support workforce develop-

¹ The prepared statement of Mr. Fogerson appears in the Appendix on page 45.

ment, and realize we no longer have a fire season, but rather a fire year.

H.R. 7070 speaks to treating wildfire as we do hurricanes, and I urge its support. We do not care who owns the hurricane, we react as a collective community to support survivor outcomes using an enterprise-wide approach. During projected landfall, Federal agencies are collaborative to move resources, support State and local responses. Funds are provided to preposition resources. Emergency operation centers are open with a mindset to protect the whole community. Partners come together.

Our nation's response to wildfire is quite different. A Red Flag Warning did not trigger local, State, Federal, and tribal nation coordination to prepare. When we hear the Santa Ana is in Southern California or the Washoe Zephyr is in Northern Nevada, or there's no openings in emergency operation centers, no community-wide approach, and no collective movement of resources as wildfire is still viewed as a responsibility of whichever agency manages the land segregated by property lines and jurisdictions.

We need an outcome-based view, one of consequence management as we do with hurricanes. The evacuation coordination effort currently being led by the Fire Administration is of paramount importance. In fact, Nevada, California is holding a bi-State workshop on this issue in two weeks.

Our responsibility includes accounting for the cascading hazards wildfire brings. We know floods follow fire. Tying flood to the fire is essential for resource-poor communities to protect the residents and visitors. Collaboration is key given the role that local governments play in wildfire response. In Nevada, local governments, structural firefighters are our primary wildfire responders. Federal grants such as Fire Management Assistance Grant (FMAG), Emergency Management Performance Grant (EMPG), Assistance to Firefighters Grants (AFG), and Staffing For Adequate Fire and Emergency Response (SAFER), help local governments fight the fire and not their checkbook.

Administrator Chriswell is working to increase FEMA's nimbleness. No one wants fraud, waste, and abuse. We want nimbleness to create the best outcomes in the shortest amount of time. There is a fine balancing act between those two needs a balance point we must continually seek.

FEMA and the U.S. Fire Administration needs our support to ensure they are positioned to support the whole community. They must be sufficiently resourced and funded for wildfire planning, preparation, response, recovery, and mitigation. Our Federal land management agency partners spend their entire careers dedicated to the wildfire. These professionals need adequate salary, benefit, and respect, and the workforce must be grown to a year-round one, one which can provide for mitigation activities outside of fighting fire.

The idea of a fire season lasting from May to October is no longer a reality in Nevada. Nevada sees a year-round fire season with our largest loss of civilian life and property during winter wildfires when our Federal partners are not staffed to support response. I've managed many winter wildfires asking for additional engines, hand

crews, and air support, only be reminded it is out of season, and local government is depth of the resources available.

Local governments are critical component of wildfire response, year-round and around the clock. The same firefighter that responds to your difficulty breathing call to your structure fire, to your motor vehicle collision with extrication needs, is your wildfire responder year-round. We must allow for more rapid reimbursement to make the local government whole for their efforts. This will allow them to grow their capabilities and remain engaged. Reciprocal Fire Act of 1954 remains an impediment to the local government partners.

I thank you for this opportunity to testify today. It is an honor and highlight of my career. My passion is to ensure that we are learning from experience and improving our systems; for to those who much is given, much is expected. Thank you.

Chairman PETERS. Thank you, Mr. Fogerson. Before we introduce our next witness, I recognize Senator Carper for one minute for a brief remark.

OPENING STATEMENT OF SENATOR CARPER

Senator CARPER: Thanks, Mr. Chair. Welcome. I represent the State of Delaware. We do not have a lot of wildfires. We have a lot of firefighters, and we revere them in the good work that they do. We have challenges that emanate from the ocean. We have sea level rise and wiping out parts of our beaches and our farmland along the coast. It is not just Delaware, it is all up and down the East Coast, the West Coast as well.

I would like to say in my State, it is not enough just to address this the symptoms of sea level rise and the devastation that comes around. We have to address root causes. We all know what the root cause is; it is climate change. There is too much carbon in the air.

The good news is we are doing a lot as a country, I think, leading the world in addressing that, and we need to do more of that. We will not only make sure we have great beaches in places like Delaware, but also make sure that the we will have fewer wildfires to fight across the country.

Thank you all for being here, and welcome. Thank you. Thanks, Mr. Chair.

Chairman PETERS. Thank you, Senator Carper. I need to step away to an Armed Services Committee to ask some questions. I will be passing the gavel over to Senator Romney. Senator Romney will be chairing this hearing while I step away. Senator Romney.

Senator ROMNEY. Yes, I will be a good boy. I will not do anything to embarrass you, Mr. Chair, I promise. Although it is mostly Republicans here, so we might.

Chairman PETERS. I have a tremendous amount of trust in you, my friend.

Senator ROMNEY [presiding.] All right. Thank you. We are going to hear from Director Barnes. Jamie Barnes is currently serving as the Utah State Forester and Director of Utah's Division of Forestry, Fire and State Lands. Prior to this, she was responsible for the Sovereign Lands Program in our State.

She, by the way, got her master's degree at University of Idaho. She obviously went astray from our Northern Border, but her un-

dergraduate is from Weber State University. Director Barnes, we are happy to have you here and we turn to you for your testimony.

**TESTIMONY OF JAMIE BARNES,¹ DIRECTOR, FORESTRY, FIRE
AND STATE LANDS DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH**

Ms. BARNES. Thank you, Senator Romney. Good morning, and thank you Chair Peters, and Members of the Committee. I am pleased to be here with you today to take the opportunity to appear before you and to discuss wildfire.

We are no stranger to the development occurring in our wildland urban interface communities. With urban growth comes an increased risk of devastating wildfire. Many of these areas contain an overgrowth of fuels. We are seeing fires burn hotter and more severely than ever. Many States across the Western U.S. now refer to fire season as fire year. Increased fire occurrence and severity also lead to more days of wildfire smoke in our communities.

The increased severity and intensity of fires outside the typical fire season is demonstrated by the recent destructive wildfires experienced in places like Colorado, Maui, and most recently, Texas. The unexpected is no longer unexpected. It is the new normal.

In addition to States being faced with the increasing suppression costs or of altered fire regimens, private landowners are now being pressured to reduce the amount of fuels on their landscape. While this may reduce the individual risk of wildfires, communities have little control of wildfires beyond their property boundary.

We do have tools in the toolbox that we can use to help mitigate hazardous fuels and actively manage our lands as prescribed fire is one of them. However, it becomes complex, and when dealing with air quality standards, permitting challenges, and with mechanical treatments and cross boundary landscapes.

The majority of the focus around air quality is out of proportion to the frequency and porosity of wildfires. Wildfires can negate any improvement of air quality in a single incident. Utah spends the majority of its summer months inundated with smoke from wildfires of other States. With this in mind, we must remember the true cost of wildfire.

Each year, wildfire suppression dollars are reported and used widely to bring into context the severity of wildfire season. In reality, suppression is only a fraction of the cost. When assessing the full cost of wildfire, we must consider the long-term and complex cost from loss of life, safety, infrastructure, and ecosystem services.

Utah's collaborative relationships lead to our successes. We believe in strong interagency collaboration. Shared stewardship and Fire Sense are examples of how the Utah way achieves goals. The shared stewardship approach brings partners together and stakeholders together to focus on doing the right work in the right place at the right scale.

Since 2019, the shared stewardship program in Utah has invested \$30 million in active forest management treating over 80,000 acres. This initiative has improved Utah's watersheds through a collaborative approach. Fire Sense, a State-sponsored

¹ The prepared statement of Ms. Barnes appears in the Appendix on page 55.

campaign with inter-agency collaboration to educate Utah citizens and visitors is a wildfire prevention campaign.

Utahans have successfully reduced human caused wildfires by over 60 percent in the last three years. That is absolutely amazing. Wildfire Mitigation and Management Commission Act released a report with key findings that are important to Utah with regard to mitigating managing and recovering from wildfires.

In the last decade, Utah has seen large wildfires and escape-prescribed burn projects impact our watersheds. The report identified ways to make planning more effective and efficient. This is one approach that Utah has been very proactive in with shared stewardship, but with limited funding.

There are still limitations to achieving large landscape scale projects due to Nevada Emergency Preparedness Association (NEPA's) litigation challenges, the need for permitting reform, and the lack of mechanisms for forest management. Also, limited funding is available for post-wildfire restoration at the State level. Providing additional funding would help the recovery from a significant wildfire event.

Forestry, Fire and State Lands evaluates the State of Utah wildfire risk by considering resources and values at risk in an area to determine fire risk. These same metrics should be used to prioritize success of mitigation work and not just the number of acres treated. Current Federal performance metrics are used solely on metrics around acres treated.

Last, prioritizing investment in building a workforce is important throughout the Nation. Firefighter pay has been at the center of discussions for years now. Utah recently passed legislation addressing the pay of State wildland firefighters. Having an equally paid inter-agency workforce should be a priority.

We need to learn to live with fire being the new normal. We need to fight fire with fire, putting more fire on the landscape through prescribed burning with lower intensity burning and less impact to air quality. Increasing funding and capacity, along with finding ways to strengthen relationships is the key to successful forest management and reducing the number of wildfires throughout the Nation. Thank you for your time.

Senator ROMNEY. Thank you, Director Barnes.

The chair recognizes Senator Sinema to introduce the fourth witness.

OPENING STATEMENT OF SENATOR SINEMA

Senator SINEMA. Thank you, Mr. Chair. I am pleased to be able to introduce my friend and member of the Wildland Fire Mitigation and Management Commission, Lucinda Andreani.

Lucinda serves as the Deputy County Manager and Flood Control District Administrator for Coconino County in Arizona, where we have worked together on many critical projects for the people of Northern Arizona, from resiliency planning to delivering key post-fire and post-flood resources to seeing firsthand the people in neighborhoods in Flagstaff devastated by post-fire flooding.

Lucinda has been a champion for rethinking the ways we plan for and respond to wildfires in our country, and her appointment to this important commission is a testament to her dedication to

Northern Arizona. I cannot thank Lucinda enough for exemplary work co-chairing the Post-wildfire Working Group with another witness we have at today's hearing, Mr. Fogerson.

I look forward to Lucinda's testimony and continuing our work to deliver results for all Arizonans who are affected by the growing threat of wildfires. Thank you. Thanks, Lucinda.

TESTIMONY OF LUCINDA ANDREANI,¹ DEPUTY COUNTY MANAGER AND FLOOD CONTROL DISTRICT ADMINISTRATOR, COCONINO COUNTY, STATE OF ARIZONA

Ms. ANDREANI. Senator Romney, Senator Sinema, and distinguished Members of the Committee. I am honored to testify.

From the shores of Hawaii to the Panhandle of Texas, wildfire ravages tens of millions of acres and thousands of communities. Even once the wildfires are extinguished, secondary impacts such as loss of housing and post-wildfire flooding threaten the health and safety of affected communities for years.

I am Lucinda Andreani, and I serve as Coconino County Arizona's Deputy County Manager and Flood Control District Administrator. I am responsible for mitigating the impacts of wildfires and post-wildfire flooding, and my duties include leading the district's forest restoration initiative.

I can tell you firsthand, the scale of these crises rapidly overwhelms the capacity of local governments. While there are opportunities for Federal support, much must be done to improve the accessibility, immediacy, and effectiveness of the Federal response to the wildfire crisis.

I also was privileged to represent counties across the country as I served on the congressionally established Wildland Fire Mitigation and Management Commission. It is counties that generally bear the brunt of wildfire disasters. I want to thank Senator Sinema for her continuing leadership with and significant contributions to improving wildfire prevention response and recovery. Her support of the county's efforts have been steadfast and are deeply appreciated by the county and our residents, and me personally as well.

Since 2010, Coconino County has endured nine major wildfires, issued over 25,000 evacuation orders, lost over 130 buildings, including 63 homes, and wildfires have released 4.1 million metric tons of carbon. I would like to focus on some key issues relative to how FEMA can improve wildfire recovery processes.

Commission recommendation 64 advocates for amending the Stafford Act to reflect the cascading repetitive nature of post-wildfire flooding. Although cumulative impacts usually exceed the minimum for a declaration, the disaster events are separated by 72-hour windows. As a result, Coconino County has lost access to millions of dollars in FEMA reimbursements and has virtually no access to the Public Assistance Program.

Commission recommendation 79 calls for protecting taxpayer investments by ensuring that FEMA funds can be applied to infrastructure improvements, not just in-kind replacements. In Coconino County, we have seen wildfire impacted watersheds discharge up

¹ The prepared statement of Ms. Andreani appears in the Appendix on page 59.

to 26 times more flood water than they did in pre-wildfire conditions. Congressional action is needed to allow FEMA to reimburse for upfront short-term flood mitigation and infrastructure preparation costs for post-wildfire flooding. While some areas may qualify for Natural Resources Conservation Service (NRCS') exigency program, FEMA should reimburse local governments and tribes that do not qualify for NRCS exigency, and to prepare infrastructure for the dramatically increased flood flows. Furthermore, exigency funding through FEMA may provide a tangential benefit to the National Flood Insurance Program (NFIP).

Now, I want to quickly turn to increasing the resiliency to wildfires. While the BIL and IRA funding has significantly improved Federal investments in forest restoration, additional funding will be needed across the West to reduce the threat of catastrophic wildfires as called out in Commission Recommendation 126. Improving the resiliency of the built environment is also important as is identified in Commission Recommendation 6.

I am glad to see FEMA's Building Resilient Infrastructures and Communities (BRIC) and Hazard Mitigation Grant Program (HMGP) programs are now focusing on fuels reduction within communities. However, streamlining FEMA's processes is greatly needed. Our county received a fuels reduction grant, but because of these slow processes, it will take over five years to implement. The wildfire crisis cannot be dealt with as business as usual.

In Coconino County, we have become adept at navigating the systems and forming the partnerships to secure aid to address post-wildfire impacts, but this is not the case for most areas such as our neighboring State of New Mexico. The Commission's Recommendation 60 calls for major improvements in Federal agency coordination.

Thank you again for the opportunity to provide testimony. A robust unified response from all levels of government is needed. Thank you.

Senator ROMNEY. Thank you. I appreciate that testimony. I am just going to note that you may wonder why it is that people are coming in and out from this front row here. That is because there are other hearings going on that we have responsibility to attend, and in some cases, to chair.

I would also note that the people who are going to be doing drafting on legislation and implementing many of the recommendations from the commission, they are the ones sitting behind us. The workers are the ones sitting at these back rows here, and they are not leaving. They are here to make sure that we actually turn into law some of the recommendations that are being made by the commission.

Our final witness is Christopher P. Currie. He serves as Director of Homeland Security and Justice at the Government Accountability Office (GAO). Mr. Currie leads the GAO's work in emergency management and disaster response and evaluates the efficiency of certain programs within DHS, including FEMA. He has served in the GAO since 2002. We have seen him a number of times before, as you can imagine.

Mr. Currie, you are now recognized for your opening statement.

TESTIMONY OF CHRISTOPHER P. CURRIE,¹ DIRECTOR, HOMELAND SECURITY AND JUSTICE, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Mr. CURRIE. Thank you very much, Senator Romney, and other Members of the Committee. It is an honor to be here today to talk about GAO's work on wildfire preparedness, response, and recovery.

I am not going to repeat all the challenges about wildfires. I think everyone's covered that pretty well, and the 150 or so Wildfire Commission recommendations show how big of a problem this is. But what I want to do is get into some nuts and bolts, and really lay out three key points based on the years of work we have done on this area and talking to almost every State in the country as well, and listening to the challenges they face.

The first point is that the current Federal system has not really caught up to the modern threat of wildfires. It is very similar to, I think, what we were facing in 2005 with Hurricane Katrina when we were not ready for those types of disasters.

The current system focuses on suppression and mitigation in rural and Federal lands, and what we have seen is that wildfires are now affecting very populated areas. Over the last 10 years FEMA is becoming a lot more involved because more people and infrastructure are being affected.

Traditionally, land management agencies like the Forest Service and Interior have had separate missions from FEMA. Now that this is changing, there needs to be better coordination between the two. As others have mentioned on the panel, there needs to be a much more holistic approach from start to finish about this.

Some examples I love to throw out are, States have told us, for example, that if a wildfire starts on Federal land, you can not actually access certain FEMA grants and programs until that wildfire crosses into State or city land. That was just an archaic process that is tied up in how these programs have been applied for other types of disasters and in statute.

Wildfire smokes is another example. As you can imagine, the Environmental Protection Agency (EPA) and the Forest Service have very different priorities as it pertains to wildfire smoke. Forest Service wants to use prescribed burns to mitigate against fires. EPA wants to stop smoke to increase air quality. These are just the types of things that we have to work out as we change the dynamic with wildfires.

The second point is, in our work, Federal assistance has struggled to really help individuals and communities with wildfires. As was mentioned, a lot of these programs were developed for hurricanes, floods, and other tornadoes, and other types of disasters, which it is already a huge challenge in those areas. But it is even more difficult because wildfires are very unique.

The best example I like to provide is housing after a disaster with survivors. You can not put a FEMA trailer on a burned-out house. The soil is toxic. The debris has to be actually removed, and the fire completely destroys the house or the community.

¹The prepared statement of Mr. Currie appears in the Appendix on page 71.

Another unique aspect to this is that, often, the entire structure or community is gone. It takes much longer to rebuild. You have to completely redesign and, buildup to current code way more difficult than just rebuilding a house in a neighborhood after it floods or after it is hit by a hurricane.

The other challenge is just shortages of disaster housing for survivors afterwards. We have seen this in Maui, and in California. These things tend to hit in places that are extremely expensive for housing. There is not a lot of hotels and other things to put disaster survivors in.

Recently when I was in Maui, local official reminded me that average family home there is about \$1.5 million. They do not have a bunch of small houses sitting around for temporary housing for survivors. FEMA and its Federal partners and State and local partners are going to have to work together to figure out before fires happen what we are going to do with survivors when they are taking years to rebuild their homes.

The last point I would like to talk about is just Federal disaster assistance in general. What we hear consistently everywhere we go around the country is these programs are way too complicated. Recovery programs, they take a long time. They are very frustrating to navigate, and when you are trying to use multiple Federal programs together for recovery, it becomes almost close to impossible in some people's view.

This is something that we are going to have to change. We have made recommendations on how we can do this. We actually suggested it was such a big problem that there needed to be a specific commission set up to handle just disaster recovery reform in general. Many things need to take place to change the way we look at wildfire preparedness, response, and recovery.

Thank you for the chance to be here and I look forward to the questions.

Senator ROMNEY. Thank you, Director Currie, and appreciate the work that you do and that all of our panel members do to help protect our citizens and our land.

I am going to direct my first question to Director Barnes, but you others are free to comment on it as well. Director Barnes, you noted the importance of forestry management, but said that there are regulatory barriers that make it difficult for us to effectively manage our forest. What are the barriers that the commission identified, or just based on your own experience, what things should we focus on to be able to make it more likely that we will be able to effectively manage the forest prior to a wildfire?

Ms. BARNES. Yes. Thanks, Senator Romney. I think some of those barriers are definitely the NEPA process that we are going through. Permitting reform is something that we definitely need to be focusing on. Also, efficiencies across agencies is something that we should be focusing on and how we can do better planning efforts.

Honestly, in Utah, we do things very well with our interagency partners. I often tell people if everybody could do it the Utah Way, the world would be a lot better. We have worked on that very hard through shared stewardship, but I think breaking down those bar-

riers through NEPA, the litigation issues that we see that are very costly.

Also the alignment, getting everything aligned to have a project happen, that's a tricky thing for things to happen. Air quality, if you are doing prescribed fire, permitting, everything lining up altogether to make things work, it becomes complicated and complex at times.

Senator ROMNEY. I am going to add that to this question. Just personal observation, having driven through a number of the forests in our State, I was astounded to see that in some cases, perhaps as much as two-thirds of the wood of the trees are dead. If they are harvested, I am told within three years or so, they can be used for chipboard and so forth. But the process of getting a permit to harvest this dead wood takes so long that it is no longer useful and therefore has no economic value, therefore we can not get loggers to come in and take out the dead wood.

Does the commission make any recommendations that would allow us to actually use some of the deadwood, and to get private sector participants to come in and remove some of the fuel that adds to the danger of these wildfires?

Ms. BARNES. Absolutely, and that is an important piece of the puzzle. In Utah, and again, through shared stewardship, that is one of the approaches that we have taken. We have invested in a position of a wood utilization specialist within the division, and having that person to determine what wood is out there, how can we utilize that wood, and how can we get that wood off to the forest to be an economic benefit in the State is something that we are very focused on, and we are starting to build success in that area. It is a very important topic.

Senator ROMNEY. Thank you. I would be happy to hear from any other member of the panel that would like to address as well. Yes, Director.

Ms. ANDREANI. Thank you. One of the commission recommendations does point to the continuing and additional needed investment in biomass utilization technologies and investments in those businesses. Because much of this the wood in the West particularly in Ponderosa pine area, is very low or no value, and we need to look at other ways that we can create value out of those products. So continuing investments in those areas is going to be critical. Thank you.

Senator ROMNEY. Thank you. Let me turn to another topic that you raised, which is the workforce and the pay. Again, Director Barnes, you indicated a desire to provide the appropriate pay between State and local individuals, but there has been discussion about the difference in pay with Federal as well as State and local, and how those compare, and the conflict that may exist.

Likewise in this regard, there is some discussion about full-time versus part-time. At the Federal level, we have part-time individuals. Who wants to take a job that is going to require you to have a salary or provide a salary for you maybe five or six months a year, but the rest of the year you got no pay. Are there solutions in this regard that we need to consider?

Ms. BARNES. Yes, Senator Romney. Recently, a couple years ago, Utah passed H.B. 65, which increased wildfire pay. We increased

that and brought people up to the level which we felt was comparable with Federal pay of Federal wildland firefighters.

Right now, we feel that Utah is in a good place compared with our Federal partners, but there is still that compensation bracket with regard to benefits. Some of our time-limited firefighters that fight fire just throughout the season do not receive a benefits package. That is also an important piece of that puzzle; bringing people on. As we talked about, fire season is not just fire season anymore, it's fire year. Compensating is very important.

It is also very important to not have a swift difference in firefighter pay from agency to agency. When a fire happens, it knows no boundary. We are all out on the landscape. We are working together. We are working to put that fire out. If you are a State wildland firefighter or you are a Federal wildland firefighter, we should all be making an amount that is similar so that there is no difference in what these people are doing out there in saving our resources.

Senator ROMNEY. Thank you. Any other individuals, please?

Dr. MOORE-MERRELL. Please. Thank you, Senator, for that. I would like to, if I may, transition just a bit to our local firefighters. As you have noted there is a shortage of wildland firefighters, but certainly we are having a shortage in the structural side as well. It is up to the structural firefighters to often cover on Federal State lands as regardless, they are the first boots on the ground, not a Federal firefighter. I would like to express my gratitude, certainly to the Senate for already have passed the SAFER Act. This is critical to making sure that we can continue to recruit structural firefighters across the Nation because we are on the edge of a shortage nationwide.

Senator ROMNEY. Thank you. Any others have any comment? If not, I am going to turn to Senator Butler, and let her take over. Obviously, we are very much aware of the tragedies and the wildfires that have occurred in California in recent years. Appreciate your being here and turn to you for questions you may have.

Senator BUTLER. Thank you, Senator Romney, and thank you to all of the witnesses and my colleagues who are here. I appreciate you, mark in the moment, Senator Romney, and our colleagues who are having to do multiple things sort of all at the same time because I do not think it is a reflection. Please do not see it as a reflection of the commitment of this body to this incredibly important issue. I think it is an important note for those who are watching to understand what is happening here.

I would love to pick up on this conversation about firefighters because I think that they are just a critical asset to the entire sort of complex puzzle that you-all are managing as it relates to community safety, and environmental standards, as well as land preservation.

As was noted, Director Merrell, the Senate Appropriations package last week that extended the temporary pay increase for Federal wildland firefighters, I think it is important for us to note that, at least the data that I have seen in President Biden's Fiscal Year 2025 budget proposal, Congress must now pass a permanent increase to the base pay to give our nation's firefighters the long-term certainty that everyone here has spoken to.

