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Flames and Rapid Feedback: How Focus Groups Shaped Wildfire Response During COVID-19

In early 2020 as the world grappled with the profound disruptions wrought by the global pandemic COVID-19, Forest Service personnel managing firefighting crews found themselves in a novel situation where traditional strategies for managing wildfires clashed with the imperative to safeguard firefighters against a highly contagious virus. At the outset of this extraordinary year, and as COVID-19 began spreading through the United States that spring, some typical prefire season preparations such as trainings and new hires were being made but it was not exactly “business as usual.” Concerns about COVID-19 and how it would impact firefighting crews and their ability to perform their jobs was top of mind for people at all levels of the agency.

According to Rocky Mountain Research Station's research social scientist David Flores: “The major overarching question was, how are we going to deal with wildland fire within a COVID-19 context? And what if there is disease outbreak on a large, catastrophic fire that we don't have the capacity to manage?” Grappling with these challenges required that the Forest Service set up clear, rapid, and multidirectional lines of communication for what would end up being a very active fire season overlaid on the pandemic.

Planning the pandemic pivot using feedback loops

It was clear to all involved in Forest Service fire management operations that a massive amount



The point of the focus groups was to provide a constant feedback loop between the senior leadership at the Forest Service—who were trying to write effective COVID-19 guidance in a fog of uncertainty about the virus particulars—and the people in the field who had to implement this guidance under real-world conditions. Here, members of the Rifle Peak fire crew from Nevada line up for a temperature check at the Slink Fire in Colorado, September 2020. USDA Forest Service photo by Charity Parks.

of planning needed to be done quickly when even the most basic and crucial details about preventing the spread of the virus were unknown, such as whether transmission was via air, surfaces, or both. Initially, the agency looked to the interagency Risk Management Assistance (RMA) group to think about how the Forest Service was going to respond to wildfires within the context of COVID-19 and imagine how various scenarios might unfold. RMA is designed to provide access to experienced line officers, personnel skilled in risk management, fire operations, and enhanced fire analytics to improve fire management responses.



“There was a lot of discussion in the Washington Office about what kind of guidance we were going to provide people in the field on how to manage this disease that we really didn’t know anything about,” explains Flores. As a little more about COVID-19 was learned each week, the Washington Office and National Interagency Fire Center (NIFC) began developing guidance for firefighters in the field with assistance from medical advisors.

For the Forest Service to be able to fold COVID-19 protections for firefighters into the already existing structures and usual way of operations was going to require a pivot; and early on, no one really knew exactly what direction that pivot would move and how quickly it would change. A critical part of providing firefighters with written COVID-19 guidance in a rapidly changing real-world situation would be to set up a mechanism in which feedback from the field could be rapidly delivered back to the Washington Office and to RMA. “We wanted to find out how people were interpreting guidance and what questions were coming up in the field,” says Flores, “and have senior level executives provide responses that we could then pass into the field. We needed a constant feedback loop that operated in real time.”

Flores, in his role as a social scientist for RMRS, was asked to oversee this administration-to-field communications loop. To ensure a successful outcome and

pool resources, he partnered with Jim Gumm, the Director of the Innovation and Organizational Learning (IOL), a Forest Service unit housed within Research and Development. IOL is largely staffed by firefighting professionals and does critical work advising, coaching, and supporting the agency to protect the health, safety, and welfare of its employees. According to Gumm: “IOL has two sides: one looks at very specific incidents, for example a plane crash, and the other is a thematic learning unit that looks at the bigger picture. It’s part of our DNA that we look at situations with very different lenses and we have a lot of experience conducting focus groups, and writing complex, multiple-perspective narratives as a learning tool.”

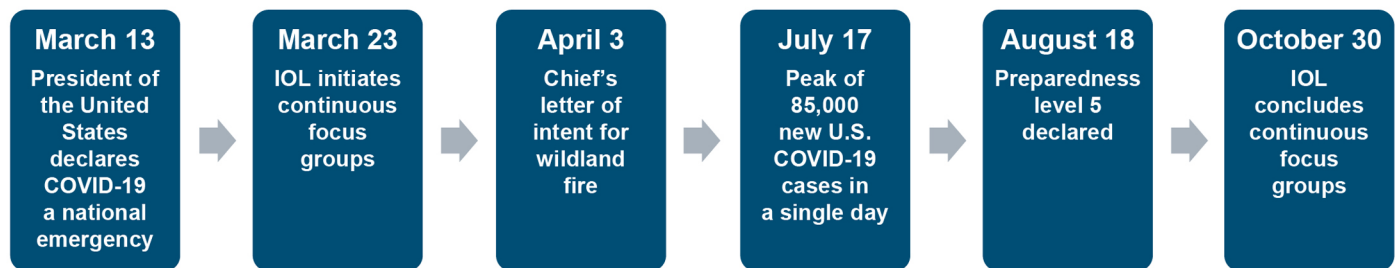
Focus groups were a critical pandemic communication and learning tool

