
“We’ve made huge improvements in how we address firefighter safety. It has been painfully slow, though. All things are doable over time; it’s just the speed of change that is difficult. We will change over time, but do we want to wait 20 years and sustain the 20 firefighter deaths per year and increasing public deaths?”

—Type 1 Incident Commander, Society Focus Group

A 10-year review of accidents and incidents within the USDA Forest Service wildland fire system.

USDA Forest Service photo by Jace Jacobs.
Abstract

This document seeks to describe the wildland fire system and culture within which U.S. Department of Agriculture, Forest Service employees operate. To do so, this review presents a narrative of the Forest Service's wildland fire system based on the opinions, experiences, and perspectives of those who operate within it.

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Chapter 1. Introduction

“To decrease the risk of injury or fatality, you need to either increase the room for error or decrease the severity. That requires changing the system.”

—Regional Aviation Safety Manager, Fatalities and Injuries Focus Group

The driving force for this metareview arose out of a safety action plan recommendation from the “Twisp River Fire Fatalities and Entrapments Learning Review” (2016) where the U.S. Department of Agriculture (USDA), Forest Service tasked itself with “conduct[ing] a broad spectrum learning review...[to] detect and study patterns within the current system.” At the request of Forest Service leadership, the Innovation and Organizational Learning (IOL) Research, Development, and Application unit undertook the “Wildland Fire Metareview, 2007–2016” to dive deeper into the conditions of the wildland fire system that influence incidents, accidents, and normal work.

To do this, IOL analyzed a dataset spanning 10 years of Forest Service wildland-fire-related incident reviews, mapped trends and commonalities across those reviews, and then explored the emergent conditions through rich conversations with those who operate within the wildland fire system. From these conversations, IOL identified themes that have the potential to improve the wildland fire system and should be explored further.

Each chapter of this review covers one of these themes, identified as a challenge the wildland fire community is currently facing. Many of these challenges are characterized by dynamic tensions, often felt as a pull between multiple possibilities, none of which are simply good or bad, but rather tradeoffs full of pros and cons, options and constraints. Due to the complexity of these dynamic tensions, no simple answers are offered in this review. Instead, the authors hope that the metareview’s recognition of these tensions leads to open and honest conversations across the agency about the challenges of the wildland fire system. Those conversations should include how the Forest Service can lead the entire wildland fire system in organizational change.

What Is a Metareview?

Each learning review, organizational review, case study, and facilitated learning analysis (FLA) is an important example of learning from a specific event which occurred at a precise point in time. Each incident offers the possibility to learn something new about the structure and behavior of the wildland fire system.

A metareview takes this learning further by examining hundreds of incidents simultaneously for connections, patterns, and differences which become apparent only when looking at the whole rather than its individual parts.

Audience

Whatever your role in the Forest Service wildland fire system, this document was written for you; whether you are a senior leader who commissioned this study to better understand the wildland fire system’s complexities and to find tangible ways to improve it or a Forest Service employee representative of one of the many wildland fire communities of practice. Line officers, fire personnel, practitioners, researchers,
district rangers, and Washington Office staff all participated. Each person who contributed brought a set of perspectives and experiences uniquely their own and shared them during focus group discussions. During these sessions, participants were asked to describe the current wildland fire system in the context of the focus group theme and to suggest how the system could be improved. This review serves as a bridge between perspectives held by senior leaders and those performing the work.

What You’ll Find in This Metareview

Each chapter of this review is both a standalone discussion on its topic area as well as part of a cohesive, whole document.

Chapter 2. “Learning from the Past,” presents a history of the Forest Service as a learning organization and the resulting purpose of this effort. Chapter 3, “Conducting the Wildland Fire Metareview,” discusses the metareview process, describes the two parallel and complementary social science methodologies used to implement it, and summarizes the quantitative findings of this review. Chapters 4 through 12 explore nine challenges the wildland fire system faces which emerged from five separate and distinct focus group discussions. The following topics resulted from a synthesis of those conversations:

- Chapter 4. “Clear, Stable, Long-Term Vision”
- Chapter 5. “Does Our Communication Lead to Trust?”
- Chapter 6. “Telling Our Story—Consistently Inconsistent”
- Chapter 7. “Socio-Political Pressures: Real and Perceived”
- Chapter 8. “Cost or Investment?”
- Chapter 9. “Is ‘Safety First’ a Myth?”
- Chapter 10. “Mental Health and Suicide—A Call to Action”
- Chapter 11. “The Quest for 1,000 Hours of Overtime—Money as an Incentive to Risk”
- Chapter 12. “An Exercise in Envisioning”

Chapter 13, “What’s Next? Continuing the Learning,” proposes what a learning strategy for the Forest Service might look like into the future. And finally, chapter 14 presents the final learning challenge in this metareview.