Now, Director Merrell, I have heard estimates that Congress that had we not extended the pay increase, 30 to 50 percent of Federal wildland firefighters might have left their jobs. I would love to hear your thoughts about how a reduction of this scale might impact the Federal Government's ability to be the kind of partner that I hear is required in order to meet this crisis that we are dealing with.

Dr. MOORE-MERRELL. Absolutely. Thank you, ma'am, for the question. Certainly, I will address your initial question about what would be the impact if we lost that many firefighters across the Nation, certainly, our Federal firefighters.

It is huge because then it defaults to our local and State. They are already covering because there is a shortage. If we do not pay the Federal firefighters, the wildland firefighters, and pay them year-round to take on what is their responsibility on Federal lands to be there first, initially the burden is still falling on our local firefighters to get there.

Then when they can deploy from the Federal wildland, or interior, or other agencies, they are arriving, but it is later. We have already noted the impact if we do not get to these ignitions quickly. We must have resources.

The other thing is sustainability of the pay for our wildland Federal firefighters. Not just a bonus pay, not just a one-time that is not pensionable. They need pay increase. Right now, they can go and apply at Target or somewhere and make almost double what they are making an hour here. Our most skilled set, our smokejumpers, these, and others, and I am certainly going to defer to the forester here in the room to answer this, but this is something that we must address as our workforce across the board.

Senator BUTLER. Say louder for the people in the back. Thank you so much for making that point so clear. Relying on the people that we have to do this work is critically important.

Mr. Fogerson, I am going to turn to you for my next question. As was noted, and you know, is widely known and reported, California has been just sort of ground zero for so much of the accelerated experience of wildfire that, that we are experiencing as a country.

In 2018, our Camp Fire killed 85 people, destroyed 19,000 homes, burned 153,000 acres, and cost nearly \$17 billion in damages. The immediate aftermath of the fire impacted individuals struggled to access adequate shelter. Those who did access shelter faced an outbreak of norovirus and crime.

Nearly six years after the fire, many of the affected areas have yet to rebuild. Further, elderly individuals made up a majority of the 85 fatalities, demonstrating the disproportionate impacts of wildfires on vulnerable populations.

Mr. Fogerson, your testimony highlights the ongoing struggle of Butte County, and the towns of Paradise, Magalia, Concow, and Butte Creek Canyon to recover and rebuild. You note in your testimony that it remains an important watermark for you in the context of the whole community recovery. Can you elaborate on some takeaways from the Camp Fire and what you would suggest that we as Congress take as action?

Mr. FOGERSON. Absolutely. Thank you for the question, ma'am. Those fires were the first time we really saw the huge impact of

loss of major homes in a resource-poor community. A resource-poor community is a rural frontier community, much like we see Northern California and Nevada.

When we look at it from the southern States, when we have a hurricane, we are able to go put a FEMA trailer out. We are able to do those things. Everyone has their mindset, that is how we are going to do it. But we can not actually do that on the West Coast, especially as my friend from the GAO said, you can not just go put a trailer on a burned-out section of land because of what happens with the dirt.

The take homes that I have taken from it is looking at how are we going to house these people long-term? It is not going to be a 30-day we are going to have to put this person up, but how do we figure out how to make encampments, or something along those lines, to take care of these people for the longer-term period of time?

I have a neighbor that lives in Gardenville, Nevada with me and came from the Camp Fire area. Had his house burned down, and was unable because of supply chain issues and Coronavirus Disease 2019 (COVID-19) to actually rebuild his house. Had to relocate to another community. How do we look at those things? How do we fix that so that way we have that in our pocket? That is where I see FEMA as being a big partner in this, and treating that wildfire as we do hurricanes and not as a land management issue that encroached upon privately owned property.

Senator BUTLER. Thank you so much. I have lots of questions for all of you and a limited amount of time. I would love to just end with a comment.

All of you have in your testimony to disaster recovery, and I think that is an incredibly important focus and appreciate you for highlighting it. One of the topics that we have not touched on yet is the recovery of industries that are not explicitly covered under the FEMA programs. In particular, I am concerned with the recovery of the agriculture community and industry.

In California, wildfires, which have become increasingly worse, have an extreme impact not just on California's farmers, but on the food supply that drives up cost for groceries of everyday families. I want to urge my colleagues as we consider and do our work, that we work together in a bipartisan way to not only ensure that FEMA has the resources it needs to address disaster recovery, but that we are also providing funding for the Department of Agriculture Emergency Relief Program, so that we are ensuring that agricultural providers and producers can have robust and timely recovery, so that we could all work together to continue to bring down costs for work and families. Thank you.

Chairman PETERS [presiding.] Senator Johnson, you are recognized for your questions.

OPENING STATEMENT OF SENATOR JOHNSON

Senator JOHNSON. Thank you, Mr. Chair. Thanks for holding this hearing. I think it is really fascinating. I come from a State where we obviously have forest fires, but you know, generally not the extent of as you have out West. I do find this fascinating, and I actually appreciate, whether you are on board with climate change or

not. I do not think I even heard that word used because we are talking about the practical things we can do, and I want to focus on that, again, not coming from a western State.

Ms. Adreani, you talked about the post-fire and the flooding afterwards. Is it because these things are sparked by huge thunderstorms and that caused, or is there something else occurring? Is there lack of vegetation that is not absorbing the moisture? I mean, just describe what is happening, geologically that you have post-fire floods. I am fascinated by that.

Ms. ANDREANI. Thank you, Senator. In the southwest, and actually, Utah, other areas of the West experience of what is called, a monsoon, a traditional monsoon in the summer. Typically, anywhere from the end of June through September. Then, certainly, you have seen in California, the atmospheric rivers, you have seen other types of rainfall events, mountain thunderstorms that can create post-wildfire flooding. That is the dynamic.

What you see on the ground is that when a wildfire occurs, particularly if it is a severe wildfire with very severe impacts to the soil, the soil actually becomes hydrophobic.

Senator JOHNSON. You can not absorb it.

Ms. ANDREANI. It acts like glass. That will typically take place for through an initial season, maybe even longer depending upon the circumstances. You get this massive increase in flood flows.

We have seen in an area recently that was burned up, to 26 times, the pre-fire flood flows in those areas. You are getting massive removal of sediment in many of these areas. We have steep slopes that have burned very severely, so you are getting massive wasting of sediment debris that is coming from the wooded area. You no longer have any foliage to deflect the rainfall, and so you see these catastrophic events after the fire.

Senator JOHNSON. Again, if it is coincidental the massive flooding is caused by the fact they had a fire beforehand, and oftentimes, it occurs more than 72 hours, then that is a problem for Federal funding.

Ms. ANDREANI. Exactly. There is this window between events. For example, after the pipeline fire in 2022, we had 45 major flood events that summer. Once you have a flood event, then they create a 72-hour window within which you are not eligible.

Even though the total amount is over double our current financial threshold for a declaration, we never met the declaration level. That means we are not eligible for reimbursement, and it means we are not eligible for public assistance.

Senator JOHNSON. Again, I think we are all aware that the Federal Government creates these rules. Sometimes they are cross purposes, and sometimes they did not make sense. Again, I appreciate the testimony so that we can hopefully get that in better alignment.

At the same time permitting, and the cross purposes of the agencies. I know Mr. Currie mentioned the fact that the EPA is all about reducing smoke, but one of the mitigating factors would be to do controlled burns.

Mr. Fogerson, you mentioned your agencies got together and you came up with, I think, you said, 148 different recommendations that were 100 percent agreed to. Laying aside the financing and

some of those permitting, can you talk about the mitigation, because I have always heard we are just not removing the fuel? Talk about controlled burns. What are the best things we can do in terms of mitigation that everybody agrees to?

Mr. FOGERSON. Absolutely, Senator. Thank you very much. This is a very wicked problem. There is not an easy answer to that. We just need to do more prescribed burns on the forest lands, because we are talking forest lands, we are talking range lands, we are talking the built environment.

It is using biomass tools that we talked about earlier so that way we can take out the dead and down timber that is not salvageable for costing, using the logging operations, doing controlled burn operations.

We do run into some issues with controlled burn operations because when we look at using FEMA hazard mitigation funds, we are not allowed to do controlled burns, but we can do controlled burns using Forest Service or BLM funds.

Senator JOHNSON. But you also have problems with anti-loggers, that type of thing as well. Right?

Mr. FOGERSON. 100 percent. That is why it is kind of the wicked problem of how do we do reduce the fuel volume in the forced environment, the rangeland environment, and the built environment.

Some of that also involves using wildland urban interface codes. That way we have homeowners that are actually protecting their communities around it, tying our community wildland fire protection plans that are required for dealing with the foresters, and BLM, with the FEMA's hazard mitigation plans. That way there is one cohesive plan on how we are going to reduce that risk.

Senator JOHNSON. I continue to see different charts saying that we really do not have an increase in the number of acres being burned every year. Some over time it is actually decreased. But I think, oftentimes, like hurricanes as well, we have just built up so much valuable real estate on the coast, or we have built so many expensive homes in fire-prone areas. Is that the issue here?

I thought it was interesting too, you can not have any Federal funding until it actually crosses into State land, which again seems insane, but kind of understand that. Ms. Merrell.

Dr. MOORE-MERRELL. Certainly, I would like to address the building toward risk. You are absolutely right there, sir. We are building toward risk. We continue to build toward fire-prone lands, and if we do so without proper ingress and egress for the population living there, without proper building codes being implemented, adopted, and enforced using fire resistant materials, we know that geography is going to burn.

We have to pre-plan for that so that we do not have these disasters. Fire's going to be normal. We are going to have to have fire-adapted communities, but they must pre-plan. The Federal Government cannot bring all the solutions to this. It is too big a problem. Individuals who choose to live there are going to have to mitigate their property.

We are taking a heavy role in that; in education about what mitigation looks like, what does right look like, keeping vegetation off your home, not using mulch, not having wood fences. These are very practical solutions to making a fire-prone community.

Senator JOHNSON. Just real quick. As you read more about the Maui and Lahaina disaster, and people just knew that was a disaster waiting to hit and is there kind of a booklet? Is there publication of here are the real concerning areas?

People were not thinking about this before they moved in there because I love to live around trees. Have we identified these areas, and we are just simply not addressing them, or what are we doing toward that—and I apologize going over time here.

Dr. MOORE-MERRELL. We are continuing to identify those risks. We can look at a fire risk index for the wildland, for our forested areas. What we do not yet have is a fire risk index for the built environment.

As we build toward those risks, because of the building materials that are being used, because of climate change, which you appropriately brought up, the drought that we are having all of the soil moisture reduction.

On one side of the island in Maui, it is perfectly green. On the other side, everything is dry. We are seeing that not only across the islands, but in areas across the Nation that have never burned before. Louisiana, for example.

These are areas that we have to pay attention if we are going to build here. Coupled with climate change, we have to bring solution pre, not post, necessarily.

Senator JOHNSON. OK. Thank you, Mr. Chair. Thank you.

Chairman PETERS. Thank you, Senator. My bipartisan bill, the Fire Grants and Safety Act reauthorizes the U.S. Fire Administration the Assistance to Firefighters Grant Program, as well as the Staffing for Adequate Fire and Emergency Response Grant Program through 2030. The bill would also increase authorization of appropriations for the fire administration for the first time since 2012.

Dr. Merrell, can you share with us what the U.S. Fire Administration would do with these increased resources to better help protect our first responders who are preparing for these wildfires?

Dr. MOORE-MERRELL. I appreciate that, Senator, and thank you so much for shepherding that bill and for already passing those in the Senate.

Yes, the U.S. Fire Administration needs the extra initiative, the funding, to be able to expand our own resources to prepare our firefighters across the Nation to mitigate pre, to be able to respond, and to be able to assist with recovery.

It is imperative that we not only educate the communities. Community engagement here has been made abundantly noted that the individuals are going to have to take responsibility, but it is our firefighters who connect with those individuals in their communities to teach them those things.

We need that. We need the data. We need to be able to build a new analytics platform. Our National Fire Incident System was built in 1976, and so we need the funding to be able to build an appropriate data platform to inform this fire risk index that we have discussed.

These funds are necessary to be able to elevate the USFA to an appropriate place where we can engage according to the recommendations in the commission. There are many there that talk

about USFA's engagement at the community level with our structural firefighters across the Nation, because they are the boots on the ground many times early on. Thank you for leaning into that.

Chairman PETERS. Thank you for your answer. Mr. Fogerson, a question for you is just how vital are these grant programs to local fire departments, especially, given the fact that you are all finding yourselves on the front lines protecting your communities and resources are clearly stretched? But let this Committee know how important these resources are.

Mr. FOGERSON. Absolutely, Senator. Thank you so much for the support of these grant programs. When I was the local government Deputy Fire Chief, we had assistance for firefighters' grants, and we had the SAFER Grant Program. When you look at, especially, the built environment, we are putting homes in these urban interface areas, but homes do not provide the tax revenue to start with. It takes a while for that tax revenue to catch up, and so when we put a subdivision in, we might not have the funding for staffing.

These SAFER Grants have a cost shared from the Federal Government that varies over time, that allows that local government to make that large investment, and I was able to do that. We had funds for two people, but we need six people to fill the two positions. We were able to use a SAFER Grant to hire the other four, and then by the time the cost allocation came to 100 percent on our side instead of the cost share, we were able to absorb that in our budget. But we were able to, in that four-year period, have two more additional firefighters on the streets, whereas we would not have had that without that SAFER grant.

The Assistance for Firefighters Grants. Things are very expensive in the fire world. You are looking at a fire engine that we use on a wildland fire, a type 3 engine, costing \$300,000 to \$400,000. Our law enforcement partners get a lot of funds from Department of Justice (DOJ). Our public health friends get a lot of funds from the Center for Disease Control and Prevention (CDC) Asper. These are the fire services way of getting those funds for those high-ticket dollar items that are necessary to provide protection in our local communities, but might be out of the reach of some of these jurisdictions, and the competitive process that is used helps to ensure that we are giving it to the right places, I think, nationally.

Chairman PETERS. OK. Thank you. Certainly, the Maui fires are just a devastating example of how these wildfires can destroy communities in catastrophic ways. As a remote group of islands, Hawaii is especially vulnerable to disasters because it is difficult for resources to quickly reach the State when disaster strikes. FEMA has worked with other Federal, State, and local partners to provide continuing relief and recovery to disaster survivors with hundreds of FEMA staff deployed to Hawaii to assist in those local efforts.

But Mr. Currie, my question is for you. You recently traveled to Hawaii to examine the recovery efforts. Would you mind sharing with the Committee some of your top concerns for recovery at this point?

Mr. CURRIE. Sure. Yes, we went there shortly after the fires hit and toured the affected areas. A couple of them I mentioned in my opening statement. One of my biggest concerns after every disaster

is housing for survivors. In a wildfire, it is 10 times harder than traditional disasters for many reasons.

First of all, a lot of times these happen remote locations, and also in high-cost locations. Whether it be Maui, California, there is not a lot of affordable housing that can be used temporarily or hotels or things like that. I think, in Maui right now, according to FEMA, there is still almost 5,000 people that are in some type of hotel or temporary condominium situation.

Also with a fire, you have to wait a lot longer. If you have a flood, typically you can get your house ready to live in within months. Possibly with a fire, it could take years, and you are fighting with insurance, you are trying to get Federal assistance.

FEMA does a really good job with really short-term housing, and then United States Department of Housing and Urban Development (HUD) can come in on the long end, but there is this middle ground where people often get stuck and they just do not have a good housing option. Housing is one of the biggest things that I see as the challenge.

The other thing is debris removal. This is always a really tough part of any disaster. But with fires, again, 10 times harder. The debris is toxic. You have to figure out where you can take it, how it is going to be excavated. You can imagine a lot of this is privately owned land, so people are very sensitive about just excavating and removing their property. In Maui, they just now figured out where they are going to store this, this toxic property and treat it.

Those are two examples of fire that are just way more different and difficult than traditional disasters, and our system is just not prepared and designed to handle that yet.

Chairman PETERS. Thank you. Senator Lankford, you are recognized for your questions.

Senator LANKFORD. Mr. Chair, thank you.

Thank you, all of you. Obviously, this is a national issue that we have to continue to be able to focus on. Appreciate the insight from folks that are on the ground. I want to talk a little bit about the permitting piece of this. Ms. Barnes, you brought this up earlier on. What permitting issues do we need to try to be able to work through on Federal permitting post-wildfire or pre wildfire that need to be done? Any ideas? Ms. Barnes, you mentioned this earlier in your opening statement, but anyone can jump in on that.

Ms. BARNES. Yes. I can start on that, and thank you for the question. I think it is just that permitting reform of the alignment; the clearing indexes that we need to receive, the NEPA part of it, there's issues with contracting.

Senator LANKFORD. Can I zero in? What is the NEPA piece of it?

Ms. BARNES. Yes. NEPA often, and in Utah, gets held up a lot on litigation. That takes people away from that work that gets done on the ground. It takes a lot of staff time, a lot of money—

Senator LANKFORD. Is this post-fire or pre-fire?

Ms. BARNES. Both.

Senator LANKFORD. OK.

Ms. BARNES. Any type of mitigation work or post-fire work that—

Senator LANKFORD. Is the issue there for NEPA, not that NEPA exists, it is the litigation around it or what needs to be resolved?

Ms. BARNES. It is the procedures that we need to go through on NEPA that get held up in litigation in order to get the projects done. Working on those to find more efficiencies through that process, I think, would be the best thing to avoid being held up in litigation. That takes a lot of staff time. It takes away from getting work done on the ground.

Having a clear sense of what can be done as far as mechanisms that we can do in the forest, and categorical exclusions; what we can do to get through the process faster. The faster we can get through the process, the more work that we can get done on the ground.

Senator LANKFORD. OK. When you talk about categorical exclusions, again, is this before fire and mediation before, or post?

Ms. BARNES. I would say it would be both. In Utah, we are years behind on getting work done, and so we need to be able to get in there, get work done. Then after a fire, there is an immediate need to get things done after a fire happens. But in order to get ahead of the wildfire crisis, we need to start mitigating hazardous fuels immediately.

Senator LANKFORD. OK. Any other permitting comments anybody may make? Go ahead.

Ms. ANDREANI. Thank you, Senator. Relative to forest restoration and the work that is necessary to improve the habitat and the area, reduce the threat of wildfire. A couple other tools are that both FEMA and the Forest Service are typically limited in their willingness to allow third-parties to potentially fund conducting the actual NEPA process on their behalf. They are very limited in the resources that they have available internally to actually do that physical work on the ground, go out and do the cultural surveys, biological surveys.

We are utilizing, for example, in our area are Good Neighbor Authority with the Forest Service to be able to actually perform some of that work on their behalf. They still go through the regulatory process. They still have to approve or, typically they go to a cadex, but we are able to step in and help with those costs and/or resources that we have under contract to perform that work by credible, licensed professionals.

Bringing more flexibility, we approach FEMA about doing this for a fuels reduction project that we have in our area that is four years in, and we are still waiting for the environmental to be done. That would have been a fairly simple solution. Yes, we are not taking over the regulatory responsibility, but providing them with the legwork, boots on the ground to get the work done.

Senator LANKFORD. Yes. Obviously, while you are waiting on permitting, you are dealing with the potential of a pretty expensive wildfire. For some reason, wildfires do not wait on NEPA permits.

Ms. ANDREANI. They do not. We have seen that repeatedly.

Senator LANKFORD. Let me ask a couple of clarifications. I brought up in my opening statement as well about power, and power lines, and sparking Red Flag Warnings, and what we deal with at times. Anything that you have seen that has been effective for reducing the number of wildfires caused by power lines without actually just shutting down all power to communities as well?

Mr. CURRIE. Yes. As you know, oftentimes wind. If you have another type of storm, it can cause that, and I mean, some of the mitigation measures that you use for hurricanes, tornadoes, or straight line winds, here in the East, are effective for preventing this from happening. The problem is that we have mitigated a lot of these things in the East because of the threat of hurricanes, and tornadoes, and things like that, but we have not done that in the west.

Senator LANKFORD. OK. Is it just a rule, or is it just physical structure that is attached to the line?

Mr. CURRIE. I think it has been more of a matter of the risk, and the threat over time, and where most of the Federal money has gone over the years.

Senator LANKFORD. Yes. A lot of those are not Federal dollars. Those are local power companies, and co-ops, and others on that. What I am asking is, is it the way they are managing the line, or is it a piece of hardware, or something else that is missing or software that is missing to manage it? Go ahead someone else.

Ms. BARNES. Yes. I can touch on what Utah has done on that. I think it is a collaboration effort with those power companies. In Utah, we have taken a stance of identifying where that risk is on those power lines, if it is a high, medium, or low risk, and then working with those agencies to mitigate that risk.

Developing fire mitigation plans with those agencies of how they are going to manage the risk that they have around those lines is very important.

Senator LANKFORD. OK. Mr. Fogerson.

Mr. FOGERSON. Great question, Senator. In Nevada, we have taken a little more proactive response, kind of falls into Utah lines, where we prioritize what zone that power line is in and the odds of it starting a fire. Then our power company has actually contracted local government fire departments to go out and do the pole grubbing and the clear the lines. Then the power company is working with the Public Utilities Commission in Nevada to replace the at-risk power poles.

A lot of the infrastructure's old, and, and I think that speaks to what the GAO representative was talking about was on the East Coast. More of that stuff's probably been more recently replaced because of a disaster. We just have not had the disaster to cause that power pole to need to be replaced yet.

Now they are going and replacing the poles, they are able to wrap the poles with special material that actually expands to absorb the heat. That way we keep those lines in place when a fire does come through as well.

Senator LANKFORD. OK. That is really helpful, Mr. Chair. I would take up anyone that is here that is willing to be able to have a chainsaw in their backyard and be able to bring it on over to be able to help us because we deal with these red cedars, as I mentioned before, which are explosive to us.

They are a nice pretty tree. They are terrible pollen in the springtime, and they are terrible for being a fire problem for us, and they are an invasive species. It is one of the areas that we have to deal with on mitigation. I know where we are clearing forest and trying to be able to manage underbrush and things that

are there. We have the same issue in some of our open prairie areas as well, and we will have to be able to work through processes to be able to resolve that in the days ahead. Thank you to all of you.

Chairman PETERS. Very good. Senator, I appreciate you warning us on explosive trees in Oklahoma. [Laughter.]

Senator ROSEN. I have my chainsaw ready. Ready for duty.

Chairman PETERS. Bring your chainsaw. We will take some of them down and have fewer explosions. Sounds great. Senator Rosen, you are recognized for your questions.

Senator ROSEN. Thank you, Chair Peters. I want to build on this last question about Senator Lankford brought up about shutting down the power lines, and thank you Chief Fogerson. I want to say that for shutting down power lines in a place like Nevada, that we regularly have temperatures greater than 100 degrees all throughout our State through a large portion of the year, this could create a second deadly consequence by them not having power.

It is just as bad. You could have a fire or high winds. We also get the Santa Anas. We get a lot of those winds coming in from the coast. Do we want the power lines to go in far? Do we want to kill people because there is no air conditioning? This is why it is important that we talk about these things.

But I am going to talk about three main topics. One about smoke, one about land management, like I said, 80 percent of Nevada's public lands. Then our wildfire designation upgrade, which I know is near and dear to the hearts of us in Nevada.

There really is a big impact of wildfire smoke on our air quality for our local communities. We are no stranger to that in Nevada. We experience hazardous air quality for weeks at a time. It forces small businesses to close their doors. Schools have to keep their students inside. It has lots of health risks, and the smoke levels are just as expected to increase more frequently as climate change causes more frequent and severe wildfires.

When smoke plagues communities like those in my State, we often do not have the tools to properly mitigate that, and that is really important. Persistent hazardous air quality as a result of wildfire smoke, it is not currently eligible for major disaster declaration under the Stafford Act. It makes it difficult for us to get those Federal funds.

