

Coordinating Wildland Fire Management: Insights from Bryan Rice, Former Director, Office of Wildland Fire, U.S. Department of the Interior

By Michael J. Keegan



Editor's note: Since this conversation and profile, Bryan has been appointed Director of the Bureau of Indian Affairs.

Wildland fire plays an essential role in the ecological process because it acts as a natural change agent. But in the past two decades, controlling it has become much harder. A rapid increase in difficult wildfire behavior,

accompanied by a significant rise in risks to responders and citizens, losses to home and property, soaring costs, and threats to communities and landscapes all act as obstacles to efficient wildland fire control. Fire management decisions are based on the best available science, knowledge, and experience, and are used to evaluate risk versus gain. These decisions take on even greater importance as the challenges facing fire management grow more complex.

Wildland fire management responsibilities are characterized by a patchwork of jurisdictions and ownership and often more than one agency may be involved in managing wildland fire incidents. It is the result of collaboration, partnerships, and cooperation among states and federal fire management agencies. The U.S. Department of the Interior's Office of Wildland Fire (OWF) is one such agency that plays an integral role in the nation's response to today's wildland fire challenges.

What role does fire play in shaping natural resource land management? How does OWF achieve its mission? And what's being done to reduce the risk to first responders and the public? Bryan Rice, former Director of OWF, joined me on *The Business of Government Hour* while still director to share his insights on these topics and more. The following is an edited excerpt of our discussion, complemented by additional research.

Before we delve into specific initiatives, could you provide a brief overview of the history and mission of OWF?



Bryan Rice: OWF is a product of many things that have happened over the last several decades. Particularly in the late 1980s, most people remember the Yellowstone fires, which consumed hundreds of thousands of acres within the park. Then there was the South Canyon Fire in Colorado five or six years later. There was the South Canyon Fire outside of Glenwood Springs in Colorado five or six years later, where there were many fatalities. These incidents, whether they were prescribed fires that escalated or other causes, drove fire policy at a national level.

With the issuance of Secretarial Order 3219 in January 2001, the Office of Wildland Fire Coordination (now OWF) was created when Congress provided new financial resources and direction to the Secretary of the Interior to take action to reduce the risk of wildfire in the wildland urban interface areas. Then, in September 2008, Secretarial Order 3278 transferred the responsibility for the department's Wildland Fire Management appropriation from the Bureau of Land Management to OWF.

There are approximately 500 million acres of land that could require wildfire response. These acres encompass national parks, wildlife refuges and preserves, Indian reservations and tribal lands, as well as other public areas. These diverse locations include historic and cultural sites, commercial forests, rangelands, and valuable wildlife habitats, as well as some lands managed by other federal and state agencies.

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We manage a large budget that supports all fire operations and land management activities for the department. We coordinate OWF's Wildland Fire Management program with federal agencies, tribes, states, and external partners to establish policies and budgets that are consistent with and support the goals of the National Cohesive Wildland Fire Management Strategy.

OWF provides strategic leadership and oversight to advance the three goals of the National Cohesive Strategy, which are to:

- Restore and maintain fire-resilient landscapes
- Create fire-adapted communities that will withstand the effects of a wildfire without the loss of life and/or property
- Safely and effectively respond to wildfire

How does your office fit within the Federal Wildland Fire Management Organization?

 **Bryan Rice:** The U.S. Department of the Interior and the Department of Agriculture (USDA) each manage an arm of the Federal Wildland Fire Management Organization (FWFMO). Interior's arm comprises my office and four land management bureaus with wildland fire management responsibilities, including the Bureau of Indian Affairs, Bureau of Land Management, U.S. Fish and Wildlife Service (FWS), and National Park Service. The Bureau of Reclamation also has limited protection responsibilities for its lands. The Office of Aviation Services provides aviation support to FWFMO.

The U.S. Geological Survey (USGS) plays an integral role in preparing for and responding to wildfires. It provides tools and information before, during, and after incidents to identify risk and reduce subsequent hazards, while offering real-time firefighting support during events. Each Interior land management bureau is responsible for its respective land base and is expected to manage and protect the natural and cultural resources entrusted to it in the safest, most efficient manner possible.