Becoming a Learning Organization

The Forest Service is committed to becoming a learning organization and this review along with the associated StoryMap and audio book are further examples of that commitment. Learning is not passive, but interactive, and the products of this review are meant to be used as a means for organizational learning. Some of the content may not resonate with you, some may feel unfamiliar or out of place, while some may make you feel uncomfortable. This is all part of the learning process. Explore these themes and ideas from all angles, perspectives, and organizational levels. Engage in conversations with your coworkers and friends and discuss themes and statements put forth in this review. Be willing to agree and disagree with others;
these healthy, honest conversations may just open up the wildland fire environment to you in unexpected ways.

Throughout this document, you will have an opportunity to explore different aspects of the wildland fire system by following numerous links to learn more and undertaking a series of learning challenges like the one following this section. These challenges will prompt you to consider and apply what you’ve read and to think about your own lived experience, much like focus group members did as they participated in this endeavor. Questions and activities are posed to prompt critical thinking, discussion among work groups, and opportunities for learning. You’ll have the opportunity to share what you’ve learned, turning individual learning into shared learning, a necessary step to becoming a learning organization.

Continued Learning

Peter Senge\(^1\), author of “The Fifth Discipline,” explains that a learning organization is one “where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free and where people are continually learning to see the whole together.” Senge presents five disciplines that a learning organization practices. They include:

1. **Systems Thinking**—Learn to better understand interdependency and change.
2. **Personal Mastery**—Developing a “coherent picture of desired results by balancing the tension between their vision and their reality.”
3. **Mental Models**—Developing “awareness of the attitudes and perceptions that influence thought and interaction.”
4. **Shared Vision**—Learning to “nourish a sense of commitment in a group by developing shared images of the future they seek to create.”
5. **Team Learning**—Transforms a group’s collective thinking, teaching them to mobilize their energies and ability greater than the sum of individual members’ talents.

As you explore this metareview you will find examples of these disciplines in action, as well as areas where improving the practice of these disciplines might further the agency’s efforts in becoming a learning organization. To dive deeper into the topic, read a summary article about Senge’s five disciplines.
Gather your work group and discuss what it is to be a “learning organization,” as defined by Peter Senge in “The Fifth Discipline.”

Q What are the “results you truly desire” and what are you doing individually, and as part of the Forest Service’s wildland fire organization, to attain them?

Q What new and expansive “patterns of thinking are being nurtured” in your workplace and in the wildland fire organization as a whole? What patterns of thinking are being suppressed or discouraged?

Q From your perspective, what are the fire organization’s “collective aspirations?” What is being done to set them free? What is being done to hold back collective aspiration?

Q Where do you see yourself, within your work group and within the agency, coming together to “see the whole?” Where are the efforts to come together limited?

Q Did everyone in your work group hold the same ideas as you? Was there tension between individuals as thoughts were explored? How did you and your work group respond to those tensions?

Q Where do you see the five disciplines—systems thinking, personal mastery, mental models, shared vision, and team learning—practiced in your work group? Within the Forest Service as a whole? Where do you see opportunities to apply these disciplines?

Tell us about your experience participating in this challenge at this [team learning link]!
Chapter 2. Learning from the Past

“Detect and study patterns within the current system: Conduct a broad-spectrum learning review...There is an existing body of information from accidents, incidents, and normal work stories. This review will combine information and results from multiple studies to better understand work-related conditions that can be improved in the wildland fire system as well as identify what is going well.”


While the motivation for the “Wildland Fire Metareview, 2007–2016” came from the “Twisp River Fire Fatalities and Entrapments Learning Review Safety Action Plan” recommendation quoted above, the agency's ability and desire to conduct such a review has been many years in the making. Read on to find out more about the journey the Forest Service has been on as it has moved to a place where organizational learning is valued.