People really suffer, those with chronic lung disease. I remember being up there a few years ago, and I can just tell you, I could not breathe after a while. The sky is just brown from the smoke.

Chief Fogerson, can you talk about what happens particularly up in Northern Nevada when that smoke just hangs over us coming in, and what it means if we could upgrade smoke as a major disaster declaration?

Mr. FOGERSON. Thank you for the question, ma'am. A few years ago, I think it was the Rim Fire, it was the first time that we actually saw this impact because it has not happened—from my history of the fire series, I could not remember till the Rim Fire, and it just floated in and stuck around for a month. Then we had a year without it, and then it seems like every year now, every summer, we have two months' worth of socked in smoke that is causing air quality issues.

I do not know if there is a good answer to it. There is a lot of people that have some thoughts on it, and we have had some jokes about it between the two of us as well and what some of these items are. But we have to figure out how we use good fire to reduce the number of fires that there are so that way we have lighter smoke that is not as heavy, as dense, and is in the right time of year for the air balances to occur.

Then the other one is we have to start investing more in public health and sensors. That way, we can see where is the bad air quality at and do additional research on what the impacts of air quality is. Because one part of it is on not only on the community, but then we also have to think of our firefighters that are on the fire line in that smoke, and then sleeping in a base camp in that smoke, and then taking their two-day break at home in that smoke.

Senator ROSEN. They have the long-term health implications. We know up in Northern Nevada, we have Lake Tahoe, and all of the wildlife, and other things in the community impacted, that ecosystem as well. I think investing in research and development (R&D) and how we address this is going to be good for everyone.

I know that the commission recommended we invest in a national smoke monitoring and alert system, and you think that would be a good thing for us to invest in?

Mr. FOGERSON. Yes, ma'am, I do. Because when we look at it, urban areas have a lot of those smoke monitors. We look at rural frontiers such as Nevada, such as Utah, we do not have many of those monitors. It is harder to give people ideas of what is the air quality level and what precautions they should take.

Senator ROSEN. Thank you. I want to continue to talk about response and recovery. Eighty percent of Nevada, Atlanta, managed by the Federal Government. 60 percent managed by the Bureau of Land Management. We have multiple Federal agencies. It is kind of an alphabet soup. The Wildfire Commission reports that five Federal land management agencies have missions related to wildfire management. All five of these agencies interact with you with the tribes, with our communities.

I am going to stick on Nevada here. What are the challenges of having so many agencies, and what might you suggest to help streamline this process, particularly, in this middle of a disaster?

Mr. FOGERSON. Absolutely, ma'am. Part of the issue is trying to get the rules to be the same for each of the Federal agencies. Each of the Federal agencies, whether it is Department of Agriculture, or Department of Interior, to have different rules on how they do things.

Streamlining those, how the rules are the same for the same Federal agencies on how we use those firefighters, and work-rest ratios, and all that stuff that National Wildfire Coordinators Group is starting to work pretty hard on, but there is still some nuances there. The agreements with between local government and the different agencies is an issue.

Then the bigger part of it is pulling in that emergency management. That way we have the enterprise-wide approach. That way we can bring in public works, we can bring in law enforcement, we bring in fire, we can bring in emergency management and have

that coordinated collaboration like we do in an emergency operations center.

Senator ROSEN. A central point of contact in the midst of the emergency would be most helpful to cut through some of these different bureaucracies, would you say?

Mr. FOGERSON. Absolutely. I would agree with you, ma'am.

Senator ROSEN. I am going to move on to something that I know is really important to you and really important to all of us. We need to respect the wildfire, right? How do we do that? We need to give it the same respect that we give the disaster of hurricanes.

We need to be proactively ready to prepare. We see it coming. We know it is coming, but we can not wait till it crosses this particular road for you to do anything or some of the other groups to do anything. This is impacting our homes, our communities, our health, our ability to manage everything that happens.

We have to do more to detect and respond, but moving that designation up to be like a hurricane. We see it coming, and we are there prepared and ready. What would this do to improve the outcome; saving lives, saving businesses, and just getting that that fire out, right?

Mr. FOGERSON. Absolutely. The commission recommends a fire intelligence center or a fire environment center that is based upon The National Oceanic and Atmospheric Administration (NOAA), and based upon just like a hurricane center. Then we move resources that way, then we can put those fires out before they get big, or have the resources there to utilize that fire in a beneficial manner because we have sufficient resources there to make that decision.

That is the whole crux of ensuring we have the right resource at the right place at the right time, based upon what science today seems to be able to tell us through either artificial intelligence (AI) bottling with our fire cameras, or the new sensors the fire administration put in Hawaii, or the weather data we are getting from NOAA.

Senator ROSEN. Like I said, it is no longer the Western States. It is every State. We need to respect the wildfire, and we need to prevent and attack it. Prevent it when we can, attack it when it is there, and work on mitigating it before and cleaning up after.

Thank you. I thank you all for being here and everything you are doing. This is critical work to every community across America. I hope that all the mitigation prevention works so we are not having to respond, but I am grateful that you are thinking about the best ways to do that. Thank you.

Chairman PETERS. Thank you, Senator Rosen. Senator Carper, you are recognized for your questions

Senator CARPER. Yes. Thanks very much. Thanks, again, for giving me a chance to talk a little bit about not just addressing the symptoms of problems and challenges, but also addressing the root causes. Now I have went to another hearing. Now I am back here, and I want to ask a couple of questions.

I want to ask a question, I think, for Mr. Currie, involving how do we improve coordination between FEMA and local authorities? After that, I want to ask a question of Dr. Moore-Merrell, how do we better support at-risk communities?

Before I do that, let me just say that our planet's on fire. It is not the western part of this country. Our planet's on fire. The National Oceanic and Atmospheric Administration tells us last year was the hottest year on the planet. Hottest year as far as way back as we can look. Hottest year.

They have a bicycle race in France, and a year before that, Tour de France, they had to call off parts of the race because the pavement was melting, on the race. It is not just incidental to the western part of this country.

It is not just sea level rise on the eastern seaboard and other places. It is real, and as we try to address the symptoms of these challenges, and that is also important that we continue to focus on root causes.

Mr. Currie, if I could, with respect to improving coordination between FEMA and local authorities, the evidence is, we think, pretty clear. The threat of wildfire is escalating at a rapid pace and posing significant risks to the health and safety of communities, not just out West, but across our country.

Wildfires are not only more frequent, also more destructive than ever before, and more likely to burn hotter because of climate change. Extreme and persistent drought create drier fuel for those fires, and its accumulation over years creates the conditions that lead to high temperature firestorms that are extremely dangerous and move fast. The result is more loss of life and more loss of property.

The FEMA plays a critical role in assisting State and local authorities in reducing the risk to our environment, our infrastructure, and our public health. The Government Accountability Office has conducted audits in recent years looking into the Federal Government's role in wildfire management.

Question for you, Mr. Currie. Through the various audits and reviews that GAO has conducted, how can the Federal Government better improve its coordination with State and local authorities? I put my old recovering Governor hat on, how can we better coordinate with State and local authorities more productively to address the impact and risk of wildfires.

Mr. CURRIE. Thank you, Senator. Senator Rosen laid this out really well. I think what we need to do with wildfires is we need to treat them, or prepare for them, and respond to them the same way we do for hurricanes.

I will just use a Delaware analogy.

Senator CARPER. Oh, I love it when our witnesses do this. [Laughter.]

We will get more time for your testimony, sir.

Mr. CURRIE. If we expect a hurricane to landfall in Delaware, we also declare an emergency—we do not just declare an emergency in Delaware. We declare an emergency in Maryland, Virginia, and maybe even a couple States north or south of that because they are unpredictable. We know it is going to be bad, and we just go ahead and assume that is going to happen. We can take all the necessary steps to do that.

That is not how it works in wildfire. We sort of wait and hope it does not happen. We hope it does not cross from Federal or rural land into a populated area. That's just got to change. That men-

tality and whatever sort of rules and legislation are potentially behind that needs to change.

The other thing we can do is to improve coordination. I think FEMA particularly has gotten pretty good in terms of coordination with State and local on response. Recovery programs are the challenge. All these recovery programs across the 30 different agencies at the Federal Government that provide for some type of assistance, they were never designed to work together for recovery.

Like Senator Lankford said with the permitting, they all have different rules, requirements, timeframes, and they are not designed to work in concert together. What happens is, at the State and local level, that is just a very frustrating process in the years of recovery after.

Senator CARPER. All right. Thank you for that. I noticed some of your colleagues up there nodding their heads and trying to wish they had a Delaware example they could offer us as well. [Laughter.]

Dr. Moore-Merrell, if you could, I already telegraphed my pitch, but question with respect to supporting at-risk communities. Fire departments in Delaware and across our country are depending more and more, as you know, on Federal assistance to effectively respond to wildfires as the threat level has increased over time. As my colleagues on this Committee have heard me say more than a few times, we got to find out what works. We got to do more of that.

What specific measures are the U.S. Fire Administration and FEMA taking to ensure timely and adequate support for at-risk communities, particularly in terms of healthcare and infrastructure resources? Also, how can we build on successful efforts to keep up with the increasing threat level of these devastating wildfires?

Dr. MOORE-MERRELL. Thank you for the question, Senator. Yes, USFA is certainly leaning into our communities and particularly their vulnerability to wildfires. We have noted throughout the hearing today, the impacts of climate change, which you have brought up already, the various impacts. We have looked at the vulnerabilities of our land areas, and where we are building communities toward fire-prone geographies. This continues to escalate our risk.

We have to lean into and where USFA was leading to advocate for building codes that are based on science. We are advocating for technology to be able to be introduced. We are advocating for more and more complete data, quality data that can be leveraged to help us understand the fire risk index. Not just in the wildland space, but once a fire hits communities, we have no idea today the dynamic nature of that fire.

Yes, we can equate it to hurricanes and we should elevate it to that recognition level, but what we cannot do, like a hurricane, there is no cone for a fire. We can look at the cone on hurricanes, we can prepare for evacuation. In fire, we do not have that.

There is one caveat. Evacuating communities is very dynamic, and this is a challenge that I will say to you. We are leaning in heavily on wildfire evacuation. How we are going to prepare communities to understand. Right now, we use a ready set, go, while

ready and set should be already happening, not in the midst of a fire.

We have to understand that when we hit go, that is in the midst of a fire. If we have not leaned into preparing our people across the Nation to be able to evacuate, then we are going to have issues like the Paradise fire, where we had 85 people trapped on the egress route, like Lahaina, where it was so fast the time for evacuation was minimized. There are dynamics of wildfire that do not match the hurricane model that I do not want to lose base.

The other thing I would say, Senator, is highlighting, as you have, in our communities, the real effect of continuing structure fires. It is not always a wildfire that starts with vegetation. We have structure-to-structure spread that happened in Lahaina that becomes conflagrations in our communities, but also, we have already lost in homes, where people should be their safest, almost 600 people since January 1, have died in their homes.

That does not mean all of the people who have been displaced. This is from fire in general. You said America's burning. I am going to echo that. America is burning, and we need to be attentive to all methods of fire that is bringing that about.

Senator CARPER. Good. Mr. Chair, can I have maybe another minute?

Chairman PETERS. Yes.

Senator CARPER. Thanks very much. Yesterday, Democrats, Senators, gathered to hold our annual caucus retreat. It was a wonderful time to share ideas on what is working and what is not. Republicans had a similar kind of caucus, I believe, yesterday. One of the things I mentioned to my colleagues yesterday, and in terms of what is actually causing this, the root causes behind these; our planet on fire.

About 30 percent of the greenhouse gas emissions in this country are coming from our mobile sources, our cars, trucks, and vans that that we drive. Probably another 25 percent comes from power plants that generate our electricity, coal-fired plants, natural gas-fired plants. Maybe another 20 percent comes from manufacturing operations, think asphalt plants, think steel mills. Those are the three majors. 30 percent, 25 percent, 20.

It is like three quarters of the root causes and the contributors to this problem we are doing. We are working on all of those as a country. We are working on a lot of those and trying to provide and guide maybe some inspiration for and provide leadership for the rest of the world.

I want to know that we are not just addressing that the symptoms of these problems, which are tragic, but we are also going after the root causes, and we are all in this together. Thank you very much.

Dr. MOORE-MERRELL. If I may, Senator, on the greenhouse gases. Wildfires themselves produce greenhouse gases that then contribute to climate change that are causing the drought, that help perpetuate wildfires. This becomes a very circular-in-nature problem. Thank you for recognizing that. Thank you.

Senator CARPER. Thanks, and thanks, Mr. Chair.

Chairman PETERS. Yes. Thank you, Senator Carper. Mr. Currie, the GAO has issued a number of reports on the Federal Govern-

ment's emergency management efforts on wildfires, on topics ranging from Federal cooperation, to manage a growing risk, to barriers to recruiting, to retaining Federal wildland firefighters, and many others.

My question for you is, what are some of GAO's top recommendations for FEMA to better help communities prepare for, manage, and respond to wildfires? What should the Committee know and what can we do?

Mr. CURRIE. A couple things. First of all, back in 2019, we issued a report on wildfire response, and we actually identified some of the things we are talking about today, and how unique the response was, and how FEMA programs were not necessarily geared toward that.

FEMA developed a plan in response to some of our recommendations to try to change some of their programs to better gear themselves toward wildfire. There was some progress there, there just was not enough.

A great example is the housing one I talked about. FEMA provides short-term housing when the Federal Government responds to a disaster like a wildfire. This is not really designed for the length of recovery for a wildfire that a survivor has to deal with, and there is not really a good option in that intermediate phase, which is what we are seeing right now in Lahaina and trying to find places for disaster survivors to live.

We have made recommendations related to housing. I talked about the debris removal challenges, how there is so much different than hurricanes. But one of the biggest things that needs to be done is reform of the recovery process and the recovery programs. Because, again, what we hear from the State and local level over and over again is that the programs were not designed to work together, and that leads to delays, and oftentimes missed opportunities in disaster recovery.

Chairman PETERS. Good. Thank you. As we wrap up here, I have a question, Mr. Fogerson, and Ms. Andreani, if you would address this. This deals with the Wildland Fire Mitigation and Management Commission Report, which we mentioned had some 150 recommendations.

An awful lot to think about, but I am going to ask both of you to prioritize some of those in your mind. There was not a prioritization in the report, but what things stand out for you? Mr. Fogerson, you can start and then give us some idea as to what we should be looking at. If we are drafting legislation, what should we be focused on?

Mr. FOGERSON. Great question, Senator. I am sorry I do not have a good answer for you because it is such a wicked problem, that is why there is 148 recommendations we made. It would be hard, and I would be remiss to tell you the top 3, the top 5, the top 10.

Chairman PETERS. Top 11 then. [Laughter.]

Mr. FOGERSON. I would be looking at the themes that we have in the report, the chapters, and maybe seeing how we do legislation in each of those various chapters and grouping those things together because one really has a nexus to another.

We have a great chart that commission staff made for us, and, and I am sure we can share with your staff that shows how inter-

connected all the recommendations are. If you pick three, then that eliminates a few other ones. I would really highlight that staff looks at the chapters and sees about using that as their priority base rather than the recommendations.

Chairman PETERS. That is a good guide. Andreani, do you have top 10 list, or top 5, or 3?

Ms. ANDREANI. I would concur with David that they are all important. However, I did point to a couple in my testimony that I think are, for lack of a better term, fairly straightforward opportunities that can dramatically change outcomes in communities.

I would ask you to consider those because I think their policy level, some may, level opportunities to right-size the problem, and address some very immediate issues that we have, so.

Chairman PETERS. OK. Very good. In the interest time, we are going to wrap up. But Dr. Merrell, I am going to be submitting a question for the record¹ for FEMA to kind of identify for us, which recommendations FEMA is implementing on its own from the commission, and which recommendations you believe require congressional action, specifically. I will be submitting that for the record and would look forward to seeing your response to that.

I would like to, first, just thank all of our witnesses for joining us here today to share your testimony and expertise. This is an important conversation, and one that is not in today. We have a lot of work to do, including a lot of recommendations to act on, but also support the men and women who are dealing with this issue each and every day, and oftentimes risking their lives to do that.

Congress and the entire Federal Government must do its part to address this increasing threat, and we must do everything we can to create resilient communities in the process. I look forward to our continuing work together to improve both mitigation, preparedness, response, as well as recovery capabilities.

The record for this hearing will remain open for 15 days until 5 p.m. on March 29, 2024, for the submission of statements and questions for the record.

Thank you, again. This hearing is now adjourned.

[Whereupon, at 11:46 a.m., the hearing was adjourned.]

¹ The information referred to appears in the Appendix on page 108.

A P P E N D I X

Chairman Peters Opening Statement as Prepared for Delivery Full Committee Hearing: Wildfires March 14, 2024

The Committee will come to order.

Wildfires are an increasing threat to our country. They have gotten bigger, burned more land, and put more communities in danger. Last year alone, wildfires affected Americans from Hawaii to the Great Smokey Mountains. This year, they will likely get even worse.

As we sit here today, communities in Texas just recently finished fighting the largest wildfire in the history of the state. It burned almost 1.4 million acres of land – taking lives, damaging houses, devastating agriculture, displacing families, and leaving property across the northern edge of the state in ruin.

Last August's fire in Maui was also catastrophic and even more deadly. It took the lives of over 100 people and shattered countless communities. It was the deadliest wildfire in our country in over a century. I would like to enter into the record testimony from the Council for Native Hawaiian Advancement and from the Mayor of Maui County regarding the ongoing recovery in Maui. Without objection.

These are just a few examples of a new crisis – one that's putting more and more Americans at risk.

The effects of these fires aren't only physical danger and property damage. They also bring a host of health risks to our communities, even in locations hundreds of miles from the fire. Last year, large swaths of eastern U.S. were impacted by wildfire smoke from Canada, causing unhealthy air quality. Inhaling smoke causes lung disease, heart problems, and cancer. As wildfires grow more common in urban communities, they can burn dangerous synthetic materials. Even after the fire is over, the threat remains. Aftereffects like floods, mudslides, and barren land can threaten public safety for years.

But it doesn't stop there. Wildfires are also unbelievably expensive. They amount to billions of dollars in response and recovery costs, as well as economic losses, every year. Our state and local governments have to spend already limited resources responding to these disasters – often more than they can afford.

Businesses lose money, properties lose value, infrastructure gets damaged, and industries are changed for good. This isn't just a land management issue anymore – it's also an emerging crisis of public health, emergency management, and economic security.

That's partly due to development. We're building more in the "wildland-urban interface," a term for the transitional zone between unoccupied land and settled property. That brings us closer to wildfires that in the past could be contained to uninhabited land.

This problem is also exacerbated by climate change. We have higher temperatures, more droughts, and a host of other ecological factors that make wildfires more dangerous. They are one of the gravest consequences of global climate change.

In short, this is a serious problem, climate change is making it worse, and we have to improve our response, recovery, and mitigation efforts.

We have a few key tools for that work. FEMA is the government agency tasked with disaster relief, and wildfires affecting communities falls under its purview. FEMA handles declarations and gives out key resources to communities affected by wildfires. But the increasing danger posed by wildfires has revealed gaps in this agency's infrastructure. For instance, many of its programs were designed for other hazards, like floods and hurricanes, and do not adequately meet the needs of wildfires. I look forward to hearing from our panel of witnesses on what FEMA needs in order to properly mitigate this threat.

Our witnesses will also provide valuable insight on the Wildland Fire Mitigation and Management Commission. The Commission, which I want to thank Senator Romney for championing, was marked up in this Committee and signed into law as part of the bipartisan infrastructure law. It offered a sweeping review of our government's response to wildfires and what we need to improve. It was co-chaired by FEMA, the Department of Agriculture, and the Department of the Interior – and released nearly 150 recommendations this past September.

The report outlined ways we can expand our workforce to fight fires, modernize the tools we use, invest in resilient infrastructure, and adopt a proactive approach, so our communities can be better prepared to face this problem in the future.

As a response to that report, our committee has taken some key steps.

Last year, the Senate passed my bipartisan *Disaster Assistance Simplification Act*, which makes it easier for people to get the help they need after wildfires and other serious natural disasters. This Congress, the Senate passed the *Fire Grants and Safety Act*, which will help expand our workforce and support firefighters across America. This Committee has also passed the *Wildland Firefighter Paycheck Protection Act* – led by Senator Sinema – to establish a permanent, updated pay scale for federal firefighters. We will continue working to advance this bipartisan legislation through Congress to prevent a pay cliff for wildland firefighters at the end of the fiscal year.

But there is still so much more we need to do. Wildfires have become a crisis for our country – one that calls for bold and comprehensive solutions. This threat isn't going anywhere, and this committee must play a central role in our federal government's response. Today's discussion – and our expert witnesses – represent a step towards that goal.

3.14.24 HSGAC Hearing on Wildfires

Senator Rosen Introduction, Chief Fogerson

It is my honor to introduce Nevada's own David Fogerson, Chief of the Nevada Division of Emergency Management and the Office of Homeland Security.

Chief Fogerson has over 30 years of experience in public safety, serving in a number of different roles, including as a wildland firefighter himself and as Deputy Fire Chief and Emergency Manager for Douglas County.

In our state of Nevada, the unique landscape, the changing climate, and the amount of land owned by the federal government make wildfire mitigation and recovery all the more challenging.

That's why we need strong leaders like Chief Fogerson who create collaborative partnerships and encourage innovation in our approach to addressing wildfires.

We are lucky to have someone with as much experience and insight as Chief Fogerson leading Nevada's response to devastating wildfires and working with leaders from across the country to address the increasing challenges wildfires present.

Nevada needs to be at the table in these important conversations.

That's why I'm pleased that Chief Fogerson represented our state on the Wildland Fire Mitigation Management Commission, which was charged with making important recommendations to Congress on wildfire strategies and response.

And I'm glad to have him here today testifying before this Committee.

Chief, I'm very grateful to have you here with us and thank you for your service to our state.

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STATEMENT
OF
LORI MOORE-MERRELL, DrPH, MPH
U.S. FIRE ADMINISTRATOR
FEDERAL EMERGENCY MANAGEMENT AGENCY
U.S. DEPARTMENT OF HOMELAND SECURITY
BEFORE
THE
COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS
U.S. SENATE
WASHINGTON, D.C.

“A Nation on Fire: Responding to the Increasing Wildfire Threat”

Submitted
By

Federal Emergency Management Agency
500 C Street SW
Washington, D.C. 20472
March 14, 2024

Chairman Peters, Ranking Member Paul, and Members of the Committee: My name is Lori Moore-Merrell and I serve as the Administrator of the United States Fire Administration (USFA) within the Federal Emergency Management Agency (FEMA). Thank you for the opportunity to testify today and to discuss the continuous and evolving wildfire threats to the nation.

The USFA's mission is to support and strengthen fire and emergency medical services (EMS) to prevent and respond to all hazards. Strengthening the preparedness and resilience of the nation against fire events is a vital aspect of this responsibility. Since 1974, the USFA has led national efforts to reduce impacts of fire and other disasters in our communities through education, building codes and standards, fire safety advocacy, data collection, research, and grants. Yet, there is much more to do as the wildfire crisis continues to grow, with severe and catastrophic wildfires devastating communities and threatening lives and livelihoods across the nation.

Before we can effectively examine the impact of wildfire on the nation, however, we must first clarify our terminology. Historically, there has been a propensity for Federal decision makers to refer to wildland fire in laws intended to reduce the impact of fire on communities. To clarify, wildland is a location made up of vegetation, while Wildland Urban Interface (WUI) or Wildland Intermix Communities (collectively "the interface") are areas where human development meets or intermingles with undeveloped wildland and vegetative fuels that are both fire-dependent and fire-prone. Suburban communities are largely structural, often with ample vegetative and structural fuel to enable rapid fire spread and suburban conflagration. Ultimately, this confusion in terminology has led to limited resources in the built environment to address the threat of fire before it occurs.

The expansion of our communities into new locations also contributes to the risks we face. Today, 99 million people, or a third of the U.S. population, live in the interface environment, yet many have little or no idea what the interface is, the dangers it poses, how they can reduce their risk of wildfire impacts on their property, or what to do if they need to evacuate, according to a 2018 Proceedings of the National Academy of Sciences article. It is imperative that states and local officials adopt, implement, and enforce the national wildland urban interface building code.