In March 2020, nine focus groups—one for each National Forest Service region—were organized with an IOL facilitator at the helm of each. These facilitators then reached out to their contacts to recruit focus group participants. Flores explains, “We did a mad dash to put together these focus groups within a matter of weeks, which usually takes a significant amount of time and effort.” One of the goals was to pick a broad range of people involved in different aspects of firefighting. According to Louis Fleming, the main focus group facilitator for Region 1, “We wanted to involve people from bottom to top of the organization—folks that were going to be engaged in fires, leading

Summary

In the tumultuous year of 2020, the USDA Forest Service faced a unique challenge as the COVID-19 pandemic collided with wildfire season. Amidst uncertainties about virus transmission and prevention, Forest Service personnel navigated the complex terrain of managing firefighting crews while safeguarding against contagion. Led by social scientist David Flores and director Jim Gumm of the Innovation and Organizational Learning (IOL) unit, the Forest Service swiftly organized focus groups across regions to gather frontline feedback. These sessions became crucial for adapting guidance and protocols in real-time, addressing issues like social distancing, vehicle occupancy, and personal protective equipment (PPE) usage and providing an efficient communication mechanism between agency leadership and field-going fire personnel. The resulting insights were compiled into a comprehensive report, [“Pivoting During the Pandemic: How COVID-19 and the 2020 Wildland Fire Year Created a Novel Learning Opportunity for USDA Forest Service Wildland Fire Management,”](#) highlighting lessons in communication, organizational culture, and learning. Flexibility from senior leadership, coupled with frontline input, enabled the Forest Service to pivot effectively amidst unprecedented challenges. Recognized with a Forest Service Chief’s Award, the efforts underscored the agency’s commitment to adaptability and organizational learning in the face of crisis.





Timeline of COVID-19 and organization of focus groups during the 2020 fire year (graphic from Flores and Haire 2022c).

engine modules or hotshot crews, helitack or aviation crews, people on incident management teams, District Rangers, etc. We were also looking for geographic diversity within each region.”

The point of the focus groups was to provide the constant feedback loop between the senior leadership at the Forest Service—who were trying to write effective COVID-19 guidance in a fog of uncertainty about the virus particulars—and the people in the field who had to implement this guidance under real-world conditions. One of the first main pivots needed was figuring out how to conduct the focus groups and prepare for the fire season while socially isolating to prevent spread of the virus. People had to very quickly adapt to working from home and videoconferencing while trying to also set up the focus groups. And then, as Flores recalls, “The questions were overwhelming.” For example, to be prepared for the fire season, crews need to be trained, but all the in-person trainings were canceled, leaving supervisors to wonder how they would be ready for the 2020 fires. It was unclear

what the alternative to the large, military-style fire camps would be, or even how crews would travel to and between wildfire incidents effectively if they couldn’t be in vehicles together.

Once the focus group process was established early in 2020, the general flow was that focus-group facilitators sent email invitations and reminders to their respective groups and led weekly focus-group sessions. A separate note taker initiated the Microsoft Teams recording, used a template to take notes on the session, conducted initial analysis of the notes, and posted a summary for the writer-editor who would prepare a report for senior leadership. Each regional focus group session was scheduled for the same time each week and facilitators and note takers remained with the same groups throughout the year to the extent possible.

Christina Anabel, a writer for IOL, and a firefighter herself, explains that she would take the notes from all nine focus groups and, every week, turn it into a 5–10 page report written in a single voice.

She recalls: “The reports were so popular, many people outside of the Washington Office wanted to read and use them and we found that they were being shared with the media. So, after we knew that, our full report would only go to the people using the information, and then we produced a 1–2 page summary for wider distribution that went through the [WO] communications office for media review beforehand.”

An additional, innovative aspect of this focus group project was the regular involvement of people like David Flores and other social scientists, who, according to Gumm, acted as a “quality assurance board.” They had an extra week to read all the transcripts and one role they served was to point out any innovations that IOL might have missed or themes that were emerging over time that IOL staff weren’t necessarily seeing because they were so focused on their weekly production cycle. “It was a lot of work to get this done in a week, so having a group of really smart communicators and scientists coming behind us, able to take some time with each set of

documents to review them, was a really important component of our success story,” recalls Gumm.