Interior and U.S. Forest Service both follow the Federal Wildland Fire Management Policy and work closely together prior to, during, and after wildland fire and all-hazard incidents. Interior supports the National Response Framework Emergency Support Function (ESF), Wildland Fire, during wildland fire and all-hazard incidents. The U.S. Forest Service is the ESF Coordinator and Primary Agency for ESF 4. Both departments work closely with the Federal Emergency

Management Agency (FEMA) when the President of the United States issues a Federal Disaster Declaration and ESF 4 support is required.

Would you elaborate on your role and the challenges you face as the leader of OWF?



Bryan Rice: I am responsible for the department's budget for fighting wildland fire, deciding how those funds are spent, and I manage how policies are developed to address wildland fire, both from a national perspective and as tailored by individual bureaus and programs. Important missions come with many challenges—and I'll identify a few that I face. They involve the workforce, IT infrastructure, and external stakeholder engagement.

On the workforce side, historically, those who worked in the fire program tended to come from a natural resources background such as foresters, forest rangers, or wildlife biologists. Today, we have a much different dynamic with folks coming from different backgrounds and expertise that are outside natural resources management.

In terms of our external stakeholders, the way the public perceives fire, the way it has grown around fire, and the way we've seen urbanization across the country, creates a different dynamic. There's a nostalgic view that cabins in the woods are great places to relax. But we've found that many of those places are built in fire-prone areas. It's critically important to get key information out to the right people so they can practice proper fire safety and understand how to survive in case they find themselves in such a situation.

Technology can make a serious contribution to battling wildfires. Leveraging technological advances and making sure our IT infrastructure can support such efforts is challenging as it is important to the success of our efforts.

What role does fire play in natural resource land management?



Bryan Rice: Fire is very important to the ecosystem. Wildland fires are both natural and inevitable, and they play an important ecological role in managing the nation's landscapes. These fires have long shaped the composition of forests and grasslands, periodically reduced vegetation densities, and stimulated seedling regeneration and growth in some species. It cleans out the lower, smaller vegetation and allows trees to grow healthier and stronger. Wildland fires can be ignited by natural causes such as lightning or by humans, either accidentally or intentionally.

Every fire has some type of response. That may be just to monitor it to ensure that the fire is not threatening public safety or infrastructure. Roughly 97 percent to 98 percent of all fires are stopped right away. We call that our “initial attack success rate.” They are typically stopped within twenty-four to thirty-six hours. We call that timespan the “first operational period.” All fires outside this period are the ones we battle and use all available resources to fight.

Roughly 90 percent of all of our fires are caused by humans. The majority of fires happen on state land with a smaller percentage on federal and tribal lands across the country. If we have a fire that starts on federal land, burns onto tribal land and then over to state land, the lead agency usually follows the fire’s origin.

How do you keep the safety of firefighters front and center?

 **Bryan Rice:** Our mission is to ensure that we have safe and effective fire management activities. Firefighter safety is paramount. There was a time when firefighters were expected to go out and work nonstop for days. That’s changed dramatically. Fighters now follow a “work-rest ratio,” which means for every set of hours worked there is a required period of rest. We’ve made other changes. Along with fire shelters and other protective equipment, our fire pants and shirts are now made of Nomex. We are also focusing on enhancing training and providing better ways to communicate.

Alongside these efforts, we are pursuing greater interoperability of systems and assets to help firefighters on the frontlines. Fuel management projects that influence wildfire behavior and promote the safety and effectiveness of wildfire response are also being considered, and we are looking to utilize emergent and innovative technologies such as Unmanned Aircraft Systems (UASs), or drones.

All of this is being done with an express purpose to safely and effectively fight wildland fires. The greatest losses during the 2016 wildfire season involved the fatalities of fifteen wildland firefighters who made the ultimate sacrifice to protect the lives of others and the lands and resources we are entrusted to manage.

How is OWF supporting the development and use of emerging technologies in Wildland Fire Management?