Throughout much of the United States and globally, wildfires are growing in intensity, size, and destructiveness. When wildfire enters the interface, the effects on communities can be catastrophic, including overwhelmed response capabilities, tragic loss of life, disastrous property loss, and socioeconomic devastation. The threat of catastrophic wildfire in America's interface and suburban communities demand national attention and a unified approach. Current approaches to wildfire mitigation and management do not match the scale of the issue.

The Wildland Fire Mitigation and Management Commission

In response to these challenges, the Department of Homeland Security, FEMA, the U.S. Fire Administration, the U.S. Department of Agriculture's Forest Service, and the Department of the Interior were directed by Congress through the Bipartisan Infrastructure Law to lead the Wildland Fire Mitigation and Management Commission. The Wildland Fire (or Wildfire) Mitigation and Management Commission was charged with recommending improvements to how Federal agencies manage wildfire across the landscape.

To quote an opening statement in the Commission’s final report, “The wildfire crisis in the United States is urgent, severe, and far reaching. Wildfire is no longer simply a land management problem, nor is it isolated to certain regions or geographies. Across this nation, increasingly destructive wildfires are posing ever-greater threats to human lives, livelihoods, and public safety. Further, the drivers of the wildfire crisis are numerous and complex, and themselves are influenced by multiple forces and factors at all scales. Despite widespread recognition of this crisis and decades of concerted action, wildfire impacts continue to mount.”

The report itself makes 148 recommendations covering several key themes, to include putting significantly more focus and resources toward proactive pre-fire and post-fire planning to break the current cycle of increasingly severe wildfire risk, damages, and losses. The Commission specifically included several recommendations for investments in resilience across the nation as a critical focus to reduce fire spread risks and the overall impacts of wildfire on communities and support effective evacuation communication and planning. The Commission also recommends supporting and expanding the workforce, including increasing the number of firefighters in the Forest Service and Department of Interior. The Commission stated that Federal investment is urgently needed to create a cross-trained year-round workforce, consisting of both local structural firefighters and state and Federal wildland firefighters, focused on risk reduction, fuels mitigation, preparedness, prevention, and resilient communities, and inclusive of strategies for recruitment and retention. Another theme of the report was modernizing tools for informed decision-making including several measures that would better coordinate, integrate, and strategically align fire-related science, data, and technology. The recommended establishment of a Fire Environment Center, for comprehensive analysis and prediction of the fire environment across the continuum of the fire lifecycle, and the USFA efforts on the new National Emergency Incident Reporting System (NERIS) are some of the initiatives at the heart of these science and data modernization efforts.

A major Commission recommendation for USFA is that the United States Fire Administration provide expanded community-based wildfire training and engagement of the nation’s non-Federal fire service, promote fire-adapted communities to build community resilience, and improve coordination with wildland fire management in the interface. These recommended actions would have been particularly valuable to address the Lahaina, Maui community before the fire. The USFA is now working to implement this recommendation and how we can reprioritize necessary resources.

Lahaina, Maui Wildfires

I accompanied the FEMA Administrator to Lahaina, Maui immediately following the August 8, 2023, fire. My overall focus on the ground was to get a firsthand look at indications of how the fire moved, the likely wind impact, the fuel load that enabled rapid and extensive spread, indications of human behavior during evacuation, and overall firefighter well-being. Following the initial visit, I have remained in communication with the Maui County fire chief and emergency manager as recovery continues. I made a second visit in November 2023 to review the harvesting, de-energization, crushing, and preparation for shipping of lithium-ion batteries recovered from the fire area.

USFA's focus is now on the postfire mitigation opportunities through the FEMA Mitigation Assessment Team (MAT) and increasing resilience during the build-back in Lahaina. In coordination with FEMA Building Sciences, USFA subject matter experts participated in pre-mitigation assessment that revealed indicators of hurricane wind impact, drought, high temperatures, invasive grasses, lack of interface building code adoption, resource constrained infrastructure and services, and an overall lack of planning for a suburban conflagration or community-based wildfire.

To assist with building resilience, USFA, in collaboration with DHS Science and Technology, is deploying several wildfire sensors on Maui and on several other fire prone islands in the state. These sensors, in the second phase of testing, will enhance 'Warnings' and 'Alerts' notifications, enable the deployment of mobile sensors for post burn monitoring, and enable integration testing with mass notification systems and the Integrated Public Alert and Warning System (IPAWS).

Wildfire Response

Sensory technology is a critical part of an effective wildfire response, providing real-time, accurate information about fires as early as possible post ignition so that resources can be quickly deployed and engaged in suppression. However, we also need continual investments and updates to existing wildfire models to adequately predict fire behavior under extreme conditions and within the built environment of the interface and in suburban communities, as well as additional training for firefighters responding to these events.

The increasing incidence of wildfires that affect communities means that more municipal fire departments are responsible for firefighting in the wildland and interface. Structural firefighters, accustomed to fighting one structure fire at a time, are now being confronted with multiple structures burning simultaneously, as well as structure to structure fire transmission. They must react and respond with uncharacteristic tactics and strategies to successfully mitigate the event by reducing or eliminating fire spread. Without specific training, firefighters use traditional firefighting tactics, increasing their risks as they face rapidly moving wildfires. They can be cut off from egress, loose apparatus that are unable to exit from closed off cul-de-sacs or be forced to abandon dry hose lines during the fight. The reality is that they must add interface and suburban conflagration wildfire strategies and tactics to their operational skillset. However, nearly half of the departments that perform these operations indicated that their training does not include specialized interface firefighting operations training.

Lastly, fire departments cannot safely and effectively respond to wildland or interface fires without proper personal protective equipment (PPE). Two-thirds of departments responding to these events use their structural firefighting gear and have unmet needs for wildland and interface PPE for all firefighters. Research, innovation, and standards for respirators purpose-fit for wildland and interface firefighting, as well as PPE specifically designed for female firefighters, are urgently needed. There are significant risks associated with ill-fitting PPE because firefighters are not able to move as easily or as quickly as they need to during an emergency response.

Overarching Goal

The USFA, along with Federal, state, and local partners, is actively participating in preparedness, including community risk reduction, where we are engaging with individual communities through fire stop tours across the nation. We are teaching individuals to make their home fire safe by reducing vegetation around their home, using fire resistant materials to build or replace fences and decks, and making themselves savable by knowing the way out if told to evacuate. USFA is also engaged in preparing structural firefighter training for interface response, developing wildfire operational evacuation standards and exercises, and supporting community resilience through continued research and building code advocacy. It is our goal to prepare all local structural firefighters and communities for the increase in wildfires in the interface and in rural and suburban communities.

As we anticipate challenges ahead, FEMA and USFA looks forward to working with the Members of this Committee to build a more resilient nation. Thank you for the opportunity to testify. I look forward to answering your questions.



TESTIMONY OF

David Wm. Fogerson
Nevada's Emergency Manager and Homeland Security Chief

BEFORE

Committee on Homeland Security and Governmental Affairs

United States Senate

ON

Wildland Fire Threat

March 2024
Washington, D.C.

Chairman Peters, Ranking Member Paul, Nevada Senator Rosen, and distinguished members of this Committee, my name is David Fogerson, and it is my esteemed pleasure to speak with you about our Nation's wildfire threat.

I serve as Nevada's Emergency Manager and Homeland Security Chief. In this role, I work with our local emergency managers, the Federal Emergency Management Agency (FEMA), and many other federal agencies to plan, prepare, respond, recover, and mitigate all hazards and emergencies, including wildfire.

I am in my fourth year serving as the state emergency manager and my 30th Nevada wildfire season. My career began in the fire service in Southern California. I later moved to Northern Nevada where I was promoted through the ranks of firefighter, engine captain, training captain, battalion chief, and deputy chief. As deputy fire chief, I was responsible for negotiating the Cooperative Fire Protection Agreements with two U.S. Forest Service (USFS) National Forests comprised of three ranger districts, two different districts of the Bureau of Land Management. These agreements are based upon the Reciprocal Fire Protection Act of 1954.

While in the fire service, I served as Co-Chair for the Sierra Front Wildfire Cooperators. This group, which includes non-profits, local, state, and federal governments, assembled to form an effective force against our wildfire threat. We serve an extensive geographic area from Mammoth Lakes California along the Sierra Crest to Herlong, California and a large swath of Nevada that lies in between.

Fire has shaped the landscape where I live and continues to be Nevada's number one natural hazard threat. The impact of many fires, including one from 1984 which burned through my yard, can still be seen today. The 1984 Indian Creek Fire, which originated in California but quickly spread to Nevada, has changed my landscape providing a daily visual reminder of the problem we face; a stark transition from Nevada's traditional Pinyon Pine to the treeless brush I see today. My career mentor, Fire Chief Tod Carlini, was on that fire in 1984 and is still serving our community today.

While I left the fire service for my current role as emergency manager in 2020, wildfire has continued to be a part of my life's work. In recent years, a 2020 border fire destroyed a California town and the ancestral lands of a non-Federally recognized tribal nation, including their health center. The 2021 Dixie Fire in California crossed the Sierra Crest, becoming the first fire to ever do so. Weeks later the Caldor Fire did the same. In between the Dixie and Caldor fires, we had the Tamarack Fire, which started in California, like the Indian Creek Fire, and moved into Nevada just south of Indian Creek. Structures were lost in both states.

As I have seen over the course of my career in multiple landscapes and from multiple positions, our Nation's fire problem is growing in severity and frequency. It impacts every facet of our landscape, communities, and lives.

More recently, I was selected as a member of the Wildland Fire Management and Mitigation Commission, a commission created through the Bipartisan Infrastructure Law and my reason for being here today.

I believe the Commission was envisioned to rethink our path on wildfire. Congress brought together 50 diverse commissioners and charged us with recommending improvements to the entirety of the federal wildfire management system. I believe the diversity in membership provides the greatest value in our Commission's report. All the Commission's recommendations were developed through a consensus process: something that takes quite an effort, so I place extra value in their worth. If you have not done so already, I would encourage you and your staff to review our report with a focus on our 148 recommendations.

My testimony focuses on three points that are critical to enhancing our nation's wildfire readiness and responsiveness:

1. Treat wildfire as we do hurricanes.
2. Support collaboration.
3. Develop the required workforce

TREAT WILDFIRE AS WE DO HURRICANES

Although not a Commission recommendation, it is a mantra of many western states and part of the National Emergency Management Association's stance that we must collectively plan for wildfire response and recovery as we do hurricanes. Emergency managers emphasize a whole community or whole of society approach to disasters. Nowhere is this better demonstrated than with hurricanes. The National Hurricane Center provides scientific support and analysis to the threat. The Center does not own the hurricane, nor does it manage the land the hurricane impacts. The Center has the critical role of providing the intelligence necessary for an enterprise-wide response. In fact, Commission recommendations 104 – 106 speak to developing a similar Fire Environment or Intelligence Center, which can be thought of as modeled on this best practice.

When the Hurricane Center issues notice that a hurricane is poised to make landfall, federal agencies begin working collaboratively to move resources to support state and local government responses. FEMA leans forward to stage resources, including federally supported but locally executed Urban Search and Rescue Teams through the National Response Framework. Our nation's military places Title 10 advisors within state operation centers. Funds are provided so local and state governments can pre-position resources. Emergency Operation Centers (EOC) are opened with a mindset to prepare the whole community for landfall. Partners come together in messaging and preparations.

Our nation's response to wildfire is quite different. When Nevada receives a red flag warning, or in newer National Weather Service terminology a "Red Flag Warning with a Particularly Dangerous Situation," it does not trigger local, state, federal, and Tribal coordination to prepare for the threat. When we hear the Santa Ana or Washoe Zephyr winds are kicking up, there is no

opening of EOCs, no community-wide approach, and no collective movement of resources. There is no funding to support the collective local, state, and tribal agency readiness effort.

Wildfire is still viewed as the responsibility of whichever agency manages the land – segregated by property lines and jurisdictions. This small mindset and distinct difference from a community-wide approach affect how we plan for, respond to, and recover from wildfire across the country. Jurisdictional boundaries still matter more than they should. The approach continues to evolve, and we are getting better at cooperation, but we are not quite there yet. We must get to outcomes and take a consequence management approach as we do with hurricanes. This will engage all our partners.

The Wildland Fire Mitigation and Management Commission report highlights the need to engage all our partners in coordinated preparations. More specifically, our response workgroup developed many recommendations to enhance our nation’s wildfire preparedness and shape our future. Woven throughout those recommendations is the fundamental theme that we need to do more to work together, including improving the response system to be more inclusive of all partners and the resources they bring. Cooperation and coordination are essential to protecting the communities in which we live.

When wildfire impacts our communities, as it is continuing to do with alarming regularity, we can see wildfire transition into a conflagration. The 2003 Grand Prix Fire in California, which merged into the Old Fire, was one such conflagration which caused a combined loss of 3,710 homes.¹ These fires, along with the Cedar Fire, burned in what was known as the Fire Siege of 2003. In addition to homes lost, the combined fires of the Siege took the lives of 24 people, including Fire Engineer Steven Rucker from the Novato Fire Department. Combined, the Siege caused an estimated, adjusted \$3.4 billion in damages.² The 2012 Waldo Canyon Fire in Colorado similarly intensified and caused the loss of 346 homes and \$352.6 million in damages.³ The fires which have impacted communities, causing structure loss and financial damage are too numerous to list: the Station Fire in California, Dixie Fire in California, Tamarack and Caldor Fires in California and Nevada, Camp Fire in California, and the recent tragedy in Hawaii all provide examples of real costs and losses. These impacts are not confined to the West. Tennessee’s 2016 Gatlinburg Fire, which killed 14, injured 190, damaged about 2,500 structures, burned over 17,000 acres, and is one of the state’s largest natural disasters.⁴

The fires we are seeing today require better preparation, more coordinated response among all levels of government and stakeholders, and the type of thoughtful collaboration provided to communities in the projected path of a hurricane so we can reduce the loss of life and ensure our communities are in the best position possible to make it through the wildfire event. Yet, wildfire

¹ <https://www.hsd1.org/c/tl/california-fire-siege-2003/>

² <https://www.hsd1.org/c/tl/california-fire-siege-2003/>

³ <https://www.cpr.org/2022/06/23/remembering-the-waldo-canyon-fire-in-colorado-springs-ten-years-later>

⁴ <https://apnews.com/article/gatlinburg-fire-lawsuits-0f35464330ec1cf89ecc30776bc0586c> and <https://www.wate.com/news/local-news/gatlinburg-wildfires/seven-years-since-deadly-sevier-county-wildfires/>

and wildland urban interface fires continue to be viewed as issues to be addressed by land management agencies, including the U.S. Forest Service, Bureau of Land Management, Bureau of Indian Affairs, U.S. Fish and Wildlife Service, state forestry agencies, and the like. This worked years ago when these fires could be stopped before they reached the record intensity and frequency we are experiencing today.

As fires continue to burn into communities, evacuation remains critical. The Commission highlighted this need (see Recommendations 45 and 46). The evacuation coordination effort currently being led by the United States Fire Administration is of paramount importance. In fact, in a few weeks, Nevada and California is hosting a bi-state workshop reflecting problems identified in two previous after-action reports from Caldor and Tamarack incidents.

Our responsibilities do not end with wildfire response. If we are taking the whole community into account, we must also account for the cascading hazards wildfire can bring. Western states know that floods often follow fire and that communities must prepare for the subsequent event.

Following the 2021 Tamarack Fire, I was privileged to bring both the Governors of Nevada and California, along with my emergency management peer from California, on a tour of the fire's impact on the built environment. The four of us stood along a federal highway, observing the loss of structures and vegetation on both sides. We discussed the potential for flooding come winter from the steep canyons if we were unable to conduct flood mitigation activities. Flood mitigation had occurred on federally managed lands, but we were unable to obtain funding for work on privately owned lands. That winter, the federal highway washed out, in the exact spot we predicted, because of our inability to look across jurisdictions and take the appropriate mitigation actions. This cost the federal highway system emergency relief funds to repair.

In addition to being able to look across jurisdictional boundaries, we need to be able to account for cascading disasters. Stafford Act and FEMA guidelines do not allow us to tie these incidents together. If local and state governments were able to connect the disasters together to reach our declaration threshold, we would be in a better position to protect life and property. This is so key when we are speaking of smaller, rural and frontier communities, where disasters can often overwhelm local capacity.

Our Commission has recommendations related to these cascading incidents, especially when they affect water quality down the road (see Recommendation 64). Federal land management agencies work to reduce the flood risk on their lands, but the survey teams ordered by federal agencies cannot extend their work onto state or private lands. This siloed approach creates gaps in the surveying of the wildfire footprint. Our Commission recommends a more holistic approach to include everyone: the land management agency (oftentimes upstream); state, local, and private entities; and nonprofits engaged in the process (see Recommendation 75 related to the cross-jurisdictional assessment of burned areas). It is up to us as a group to work together and treat incidents as all-hazards and to consider the whole community when we do so, not just the landscape.

The 2018 Camp Fire in California remains an important watermark for me in the context of whole community recovery. Communities impacted by the Camp Fire have not returned to their

pre-fire state. As an emergency manager, I must consider how to provide those affected with shelter after their evacuation, as well as long term housing until they gain resilience. Our Commission speaks to the importance of meeting the need for shelter (see Recommendations 71-74). Obviously, COVID and supply chain shortages created issues for Camp Fire survivors, but on-going sheltering challenges continue for the Hawaiian survivors Dr. Lori works with now. The longer it takes a community to rebuild, the harder the economic losses are felt, as local tax bases are destroyed, which further hinders the ability of the local government to make tomorrow better than today.

SUPPORT COLLABORATION

One of the key themes of the Commission was the need to support collaboration. As the Commission noted,

“Successfully meeting the challenge of wildfire mitigation and management requires better involving all relevant entities and every scale of society. Governance systems and structures must become more inclusive and involve greater collaboration among federal agencies, and between federal agencies and non-federal governments, organizations, and communities. Such approaches are essential to building new relationships, creating more cohesive and holistic approaches, and removing the silos that limit effective wildfire risk reduction (Abrams et al., 2015; Huber-Stearns et al., 2021).”⁵

I saw the need for collaboration firsthand early in my career. The 1987 Acorn Fire in California spurred the creation of the Sierra Front Wildfire Cooperators. The Acorn Fire brought into focus the fact that agencies (local, state, and federal) were not working cooperatively together. The jurisdictional land management agency felt they could handle the incident and said they didn’t need assistance. 6,600 acres were burned, structures were lost, and the community was changed.⁶ We still experience the impact of that fire today in the community, resulting in a lack of confidence in coordination among the many layers of land management in the area.

The issues exposed by the Acorn Fire were not unique to that fire, nor have they been completely resolved with time. The 2021 Caldor Fire started in California and burned towards the jewel of the Sierra: Lake Tahoe. Both states, many counties, a few ranger districts, multiple fire districts, and many county sheriffs, all tried to work together on the effort. Nevada was working with California on a funding agreement to care for evacuated residents in shelters, yet Nevada only learned of the Caldor evacuation via Twitter. This has spurred two bi-state meetings and an upcoming workshop to get everyone in one room to discuss how we move forward. Improving collaboration takes dedicated time and effort; the Commission made a number of recommendations to support this work (see Recommendations 126, 139, 142, 57 and 58 as examples).

⁵ <https://www.usda.gov/sites/default/files/documents/wfimc-final-report-09-2023.pdf>, page 18.

⁶ <https://www.rgj.com/picture-gallery/news/2022/07/25/acorn-fire-past-and-present/10087798002/>

The consequences of poor collaboration can be significant. I would like to share one anecdote as an example. The Caldor Fire came into the Basin as my mother was passing away. I was able to give a brief to leaders in Nevada prior to leaving to see her in her final moments. While sitting in my office deciding what I should say, knowing I would not be present for the disaster declaration, evacuation, and sheltering, I realized it was an anniversary. My friend Arnie Quinones, a Los Angeles County Fire Department Engineer and his captain, Ted Hall, died in the 2009 Station Fire. Arnie, or Q as we knew him, and I were explorers together in the late 1980's. At the time of his death, Q was assigned as a wildland fire hand crew supervisor. The Station Fire resulted in disagreements between a land management agency and a local government.⁷ I understand these disagreements to have been centered on jurisdiction, night helicopter flying, and how best to attack the fire. According to a Forest Service Lessons Learned review of the incident,

"The Forest Service has received criticism for not utilizing night flying capability by partnering agencies during the evening of August 26 and early morning hours of the 27th, 2009. As a result, the Forest Service identified this topic as an area to explore for potential use in the future."

...

"As stated in the cooperative agreements section, fire response is always an interagency environment, so continued relationship building and knowledge sharing will help ensure there is no breakdown between agencies. Unfortunately during the Station Fire, many of the questions posed by external parties deflated relationships which are critical for future response. As a result additional effort will need to be made to make sure these relationships are repaired."⁸

Q and his Captain died protecting a conservation crew camp threatened by the fire, but lack of contact between those resources and the Incident Management Team was identified as one of the causal factors in the fatality.⁹ After the fire, discussions lead to resolutions on some of the issues. We must continue to engage in discussions on agency differences to ensure we are doing the best to protect life safety during an incident.

When we support collaboration, we support engaging the right partner at the right time. We respect jurisdiction and we respect authority. Bringing fire, public health, emergency management, law enforcement, non-governmental organizations, and the like together serves as a force multiplier.

This is especially important given the role that local governments play in wildfire response. In Northern Nevada, local governments are one of the primary responders to wildfire. Existing

⁷ https://lessonslearned-prod-media-bucket.s3.us-gov-west-1.amazonaws.com/s3fs-public/irdoc/Station_Fire_Lessons.pdf

⁸ https://lessonslearned-prod-media-bucket.s3.us-gov-west-1.amazonaws.com/s3fs-public/irdoc/Station_Fire_Lessons.pdf

⁹ https://lessonslearned-prod-media-bucket.s3.us-gov-west-1.amazonaws.com/s3fs-public/irdoc/Station_Fire_Fatal_Vehicle_Accident_Factual_Report.pdf

federal grants help to support that local response. A key area of FEMA support is the Fire Management Assistance Grant which provides funding for 75% of local fire suppression costs. It is designed to avert the need for a major disaster declaration under the Stafford Act: rarely does a fire obtain both, but some occasionally do. This grant moves so much faster than many other federal programs, providing immediate relief to those local governments who are concerned with saving lives and property while being mindful of their budget to do so. These grants have enabled local governments to fight the fire and not fight their checkbook. FEMA is and must continue to be a strong partner in the wildfire space, as Dr. Lori Moore-Merrell and Administrator Criswell advocate.

Administrator Criswell is working to increase FEMA's nimbleness. Historically, FEMA grants may have been more at risk of fraud. Policies were changed which have swung the pendulum to the other extreme, causing delays in the effective use of funds and onerous grant requirements. I believe Administrator Criswell is working hard, with partners, including the National Emergency Management Association, to move the pendulum back to the center. We must continue these efforts, as highlighted by Commission Recommendations 142-144. No one in this space wants fraud, waste, and abuse. We all want nimbleness to create the best outcomes in the shortest amount of time. There is a fine balancing act between those two needs, a balance point we must continually seek.

We must work to support FEMA and the United States Fire Administration, ensuring they are positioned to support the whole community in the event of a wildfire. They must be sufficiently resourced and funded to assist state, local, tribal, and nonprofit organizations to meet the whole community need for wildfire planning, preparation, response, recovery, and mitigation. The Commission recommended support for the U.S. Fire Administration (R56 and R129), better positioning them to provide support to communities, engage with the National Wildfire Coordinating Group, and provide critical wildfire training to local fire departments.

WORKFORCE DEVELOPMENT

Wildfire responders include many disparate groups. Our federal land management agency partners spend their entire careers dedicated to wildfire. We must ensure we provide these professionals with an adequate salary, benefits, and respect. This work force must be grown to a year-round one, one which can provide for mitigation activities outside of fighting fire. This workforce must be paid commensurate with the risk we ask them to take to protect our lands. Our Commission provides recommendations 84 and 89 on these ideas.