History

TriData Study

After a series of high-profile tragedies on wildland fires in the early 1990s, the five Federal land management agencies commissioned a study “to identify and change aspects of the underlying organizational culture that negatively impact firefighter safety.” In 1995, the private consulting firm TriData Corporation was hired to conduct this study, known as the “Wildland Firefighter Safety Awareness Study” or TriData Study. The corporation surveyed over 1,000 firefighters to collect their perspectives on factors they felt influenced safety in the wildland fire system and used the results to define then current-day issues and describe a “culture of the future.”

The study culminated in the document “Phase 3: Implementing Cultural Changes for Safety,” which presented over 200 recommendations that had the potential to improve organizational culture and firefighter safety. While many of these recommendations have lain dormant, many others have been implemented since the final phase of the study was released in 1998, including the creation of the Wildland Fire Lessons Learned Center, the establishment of fire program management standards, and the use of Red Card Committees.

Evolution of the Accident Investigation

The first formal attempt at a standardized, interagency approach to accident investigation was the “Interagency Serious Accident Investigation Guide,” published in 2001. This guide was meant to “help agencies understand how and why [an] accident occurred...to prevent further similar accidents.” Though the guide states “information from [serious accident investigations (SAIs)] should...not assign blame or serve as the basis for disciplinary action,” the core process of the SAI is to find root cause, which has often invariably led to assigning blame. In the early 2000s, a series of prominent fire fatalities (Thirtymile, 2001; Cramer, 2003; Esperanza, 2006) highlighted some of the negative impacts the Serious Accident Investigation was having on those involved in accidents. While intended to reduce fatalities, the punitive actions which arose from the SAI’s rules-based approach led to secondary injury...
of incident-involved personnel as well as a deep distrust of the agency itself. Around the same time, Public Law 107–203 was enacted, which required that the USDA’s Office of the Inspector General (OIG) investigate all firefighter fatalities independent of any Forest Service investigation. Incident-involved individuals became increasingly unwilling to tell their story due to fear of legal liability or being used as a scapegoat for the agency. As a result, an untold number of organizational learning opportunities were lost, and Forest Service leadership became concerned the trend in firefighter fatalities would continue to rise.

Several change leaders within the agency saw the detrimental consequences of this rules-based approach. Building upon Ted Putnam’s work in the first Wildland Firefighters Human Factors Workshop in 1995, these change leaders began advocating for the Forest Service to seek learning rather than retribution from accidents.

They called for making every accident and incident an opportunity to learn instead of an occasion for finding fault. They proposed replacing the SAI’s rules-based approach to accident investigation with a “just culture” model. These efforts would eventually give birth to the learning review and the facilitated learning analysis (FLA), both learning-based approaches to accident investigations founded on guiding principles rather than rules.

Want to learn more about the Forest Service’s processes for learning from unintended outcomes? Check out the video “Facilitated Learning Analysis: An Introduction” for more information about the FLA and learning review processes, their history, the role storytelling has, and where to find existing learning products.

In 2006, Forest Service leaders launched another review, hiring the consulting firm Dialogos International to study the organization’s safety culture. The first report, “Integrating Mission Accomplishment with Safety at the U.S. Forest Service,” published in 2007, provided a diagnosis of the Forest Service’s “DNA,” describing safety outcomes as symptoms of a core organizational dynamic. The analysis revealed four drivers influencing this core dynamic:

1. Core leadership alignment and mission clarity
2. Community and quality of relationships
3. Integrated capability
4. Coordinated execution

Dialogos found that “each of these is interrelated and can work either for or against effectiveness. In addition, each is necessary but none sufficient by themselves to achieve the desired results.” Troubled by Dialogos’ projected increase in firefighter fatalities outlined in the report, Forest Service leadership continued to work with the company to further explore these dynamics in the hopes of transforming the agency’s safety culture.
In response, Forest Service leaders began emphasizing safety as a core value and learning as the basis for safety, and in 2009, the Forest Service formally set itself on a course to become a learning organization. A year later the Forest Service embarked on an agency-wide effort known as the “safety journey,” with the primary goal being zero work-related fatalities. During this time, the agency’s National Leadership Council studied other entities known to have outstanding safety records to learn about their organizational habits and behaviors. They were: ConEdison, Los Alamos National Laboratory, Louisiana Pacific, the Forest Service Region 10 Aviation program, United Parcel Service, URS Corporation, and the U.S. Coast Guard.

