House Natural Resources Committee - Subcommittee on Federal Lands

Testimony of Tyson Bertone-Riggs
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To: Subcommittee Chair Tom Tiffany and Ranking Member Joe Neguse

Chairman Tiffany and Ranking Member Neguse, thank you for the opportunity to speak with you today. My name is Tyson Bertone-Riggs, and I am the Managing Director of the Alliance for Wildfire Resilience. Our mission at AWR is to advance policy change to reduce the long-term consequences of wildfires in the United States. I previously served as a coordinator and staff co-lead for the Wildland Fire Mitigation and Management Commission. My organization looks to the Commission reports and recommendations as a roadmap for wildfire policy and I'll reference the Commission throughout my remarks. I also bring experience working for state and federal land management agencies in Oregon and throughout the West.

I've been asked here today to speak to the need to address our rising wildfire risks and the important role that technology can play in helping to reduce those risks. As everyone here is already painfully aware, wildfires have tremendous impacts on public safety, public health, natural resources, and the environment. **Wildfire impacts the entire nation and thus demands national action**.

The Wildfire Commission took a holistic approach to their work and provided one of the most comprehensive reviews of our wildfire system to date. The Commission reports explored the whole fire cycle, from risk reduction to response coordination, and post fire recovery. **The Commission found that new approaches to wildfire are urgently needed– this includes modernization of the science, data, and technology we use to support our efforts.** The wildfires of today are faster, larger, and more destructive than the wildfires of decades past. It should be no surprise then, that yesterday's technology cannot keep pace with the dynamic and complex fire environment of today and tomorrow.

Significant improvements can be made to federal agencies' ability to utilize new technology. As the Commission noted in its report, "Current efforts and resources are dispersed, siloed in their operations, challenging to access, and lack overarching structures for coordination or aggregation across relevant disciplines."[1] This dispersal of federal efforts in wildfire technology has been relatively well documented over the past decade. Additionally, reports as recent as March of this year have further identified that while the technology to meet critical needs in the wildfire space already exists, **the decentralized approach of multiple agencies responsible for wildfire management and suppression limits the ability to procure and integrate these new technologies**.[2]

In 2015, the Wildland Fire Science and Technology Task Force identified 11 federal departments or independent agencies involved in the production of fire science and five departments as users of such

[1] ON FIRE: The Report of the Wildland Fire Mitigation and Management Commission. (September 2023). Wildland Fire Mitigation and Management Commission.
[2] Wildfire Intelligence Capability Gap Analysis (May 2025). FFRDC/UARC/Independent Laboratory Wildfire Working Group.

research (WFST Task Force, 2015).[3] This is a simplification of the 60 federal programs that produce fire science across those departments and independent agencies, and the 30 federal programs and interagency efforts identified as end users. Important actors in this space include the U.S. Department of Agriculture's (USDA) U.S. Forest Service (Forest Service) Fire & Aviation Management and Research & Development, the Department of the Interior's (DOI) Office of Wildland Fire (OWF), U.S. Geological Survey (USGS), the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), and the Department of Defense (DoD) and the National Aeronautics and Space Administration (NASA). Many other agencies and entities play roles within the wildfire science and technology space as well, including the Department of Homeland Security through both the Federal Emergency Management Agency (FEMA) and the Science & Technology Directorate, the Department of Energy, the Environmental Protection Agency (EPA), and the National Institute for Standards and Technology (NIST). This list is not exhaustive and does not account for the multitude of coordinating bodies or non-federal partners that are active in wildfire technology.

While the Commission saw value in the services and data provided by those agencies, coordinating bodies, and entities, they found that **centralization of efforts would provide more effective support to decision-makers on the ground**. Too often, dispersed federal efforts have hindered our collective ability to procure and use modern wildfire tools– tools that can support better detection of wildfire, enhanced predictive modeling, and more effective decisions by firefighters in communities across the nation. More specifically, the Commission recommended development of a joint office to reimagine the federal approach to science, data, and technology (see Recommendations 104-106).