We must reach the conclusion that disasters happen with greater frequency and severity than in years past. The idea of a fire season lasting from May to October is not reality in today's world. We see fire year-round, in fact Nevada sees our largest loss of civilian life and property during winter wildfires, when our federal partners are not staffed to support response. Additional support for a year-round federal wildfire workforce would also ensure personnel are on hand to engage in mitigation efforts while not in firefighting mode. This could help buy down our risks while lessening the load on local government firefighters.

We must recognize that local governments, who provide our structure firefighters, are a critical component of wildfire response year-round and around the clock. The same firefighter who responds to your difficulty breathing call, your structure fire call, your motor vehicle collision with extrication call, is your wildfire responder year-round. As called for by the Commission, we must continue to work to ensure that these local resources have access to both the qualifications and training they need to best prepare them for wildfire (Recommendations 54 and 56) and the federal resource ordering system that enables them to be deployed rapidly to nearby incidents to enhance our collective response (Recommendation 53).

Recognizing the work done by our local governments is key. Our Commission recommends finding a way for them to establish allowable costs, with the goal of utilizing the nearest available resources (Recommendation 51). Similar to the need for streamlining FEMA programs, we must allow for more rapid reimbursements to make the local government whole for their efforts. This will allow them to grow their capabilities and to remain engaged.

We want to buy down our risks. We want to make our communities safer. This occurs when we treat wildfire as we do a hurricane, with the whole community approach. This occurs when we support partnership to ensure everyone has a seat at the table, especially the local government emergency manager who is key to the recovery and mitigation effort in the built environment. This occurs when we support workforce development and realize that we no longer have a fire season, but rather a fire year.

My advice to the Committee, since I believe that is why you asked us here today:

- Model wildfire threats as you would hurricanes. The loss of life and property, as well as impacts to our environment are on par or sometimes greater due to frequency and intensity. Support federal, state, local, tribal, and non-profit organizations in advancing the cause. (See Commission recommendation 104 supporting the creation of a joint office Fire Environment Center to provide predictive services and other modeling support to all entities responding to, recovering from, or mitigating the risk of fire).
- Partners must be engaged at every level in the decision-making process. (See “collaboration” theme of the Commission).
- Encourage land management agency leaders to have their line officers engage with emergency managers at the local, state, and tribal levels. Forest Supervisors should be as close with the state emergency manager as they are the state forester or state fire warden. District rangers should also know their emergency manager as closely as they know their fire and law enforcement chiefs. (See Commission recommendation 58 on collaborative pre-fire planning).
- Support Administrator Criswell’s efforts to make FEMA nimble. FEMA is key to our mitigation and recovery phases. We have moved past poor management, allowing the collective body to provide grant funding using the same rules and speed as the U.S. Department of Justice (DOJ), U.S. Department of Health and Human Services (HHS), or Centers for Disease Control and Prevention (CDC); swing the pendulum back to the

center. (See Commission recommendations 61 and 72 on increasing the speed and flexibility of FEMA funds for post-fire recovery).

- Support Dr. Moore-Merrell's efforts to engage the United States Fire Administration in the wildfire world. These structural firefighters are there 24/7/365. They provide initial, and oftentimes, extended attack under contract to federal land management agencies. (See Commission recommendations 56 and 129 on increasing the role of and funding for the U.S. Fire Administration in providing wildland fire training to structure fire departments).
- The 1954 Reciprocal Fire Act needs to be updated. Gather input from your local government partners, including fire districts, emergency managers, law enforcement, and other partners, in addition to your state foresters to inform amendments to the Act.
- Increase the pay, respect, and standing of our federal wildfire workforce. We need a year-round force to support local and state government response efforts. Compensate them fairly. (See Commission recommendation 84 which calls for increased pay and benefits for wildland firefighters and recommendation 89 which calls for a dedicated restoration workforce, including the option of year-round employment).

Again, thank you for the opportunity to testify today. It is the honor and highlight of my career. My passion is to ensure that we are learning from experience and improving our emergency management systems and wildfire responsiveness. Those who follow will stand on our shoulders, as I do those who came before me. It remains my mission to reduce the loss of life and reduce suffering. That is done by taking bites of the apple until we are done with it, then finding a new apple, to make tomorrow better.

The stress and pain I have seen in my career should not have to be repeated in future generations. To those whom much is given, much is expected. With the report from the Wildland Fire Mitigation and Management Commission and the many years of experience people like me can bring to the table, we have a framework and lived experience to inform improved systems to address the wildfire challenges in communities throughout the country.

Respectfully.



State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

Department of Natural Resources
Division of Forestry, Fire & State Lands

JOEL FERRY
Executive Director

JAMIE BARNES
Director/State Forester

TESTIMONY OF JAMIE BARNES
DIRECTOR/STATE FORESTER
FOR THE UTAH DIVISION OF FORESTRY, FIRE AND STATE LANDS
BEFORE THE COMMITTEE OF HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS
“A Nation on Fire: Responding to the Increasing Wildfire Threat”
March 14, 2024

Good morning Chairman Peters, Ranking Member Paul and members of the Committee. I am Jamie Barnes, Director/State Forester for the Utah Division of Forestry, Fire and State Lands. Thank you for the opportunity to appear before you today and discuss wildfire and the increasing threat of wildfire across the nation. My testimony today will focus on the increasing threat of wildfire to communities, with the increased severity of wildfires, the true cost of wildfire, the importance of interagency collaboration and necessary actions to improve disaster response, recovery and mitigation.

Increasing Threat of Wildfire to Communities and Increased Severity of Wildfires

We are no stranger to the development occurring in our Wildland Urban Interface communities, the area where communities meet and intersperse with wildlands. With urban growth comes an increased risk of devastating wildfire. Many of these areas contain an overgrowth of fuels, creating conditions where a seemingly insignificant ignition source could lead to a wildfire. We are seeing fires burn hotter and more severely, due to the excess fuels and lack of active management on the landscape. Many states across the Western US now refer to the fire season as a fire year due to the increased number and severity of fires outside of the traditional fire season. Increased fire occurrence and severity also lead to more days of wildfire smoke in communities. The increased severity and intensity of fires outside of the typical fire season is demonstrated by recent destructive wildfires experienced in places like Colorado, Maui and most recently Texas. The unexpected is no longer unexpected; it is the new normal.

In addition to states being faced with the increasing suppression costs of altered fire regimes, private landowners are now being pressured to reduce the amount of fuels on their property. While this may reduce the individual risk of wildfires, communities have little control over wildfires beyond their property boundary. We do have tools in the toolbox that we can use to help mitigate hazardous fuels and actively manage our lands. Practicing prescribed fire as a management tool could prevent fires



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from getting out of control and ultimately reduce smoke pollution. However, it becomes complex when dealing with air quality standards for prescribed burning and permitting challenges with mechanical treatments and cross-boundary landscapes, including adherence to NEPA. The majority of the focus around air quality has focused around vehicle and industrial emissions, which is out of proportion to the frequency and ferocity of wildfire events. Wildfires can negate any improvement of air quality in a single incident. Air quality implications, much the same as wildfire, impact communities regardless of jurisdictional boundaries. Utah spends the majority of summer months inundated with smoke from fires in other states. With this in mind we must remember the true costs of wildfire.

The True Cost of Wildfire

Each year, wildfire suppression dollars are reported and used widely to bring context to the severity of the fire season. In reality, suppression is only a fraction of the cost. When assessing the full cost of wildfires we must consider the long-term and complex costs including, but not limited to, impacts to: public & firefighter safety, loss of life, loss of property including but not limited to homes and infrastructure, infrastructure shutdowns (e.g., highways & airports), lost revenues to business (e.g., tourism), air and water quality impacts, wildlife and habitat loss, post-fire rehabilitation costs, flooding and erosion, healthcare costs (e.g., respiratory) and evacuation costs. In addition, ecosystem services must be considered, as they could have unknown and everlasting future impacts.

The Importance of Interagency Collaboration

Utah's collaborative relationships lead to our successes. We believe in strong interagency collaboration, along with shared decision making and leveraging respective agency mandates and projects. Shared Stewardship and Fire Sense are examples of how the "Utah Way" achieves goals/work across the landscape on the State's public and private lands and allows for advancement of landscape scale efforts and state-wide prevention campaigns.

Shared Stewardship:

The Shared Stewardship approach brings partners and stakeholders together to focus on doing the right work, in the right place at the right scale. Utah is leading the way in many areas on the Shared Stewardship platform, creating a partnership with USDA Forest Service, Utah Division of Forestry, Fire and State Lands, Utah Public Lands Policy and Coordinating Office (PLPCO) and Natural Resource Conservation Service (NRCS). Through Shared Stewardship projects areas are identified in watersheds that are at risk for wildfire, impacting Utah's communities and drinking water. Most recently, the priority areas have been updated to account for new data, and an expanded analysis to



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encompass all lands in the state. This is a new approach as we learn how to navigate Shared Stewardship with the wildfire crisis priority areas and the constant threat of wildfires with ongoing drought and one of the fastest-growing populations in the nation. Since 2019 the Shared Stewardship program in Utah has invested \$30 million dollars in active forest management, treating over 80,000 acres with methods such as mastication, cut and pile and prescribed fire. This initiative has improved Utah's watershed through a collaborative approach.

Fire Sense:

Fire Sense is a state-sponsored campaign with interagency collaboration to educate Utah citizens and visitors on wildfire prevention. The mission of the fire sense campaign is to get Utahns to take personal responsibility for wildfire. Through this initiative Utahns have successfully reduced human-caused wildfires by over 60% over the last three years. The use of billboards, social media, media, public service announcements, partnerships, and various other methods have helped us achieve this. In the future, we aim to further educate through a more surgical distribution of our message and using new behavior change techniques to help people take personal responsibility for fire safety. Fire Sense was honored with the Bronze Smokey the Bear award this year from US Forest Service, the Ad Council and National Association of State Foresters.

Necessary Actions to Improve Disaster Response, Recovery and Mitigation

The Wildfire Mitigation and Management and Commission Act report presented key findings that are important to Utah with regard to mitigating and managing wildfires.

In the last decade, Utah has seen large wildfires and escaped prescribed burn projects impact watersheds. These significant events have caused severe long-term issues and have had costly impacts. (i.e., Brian Head Fire, Dollar Ridge Fire, Trail Mountain RX). Finding ways to make planning more effective and efficient, such as improved information gathering, training, staffing, collaboration, and programmatic analyses for restoration and hazardous fuels reduction activities could potentially reduce the risk to watersheds and landscapes across the state. This is one approach that Utah has been very proactive in with the Shared Stewardship program, but with limited funding. There are still limitations to achieving large landscape scale projects due to NEPA's litigation challenges, the need for permitting reform and the lack of mechanisms for forest management. Utah has two jointly funded positions with the NRCS to implement IRA money on the ground through general forestry work. Similar positions dedicated to watershed protection would benefit the state and allow for more cross-boundary assessment and collaboration.



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Limited funding is available for post-wildfire restoration at the state level. Providing additional funding would help in the recovery from a significant wildfire event. In addition, supporting multi-year funding for federal programs would significantly enhance their efficiency and provide agencies with more reliable funding, aiding states in fire mitigation and management work. Boosting funding for watershed rehabilitation programs after disasters and endorsing new and effective approaches and agency efforts to enhance planning, response, and collaboration in the aftermath of fires would significantly improve the recovery program.

Forestry, Fire and State Lands evaluates the State of Utah wildfire risk by considering the resources and values at risk in an area to determine high, moderate or low fire risk. These same metrics should be used to prioritize and gauge the success of mitigation work and not just the amount of acres treated. Current federal performance metrics focus solely on metrics around acres treated or burned to measure success. Success should be gauged by outcomes such as safeguarded assets, values, and resources and the effectiveness in returning and maintaining forests and rangelands in a more resilient state. Achieving success depends on avoiding data isolation, ensuring compatibility with existing processes, and providing up-to-date, accessible data to states.

Prioritizing investment in building a workforce dedicated to restoration and mitigation efforts is important throughout the nation. Firefighter pay has been at the center of discussions for many years now. Utah recently passed legislation addressing the pay of state wildland firefighters. This allowed for an increase in compensation for those involved in fighting wildfire. Increasing pay across agencies is needed, but we caution against swift pay raises to prevent wage conflicts in Utah among state and federal agencies.

CONCLUSION:

We need to learn to live with wildfire being the new normal. We need to recognize the increasing threat. Making communities firesafe is part of learning to live with the reality of wildfire. We need to fight fire with fire, putting more fire on the landscape through prescribed burning. Lower intensity fire creates healthy resilient forests that are much more manageable and reduce the risk to fire fighters, communities and the impacts to air quality. Increasing funding and capacity, along with finding ways to strengthen collaborative relationships and engage in planning and permitting reform is the key to successful forest management and reducing the number of wildfires throughout the nation.





**TESTIMONY OF LUCINDA ANDREANI
DEPUTY COUNTY MANAGER &
COCONINO COUNTY FLOOD CONTROL DISTRICT
ADMINISTRATOR
BEFORE
THE COMMITTEE ON HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS,
UNITED STATES SENATE,
REGARDING
CONGRESSIONAL ACTION AND THE ROLE OF FEMA
IN ADDRESSING THE PUBLIC SAFETY THREATS
OF WILDFIRE AND POST-WILDFIRE FLOODING
MARCH 14, 2024**

Introduction

Chairman Peters, Ranking Member Paul, and distinguished Members of the Committee, I am honored by this opportunity to provide testimony on the role of Congress and the Federal Emergency Management Agency in addressing the public safety threats of wildfire and post-wildfire flooding. Wildfires, especially in the West, are becoming increasingly expansive, severe, and unpredictable.¹ From the shores of Hawaii to the panhandle of Texas, wildfire ravages tens of millions of acres and impacts thousands of communities each year. Even once the wildfires are extinguished, secondary impacts, such as post-wildfire flooding, threaten the health and safety of affected communities for years.

As Coconino County's Deputy County Manager and Flood Control District Administrator, I lead and take responsibility for mitigating the impacts of wildfires and post-wildfire flooding to our communities. In addition, my duties also involve leading the District's Forest Restoration Initiative to reduce wildfire risk. I can tell you firsthand: The scale of these crises rapidly overwhelms the capacity of the local governments burdened with immediate response and long-term flood mitigation. While there are opportunities for federal support, there is much that must be done to improve the accessibility, immediacy, and effectiveness of federal response to the wildfire crisis, both relative to post-wildfire response and pre-wildfire mitigation.

I also want to note that I was privileged to represent counties across the country as I served on the Congressionally established Wildland Fire Mitigation and Management Commission (WFMMC)². The decision by Congress to establish this Commission was very insightful and I believe the ultimate outcomes will be transformative. The Commission reached consensus on the 148 recommendations forwarded to Congress in September 2023 and I am very proud to have contributed the counties' experiences to that process and product given that, in the vast majority of cases, it is counties that bear the brunt of wildfire disasters, and most disasters. My testimony today largely reflects my experiences leading both post-wildfire recovery processes and pre-wildfire mitigation efforts that our Flood Control District is known for nationally. As you will see below, I do connect my comments and suggested Congressional actions to the Commission's recommendations as appropriate.

Wildfire and Post-Wildfire Flooding in Coconino County

Coconino County is no stranger to wildfire. Like many areas in the West, wildfire is a natural part of our forest ecology and vital to the maintenance of a healthy landscape. However, multiple factors, including fuel-loaded forests from a century of federal fire

¹ www.epa.gov/climate-indicators/climate-change-indicators-wildfires

² <https://www.usda.gov/topics/disaster-resource-center/wildland-fire/commission>

suppression policy³ and a warming, drying climate⁴ have created conditions in which wildfire in our region can quickly explode into a catastrophic wildfire.

Since 2010, Coconino County has endured nine major wildfires. The County has issued over 25,000 evacuation orders, lost over 130 buildings including 63 homes, and estimates that smoke from our wildfires have released 4.1 million metric tons of carbon into the atmosphere—roughly equivalent to the annual emissions of 900,000 fossil fuel vehicles.⁵

The Southwest experiences a traditional monsoon season typically between July and October, and as our population centers occur close to steep mountainous areas with significant urban-wildland interface, Coconino County's catastrophic wildfires have also resulted in severe and repetitive post-wildfire flooding.

The Schultz Fire

My first experience with post-wildfire flooding followed the [2010 Schultz Fire](#), which severely burned over 15,000 acres of U.S. Forest Service land on the San Francisco Peaks above Flagstaff, Arizona and caused upwards of \$100 million in economic impacts.⁶ The wildfire was started by an abandoned campfire on federal land.

The experience was harrowing. Frankly, we entered this impending disaster not knowing a thing about how to prepare for or address post-wildfire flooding. As the wildfire neared containment, the Burned Area Response Team's (BAER) analysis of the burned area indicated a risk of post-wildfire flooding. Fortunately, a local engineer had worked for the USDA's Natural Resources Conservation Service (NRCS) and connected us to their state office. The District utilized the NRCS' Emergency Watershed Protection Exigency funding to deploy concrete barriers and sandbags as short-term flash flood mitigation to the impacted area. If not for this source of funding (75%/25% cost share), then the County would have immediately exhausted all of its emergency reserves prior to any flooding.

On the afternoon of July 20, 2010, a monsoon storm with a 1.25" rainfall event in 15 minutes pelted the entire burn scar and sent debris flows and flash floods down the mountain into a far greater residential and business area than had been predicted and forcing the closure of U.S. Highway 89, the major transportation artery between Arizona, Utah and Colorado and key access corridor to the Grand Canyon National Park and the

³ www.cbsnews.com/news/fires-destroy-forests/

⁴ <https://apnews.com/article/wildfire-smoke-canada-climate-change-new-normal-f22a68e7df9688ef8eccd970efde3baf>

⁵ <https://www.coconino.az.gov/DocumentCenter/View/61251>

⁶ <https://cdm17192.contentdm.oclc.org/digital/collection/p17192coll1/id/1099/rec/17>

Lake Powell National Recreation Area. The floodwater killed a twelve-year-old girl.⁷ The short-term mitigation wasn't enough – about 1,000 residential properties were impacted with over 100 homes severely flooded, and the rain kept coming. That summer and over several more summers, the Schultz Flood Area experienced an additional 40 major flood events.

The District/County, with the strong support of our then Senators McCain and Kyl and Congresswoman Kirkpatrick patched together the critically necessary federal funding to initiate long-term flood mitigation, which was completed in 2015. The watershed restoration measures on-forest and the flood mitigation measures off-forest constructed resulted in no flood impacts until the post-wildfire flooding from the Pipeline Fire in 2022, which reburned most of the Schultz Fire burn area. The only exception was a 1,000-year rainfall event in one of the watersheds in 2018. Even then the measures performed very well.

Coconino County had the rare good fortune to receive sufficient funding through Congressional action reappropriating funds to the then drained NRCS Emergency Watershed Protection Program to initiate long-term flood mitigation measures after the Schulz Fire. This, however, is the exception that proves the rule: strategically directed post-fire recovery funding can proactively prevent future cascading disasters. Most counties are not so fortunate. **Commission Recommendation 76** calls for standing funding for the NRCS EWP Program. Furthermore, standing disaster relief funding to support the U.S. Forest with post-wildfire recovery is also needed.

Although the District's Board had increased the District's property tax to make the federal grant match and borrowed money from the County's General Fund, the mitigation constructed would have taken over a decade plus if no federal funding had been forthcoming. It took total dedication and perseverance by our Board and leadership to secure what funding we could and work through the many processes involving numerous federal agencies. Most counties would not have been able to sustain this effort either financially or politically given the extraordinary challenges.

With regard to FEMA specifically, the Flood Control District and County appealed for public assistance from FEMA, and despite a Governor's Disaster Declaration and a Presidential Disaster Declaration, the support the County received was very limited relative to the extent of the public safety measures that were needed—about \$2.5 million (out of a total expenditure of about \$32 million) delivered to late. By the time we received aid from FEMA (three years after the wildfire), we had already seen significant post-wildfire impacts to our communities. **Increasing the deployment speed of FEMA**

⁷ https://azdailysun.com/news/local/mudflows-below-the-schultz-fire-inundate-houses-block-roads-clog-culverts/article_320591b2-b939-5865-aa4d-f33cd801bb6a.html

wildfire and post-wildfire flood mitigation and recovery funds is called out in the Commission's Recommendations 61 & 81.

Fortunately, I had a very capable Project Manager that had the capacity to wade through the PA application, complete the Benefit/Cost analysis and other documentation to apply for the funding. Many smaller and more rural counties, towns and Tribes do not have this level of capacity, which relates to the accessibility of FEMA and other federal funding as noted in the **Commission's Recommendation 142**.

After the Schultz Fire post-wildfire flooding experience, the District learned that we could not count on FEMA to provide aid during a post-wildfire flood disaster – either through Public Assistance or the existing grants programs (PDA and FMA). Frankly, since then, the District has made some effort to secure reimbursement for sediment and debris removal after rainfall events reduce further impacts, but current FEMA policies that do not account for cascading events have prevented reimbursement for the vast majority of clean-up costs or let alone provided for long-term flood mitigation. The repetitive nature of monsoon rainfall events over generally a three to four-month period means that the flood impacts within any 72-hour window, which is FEMA's imposed limitation, rarely, if ever results in qualifying for a Presidential Declaration or any threshold to receive reimbursement for a portion of the costs to address the impacts to existing public infrastructure, to receive individual assistance, or to address long-term flood mitigation.

Congressional Action Needed...

Amend the Stafford Act to reflect the cascading, repetitive nature of post-wildfire flooding – Commission Recommendation No. 64

One of the reasons it is difficult to receive support from FEMA during post-wildfire flood events is the Stafford Act, which currently limits qualifying disasters to a 72-hour window. When you're dealing with a natural disaster like repetitive post-wildfire flooding where events may be drawn out over the course of an entire monsoon season, the cumulative impacts may well exceed the financial minimum needed for a Stafford Act declaration, but because the events have not been confined to a 72-hour window, the disaster will not qualify for aid. Amending this act to enable multiple events stemming from the same cause to be treated as additive under federal wildfire and disaster recovery programs will increase accessibility to much needed aid, and, importantly, reduce the overall impact of multiple, smaller cumulative disasters.

The Slide Fire

The County and the community of Sedona, Arizona went on to endure the Slide Fire in Oak Creek Canyon in 2014, and although there was limited post-wildfire flooding from this wildfire, the State and regional area experienced a 40% reduction in sales tax

revenues over the first four months after the wildfire.⁸ Although the economic impacts softened over the course of the next year, the impacts did continue. Importantly the District once again worked with the NRCS EWP Exigency Program to deploy short-term flood mitigation measures.

The Tinder Fire and Tunnel Fire

Once again in 2018, Coconino County endured the Tinder Fire, which claimed 33 homes.⁹ The County received virtually no post-wildfire support from any State or Federal agencies. This was also true after the Tunnel Fire in 2022 burned down 31 homes – beyond some reimbursement through Arizona Department of Emergency Services for County-related evacuation costs, the County had to cover all the costs for sifting through the remains of the homes and some initial clean-up of the properties, both in terms of homes and hazard tree removal. The County contracted with Team Rubicon and the Southern Baptist Disaster Response Team to perform these services. Although a minimal amount of the cost is covered by these wonderful response non-profit agencies, the County bears the lion's share of these costs to the tune of over \$300,000 for the Tunnel Fire alone.

Congressional Action Needed...

Altering FEMA's Public Assistance and Individual Assistance Programs to support smaller, rural and/or disadvantaged local jurisdictions and Tribes for some level of the expenditures related to wildfire recovery, where the total losses of public infrastructure or homes does not meet the FEMA Disaster thresholds would very positively impact the recovery in those communities. Furthermore, and as noted in **Commission Recommendations 60 and 68**, better funding and coordination of federal post-wildfire resources when wildfires do qualify for FEMA assistance programs is needed. When county budgets are severely impacted in such a way as to significantly diminish local revenue, federal support is critical.