In 2013, Chief Tidwell officially endorsed the learning-based approach to accident investigations, proclaiming the learning review as the Forest Service’s replacement for the serious accident investigation process and the FLA as a critical tool for learning from unintended outcomes. The “Coordinated Response Protocol,” introduced in tandem with the learning review, further demonstrated national leadership’s commitment to learning from unintended outcomes while also supporting employees and their families. These processes were highly influenced by the work of academic pioneers in the safety culture and organizational learning movements, such as Peter Senge and Edgar Schein.

Since the adoption of the learning review, FLA, and safety journey processes, the number of fatalities and injuries in the Forest Service has been on a downward trend (see figure 2-1). However, in 2015, a spike in firefighter fatalities caused Forest Service leaders to again question how it approached safety in wildland fire. As a result, this metareview was commissioned as part of the “Twisp River Fire Fatalities and Entrapments Safety Action Plan.”

![Figure 2-1](image-url)

**Figure 2-1.**—Forest Service Occupational Safety and Health Administration reportable (work-related) fatalities from fiscal year 1999 to 2022.
Continuing the Path To Becoming a Learning Organization

The central focus of a learning organization and culture is to learn from unintended outcomes and everyday work, change what is needed, and normalize and globalize innovations and processes that are working well. The endorsements of the FLA and learning review processes, as well as the safety journey, stand as examples of the Forest Service’s commitment to becoming a learning organization. However, up to this point, the focus has been learning from single events.

This metareview, or review of reviews, observes all the specific events together for learning opportunities which may only become apparent by looking across many events for patterns, themes, and relationships. Ultimately, the intent of this metareview is to highlight conditions that can be leveraged organizationally to improve the system.

This metareview provided an opportunity to revisit Dialogos International’s reports, the TriData Study findings, and other organizational reviews. Building off these reports, the 2007–2016 metareview explores if and how the Forest Service’s approach to safety has changed over time and identifies new challenges. One characteristic of a learning organization is the ability to shift from solely trying to fix what is broken to also encouraging what is working. Therefore, rather than focusing solely on symptoms of dysfunction, this effort also identifies positive symptoms, like local initiatives that promote safety through learning.

While the FLA, learning review, and the safety journey have all become staples of how the Forest Service learns and have served as catalysts for transformational change within the organization, the process has been subtle and has not happened overnight. It is the hope that the metareview process will create a new lens, focused on the systemic whole, through which new and continual organizational learning can be added to the Forest Service’s change process.
**Learning Challenge**

In the Wildland Fire Lessons Learned Center’s publication “Learning in the Wildland Fire Service,” the authors state: “We must create personal connections to increase the likelihood of ‘Firefighter X’ learning from an incident or accident. We must capitalize on those with an existing connection to pass on lessons.”

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**Figure 2-2.** — A visual depiction of the likelihood of learning from incidents where each ring away from the center shows a decrease in likelihood.

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Gather your work group and discuss the following questions:

1. **Q** What is your experience in learning from unintended outcomes? Have you been at the center of the bullseye? Have you participated in conducting a learning review or FLA?

2. **Q** What has been your, or your work group’s, most recent learning moment? What have you done to share it with others?

3. **Q** As “Firefighter X,” which accident review(s) have you learned the most from? What about the review(s) made it/them relevant to you?

4. **Q** How can we learn better from accidents? How can we better implement those lessons?

5. **Q** Are we learning collectively from ours and others’ unintended outcomes? Why or why not?

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*Tell us about your experience participating in this challenge at this [team learning link]*
Chapter 3. Conducting this Wildland Fire Metareview

Purpose and Need

“The fire system is as safe as the fire system can be until we change the system itself. Unless you retool the entire system, we’re going to stay here. This is our accident rate.”