The researchers divided up the work of reading through the focus group reports coming out of each region and sending a short report about the trends that were emerging to Flores, which he consolidated and sent to Gumm at IOL. According to Joel Iverson, a professor of communication studies at the University of Montana involved in the project, “I think the process did an excellent job of finding out what kind of innovations, concerns, and problems resulted or were happening as the pandemic was emerging along with the wildland fire season. One of the things we ended up pushing for was communication back to those focus groups, so they knew that they were being heard.”

Feedback from the field— what were the focus groups revealing?

The span of 2020 was a very active fire year in the western United States, with over 10 million acres burned by the year’s end. Quickly adapting guidance based on how it was working in the “real world” required a nimbleness that was challenging for a large federal agency, but the bidirectional information flow provided by the focus groups and reporting allowed for a closer working relationship between senior leadership and people in the field. Focus group findings showed that when

pandemic conditions first emerged and information about how to mitigate risk of the virus was highly uncertain, fire personnel adapted everyday work practices and navigated an overwhelming amount of information regarding virus mitigation, transmission, and spread. The facilitator’s questions were designed to give agency leadership a window into how people in the field were navigating the guidance and what they

needed from higher levels of the organization. According to Fleming, “We also discussed things like what sort of innovations were helping to adapt to this new way of doing things, like new safety protocols while people were on incidents. We put a lot of pressure on ourselves to ask good questions.”

One of the main concerns during 2020 was the need for social distancing to prevent virus spread.

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In early 2020, a critical part of providing firefighters with written COVID-19 guidance in a rapidly changing real-world situation was to set up a mechanism where feedback from the field could be rapidly delivered back to the Washington Office. Photo by Neal Herbert, U.S. Department of Interior.

Early on, guidance from senior leadership suggested that only one person could be in a vehicle at a time. Feedback from the field quickly revealed that having, for example, 30 vehicles on a dirt road was causing traffic jams, parking issues, and other safety concerns and so the guidance was changed based on a suggestion from the focus groups that multiple people could travel together in a vehicle with the windows down and with masks on.

The need for social distancing also affected the setup of a traditional fire camp, which can house 1,000 or more people during a large blaze and operate as a temporary self-contained city with tents or trailers for the administrators, a food caterer, shower facilities, portable restrooms, and more. Containing the spread of COVID-19 forced these large camps to break up into smaller “spike camps” with anywhere from 1 to 100 people, with all the logistical challenges of spreading supply delivery out over a larger geographic area. “We quickly learned that not everyone had to travel to the base camp to meet in person, because with the spike camps they could have meetings over the phone,” explains Flores.

Another consideration for 2020 was personal protective equipment (PPE)—when it was needed, where it was coming from, who was paying for it, and whether any circumstances would allow people in the field to decide not to wear it. “People on the fire lines were wearing masks and getting heat

exhaustion,” says Flores, “but the guidance says they must wear it. Clearly, it’s not always practical to do so in a fire environment. And managers needed to know if the agency would support them if they allowed people to not wear masks under certain conditions.”

COVID-19 testing was an area where the focus group process led to a change in policy. The researchers were hearing from the participants that the Office of Workers’ Compensation Programs (OWCP) would only reimburse for COVID-19 testing if the test was positive, which was creating financial hardship. “We took that to executive leadership and others and working together, found a policy that existed that said if the Forest Service has an interest, they can pay for the tests. And we got that done within about a month,” recalled Iverson. “Some of these changes in policy happened because the executive leadership was good at listening to what was happening.”

Many overarching lessons were learned from the pandemic focus groups

Between the time the focus groups started in March to the time they concluded in October of 2020, a total of 194 had been conducted, providing hundreds of everyday lessons learned and corresponding suggested tactics. To organize the large amount of data and facilitate future application of on-the-ground lessons, Flores and his colleagues published the [report](#) “Pivoting During the Pandemic: How COVID-19 and the 2020 Wildland Fire Year Created a Novel Learning Opportunity for USDA Forest Service Wildland Fire Management” in which the lessons are organized into three overarching categories: communication, organizational culture, and organizational learning (see text box on page 6 for example).

One of the overriding themes to come out of this work is the importance of talking to people in

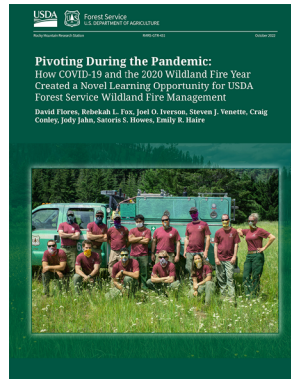
Key Findings

- The USDA Forest Service, faced with the dual challenge of a very active wildfire season coupled with the COVID-19 pandemic in 2020, required a rethinking about the usual approaches to firefighting amidst uncertainties about virus transmission.
- Through a series of regular/recurring/weekly focus groups organized across the nine regions, the Forest Service created a feedback loop between senior leadership and firefighters in the field, facilitating real-time adjustments to guidance and protocols to address emerging challenges.
- Between the time the focus groups started in March to the time they concluded in October of 2020, a total of 194 groups had been conducted, providing hundreds of everyday lessons learned and corresponding suggested tactics.
- To organize the large amount of data and facilitate future application of on-the-ground lessons, RMRS social scientist David Flores and his colleagues published a [GTR](#) in which the lessons are organized into three overarching categories: communication, organizational culture, and organizational learning.