The County has discovered that residential insurance coverage was very limited with regard to clean up costs, that many properties were underinsured and that some homeowners had no insurance, including a disabled veteran who also lost most of his income when his small rental unit burned as well as his home. There is at least one disabled homeowner in the Tunnel Fire area that cannot return to their property because they did not have insurance nor the resources to even purchase a "tiny" home or mobile home to place on the property. The Commission recognized these insurance related challenges and recommended Congress request a comprehensive study on the relationship between financial protection solutions available through the private market

⁸ <https://www.coconino.az.gov/DocumentCenter/View/61465/NAU-Economic-Policy-Institute-Upper-Rio-De-Flag-Fire-and-Flood-Stud-2023->

⁹ https://azdailysun.com/news/local/41-homes-and-structures-destroyed-in-tinder-fire/article_c6c74342-971e-5832-8635-90dab87c8cdb.html

and federal disaster recovery to support federal efforts to modernize federal post-disaster recovery benefits (see **Commission Recommendation 69**).

Insurance Crisis in Wildfire Prone Areas

As a side note, securing fire insurance in our area is becoming increasingly difficult for homeowners. It appears that many insurance companies' wildfire risk maps are not updated to show risk reduction efforts by the U.S. Forest Service or others. Certainly, the County understands that many communities within our area are at higher risk of wildfire, but the investments in forest restoration being made by the Federal Government, by our District through our [Forest Restoration Initiative](#), and by our local Fire Districts should be documented and reflected in not only the ability to secure insurance but also in the insurance rates. The District and County understand that insurance companies are regulated at the state level, however given the broad human and economic ramifications of the insurance/wildfire crisis it may be necessary for Congress to begin to identify longer-term measures to address this issue.

Museum Fire

When the [2019 Museum Fire](#) burned nearly 2,000 acres a mere mile and a half from the urban center of Flagstaff, the District's prior FEMA-funded post-wildfire flooding study had identified the area as at serious risk for significant post-wildfire flooding. Flood modeling showed that post-wildfire flooding would pose a hazard to over 400 homes and 35 businesses valued at over \$300 million, which also includes a low-income area that houses many of our working-class families.

With only two weeks before the expected onset of the monsoon season, the District mounted a herculean effort to produce hundreds of thousands of sandbags and place concrete barriers at the homes and businesses at high risk for post-wildfire flooding expending about \$4 million. The City of Flagstaff spent significant resources preparing drainage infrastructure, which was very undersized given the post-wildfire flood flows had increased tenfold. Neither the District nor City received any support from FEMA/DEMA for these proactive measures, but recognized that such work could prevent significantly greater impacts after a major flood event.

In a turn of bittersweet luck, that summer and the following summer came with severe drought, and we never saw the monsoon rainfall events that induce post-wildfire flooding. This gave the District some time to piece together resources and implement a degree of long-term flood mitigation, but our efforts still weren't enough. In 2021, monsoon rainfall on the Museum Fire scar (one 200-year, and several 25 to 50-year rainfall events) sent water rushing through several dense residential neighborhoods of Flagstaff, flooding 88 homes, damaging public infrastructure and impacting roadways

with sediment and debris.¹⁰ The District spent upwards of \$2 million with no support from FEMA, but with additional resources, likely could have prevented many of these impacts.

This year, the District completed the a suite of watershed restoration and sediment reduction projects in support of long-term flood mitigation of the Museum Fire impacts spending about \$7.7 million in total. This could not have taken place if not for not the foresight and disaster related funding from the U.S. Forest Service (\$3.6M) and the Natural Resources Conservation Service (\$2.7M). The City of Flagstaff is still working to improve their streets and stormwater infrastructure to cope with the increased post-wildfire flows. While we can use emergency funds and cobble together some sources of federal support, the severe and repetitive nature of these events cumulatively continue to exceed our local capacity. Additionally, as we use limited local funds to try to address these issues, subsequent rainfall continues to cause damage and create financial impacts. The District expenditures to date have totaled \$5.3 million to address both response, short-term and long-term mitigation.

Congressional Action Needed...

Allow FEMA to reimburse for upfront, short-term mitigation and infrastructure preparation costs in preparation for post-wildfire flooding.

While some areas may qualify for the NRCS EWP Exigency Program to receive federal assistance for short-term post-wildfire flood mitigation measures like sandbags and concrete barriers, there needs to be a process to reimburse local governments and Tribes that do not qualify for EWP Exigency and for costs borne to prepare infrastructure for the dramatically increased flood flows. In the southwest region, where the rainy monsoon season typically occurs immediately after fire season¹¹, local governments and Tribes may have only a matter of weeks or days to deploy short-term post-wildfire flood mitigation so this means the funding is not only necessary but it also must come quickly. With a limited time period to deliver a response that better safeguards lives, and to reduce impacts to homes and public infrastructure, local leadership is forced to weigh the breadth of their response against their limited budgets unless federal resources are available immediately.

Furthermore, exigency funding through FEMA may provide a further benefit to the federal government by reducing costs for recovery in areas covered by the National Flood Insurance Program (NFIP) if the threatened area is also a FEMA Special Flood Hazard Area or is qualified to receive the exemption from the NFIP 30-day waiting period for flood insurance activation (exemption is enacted if the wildfire occurs on

¹⁰ <https://www.azcentral.com/story/news/local/arizona-weather/2021/09/12/flagstaff-addresses-flood-damage-after-record-rains-museum-fire-burn-scar/5622981001/>

¹¹ <https://apnews.com/article/climate-floods-wildfires-science-california-0b3fa035ca7b2dbf47ffc84919c0c4ac>

federal land). The Museum Flood Area was a designated 500-year floodplain under FEMA's NFIP.

Pipeline Fire

The County had endured two more major wildfires—the Magnum Fire in 2020 and the Rafael Fire in 2021, before the 2022 Pipeline Fire reburned much of the Schultz Fire scar as well as new areas. As soon as we saw the Pipeline Fire's path, we knew that the flooding was coming. The initial flood modeling conducted as the wildfire was being contained found that post-wildfire flood flows had increased from 10 to 26 times more than the pre-wildfire condition.¹² The District created short-term flood mitigation plans for over 1,000 homes and produced and deployed over a million sandbags and placed over 4 miles of concrete barrier to mitigate flood impacts to those homes while also preparing its existing flood infrastructure (constructed post-Schultz Fire) for massive flooding. Some of the cost of the short-term flood mitigation was reimbursed by the NRCS EWP Exigency Program, but none of the infrastructure preparation costs qualified for any reimbursement. Not only that, but the \$9 million in response and short-term flood mitigation measures we were able to deploy were not enough.

During the summer of 2022, monsoon rains caused 45 major post-wildfire flood events.¹³ These events included 13 separate closures of U.S. Highway 89, a vital interstate travel corridor, destruction of a major municipal water line serving Flagstaff, substantial damage to Forest Service and County-maintained roads, and devastating impacts to private properties and other public infrastructure.

Because of our prior experience with post-wildfire flooding, the District also immediately began to develop a plan for long-term flood mitigation while we braced for continuing flood impacts that summer. On August 17, 2022, the District, with leadership provided by Senators Sinema and Kelly and former Congressman O'Halleran held a federal agency summit to present our long-term flood mitigation plan with the goal of securing upwards of \$120 million in federal, state and District funding to support that plan.

Although the flooding of summer 2022 had exhausted the District's flood-related budget and drained over \$15.5 million from the County's General Fund, the District, again thanks to the support of Senators Sinema and Kelly and Congressman O'Halleran secured through the December 2023 Omnibus bill a little over \$90 million in federal disaster-related funding through USDA¹⁴ (U.S. Forest Service and NRCS), which includes the District's match of about \$11 million. The NRCS EWP funding was a small

¹² https://azdailysun.com/news/local/models-show-pipeline-fire-significantly-increased-flood-risks-across-flagstaff-area/article_458950f0-f8b3-11ec-82f7-8f54685bf9b2.html

¹³ <https://www.azcentral.com/story/news/local/arizona-weather/2022/08/17/flagstaffs-pipeline-east-hit-more-flash-flooding-aid-expected/10352188002/>

¹⁴ https://azdailysun.com/news/local/coconino-county-is-set-to-receive-90-million-for-flood-control-will-it-be-enough/article_190758be-9378-11ed-a99d-3f5483ec1054.html

portion of a \$940 million element of the Omnibus bill funding disaster support across the country and the Forest Service Disaster Relief funding was part of a \$150 million to address disasters primarily in Arizona and New Mexico. The District's match is being funded through a Arizona Department of Forestry and Fire Management grant program that expired last year. To date, we have constructed over \$44 million of post-wildfire flood mitigation (completed mitigation in six of nine watersheds and their downstream neighborhoods) and watershed restoration in less than a year from receiving the funding with more construction to come this year.

This investment will bring a tremendous reduction in threat to lives and the likely economic impact for decades given it will take decades for the nine watersheds largely destroyed by the Pipeline Fire to recover. If this flood mitigation had to be solely funded by the District, then it would have taken likely decades to accomplish without the federal funding...once again federal funding is crucial for addressing wildfires taking place on federal land.

When designing and constructing our flood mitigation systems, we are routinely constrained by financial limitations. Again, many counties, Tribes and other smaller local jurisdictions do not have the capacity to orchestrate the response, planning and implementation needed to support economic, environmental, and social recovery, much as we have seen in New Mexico and many other wildfire ravaged areas.

Congressional Action Needed...

Protect taxpayer investments by ensuring that FEMA funds can be applied to infrastructure improvements, not just 'in-kind' replacements – Commission Recommendation 79

In Coconino County, we have seen wildfire-impacted watersheds discharge up to 26 times more floodwater than they did in pre-wildfire conditions. This is in part why post-wildfire flooding commonly overwhelms and destroys existing drainage infrastructure, which ultimately fails to avoid costs and losses resulting from post-fire flood and debris flow impacts.

Because post-wildfire flooding reflects a changed condition of a watershed, any repairs or replacements of infrastructure must also reflect this changed condition, at least to some reasonable extent. However, at present, FEMA Public Assistance funding is only applicable to 'in-kind' replacements of pre-existing infrastructure. This is an ineffective and costly oversight. Under this policy, the cycle of destruction and reconstruction will continue for many, many years. For example, the Pipeline Fire created much larger flood flows to an area that had received significant flood mitigation only seven to nine years prior. Even if we had met the current threshold to qualify for Public Assistance (which we would have if not for the issue of cascading events), FEMA could only financially support restoring the mitigation to the existing design.

Further Considerations for Improving Recovery from Wildfires

I also encourage the Department of Homeland Security to work with the FEMA to expand existing Categorical Exclusion N12 to include activities associated with post-wildfire soil stabilization and erosion control measures and/or work with FEMA to create a new categorical exclusion that addresses post-wildfire soil stabilization and erosion control measures, as such measures are critical to reducing the impact of flood sediment and debris on public and private property. **This proposal was articulated in the Commission's Recommendation 81.** Coconino County believes that by creating regulatory changes such as the one noted above provides other jurisdictions with the opportunity to employ our County's immensely successful post-wildfire flooding strategy that employs watershed restoration/sediment reduction measures integrated with downstream flood mitigation measures on both public and private lands.

Congress should look for opportunities to incentivize investments from other levels of government that will reduce the risk of wildfire and help ensure dedicated resources for wildfire and post-wildfire response and mitigation. This should include incentives for local, state, and Tribal governments to build capacity for wildfire resiliency, as well as incentives to maintain dedicated revenue streams for wildfire response and recovery. This could also include expanding the number of BRIC grants aimed at community wildfire risk reduction measures. Incentivizing investments from local and state government entities into wildfire resiliency, wildfire risk reduction, and response measures is called out in the **Commission's Recommendations No. 134 & 68.**

In Coconino County, we have become adept at navigating the difficult and time intensive process of securing aid to address post-wildfire flooding. Fortunately, we have capacity, hard-earned experience, and we have developed systems and relationships that allow us to mobilize mitigation as quickly as possible. But this is not the case for other areas impacted by wildfire and post-wildfire flooding. In our neighboring state of New Mexico, where the Hermits Peak/Calf Canyon Fire burned nearly 350,000 acres at the same time as our Pipeline Fire, there has been limited ability to implement post-wildfire flood mitigation. There are many reasons for this sad situation, from the lack of authority and capacity at the local level, to the lack of effective coordination of federal resources.

Building Wildfire Resiliency

Forest Restoration on Federal Lands & Within Communities

Given our County's experience with wildfires and post-wildfire funding, our Board of Supervisors identified these events as the County's most critical threats to public safety and initiated a Forest Restoration Initiative in 2018 with the goal of interrupting the cycle of wildfire and post-wildfire flooding. The focus on our investments, totaling over \$13 million to date is targeting forest restoration projects where the District has documented

significant downstream values at risk and dramatic economic impacts from a catastrophic wildfire and post-wildfire flooding. The link to the District's Forest Restoration Initiative webpage is <https://www.coconino.az.gov/2083/Forest-Restoration>.

These projects have only been possible through partnerships with other funding entities including the U.S. Forest Service, Arizona Department of Forestry and Fire Management and the National Forest Foundation, and for upcoming targeted projects, The Nature Conservancy. While the BIL/IRA funding has significantly improved federal investments in the 21 priority landscapes, including the first and largest in Arizona, additional funding will be needed in Arizona and across the Western U.S. to reduce wildfire and post-wildfire flooding.

As forest restoration is progressing on federal lands, there remains wildfire threats emanating from within communities. I am glad to see that FEMA's BRIC and HMGP grant programs are beginning to focus on fuels reduction projects in communities, which will complement funding through the U.S. Forest Service's Community Wildfire Defense Grant program. However, streamlining FEMA's processes, particularly related to Environmental and Historical clearances, is greatly needed. For example, the County was awarded a HMPG grant for \$394,000 that was initiated in March 2020. To date, FEMA has not yet even completed the EHP, which the County offered to conduct through a qualified consultant but the offer was rejected. Although very grateful for the financial support, the completion of this process will likely take over five years, which is not satisfactory to the County and the community involved. The wildfire crisis in this country cannot continue to be dealt with as "business as usual."

Enhancing Development Policy & Building Codes to Enhance Wildfire Resiliency

There are many challenges inherent in regulating development and building construction codes at the local level. In the west you will hear a common refrain, "Code of the West," which translates to less government involvement in these policy areas is better than more. That said, the extraordinary costs and tremendous human toll of wildfires now takes these policy arenas are ripe for federal action, working in concert with entities like the National Association of Counties, Fire District Associations, the League of Cities and others to move forward with a regulatory framework as was articulated in the **Commission's Recommendation 6**.

Conclusion

Chairman Peters, Ranking Member Paul, and distinguished Members of the Committee, thank you again for the opportunity to provide testimony related the Wildfire Crisis in the United States. Wildfire and post-wildfire flooding represent a crisis that is expanding across the United States and that requires a robust, unified response from all levels of government. I applaud you for holding this hearing and I remain committed to supporting Congress with making the necessary changes to improve wildfire mitigation, response and recovery.



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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 currie@cga.gov

March 14, 2024

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.¹ 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

¹Wildland 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.²

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.³ 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.⁴

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.⁵ 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

²See 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.

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

⁴Wildland 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.

⁵GAO, *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 large-scale 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 2023.⁶ 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.⁷ These include recommendations to improve agency coordination and address fragmentation in federal wildfire efforts. As of March 2024, five of these

⁶GAO, *Disaster Recovery: Actions Needed to Improve the Federal Approach*, [GAO-23-104958](#) (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).

⁷Priority 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.⁸ 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.

⁸GAO-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 9,⁹ which includes Hawaii, also anticipated challenges in obtaining homeowners' permission to enter private property

⁹FEMA consists of 10 regions in the continental United States and territories.

Post-Disaster Housing

to conduct debris removal.¹⁰ 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.¹¹ 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.¹² We will continue to explore these issues in our ongoing work.

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

¹⁰Per 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.

¹¹See 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).

¹²Wildland 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).

¹³[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.¹⁴ According to FEMA's press release, among the planned updates are two new benefits to provide funding directly to survivors:

1. 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.¹⁵
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

¹⁴FEMA, *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.

¹⁵This 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.¹⁶ The Wildland Fire Mitigation and Management Commission reported similar barriers.¹⁷

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.¹⁸

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.

¹⁶GAO-23-105517. We did not make recommendations to any of the agencies described in this report.

¹⁷Wildland Fire Mitigation and Management Commission, *On Fire: The Report of the Wildland Fire Mitigation and Management Commission*.

¹⁸GAO-23-105517.

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.¹⁹ 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.²⁰ The act authorized funding for the wildland firefighter provisions under the act, including those related to salary increases, for fiscal years 2022 through 2026.²¹

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

¹⁹The 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).

²⁰Pub. 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.

²¹The 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.²² 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.²³

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.²⁴ 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.

²²Wildland Fire Mitigation and Management Commission, *On Fire: The Report of the Wildland Fire Mitigation and Management Commission*, 157.

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

²⁴The 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.²⁵ 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.²⁶ 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."²⁷

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

²⁵GAO-23-104723.

²⁶For 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).

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

Federal Approach to Disaster Recovery

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.²⁸

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.²⁹ 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.³⁰ 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 post-wildfire activities across federal agencies, stating that “the current level of fragmentation has left significant gaps and unmet needs and lacks

²⁸As of March 2024, four of the six recommendations we made in this report have been partially addressed. See [GAO-23-104723](#).

²⁹[GAO-23-104956](#).

³⁰This 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 [...].”³¹ 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

³¹Wildland 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.³² 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.

³²We 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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TESTIMONY OF RICHARD T. BISSEN, JR., MAYOR, COUNTY OF MAUI
BEFORE THE COMMITTEE ON HOMELAND SECURITY AND GOVERNMENT AFFAIRS,
U.S. SENATE,
ON THE FEDERAL RESPONSE TO THE MAUI WILDFIRES IN AUGUST 2023

MARCH 12, 2024

Chair Peters, Ranking Member Paul, and members of the Committee, I appreciate the opportunity to provide comment on the response provided by federal agencies in support of the people of the County of Maui after the devastating wildfires of August, 2023.

OVERVIEW

Following what we now know to be the deadliest wildfire in the U.S. in over 100 years, the County of Maui has received significant aid from numerous Federal agencies, including: the Federal Emergency Management Agency (FEMA), the U.S. Army Corps of Engineers (USACE), the Environmental Protection Agency (EPA), the Small Business Administration (SBA), the U.S. Coast Guard (USCG), the Dept. of Housing and Urban Development (HUD), the Dept. of Health and Human Services (HHS), the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), the Center for Disease Control (CDC), the National Institute for Occupational Safety and Health (NIOSH) and the Administration for Strategic Preparedness and Response (ASPR).

Throughout the disaster response, this aid has been critical to the County's ability to provide care for its people, including the thousands of visitors who were on-island during and immediately after the fires, and residents – 101 of whom perished as a result of this tragic event.

The responding agencies provided a tremendous support to the County's efforts to immediately conduct search and rescue, stand up an emergency morgue, and begin to assess the overwhelming needs for water, food and shelter even as the fires were still being brought under control.

Every step thus far, Maui has been buoyed by the assistance received from its Federal partners, particularly FEMA, USACE, EPA and the SBA.

To date, more than \$339.1 million in federal assistance has been approved for 7,068 households. The value of personnel deployed to help on-island is also significant, and we are grateful for both the financial and in-kind support.

Specifically, the following is a synopsis of some of the highlights of our collaborative efforts, along with observations on some elements that with attention, can serve as opportunities for improved coordination and efficiencies for future incidents in Hawai'i and beyond.

BACKGROUND

Complexities

Numerous personnel responding to the Maui Wildfire Disaster have described it as the most complex disaster response ever supported by the Federal government. With numerous fires burning in Upcountry Maui and threatening South Maui, the Lahaina fire that became a raging inferno effectively cut off the West side of the island from access. Lahaina experienced a complete loss of communications, including 9-1-1 service, internet and cell phone connectivity, and it became necessary to share information via radio, flyers, and even flyover broadcasts by Civil Air Patrol planes.

As the winds relentlessly carried embers several miles a second, the fire spread in numerous directions simultaneously. Roadways became unsafe and an unknown number of individuals trapped in vehicles fled to the ocean to escape the flames. Some survivors endured long hours in the water, surrounded by toxic black smoke and explosions from burning vessels nearby.

Geographic isolation

Once West Maui was cut off from the rest of the island, supplies could not be delivered except by boat, helicopter, or plane until the roads were reopened for controlled access. The island's remote location in the middle of the Pacific has also impacted deliveries of resources from the West Coast and beyond, with the shortest plane trip being 5.5 hours and shipping timeframes ranging from six to nine days, depending on the port of origin.

A critical lack of housing

Pre-fire, housing availability was already limited at best. The lack of inventory has historically created higher than average rental and sale prices. The lack of available open lands, coupled with supply chain and delivery challenges, has created roadblocks for building affordable housing projects.

After the disaster, finding suitable housing for both survivors, visitors and deployed personnel was and remains a massive challenge. The most pressing issue currently is the high cost of rents for both survivors and non-survivors, due to the lack of available units and the inflated rents being paid by Federal agencies for those receiving housing assistance.

Natural hazards

Since the fires, our communities have faced the threats of rain and high winds, complicating relief and recovery efforts. The topography of Upcountry Maui also complicated fire suppression efforts, with deep, inaccessible gulches and thick plant material allowing fires to smolder underground undetected causing an ongoing threat for reignition.

Ash and Debris Removal

Post-fire, the County of Maui has been tasked with removing 400,000 tons of ash and debris from Lahaina. Having received exceptional support from federal partners in response to the 26

burned properties in Kula, efforts have now pivoted to Lahaina, where several thousand commercial and residential structures were lost to the fire.

The expedited construction of the Temporary Debris Site (TDS) at Olowalu was funded and facilitated by federal partners, and technical assistance being provided for the Permanent Debris Site (PDS) has also been instrumental in the County's ability to clear Lahaina of the astronomical amount of material for both recycling and disposal.

Facilities assistance

The expedited design and construction of the new King Kamehameha III Elementary School by USACE, in partnership with the State Dept. of Education, was exemplary and has helped students regain a sense of normalcy. The school features 38 buildings comprising 336 modular units, serving the 600 children affected by the loss of their school in Lahaina. The \$53.7 million construction contract was awarded to an 8(a) Native Hawaiian Organization; USACE was tasked with designing and overseeing the installation of the modular buildings for the temporary campus.

OBSERVATIONS

Personnel support

My department directors and staff have expressed their profound appreciation for the exceptional support we all have received from our federal partners. Their professionalism, courtesy, competence and dedication have been of tremendous help. They have demonstrated expertise in their respective fields, and an ability to navigate complex situations. Their willingness to pivot and find creative and effective solutions has been instrumental in overcoming obstacles and achieving our shared objectives. They have shown resilience and a willingness to go above and beyond to ensure the success of our collaborative efforts.

Relationship building

In light of the support we have received, I can say we have developed a sense of trust and camaraderie with responding personnel, especially those who have been deployed for longer periods of time. Their unwavering assistance has been of particular help to our Maui Emergency Management Agency (MEMA), with FEMA personnel supporting our under-staffed agency during a time of incredible stress. Their presence has made a tremendous difference in MEMA's ability to respond to the incident. While helping MEMA staff navigate challenging situations, they have been not only reliable partners, but also true friends. Their support has highlighted the importance of collaboration and mutual support in emergency management.

Cultural sensitivities

The decision to implement cultural sensitivity training for deployed personnel was a wise one, and has proven valuable for those navigating the unique cultural environment of Maui and Hawai'i. Having cultural monitors present at numerous phases of the response has also been

crucial to building trust with the community, as we are all concerned about preventing further cultural losses and preserving any significant items and structures that survived the fire.