This joint office, which the Commission referred to as a "fire environment center," is critical to our ability to provide integrated decision support and predictive services. The Commission envisioned a real-time, data-rich common operating environment that could provide the best available information to firefighters on the ground to enable them to make more informed and effective decisions. **The Commission recommended the fire environment center be governed by relevant federal agencies, but also by representatives from the non-federal entities it is designed to serve–such as state, local and Tribal entities.** Importantly, the fire environment center, as envisioned by the Commission, is not another coordinating body but instead a fundamentally more centralized approach to service provision within the wildfire technology space. The text of the Fix Our Forests Act, particularly the Senate version, would take major steps in this direction, creating a joint office similar to the one envisioned by the Commission. The Alliance for Wildfire Resilience is pleased to see this text included in FOFA.

Changes are also needed to the contracting and procurement processes to better onboard new private sector technologies into the wildfire system. Too often, critical tools are left unused for too long, as cumbersome agency procurement processes slow their adoption and dispersal. In addition, lack of certainty around timelines and processes can, as the Commission noted in its Aviation Report, disincentivize contractors from investing in improved safety and delivery systems and keep older, less effective technology on the shelf longer. The Commission noted that Department of Defense contracting authorities could potentially serve as a model, providing longer-term approaches that allow contractors enough certainty to invest in new technologies.

[3] National Science and Technology Council. 2015. Wildland Fire Science and Technology Task Force Final Report.

In addition to the need for centralized decision support and procurement reforms, it is also important to note the important role of agency science. **Rather than calling for increased centralization of research, the Commission noted the value of a collaborative research environment, more capable of effectively disseminating information to managers and more coordinated with respect to research priorities.** Research priorities can and should be informed by practitioners on the ground to ensure that we are investing in answers to the questions that our firefighters are asking. AWR is pleased to support The Wildfire Coordination Act, which would make critical improvements to the research-to-operations pathway. The Wildfire Coordination Act would create an advisory body for research coordination and prioritization, including seats for representatives of federal agencies, state, local and Tribal governments, and the private sector to ensure that our mitigation, response, and recovery decision-makers are informing our research investments.

As important as technology and science is to a more effective approach to wildfire, it has not been immune to recent reductions in agency personnel. While there is room for improvement in how we approach staffing for science and technology, from speaking with partners and friends in the agencies, **the impacts of staff reductions on wildfire preparedness have been significant.** To touch just a few of these impacts, it seems that significant numbers of "red carded" employees–meaning those who have important fire qualifications but who are not primary firefighters–are no longer available. Additionally, we should also be aware of the impacts of the loss of staff at agencies like the National Weather Service, who provide vital decision support information to incident commanders. Finally, research positions are critical to advance our understanding of the fire environment and systems used to meet the challenges of wildfire. Even approaches that rely extensively on the private sector will require the appropriate federal staff to evaluate, integrate, and manage relevant technologies.

While aspects of the Fix Our Forests Act provide a solid organizational base from which to work, acquisition of new technology and advancing research will require appropriate staffing and funding. Yes, modern technology carries costs, but the costs of not investing in the modern infrastructure that we need are far greater. More specifically, a recent report estimates that the cost for a national wildfire intelligence center to be on the order of $100M per year, although additional needed technology and data procurement is likely to cost more in total.[4] While the total costs are hard to know with precision, the Commission was clear that inaction with respect to wildfire is the most expensive choice of all. Investment will be necessary to realize the long-term reduction in costs and losses associated with wildfire.

Finally, as we discuss technology, it is important to identify the appropriate role of technology inside of the wildfire system. Technology can help us quickly detect fires in remote areas, improve decision making through modeling, and better track progress towards outcomes. Technology can also play an important role in mitigation, which the Commission and previous studies have shown to be much more cost effective than suppression alone. **Prescribed fire modeling, improved prediction of ignitions in the built environment, and more are all vital to our ability to make smart choices about fire management and long-term risk.**

[4] Wildfire Intelligence Capability Gap Analysis (May 2025). FFRDC/UARC/Independent Laboratory Wildfire Working Group.

That said, we should not think of new technology as a silver bullet that can render all fires suppressible or remove all risk from fighting fire. We absolutely, critically, need better tools and technology in the wildfire system. These tools are necessary not because they enable us to remove fire from our world, but because they allow us to make informed, sound decisions about when, where, and how fire is applied in the world. Fire is also a tool–perhaps one of humans' first– and it has a role to play in how we reduce risk to our communities and landscapes. We must not forget the importance of fire itself as a core technology, supported by modern science, and applied by skilled practitioners.

We at AWR stand ready to help you achieve a comprehensive approach to our nation's wildfire problem, supported by modern science, data, and technology.

Thank you and I look forward to your questions.