—Assistant Regional Fire Director, Fatalities and Injuries Focus Group

The primary objective of this metareview was to detect and study patterns of fatalities and injuries with the intent of proposing system-level changes in wildland fire operations. Recommendations for systemic change were developed by exploring data from existing learning products and through consultation with agency field personnel, external subject matter experts, and Forest Service leadership. The recommendations offer potential ways to improve the safety culture of the entire organization while specifically working towards reducing the number of fatalities and injuries in wildland fire operations. This report also offers a potential framework for a continued learning plan (chapter 13). The framework suggests short- and long-term learning goals that would carry the momentum of learning started here into the future.

To begin the metareview, the wildland fire system first had to be recognized as complex (see sidebar to the right). Doing so enabled the entire system and its dynamic behavior to be looked at rather than just its individual parts. To do this, the importance of context was emphasized in understanding why things happen, what needs changing, and what has already changed. Looking at incidents within the context they occurred allows interactions, conditions, and circumstances that shaped the actions and assessments of incident-involved personnel to emerge (see “Does an Acorn Cause an Oak Tree?” on page 11). Doing so permits others to look past the decisions themselves and into what system features influenced the individuals involved.

Simple, Complicated, and Complex Systems

**Simple**

Parts and actions are known. Relationship between cause and effect is obvious.

**Complicated**

Some uncertainty, more than one way to do things. Cause and effect relationships are discoverable.

**Complex**

Inherent variety and uncertainty in a dynamic environment. Requires continuous interpreting and sensing; may lead to surprise.
Does an Acorn Cause an Oak Tree?

Moving from Root Cause to Networked Causality

On the surface it may seem that an acorn can be labeled as the root cause of an oak tree. But upon close inspection, it becomes evident this is not the case. If an acorn was thrown into the ocean, or planted on a saltwater beach, no oak tree would arise to offer shade. The environment, therefore, has a critical role in whether an acorn is able to grow into an oak tree, meaning an entire network of factors is necessary for an oak tree to come to be.

When you apply this thinking approach to unintended outcomes, even in a situation where you can find a “single seed” to account for an event, the theory of a single root cause does not hold. Accident investigations, like oak trees, are heavily influenced by the surrounding environment. In the simplest of accidents, something similar to a seed may be found, like a decision or action. But finding the “seed” does not tell the whole story of the accident. In more complex accidents, looking for a single seed to tie everything back to is a distraction that can inhibit learning.

The best way we know of to learn from accidents is to look for a network of factors that influenced the outcome. The more nodes of influence we can identify within a network, the more we understand about how the accident occurred and the more likely it is we can find high leverage points within that network to make big changes in the system of work.

This metareview used two complementary processes in a systems-thinking approach, analysis and synthesis, to understand and develop a picture of the wildland fire system. This systems-thinking approach pairs quantitative and qualitative data for a deeper dive that looks at the greater system via its parts and as a whole.

The first process, analysis of incidents and accidents, was used to identify frequency of events and common themes or patterns that might provide opportunities for immediate safety improvements. The analysis looked at the who, what, where, when, and how often of Forest Service employee accidents and injuries that occurred between 2007 and 2016. This analysis, which used a mechanistic view of systems, comprised the quantitative component of this
metareview and provided insight into frequency and types of events by looking at the system’s individual parts.

The second process was more organizational in scope and addressed the how and why of these same events. Instead of just stopping at an action or decision, the bigger context or environment within which the decision or action occurred was also explored. Known as synthesis, this approach comprised the qualitative component of this metareview and allowed the underlying cultural and organizational patterns that influence the wildland fire system to be more deeply understood.

Figure 3-1.—Analysis is a “down and in” approach to understanding the world; it focuses on breaking things down into its parts with the goal of understanding each component. Synthesis is an “up and out” approach to understanding the world; it focuses on what functions or roles parts play within a bigger whole.
Continued Learning

Want to learn more about the difference between mechanical and systems thinking? Take 70 minutes to watch Russell L. Ackoff’s lecture, “From Mechanistic to Systemic Thinking,” to learn about the evolution of how knowledge and understanding are built and how using both mechanical and systems thinking is important to the learning process. He might just blow your mind!

Opportunity

The Dataset

At the outset, three data sources were considered for this review: the Safety and Health Information Portal System (SHIPS) (in use through December 2014)), e-Safety (January 2015–present), and the Wildland Fire Lessons Learned Center (LLC) database. After carefully looking at each dataset and considering desired characteristics, the LLC database was chosen. Not only did it provide 10 years of continual data, the LLC database also included qualitative information found in case studies, rapid lesson sharings (RLSs), facilitated learning analyses (FLAs), learning reviews, and serious accident investigations. This qualitative data offered opportunities to examine the incidents more deeply within the context they occurred while the other databases provided only quantitative data.