Rigid Housing Policies

One of the general comments I have received from both County staff and survivors alike, is that Federal policies have been communicated and enforced as being relatively set in stone. Of particular note are the housing policies, which mandate that any minor 13 years and older must have their own room. For multi-generational households, which are very common in Hawai'i, this means that large homes are simply not available. Families caring for elders, while also raising young children and teens are often accustomed to shared bedrooms and even communal sleeping areas, which are culturally accepted and widely practiced. Dictating the number of bedrooms per household is a major limiting factor – beyond the already limited supply of housing units.

Also of note is the requirement for families to accept housing within a 40-mile range. While an everyday fact of life for many on the Continental U.S., traveling 40 miles on a relatively small island means a completely different community with lengthy daily commutes (often twice a day or more) of over an hour each way for work and/or school. Housing availability is indeed a factor in this policy requirement, however, as temporary housing units become available, it is my hope that more West Maui families can receive housing in West Maui.

NEEDS

Housing

I have heard from hundreds of survivors and families who have expressed their strong desire to remain in West Maui. I am asking for the continued support of our Federal partners to help make this a reality. The County of Maui, along with the State of Hawai'i, has requested 1,000 temporary housing units from FEMA. As a start, FEMA has committed to supplying 169 units in the proposed Kilohana project on 36 acres in Lahaina. The County requests that FEMA builds the remaining units as proposed in previous discussions with Governor Green, Mayor Bissen and our Federal delegation.

Continued funding support

Without the federal funding support, the County of Maui cannot meet the baseline needs of our residents. From housing assistance, critical infrastructure assessments and reconstruction, assistance for small businesses, and funding support for debris transport, storage and disposal, the County is dependent on outside funding to continue its recovery efforts while ensuring public health and safety. We are fully committed to examining every possible aspect of maximizing our tax revenues while cutting internal costs, but the continued need for Federal support is a reality. While we appreciate support for emergency short-term housing options, a preexisting shortage of housing units has only been exacerbated by the loss of homes due to the wildfires. Now, paired with the unintended displacement of local tenants due to rental rates inflation and already

displaced fire victims, we are in critical need of Federal support to increase capacity for long-term housing options to house fire victims.

Continued technical support

We continue to rely on our Federal partners for technical expertise in engineering, construction, investigations, mental health support, and host of operational functions. I ask that any contracts be renewed until such time as we are able to complete projects that have been receiving assistance.

RECOMMENDATIONS

Enhanced preparedness efforts

It would be advantageous to have Federal resources pre-positioned in Hawai'i to respond to disasters, and to have personnel trained to operate equipment readily available. Significant time was lost in responding to the disaster because resources had to be brought in from off-island.

One-year plan

Federal and State partners should consider developing a one-year response plan for emergency response. This so-called "Hawai'i Disaster Manual" would guide partners through the various stages of disaster response while taking into consideration Hawai'i's unique and challenging factors including its geographical isolation, limited on-island resources, shipping and delivery times, lack of housing and infrastructure and exposure to natural hazards. The islands' multi-cultural environment should also be considered in planning for housing, household needs, historical preservation and language assistance needs, among others.

Flexible policies

Cultural considerations should also be a part of policies currently being enacted, as mentioned above in the "Observations" section. Rigid, continental U.S. based policies do not always translate as anticipated, and local Federal leadership should be granted the authority to amend policy or make exceptions as needed.

ADA accommodations

ADA/disability access must be considered when offering housing options. I have been notified that while ADA accommodations needed were clearly stated on housing application forms, access was not always considered when personnel were determining suitable housing options.

Deployments and transitions

Longer-term deployments of Federal personnel would contribute to a more efficient emergency response with fewer transitions, enhanced communications and better relationship-building.

Accountability and trust factors

Federal personnel making verbal statements should agree, when able, to put details in writing to guarantee accuracy. Some residents were told that Federal dollars would pay for the Lahaina fire ash and debris to be moved off-island for disposal, but that statement was later retracted once numerous individuals began to repeat that information. The misinformation has persisted for months, and caused issues with public trust and engagement.


CONCLUSION

Overall, the interactions between responding Federal agencies and the County of Maui have been strongly positive in nature, given the complexities involved and the overwhelming scope of the assistance that has been required. Going forward, these partnerships can be strategically developed to enhance the ongoing response and recovery, through detailed planning, applying flexibility and transparency to policy decisions, continued communication and unwavering accountability.

For those who survived the disastrous events of August 8th, their lives will never be the same. We also are painfully aware that 76 of our own County of Maui employees lost their homes in the fires, and many more lost loved ones and friends. Many residents are still grieving the losses of husbands, wives, children, family members, neighbors and longtime friends – and even an entire family that was lost in the Lahaina fire.

These are the individuals and families we continue to serve, with diligence and humility, and with the dedicated support of the Federal agency partners that have joined our efforts.

Mahalo nui loa.



Richard T. Bissen, Jr.
Mayor, County of Maui

Considerations of the Federal Agency Response to the Maui Wildfires of August, 2023	
Strengths	
Effective partnerships	Shared vision, objectives for recovery
Effective partnerships	Overall collaboration and mutual support have been instrumental in County's response and recovery efforts
Timely	Rapid / adequate deployment
Experience	Highly qualified SMEs, engineers, investigators
Responsive, professional	Extremely responsive personnel; professionalism
	Support of Federal partners was timely and greatly appreciated; exceeded County staff expectations
Caring	Personnel have been empathatic, caring
Cultural sensitivity	Cultural sensitivity training, cultural monitors
Adaptability	Personnel have adapted to numerous challenges, complex situations not previously encountered
	Personnel have come up with creative solutions to challenges not previously encountered
Rapport and Trust	Numerous long-term relationships have been established and have been instrumental in response and recovery efforts
Weaknesses	
Planning, resources	Lack of pre-positioned resources
Technical communications	Explanation of some requirements/details
Numerous transitions	Short-term deployments contribute to communication break-downs, additional County effort with each change in personnel
Continuity of communications	Change in personnel contributes to confusion when conflicting information is provided
Communication gaps	Some conflicting information between leadership and frontline personnel
Technical gaps	Families have had to re-submit details numerous times due to information not being updated in the system; ADA needs were not considered for Housing options
Accountability	Hesitancy to commit to agreements in writing has led to conflicting statements, lack of commitment in certain priorities
Opportunities	
Prevention efforts	Fire sensors being installed by the DHS Science and Technology Directorate and the U.S. Fire Administration.
Policy adaptability	More flexibility needed with Housing policies to consider cultural aspects of Hawaii families, communities
Streamlined process	One case worker assigned to help families better navigate the system, instead of numerous case workers

Policy adaptability	Hawaii families have different needs due to cultural differences; policy needs to be flexible to accommodate multi-generational living, geographical schooling and employment considerations
Threats	
Vulnerabilities	Fire caused complete loss of Comms incl. 9-1-1 service
Vulnerabilities	Geographic isolation caused delays in supply deliveries locally and from West Coast
Vulnerabilities	Natural hazard threats from rain, wind, high surf events
Uncertainties	Numerous unknowns in early days of response
Ongoing lack of resources	Very limited pre-fire housing inventory contributes to critical lack of housing for residents, agency workers;
Unattainable rent prices	Federally-supported rent assistance at high levels have exacerbated previously high rents; residents not receiving assistance cannot afford to rent.
Needs	
Housing	The County of Maui, along with the State of Hawai'i, has requested 1,000 temporary housing units from FEMA. As a start, FEMA has committed to supplying 169 units in the proposed Kilohana project on 36 acres in Lahaina. The County requests that FEMA builds the remaining units as proposed in previous discussions with Governor Green, Mayor Bissen and our Federal delegation. Additionally, while we appreciate support for emergency short-term housing options, a preexisting shortage of housing units has only been exacerbated by the loss of homes due to the wildfires. Now, paired with the unintended displacement of local tenants due to FEMA rental rates inflation and already displaced fire victims, we are in critical need of Federal support to increase capacity for long-term housing options to house fire victims.
Continued Funding Support	Without the federal funding support, the County of Maui cannot meet the baseline needs of our residents. From housing assistance, critical infrastructure assessments and reconstruction, assistance for small businesses, and funding support for debris transport, storage and disposal, the County is dependent on outside funding to continue its recovery efforts while ensuring public health and safety. We are fully committed to examining every possible aspect of maximizing our tax revenues while cutting internal costs, but the continued need for Federal support is our grim reality.
Continued Technical Support	We continue to rely on our Federal partners for technical expertise in engineering, construction, investigations, mental health support, and host of operational functions. I ask that any contracts be renewed until such time as we are able to complete projects for which we have been receiving assistance.

Council for Native Hawaiian Advancement
91-1270 Kīnoiki St., Bldg. 1
Kapolei, HI 96707

United States Senate Committee on Homeland Security and Government Affairs
Testimony Regarding the Relief, Rebuild, and Recovery Efforts After the Maui Wildfire

February 28, 2024

Chair Peters, Ranking Member Paul, and esteemed members of the Committee,

Aloha. Thank you for this opportunity to address the Committee and share our experiences and insights regarding the relief, rebuild, and recovery efforts following the devastating Maui wildfire that began on August 8, 2023.

The Impact of the Maui Wildfire

The wildfires that ravaged more than 2,500 acres of Maui resulted in profound devastation, claiming lives, displacing thousands, and leaving countless others without homes or livelihoods. The destruction struck the heart of our communities, particularly in Lahaina, a place rich in history and significance for many of us.

In the immediate aftermath, our community rallied together, demonstrating incredible resilience and solidarity. Despite the acute grief, there was a determination to support one another through the crisis. Community-run resource hubs sprang up, facilitating the distribution of supplies, while fundraisers garnered widespread support. However, as federal assistance arrived, cultural incompetencies and bureaucratic challenges hindered the recovery process, exacerbating the difficulties faced by survivors.

What is becoming noticeably clear is that the County of Maui's economy has been decimated, and the State of Hawai'i could face a similar outcome without immediate preventative action from the federal government.

While we are grateful for the support provided by FEMA, the American Red Cross, and other organizations, significant challenges persist.

Seven months have passed since the devastating disaster struck Lahaina, and 1,800 displaced households remain in Non-Congregate Shelters, unable to secure stable housing as Lahaina is cleaned and rebuilt. Our best projections indicate that Lahaina will not significantly come online for at least five years.

There are no affordable, dignified housing options for displaced families. The housing crisis in Hawai'i, compounded by the wildfire's impact, demands immediate attention and multi-faceted solutions.

The FEMA direct leasing program has been critical to providing a degree of housing relief for Lahaina families, but in the process has inflated the rental market and tied up the already scarce supply of housing units for the rest of the Maui population. FEMA's direct lease program is currently paying up to 300% of the Fair Market Rent to Short-Term and Long-Term Rentals, or \$5,000 a month for a one-bedroom, \$7,000 for a two-bedroom, and \$9,000 for a three-bedroom.

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NATIVE HAWAIIAN
ADVANCEMENT**

FEMA resources should be directed towards providing longer-term housing options for displaced residents, or at least assisting the county and state with addressing the lack of infrastructure needed to build these longer-term housing options. Bottom line, FEMA should be helping to build new temporary dwelling units to minimize adverse impacts that their current programming is having on the rest of Maui.

We are also still dealing with the difficulties of trudging through bureaucracy. For example, additional living expenses (ALE) and loss of use (LOU) insurance benefits can be used for any expense, but FEMA has only been qualifying these as rental and mortgage assistance. Additionally, both the FEMA Direct Lease and Continued Temporary Housing Assistance (CTHA) recertification processes are too cumbersome and confusing for survivors who have already been dealing with a barrage of forms on top of their enduring grief. Even this many months into disaster recovery, survivors are still having trouble navigating through all of the different programs.

Early reports indicate that over 1,500 families have already left Maui County, and we expect even more to leave if adequate measures are not taken. The outmigration crisis is worsening and the first step to prevent further displacement is to create more available, affordable housing.

Over the next few months, our community faces critical deadlines for existing disaster relief programs, underscoring the urgent need for swift action to address infrastructure rebuilding and provide sustainable housing solutions. Specifically, the looming end date of April 10, 2024, for the Non-Congregate Sheltering Program is of paramount concern, as it currently accommodates 1,765 households.

While FEMA has taken steps to mitigate the housing crisis by securing approximately 1,500 units through its direct leasing program, the future of this initiative remains uncertain as FEMA's term is set to conclude February 2025 (CTHA) and February 2026 (Direct Lease), far before Lahaina's ability to fully repopulate. Compounding this uncertainty is the fact that FEMA has qualified fewer than 1,000 households for participation in the program, leaving a significant portion of our community with limited housing options in the face of an inflated rental market.

This impending deadline underscores the immediate need for robust and sustainable housing solutions. Without decisive action, thousands of families risk displacement and further exacerbation of the already dire housing crisis. As such, it is imperative that federal agencies, in collaboration with local authorities and community organizations, expedite efforts to secure long-term housing options and provide the necessary resources to rebuild our infrastructure. Only through concerted and timely action can we ensure the well-being and stability of our community in the wake of this devastating disaster.

Snapshot Data:

Displaced Households as of 8/8/2023: **6,265**
 Displaced Households still on Maui as of 2/1/2024: **4,255**
 Lost population: 2,010 (1,500 believed to have moved away)
 Households still in Non-Congregate Shelter as of 2/21/2024: **1,765**
 (264 Households are ineligible for FEMA or insurance assistance)

**COUNCIL for
NATIVE HAWAIIAN
ADVANCEMENT**

Call to Action

To address these challenges effectively, we call upon the Committee and the federal government to:

- **Expedite Assistance:** Ensure that federal disaster assistance is provided swiftly and efficiently, recognizing the urgency of the situation and the time-sensitive nature of recovery efforts.
- **Prioritize Housing Solutions:** Allocate resources towards the development of affordable, sustainable housing options, particularly in West Maui, where the need is most acute.
- **Enhance Cultural Competency:** Improve training and cultural awareness among federal agencies to better serve the unique needs of communities like ours in Hawai'i.
- **Streamline Programs:** Simplify and coordinate disaster relief programs to reduce administrative burdens on survivors and ensure equitable access to assistance.

Conclusion

In closing, while the road to recovery may be long, we remain steadfast in our commitment to rebuilding our communities stronger than ever. We are incredibly grateful to the Federal Emergency Management Agency (FEMA), American Red Cross, and the countless other organizations who have worked tirelessly to help us rebuild, but there is still an enormous amount of work to be done.

Families need to be housed and the rental market must be controlled. Difficult conversations must be had about economic futures, diversifying industries, and developing the local workforce. Significant amounts of care ought to be given to the sustainability, prosperity, and intentionality of rebuilding efforts. We have a long road ahead of us, but it is a road we will travel together. 'A'ole hana nui ke alu 'ia. No task is too big when done together by all.

Mahalo nui loa for your attention and consideration.



Kūhiō Lewis
Chief Executive Officer
Council for Native Hawaiian Advancement

About CNHA:

The Council for Native Hawaiian Advancement (CNHA) is a member-based 501(c)(3) non-profit organization dedicated to advancing the cultural, economic, political, and community development of Native Hawaiians and Hawai'i as a whole.



Statement of David A. Sampson, President & CEO
of the American Property Casualty Insurance Association,
and Member of the Wildland Fire Mitigation
and Management Commission

Senate Homeland Security and Governmental Affairs
Committee Hearing

A Nation on Fire: Responding to the Increasing Wildfire Threat

March 14, 2024

**Statement of David A. Sampson, President & CEO
of the American Property Casualty Insurance Association, and Member
of the Wildland Fire Mitigation and Management Commission**

Senate Homeland Security and Governmental Affairs Committee Hearing

A Nation on Fire: Responding to the Increasing Wildfire Threat

Chairman Peters and Ranking Member Paul, thank you for holding today's hearing to examine the nation's increasing wildfire threat. Wildfire events impacting communities have grown in severity and number over the past several years, and this hearing provides an opportunity to hear directly from various members of the Wildland Fire Mitigation and Management Commission (Commission), representing federal, state, and local perspectives, on ways to reduce the risk of catastrophic wildfires in the U.S. and help communities become more resilient in their aftermath.

I would also like to share my perspective as a member of the Commission, representing the property development industry seat. It has been an honor to work with the diverse, bipartisan group of Commission members to develop policy recommendations to Congress - to better mitigate, manage, and recover from wildfires. I am also the president and CEO of the American Property Casualty Insurance Association (APCIA).¹

Property casualty insurers have long been engaged in ongoing efforts to prevent and reduce devastation from natural catastrophes, including wildfires. Further, property casualty insurers are on the frontlines working to help individuals, families, homeowners, businesses, and governments identify and reduce their wildfire risk, promote preparedness, and assist in post-disaster recovery. This includes the creation and funding of research-focused organizations like the Insurance Institute for Business & Home Safety (IBHS). IBHS is a leader in the development of evidence-based solutions to effectively reduce wildfire risk and other harm to communities. The IBHS Wildfire Prepared Home program² is a voluntary designation program initially launched in California that provides homeowners with scientifically proven steps they can take to protect their home. The program shows homeowners how they can significantly reduce the risk of ignition from embers, direct flames and radiant heat by establishing a critical 5-foot noncombustible zone around their home, through modifications to the home and maintaining defensible space.

While there are many natural causes of wildfires, such as lightning strikes, humans caused 87 percent of wildfire ignitions in the U.S. over the last decade as more people live and recreate in areas prone to wildfires.³ Increasingly, many regions in the U.S. are experiencing evolving man-made and natural environmental conditions that are making them more prone to burn.

¹ APCIA represents the broadest cross-section of home, auto, and business insurers of any national trade association. APCIA members represent all sizes, structures, and regions, protecting families, communities, and businesses in the U.S. and across the globe.

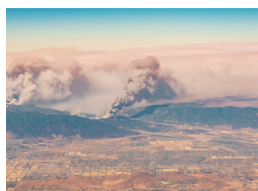
² <https://wildfireprepared.org/>.

³ <https://www.nifc.gov/fire-information/fire-prevention-education-mitigation/wildfire-investigation>.

For example, federal and state policies that have allowed declines in forest health further contribute to increased wildfire risk, while local land use policies have allowed substantial community development and population migration in the wildland urban interface (WUI) – an area where the built environment meets or intermingles with nature. The collective impacts of such policies have put a growing number of communities directly in harm's way.⁴

Separately, the intensifying impacts from climate change and drought are enabling fires to ignite more easily and spread more rapidly, resulting in more catastrophic losses as ember storms consume entire communities in mere hours. Wildfire seasons are longer and more intense, particularly in the West. Many parts of the East, which has nearly 28 million homes located in zones prone to burn, have seen smaller but impactful increases in fire weather putting more people at risk.⁵

As a result, the U.S. is increasingly experiencing unprecedented economic and insured losses due to wildfire. For example, global insured wildfire losses in the last decade were more than five times higher than prior decades, largely driven by the wildfires in California.⁶ Since 2017, U.S. insurers have experienced 8 of the top 10 costliest insured wildfires ever, globally.⁷



The effects of warmer and drier conditions were demonstrated throughout the U.S. in 2023, resulting in increased fire risk.

In its 2023 National Overview,⁸ the National Centers for Environmental Information (NCEI) noted based on preliminary analysis, 2023 ranked as the fifth warmest year in the 129-year record. Most of the contiguous U.S. experienced above-average temperatures during 2023. Additionally, NCEI noted the contiguous U.S. average annual precipitation was 29.46 inches, 0.48 inch below average, ranking in the driest third of the 129-year record. According to the U.S. Drought Monitor (USDM), drought coverage across the contiguous U.S. remained significant for the third year in a row.

These abnormally warm and dry conditions contributed to devastating wildfires in multiple states in 2023 which are not typically accustomed to such events, including in North Carolina, Tennessee, Georgia,⁹ and the tragic fires of Maui. Record wildfires in Canada further resulted in extremely smoky conditions blanketing northeastern states for extended periods, causing air quality to plummet to “very dangerous” or “hazardous” levels for the first time in some regions.¹⁰ Following an abnormally warm winter in Texas,¹¹ these very conditions have resulted in Texas currently battling the state's largest wildfire on record.

⁴ Increasing Wildfire Risk in the Wild, Wild West (Nov 2022) at <https://www.apci.org/attachment/static/7103/>.

⁵ <https://www.climatecentral.org/climate-matters/fire-weather-2023>.

⁶ Swiss Re Institute.

⁷ Aon Climate & Catastrophe Insight.

⁸ <https://www.ncei.noaa.gov/access/monitoring/monthly-report/national/202313>.

⁹ <https://www.foxweather.com/weather-news/nc-popular-drive-fire-forest>.

¹⁰ <https://www.cnn.com/2023/09/17/us/air-quality-wildfire-pollution-allergy-dg/index.html>.

¹¹ <https://www.texasmonthly.com/news-politics/texas-warm-el-nino-winter/>.



To protect communities across the U.S. and prevent conflagration-scale devastation, mitigation in the built and natural environment is critical. A holistic approach is needed to combat this significant long-term challenge.

The Commission's final report¹² contains several important takeaways for policymakers. The first is that we must shift our overall approach to wildfires from reactive to proactive, which includes investing in "proactive planning, mitigation, risk reduction, and the workforce needed to accomplish these tasks" to break the current cycle of increasingly severe wildfire risk, damage, and loss.¹³ The report highlights the critical need to improve federal policies at every stage of the wildfire cycle — before, during, and after fire — to reduce the risk of catastrophic wildfires and the harmful impacts to communities and the environment. This includes better integration of technology, data, tools, and ensuring workforce and capacity. However, among the most important takeaways, and essential connection for policymakers, is that actions taken to reduce risk "must encompass both the built and natural environment."¹⁴

Adapting communities to be more resilient to wildfire is imperative. Conflagration-scale loss events occur when the speed of fire overwhelms the capacity and response time of our fire suppression resources, limiting their ability to extinguish or steer the fire away from the community. Data from CAL FIRE shows over 90 percent of homes that have ignited in a California wildfire between 2014 to 2022 were destroyed.¹⁵ Under such extreme fire conditions, only mitigated properties can slow this progression, by eliminating fuel sources and pathways that enable the rapid spread of fire within communities. Thus, solutions must focus on ways to slow the spread of fire and prevent transition from the natural environment into the built environment where conflagration may occur. This is critical to preventing loss of life and property and is also crucial in reducing harmful environmental contaminants.

The Commission developed recommendations to drive mitigation within the built environment, including promoting improvements to land-use planning, building codes, and defensible space. The report emphasizes mitigation in the 0 to 5 feet areas surrounding a structure (i.e., Zone O), and further highlights IBHS Wildfire Prepared Home and Firewise USA as key programs to help reduce parcel and community-scale wildfire risk. Recommendations also focused on continued investments to support hardening utility infrastructure, which the insurance industry supports as a growing number of utility-involved ignitions across multiple western states during high wind events are resulting in the costliest and deadliest losses in history. If adopted and implemented, these measures can help save lives and protect communities from immediate and long-lasting impacts.

¹² <https://www.usda.gov/sites/default/files/documents/wfmmc-final-report-092023-508.pdf>.

¹³ <https://www.usda.gov/sites/default/files/documents/wfmmc-final-report-092023-508.pdf>.

¹⁴ *Ibid.*

¹⁵ https://ibhs.org/wp-content/uploads/Suburban_Wildfire_Conflagration_WhitePaper.pdf.

The Commission also identified policy recommendations to reduce risk in the natural environment such as removing excess fuel loads and restoring beneficial fire to the landscape in a safe manner. Increasing the use of beneficial fire is viewed by many as one of the most impactful and necessary solutions for reducing wildfire risk in the natural environment. Though, in putting more fire on the landscape, this may present unique challenges for communities to manage public health concerns related to smoke, though is critical to reducing more harmful and toxic smoke impacts from urban conflagration. The report also highlights the need to better manage fine fuels that ignite easily (e.g., grasses and shrubs), such as through expanding the use of grazing and other tools that can play a critical role in reducing fast moving fires. These recommendations are important to restore balance in the natural environment and reduce the risk of catastrophic fires.