the field in as close to real time as possible in times of crisis. Forest Service senior leadership also deserves credit for the success of the COVID-19 response, according to Gumm. There were ideas that came down that were well thought out but were often at odds with the way the people in the field normally did business, and sometimes they worked and sometimes not. “Senior leadership didn’t hang onto their ideas with a death grip, so that when they heard that their ideas were not working, they could let them go and try something new,” recalled Gumm, adding, “We saw a lot of that kind of flexibility from both ends in 2020.”

The extraordinary value of this work has been recognized in a couple of different ways by the Forest Service. First, the team was the winner of a [Chief’s Honor Award in 2021](#) for “Deliver Benefits to the Public” for the project “Using Focus Groups to Help Resolve Safety Issues Related to Firefighting During COVID-19.” Also, since 2020, IOL was moved from the Rocky Mountain Research Station to the Washington Office Research and Development deputy area. The Deputy Director for Research and Development David Lytle [cited](#) the importance of the work that IOL did to assist with the pandemic response as an example of how leadership had become more reliant on this group to help the agency with organizational learning.



To organize the large amount of data and facilitate future application of on-the-ground lessons, Flores and his colleagues published several reports organizing the information into three overarching categories: communication, organizational culture, and organizational learning.



Example of Learning Opportunities

Lessons that focus group participants identified during the 2020 wildland fire year were organized into three overarching categories: communication, organizational culture (an example from this category is below), and organizational learning (from [RMRS-GTR-431](#)).

LESSON LEARNED: Focus group participants struggled with the tension between needing “decision space” vs. needing guidance from leadership.

Description: Although significant appreciation exists for the opportunity to make decisions based on the situation, participants voiced concern over the support decisionmakers would receive if there were a bad outcome resulting from their decisions. Conversely, many people just wanted clear, concise direction during this time of uncertainty.

Suggested tactics from the field:

- Test leadership decisions with the people who are affected by them before sending the decisions down.
- Clear purpose could be the vehicle to providing better communication and sideboards where adaptability and innovation can occur.
- Use a delegation of authority to reduce the discomfort of enforcing mitigations.

Management Applications

- Managing a crisis like COVID-19 during the firefighting season called for a willingness to adapt quickly to changing circumstances and new information and establishing clear lines of communication.
- The bidirectional information flow provided by the focus groups and reporting allowed for a closer working relationship between senior leadership and people in the field and was very useful in gathering timely feedback and ensuring that guidance and protocols remained relevant and effective.
- The applied process for communication, learning, and decisionmaking developed here for dealing with COVID-19 serves as a flexible and highly valuable tool for the collection of information, data analysis, and report writing that could be used for a range of crisis situations that High Reliability Organizations may encounter in the future.



Scientist Profiles



David Flores is a Research Social Scientist with the Rocky Mountain Research Station in Fort Collins, Colorado. His research interests are based on a social-cultural approach to the study of land management. Using quantitative and qualitative methodologies, his research rests within the intersection of sociology, anthropology, psychology, communications, and public policy.



Jim Gumm is the former (now retired) Director of the Innovation and Organizational Learning unit of the USDA Forest Service, based out of the Washington Office.



Christina Anabel is a Writer-Editor for the Washington Office R&D, Office of Innovation and Organizational Learning. She earned her M.S. in Natural Resource Stewardship from Colorado State University.



Louis Fleming is a Smokejumper with the USDA Forest Service. He has an M.S. in Forestry from the University of Montana.



Joel Iverson earned his Ph.D. from Arizona State University and is a Professor of Communication Studies at the University of Montana. His research focuses on the communicative processes of organizing at group, organizational, and community levels, with an emphasis on risk and crisis communication.

Other contributors to this project include:

Emily Haire, Colorado State University; Steve Venette, University of Southern Mississippi; Rebekah Fox, University of Texas; Jody Jahn, University of Colorado; Tori Howes, Oregon State University; and Craig Conley, Highlands University (retired).

FURTHER READING

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[Wildland Fire Metareview | USDA Forest Service Research and Development \(usda.gov\)](#)

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The purpose of SYCU is to provide scientific information to people who make and influence decisions about managing land.

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