Bryan Rice: OWF is actively engaged in supporting the development of emerging technologies in all facets of wildland fire management, from planning and suppression operations to post-fire burned area rehabilitation. The use of technology is extensive. For example, Interior’s Office of Aviation Services (OAS) has successfully carried out a number of demonstration projects documenting the effectiveness of using UASs and optionally-piloted aircraft to improve wildland fire management operations and the safety of firefighters. The department has also successfully integrated small UAS technology to support wildland firefighting.

One potential near-term use of UASs is to detect and map wildfires in heavy smoke conditions, particularly during evening and nighttime operations. Aircraft equipped with infrared technology have the ability to take action despite low visibility, and the UASs may be deployed to multiple fires while they remain small, with relatively low operational cost. In the long term, larger unmanned aircraft have the capability to deliver fire retardant or cargo in a cost-effective manner and in environments that may prohibit the use of larger piloted aircraft. In each of these cases, firefighter safety remains a primary focus, both for those on the ground and those who might otherwise be in aircraft deployed on incidents.

Building on recent initiatives to prevent privately operated UASs from interfering with federal, state, and local wildland firefighting operations, OAS has expanded “Current Wildland Fires,” a program that provides location data on any wildland fire reported in the last eight days. The data is presented as a map and is accessible through the Geoplatform ArcGIS Online Organization. This initiative informs drone operators where not to fly so they avoid intruding on wildland fires, which is a growing problem.

Innovative uses of technology do not always require unfamiliar, expensive, or extremely sophisticated components. One example that may save firefighter lives is the use of Global Positioning System (GPS) technology. The FWS used GPS transmitter collars to monitor the locations of multiple firefighters, vehicles, equipment, and aircraft during wildfires and prescribed fires. The system proved itself as an important safety tool during its first field trial amid heavy fuels when it was used to direct a firefighter lost in unfamiliar terrain to safety.

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How important is collaboration and coordination in Wildland Fire Management?

 **Bryan Rice:** The National Cohesive Wildland Fire Management Strategy was built upon the need for collaboration between federal agencies, tribes, state and local governments, and other partners. Collaboration is fundamental to wildfire planning and suppression operations, to the identification and mitigation of wildfire hazard and risk, and to post-fire treatments that stabilize soils and restore lands. The majority of issues in wildland fire management arise from the ground up, and most are managed at a local level, across ownerships and among interested stakeholders.

For example, the National Park Service and the State of Alaska worked together to create fuel breaks on federal and state administered lands to protect the McCarthy community after being threatened by the 2009 Chakina Fire.

The department has also actively supported the preparation of Community Wildfire Protection Plans (CWPPs), as directed by the Healthy Forests Restoration Act (HFRA), not just on lands treated under HFRA authorities, but wherever communities are near department landholdings.

While the Cohesive Strategy and CWPPs represent collaboration and partnerships at the local, tribe, and state levels, the Wildfire Leadership Council (WFLC) helps coordinate issues at the national or multi-state level. WFLC's mission is to ensure the consistent implementation of wildland fire policies, goals, and management activities. The council provides strategic recommendations to help ensure policy coordination, accountability, and effective implementation of federal wildland fire management policy in support of fire-adapted communities and resilient landscapes.

What does working for Interior mean to you?



Bryan Rice: Interior has one of the most incredible missions that you can find in government. Anything that is done across government, you can find done at the department. In the late 1980s, a group of National Park Service historians put together a document that they called the "Department of Everything Else," noting that many federal agencies have their roots in this department. Most recently, Interior has been referred to as "America's Department." It is a great place to work. Public service is as rewarding as it is challenging. I'm thankful to be a part of it and to be able to talk about its important mission. □

To learn more about Interior's Office of Wildland Fire, go to doi.gov/wildlandfire.



To hear *The Business of Government Hour* interview with Bryan Rice, go to the Center's website at www.businessofgovernment.org.



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To read the full transcript of *The Business of Government Hour* interview with Bryan Rice, visit the Center's website at www.businessofgovernment.org.