In addition to mitigation for the built and natural environment, the Commission also identified several recommendations that should be implemented to improve wildfire response and recovery. Among the many unique challenges of wildfire is the sudden occurrence and erratic behavior of fire, which can create challenges for officials in timely communication with those located in affected areas. Separately, the devastating environmental effects of high intensity wildfires can result in unique and often time sensitive challenges in remediating affected regions and preventing secondary losses, such as post-fire flooding. These are challenges that property insurers are closely working with federal, state, and local officials to address, and are among the many issues that were carefully and thoughtfully deliberated by Commission members to identify comprehensive solutions.

The Commission's final report includes 148 consensus-based recommendations. Below are some selected recommendations within each fire stage — before, during, and after — to illustrate the comprehensive approach taken by the Commission.

BEFORE FIRE — REDUCING WILDFIRE RISK:

NATURAL ENVIRONMENT

- **PRIORITIZE AND INVEST IN FUEL REDUCTION TREATMENTS** — Invest in and make fuel reduction planning more effective and efficient; change the system of land management agency performance metrics beyond acres treated to actual risk reduced.

[See Report Recommendation(s): 17, 33, 147]

- **FACILITATE PRESCRIBED BURNING** — (1) Direct Federal agencies develop a strategic plan for the implementation of prescribed fire at a national scale and clarify the extent to which non-federal partners in this plan have Federal Tort Claims Act protection when burning on federal lands. (2) Create a compensation or claims fund for burn damages to third parties that can

quickly provide financial relief in instances of escape – also examine whether Farm Service Agency and Natural Resources Conservation Service programs can be used to compensate producers for forage losses due to the use of beneficial fire. (3) Direct EPA, DOI and USDA to work together to expeditiously evaluate current federal regulations (such as the exceptional events pathway) around the treatment of smoke from wildland fire in air quality management programs with the intent of ensuring the programs can accommodate increased use of beneficial fire. *[See Report Recommendation(s): 10, 11, 12, 42, 59]*

- **FACILITATE MECHANICAL THINNING TREATMENTS** — Invest in wood processing facilities and the wood utilization sector as well as programs to help private landowners dispose of woody biomass. Incentivize pilot projects for biofuels and biomass utilization technologies as well as the adoption of new technologies and processing systems to produce value added, and demand-driven innovative wood products. *[See Report Recommendation(s): 19, 20, 21, 27]*

- **FACILITATE FINE FUELS REDUCTION** — Manage fine fuels and shrubs through the expanded use of flexible, targeted grazing and develop new, nimble ways to apply targeted, off-season grazing to treat invasive annual grasses. *[See Report Recommendation(s): 22, 23]*

- **ACCELERATE HAZARDOUS FUELS REDUCTION** — Reduce red tape and accelerate funding to more quickly address hazardous fuels by expanding hazardous fuels authorizations by predetermined amounts above appropriations. *[See Report Recommendation(s): 25]*

BUILT ENVIRONMENT

- **COMMUNITY WILDFIRE RISK REDUCTION PROGRAM** — Establish an interagency coordinating partnership to reduce program friction and create greater alignment and support to proactively address wildfire risk reduction actions and increase ignition resistance of the built environment. *[See Report Recommendation(s): 1]*
- **UPDATE EXISTING FEDERAL PROGRAMS TO INCLUDE WILDFIRE** — Integrate wildfire risk reduction measures and technical assistance into existing programs. *[See Report Recommendation(s): 2]*
- **IMPROVE HAZARD ASSESSMENTS** — Support data procurement and analytic systems to inform building codes/standards and promote ignition resistant construction and defensible space. Evaluate need to refine and/or expand state and national wildfire hazard datasets. *[See Report Recommendation(s): 4]*
- **IMPROVE HAZARD DISCLOSURES** — Require all-hazard risk disclosures for real estate transactions involving all federally backed mortgages. *[See Report Recommendation(s): 5]*

- **INCENTIVIZE COMMUNITY PREPARATION ACTIVITIES** — (1) Create incentives to encourage state, local, and Tribal governments to improve land use planning while increasing accessibility of federal grants for wildfire risk reduction efforts. (2) Incentivize innovation in affordable building material design, subdivision design, landscape architecture, and safe and sustainable building practices to create more ignition-resistant structures and communities. *[See Report Recommendation(s): 3, 6, 142]*
- **UTILITY HARDENING** — While continuing resilience investments in energy infrastructure systems, develop both federal standards for electric utility wildland fire mitigation plans and consistent rules and processes for wildfire management of federal rights-of-way. *[See Report Recommendation(s): 7, 8, 9]*

WORKFORCE, TECHNOLOGY & DATA

- **CREATE MITIGATION WORKFORCE** — Create and train a fire workforce primarily focused on restoration and mitigation, to include a Reservist Program to increase both planning and implementation capacity. *[See Report Recommendation(s): 55, 89, 93, 95]*
- **FIRE ENVIRONMENT CENTER** — Establish interagency joint office (Fire Environment Center) for comprehensive assessment and prediction of fire in the wildland and built environment interface to inform land and fuels management, community risk reduction, and fire management and response. *[See Report Recommendation(s): 104, 105, 106]*
- **EXPAND SHARED DATA** — Support data collaboration to advance modeling and to improve codes, standards, and ignition-resistant materials. *[See Report Recommendation(s): 107, 108]*
- **IMPROVE TOOLS** — Direct relevant agencies to adopt new and existing technologies to improve the mitigation and management of wildfire and establish more flexible means to work w private sector. *[See Report Recommendation(s): 117, 118]*

DURING FIRE — RESPOND:

- **SUPPORT THE FRONTLINE** — Increase wages and benefits for the federal wildland fire workforce and make permanent the Wildfire Suppression Operations Reserve Fund. *[See Report Recommendation(s): 84, 121]*
- **SMOKE MONITORING AND MITIGATION CAPABILITIES** — Invest in national monitoring and alert systems and public strategies to mitigate smoke impacts. *[See Report Recommendation(s): 43, 44]*
- **STREAMLINE EVACUATION PROTOCOLS** — Provide support for local entities to utilize the best available technology and develop consistent methods for evacuation, including incorporating a new national standard of evacuation terminology based on “Ready, Set, Go!” terminology. *[See Report Recommendation(s): 45, 46]*

AFTER FIRE — RECOVER:

- **SPEED-UP RECOVERY** — Increase the deployment speed of community mitigation and recovery funds for wildfires while also accelerating individual recovery and increasing flexible housing options. *[See Report Recommendation(s): 61, 71, 72, 73, 74]*
- **EXPAND RECOVERY** — Expand FEMA Public Assistance-eligible activities to cover downstream risks caused by wildfire and review/amend existing programs for barriers which prevent distribution of funds to mitigate impacts from higher flows as a result of wildfire. *[See Report Recommendation(s): 63, 79]*
- **FACILITATE RECOVERY** — Expand existing/create new Categorical Exclusion (N12) to include activities associated with post-wildfire soil stabilization and erosion control measures. *[See Report Recommendation(s): 81]*
- **TECHNICAL SUPPORT** — Increase funding and technical assistance to state, local, tribal, and territorial partners to manage post-fire recovery. For example, by amending the Stafford Act to allow Section 1206 funding for code enforcement for up to 24 months rather than the current 180 days. *[See Report Recommendation(s): 68, 70]*

Thank you for the opportunity to highlight the Commission's work and for your consideration of the recommendations. We stand ready to serve as a resource as the Committee works to advance wildfire solutions.

**Post-Hearing Questions for the Record
Submitted to Dr. Lori Moore-Merrell
From Senator Gary C. Peters**

**“A Nation on Fire: Responding to the Increasing Wildfire Threat”
March 14, 2024**

1. The Wildland Fire Mitigation and Management Commission’s 2023 report issued almost 150 recommendations aimed at improving how the federal government manages wildfires. A number of recommendations were directed toward FEMA’s activities. While some may require Congressional action, many can be implemented by FEMA through its own authority. Please provide the Committee with a list of the recommendations aimed at FEMA, broken down by those that require Congressional action and those that FEMA can implement independently. For the recommendations that FEMA can implement independently, please provide information on current actions FEMA is taking to implement them and projected timelines for completion.

Response: Please see attachment.

Chapter of the Commission Report	Recommendation number	Recommendation	Does FEMA currently have the authority? (yes/no)	If yes what action are you currently taking?	Timeline of the current action
Creating the Foundation for Success	1	Congress should establish a Community Wildfire Risk Reduction Program as an interagency coordinating partnership including the U.S. Forest Service, the U.S. Department of the Interior, the United States Fire Administration, the Office of Wildland Fire on behalf of the Department of the Interior's land management agencies, and the National Institute of Standards and Technology as principal agencies to coordinate research, development, and actions and increase ignition resistance of the built environment.	NO		
Creating the Foundation for Success	2	Integrate wildfire risk reduction measures and technical assistance into existing programs.	YES	Currently, wildfire risk reduction measures and technical assistance are eligible under HMGP, HMGP Post Fire, and BIC. For example, BIC is authorized to provide financial assistance for wildfire risk reduction measures and non-financial technical assistance (including for capacity-building related to wildfire risk reduction) to eligible communities. FEMA also has current programs that could potentially be leveraged for wildfire risk reduction, including FEMA's Emergency Management Performance Program, FEMA's Fire Management Program, and FEMA's National Fire Protection Administration's Fire and Emergency Response grants.	Ongoing
Creating the Foundation for Success	4	Provide dedicated funding to evaluate, build and maintain existing federal, state, and local wildfire hazard data sets and identify a use case to inform and, if necessary, support disaster preparedness.	YES/NO	FEMA is working within USFA's statutory authorities, existing funding and in collaboration with DHS S&T, to develop a new analytics platform that will de-silo existing data sets while aggregating near real time fire incident and response data from the field. The new platform is the National Emergency Response Information System (NERIS).	Ongoing
Protecting Public Health	43	Invest in existing and new community and individual preparedness efforts, infrastructure development, public communication and education, and wildfire risk reduction measures to protect communities, states, local, Tribal, and territorial levels to reduce smoke impacts to human health.	YES/NO	FEMA is working within USFA's statutory authorities and existing funding to advance community and individual preparedness efforts. FEMA also collaborates with USFA, DHS S&T, and other federal agencies to coordinate efforts to protect public health and human services (PHHS) in areas where climate and public health intersect.	Ongoing
Protecting Public Health	45	Local entities should be empowered and supported federally to utilize the best available technology to develop a consistent method or methods for evacuation.	YES	The US Fire Administration funded an expedition Round Table on January 21st and is in the process of developing new and improved processes and tools to improve consistency of implementation, outcomes and public safety during a wildfire evacuation.	2025
Responding to Fire	46	Congress should increase support for the U.S. Fire Administration to develop and implement a national standard of evacuation technology and product type per the Federal Emergency Management Agency's Common Alerting Protocol be established and utilized for fire purposes. This product should include the use of "Ready, Set, Go!" terminology and be supported with national communications products.	YES	The US Fire Administration hosted an evacuation Round Table on January 21st and is in the process of developing new and improved standards and tools to improve consistency in implementation of evacuation procedures during a wildfire evacuation.	phase 1 terminology standardization 2025, Messaging standardization 2025, Exercising operational implementation 2026.
Responding to Fire	54	Increase access to qualifications and training opportunities for all partners.	YES	FEMA is working within USFA's authorities and funding to increase access to qualifications and training for partners outside of the federal system."	Ongoing
Responding to Fire	56	Congress should increase support for the U.S. Fire Administration to provide training and support to local, Tribal, and territorial fire departments and communities to build community resilience, promote fire-adapted communities to build community resilience, and improve coordination with wildland fire management as a critical and necessary partner in wildfire risk reduction.	YES/NO	The U.S. Fire Administration (USFA) is well-positioned to provide non-federal firefighter training through its National Fire Academy under the USFA's current authorities. USFA also is positioned to expand its current community risk reduction education, messages, and tool development for direct community engagement.	Ongoing

						Funding for mitigation planning activities, including mitigation planning related activities to reduce the risk or impacts of wildfire, are eligible under HMGP, HWGP Post Fire and the BIC programs. HMA funds cannot be used across multiple grant programs or for purposes outside the scope of eligible mitigation-related activities without amending statutory authorities.	
Recovering for Resilience	67	Provide funding to local entities (e.g., community-based organizations, collaboratives, public utilities, watershed coalitions, fire departments and districts, tribes and local government) to proactively complete wildfire mitigation projects and/or wildfire risk reduction projects. Amend the Stafford Act to allow section 1336 funding for code enforcement for up to 24 months rather than the current 180 days.	YES/NO				
Recovering for Resilience	70	Establish a new grant program to fund local, state, Tribal, and territorial wildfire mitigation projects and/or wildfire risk reduction projects.	NO				
Recovering for Resilience	71	Establish a new grant program to fund local, state, Tribal, and territorial wildfire mitigation projects and/or wildfire risk reduction projects. Undertake pre-event planning, and support community readiness.	NO				
Recovering for Resilience	72	Enable more flexible use of existing disaster grant funding and expansion of agency authorities in order to increase local, state, Tribal and territorial wildfire mitigation projects and/or wildfire risk reduction projects. Implement post-disaster and permanent housing coalitions.	YES/NO			This recommendation correlates with State-Administered Direct Housing, which is a separate category of federal assistance with enhanced regulatory actions outside of the rule-making process.	
Recovering for Resilience	73	Establish a separate category of federal assistance with enhanced flexibilities for sheltering.	NO				
Recovering for Resilience	74	Utilize existing sources of mitigation funding to reduce future loss to housing resources and build community resiliency post-fire.	YES				Ongoing
Recovering for Resilience	81	Encourage the Department of Homeland Security to work with the Federal Emergency Management Agency to expand existing wildfire mitigation projects and/or wildfire risk reduction projects with FEMA to create a new categorical exclusion that addresses post wildfire soil stabilization and erosion control measure.	YES			FEMA supports the recommendation as a whole. Soil stabilization and erosion control are both already eligible project types under HMGP Post Fire. In fact, FEMA has already funded projects for soil stabilization and erosion control. However, N12 would have limited applicability under HMA grant programs in its current form.	Ongoing
Recovering for Resilience	83	Support emerging best practices and agency actions to improve planning, response, and collaboration in the post-fire period.	YES/NO			Funding for mitigation planning activities, including mitigation planning related activities to reduce the risk or impacts of wildfire, are eligible under HMGP, HWGP Post Fire and the BIC programs. HMA funds cannot be used across multiple grant programs or for purposes outside the scope of eligible mitigation-related activities without amending statutory authorities.	
Building a Comprehensive Workforce	98	Invest in existing and new research and development to improve and mitigate wildfire risk reduction and safety while operating in both the built and natural environment. Congress should establish an interagency joint office with dedicated and separate funding to fund the mission of comprehensive wildfire risk reduction and safety while operating in both the built and natural environment.	YES			USFA is working with DHS S&T and collaborating with the National Institute for Occupational Safety and Health (NIOSH) within HHS on firefighter exposure research, training, and education. USFA is also working on firefighter health awareness, resilience, and access to education resources.	Ongoing
Integrating Modern Science and Technology	104	Interface through data aggregation and science-based decision support services.	NO			USFA new data analytics platform NEDS will have the capability to aggregate data and perform science-based decision support through narrow AI and near real-time data processing. USFA will also be working on a new decision support risk index for the built environment to ensure that individuals can understand the risk of configuration in their communities.]	Ongoing
Integrating Modern Science and Technology	105	The fire environment sector should provide real-time, science based, and data-rich scientific and technical analytic services, decision support, and predictive services to inform land and fuels management, community risk reduction, and the management and response to wildfire events. This environment should shepherd the creation of a technological common operating environment for practitioners across the spectrum of risk mitigation, prescribed fire, response, and post disaster response. This environment should shepherd the creation of high-fidelity, dynamic, and real-time intelligence decision support tools.	NO			USFA new data analytics platform NEDS will have the capability required.	
Integrating Modern Science and Technology	106		NO				Ongoing

Integrating Modern Science and Technology	107	Wild management, wildland fire, and built environment data should be managed through a decentralized, integrated data and modeling collaboration environment.	NO	USFA is currently developing the National Emergency Response Information System (NERIS) a new interoperable fire information and innovative analytics platform that could be leveraged to support the recommendation.	Ongoing
Integrating Modern Science and Technology	109	Invest in existing and new data collection, data availability, advanced technologies, and research to support uses of beneficial fire while protecting human health and documenting emissions levels.	YES	USFA is working with DHS S&T on a project to deploy and complete testing of wildfire sensors S&T WUI Fire Operational Requirements and Capability Assessment (OWCA) and FEMA's Wildfire Mitigation Assessment (OWMA) on Maui.	Ongoing
Integrating Modern Science and Technology	114	Expand support for the development and application of scientific research into, and monitoring of, post-fire ecological recovery and compounding disturbances, especially for wildfires featuring large high severity areas and high potential for conversion to high severity areas of management interventions.	YES	FEMA's Mitigation Assessment Teams have completed the first ever post wildfire assessment after the Marshall Fire. Their research and observations, led to the development of recommendations for communities about not only adopting codes and standards to improve construction practices, but also shared recommendations for improving safety. FEMA's MAT is also in progress of completing a post fire report for the Lahaina, Maui wildfire.	First MAT Report Completed 2023 Currently working on Maui report.
Integrating Modern Science and Technology	118	The Commission found that numerous new and existing technologies could improve the mitigation and management of wildfire if adopted by the relevant entities	YES	USFA is working with DHS S&T on a variety of projects, including wildfire sensors, so as to improve wildfire safety. USFA is also working with FEMA on the Wildfire Mitigation Assessment (OWMA) that will provide communities with the information they need to improve wildfire safety and an app that improves the capabilities of incident commanders to identify the location of responders fighting wildfires or managing prescribed fire through GIS location data. USFA is also working with FEMA on the Wildfire Mitigation Assessment (OWMA) in a USFA Report of Findings Homeland Security (dhs.gov) along with other technological needs. USFA recently launched a new tool for community awareness of whether or not they live in the WUI - with potential ember cast if a wildfire occurs. USFA is also working with FEMA on the Wildfire Mitigation Assessment (OWMA) that will provide communities with the information they need to improve wildfire safety.	TAK and Wildfire Home Safety App Deployed 2023. Wildfire Sensors deployed in Hawaii 2024.
Investing for Tomorrow	122	Congress should fund budget offices to create "crosscut" to better track all federal wildfire spending and ensure that the US Forest Service, Emergency Management Agency have the resources necessary to support efforts to reduce wildfire risks to communities and the threat of urban configurations related to wildfire and provide post wildfire support.	NO	Congressional Action is not required to adopt a Cohesive Strategy which is limited to existing authorities.	
Investing for Tomorrow	129	Adapt the mission and goals of the Cohesive Strategy to the national framework for wildfire mitigation and management.	NO	The USFA serves as the DHS/FEMA rep on the Wildland Fire Leadership Council and provides leadership in collaborating with agency partners to determine goals, strategies and communication plans that will promote planning, preparedness, mitigation and recovery guidance to promote wildfire safety.	Publication of Cohesive Strategy Update in 2024, and ongoing support provided
Frameworks for the Future	135		YES	USFA is poised for direct community engagement through local fire departments across the nation.	Ongoing
Frameworks for the Future	136	The Wildland Fire Leadership Council should be considered custodian of the Cohesive Strategy, responsible for its evaluation and revision. The Council should also be responsible for ensuring that the Cohesive Strategy advances implementation of actions under all three goals of the Cohesive Strategy.	NO	Wildfire mitigation is eligible under HMAP, HMAP Post Fire, and BRIC. HMAP has also created wildfire-specific mitigation project application support materials including templates for specific types of wildfire mitigation (e.g., defensible space, fire resistant construction, fire safe landscaping, fire safe soil stabilization, etc.). USFA is also working with FEMA on the Wildfire Mitigation Assessment (OWMA) in a USFA Report of Findings Homeland Security (dhs.gov) along with other technological needs. USFA recently launched a new tool for community awareness of whether or not they live in the WUI - with potential ember cast if a wildfire occurs. USFA is also working with FEMA on the Wildfire Mitigation Assessment (OWMA) that will provide communities with the information they need to improve wildfire safety.	Ongoing
Frameworks for the Future	137		YES	USFA is poised for direct community engagement through local fire departments across the nation.	Ongoing
Frameworks for the Future	142	Increase accessibility of federal grants for community wildfire risk reduction and post-fire recovery efforts.	NO	Wildfire mitigation is eligible under HMAP, HMAP Post Fire, and BRIC. HMAP has also created wildfire-specific mitigation project application support materials including templates for specific types of wildfire mitigation (e.g., defensible space, fire resistant construction, fire safe landscaping, fire safe soil stabilization, etc.). USFA is also working with FEMA on the Wildfire Mitigation Assessment (OWMA) in a USFA Report of Findings Homeland Security (dhs.gov) along with other technological needs. USFA recently launched a new tool for community awareness of whether or not they live in the WUI - with potential ember cast if a wildfire occurs. USFA is also working with FEMA on the Wildfire Mitigation Assessment (OWMA) that will provide communities with the information they need to improve wildfire safety.	
Frameworks for the Future	143	Ensure that the Cohesive Strategy is funded, including by providing agencies the authority to reduce or waive match requirements when needed.	YES	FEMA will leverage all existing authorities to expand equitable access to funds.	Ongoing
Frameworks for the Future	144	Ensure alternatives to reimbursable funding mechanisms are available and accessible.	YES	While payment by reimbursement is the preferred method for most GPO grant programs, pursuant to 42 U.S.C. § 5105(b)(2) advanced payments are allowable.	

Frameworks for the Future Frameworks for the Future	145	Ensure funding prioritization includes socioeconomic demographics for populations disproportionately impacted by wildfire who reside in high hazard areas. Broaden the definition of "Small Impoverished Community."	YES	FEMA's Equity Enterprise Steering Group is focused on assessing issues like access and delivery of FEMA programs, services, and activities. Members include representatives from each of the major offices across the agency and is co-chaired by the Office of Equal Rights and the Office of Response and Recovery. The group is designed to drive forward FEMA's commitment to equity in every part of the agency, not just certain programs. FEMA's 2022-2026 Strategic Plan "through inputs from stakeholders within the agency and beyond" reflect a whole of community perspective. Stakeholders will inform the agency's goals and objectives, with equity as a foundational priority for the coming years. FEMA continues to promote equity in the access of grant funding.	Ongoing
	146		NO		

COLOR LEGEND

Recommendations Specific to FEMA

Recommendations for FEMA and USFA or USFA

**Post-Hearing Questions for the Record
Submitted to David W. Fogerson
From Senator Gary C. Peters**

**“A Nation on Fire: Responding to the Increasing Wildfire Threat”
March 14, 2024**

1. Currently, Indian tribal governments cannot directly request fire management assistance declarations and must go through a state request. Would the Commission recommend updating the procedure so Indian tribal governments can directly request fire management assistance declarations, similar to how they can currently directly request an emergency or major disaster declaration?

RESPONSE: The Wildland Fire Mitigation and Management Commission made several recommendations related to Fire Management Assistance Grants (FMAG), though none specifically related to Indian tribal governments. Generally speaking, the Commission was broadly supportive of expanding existing, and developing new, authorities to support Tribal self-governance and self-determination. The Commission found that “more action should be taken to alleviate barriers of entry for Tribes wishing to engage in Indigenous stewardship and wildfire mitigation work.” More specifically, the Commission saw a need to place States and Tribes on a more equal footing regarding wildfire response, recommending that Congress expand the Weeks Act to recognize Tribes (Recommendation 49).

With respect the FMAG program itself, the commission made

- In Recommendation 50, the Commission noted that removal of the 25% cost share could help incentivize participation by local fire departments. The Commission also supported using FMAG funding to preposition first responders.
- In Recommendation 62, the Commission supported expanding the support available through FMAG. Specifically, the Commission recommended making emergency protective measure eligible under FMAG Category B beyond the end date of the incident period. Importantly, the Commission also noted that “Should these activities be made eligible through the FMAG process, it will be important to provide the capacity necessary to continue to effectively administer the FMAG process at the regional level. The Commission sees value in the responsiveness that currently exists within the FMAG program and would like to see that responsiveness extended to additional activities as opposed to creating a more administratively complex process which cannot meet essential timelines in either the response or recovery period.”