“Reading through every learning product for our dataset was emotionally draining. At times I felt myself mad because there was still no change in some areas; other times I felt sad because the same incident happened even with proactive measures in place. After 2 months of reviewing these vital reports, I was spent and needed a positive project to pull me from the dark place.”

—IOL Team Member

After the database was selected, data points from 2007 through 2016 were collected and compiled directly from learning products hosted on the LLC website. To be included in this review, a data entry had to depict an event that: (1) occurred under Forest Service operational control or (2) involved Forest Service personnel under another agency’s operational control. This filter resulted in 341 entries.

Quantitative Analysis

The 341 event learning products were assessed and categorized by “activity underway” and “mechanism of injury/fatality.” Activity underway is the type of activity the incident-involved personnel were engaged in at the time of the event, such as fireline construction. Mechanism of injury/fatality (accident type) is how the incident-involved person was injured or killed, such as hit by (e.g., rock, tree) or a motor vehicle accident. To understand which activities more commonly resulted in injury or fatality, entries were tallied by category for both activity underway and mechanism of injury/fatality (see figure 3-2 and figure 3-3).
While some patterns did emerge from this analysis, it did not provide much insight into the nature of the system. Rather, it provided a broad-stroke summary of outcomes stemming from the system (see figures 3-4 and 3-5). For more detailed numbers, see the “2007–2016 Metareview Data Analysis” report.
**Event Summary by Activity**

![Graph showing event summary by activity](image)

**Figure 3-4.**—Event summary by activity. The black dots indicate the total number of events, while the blue and orange bars depict the total number of injuries and fatalities, respectively.

**Event Summary by Accident Type**

![Graph showing event summary by accident type](image)

**Figure 3-5.**—Event summary by accident type. The black dots indicate the total number of events, while the blue and orange bars depict the total number of injuries and fatalities, respectively.
Qualitative Analysis

To better understand why the 341 events occurred, IOL team members condition mapped all of the accidents and incidents using the following conditions of influence:

1. Operational influences
2. Signal detection
3. Environmental
4. Individual influences
5. Organizational influences
6. Training/Experience
7. Historical
8. Cultural
9. External influences
10. Guidance, policy, and regulations
11. Communications
12. Equipment
13. Leadership
14. Social relationships
15. Memory items
16. Aviation
17. Assumptive behavior
18. Plan continuation

An analysis revealed over 1,400 conditions across the 341 events. Two social scientists from Rocky Mountain Research Station (RMRS), brought in to assist IOL in mapping trends, used a computer-assisted qualitative data analysis software to recognize high frequency conditions amongst the 1,400 identified. Once the conditions of influence had been ordered, there was an additional analysis of commonalities across accident types and within each condition of influence to uncover major patterns and themes in the data. The detailed results of this analysis can be explored further in the “Wildland Fire Fatality and Injury Analysis” report.

IOL team members then reviewed the qualitative data analysis, noting reoccurring and important themes in preparation for meeting as an internal focus group to combine and prioritize the list of emerging themes.

“Nonnumeric data is messy. It’s complex. People contradict themselves and it’s multilayered; and by that, I mean people can be saying a lot in one sentence, or one paragraph, or even in one word.”

—RMRS Research Social Scientist

The following are the five major themes that emerged from this effort:

1. Fatalities and injuries—why are they continuing to occur?
2. Fiscal incentives—how does the current pay structure affect operational strategies and risk management?
3. Society—how do social and political pressures play into the wildland fire system?
4. Ecological soundness—how do ecological health and land management factors currently play into wildland fire decision making and strategy planning processes?
5. Communication/work environment—what do current successes and failures look like in the context of communication and the wildland fire work environment?
During the internal focus group, discussions reflected on the fact that these themes were not new realizations, but rather had been observed in the wildland fire system in nearly every organizational review previously undertaken.

Vetting the Themes

Throughout the spring of 2019, IOL enlisted critical thinkers representing a diverse cross section of the Forest Service (field-going personnel, fire management officers, line officers, regional office staff, and Washington Office staff), along with a select group of academic subject matter experts to participate in five focus groups exploring the themes identified above. Each focus group spent 2 days together discussing the wildland fire system from their perspective, relative to the specific theme of their focus group. All group discussions were audio recorded and transcribed. Additionally, at least one observer captured key thoughts and conversational flow. Discussions highlighted what participants perceived to be working within the wildland fire system and where they saw a need for change. Focus group participants also shared ideas on how to address the challenges in the system. After each focus group, IOL and the academic specialists conducted sense-making sessions in which participants’ observations were discussed in detail to highlight key themes, lessons, and potential gaps.

The transcriptions, first checked for quality and accuracy, were then used to conduct another round of qualitative analysis to identify which topic areas transcended individual focus group conversations. From there a small team was assembled to write a complex narrative based on the quantitative and qualitative analyses, focus group participants’ observations, organizational learning documents, and internal as well as external research contributions. This document is the result of that work.

Carrying the Work Forward

While this review serves as a bridge between perspectives of the wildland fire system, it is also a new and distinct step on the organizational journey towards learning; a journey that has been going on for decades in the Forest Service as well as in the broader interagency wildland fire community. One of the outcomes of this work is to encourage more consideration into what the 21st century wildland fire system needs to look like by asking: “what changes, in all aspects of the system, are needed,” just as the participants in the focus groups were asked. As you navigate through this document, nothing should be off limits as challenging questions are asked, because the unimagined has the potential to become the new norm. This chapter, like all others in this review, ends by encouraging you to take ownership in the learning effort and to contribute to the system in your own unique way with the following learning challenge.
**Learning Challenge**

Gather your work group and discuss the following questions:

Q Which focus group would you have liked to attend and what would you have provided as your perspective? Reference this graphic to see the questions asked in each of the focus groups.

Q Are you surprised by the numbers and accident types shown in the charts in the “Quantitative Analysis” section? How do they compare with the number and type of accidents your unit has experienced?

**Please note that discussing accidents, especially ones that have occurred on their unit or that their personnel have been involved in, may be difficult for some folks.**

Gather your work group and conduct your own focus group discussing the theme(s) (pg. 16) of your choice.

Q From your perspective, describe the “current reality” of the wildland fire system as you see it. How do your “lived experiences” compare to each other’s?

Q What changes could be made to improve the wildland fire system? Don’t limit yourself—think big!

Q Think about changes from the context of: what barriers are preventing those changes from being made, how much effort would it take to overcome them, and then, if implemented, how much change they would create, either locally or organizationally?

Q Draw the quadrants demonstrated in the graphic to the right on a white board and use sticky notes to mark where you think your idea fits. It’s important to not only focus on organizational level changes but also on changes you could make within your own work group.

Once you’ve completed the exercise, as a group choose an idea to invest in. Develop a plan, communicate it, and execute!

Then tell us about your experience participating in this challenge at this team learning link!
Chapter 4. Clear, Stable, Long-Term Vision

“What is the objective? I haven’t been on a fire in years where I actually knew what success looked like.”
—Type 2 Incident Commander, Fatalities and Injuries Focus Group

Framing the Problem

The 2007–2016 metareview qualitative analysis found that focus group participants often described a longing for clarity in agency mission and purpose. This observation was confirmed during focus group discussions as participants discussed wide-ranging perspectives on what the agency’s mission was. Despite differing perspectives, what was common amongst these conversations was the question: “Are we talking about the agency’s vision or the fire organization’s vision, and are those visions compatible?” As focus group participants pointed out, the current Forest Service vision doesn’t even mention wildland fire. One participant, an assistant regional fire director, captured the impact this lack of clarity has on the field during the fatalities and injuries focus group, saying:

“The Forest Service mission, vision, and guiding principles don’t mention anything about fire, yet fire has $3.9 billion of a $6.1 billion budget.”

To put a finer point on the issue, perhaps the need is not so much for a vision specific to the fire program, but for an agency vision that includes how fire fits into the larger organization.

What Is the Vision?

While focus group participants agreed that a clear, stable, long-term vision for the agency was essential, three different perspectives about the agency’s current vision emerged during focus group conversations.

Perspective 1: The agency’s vision does not address the fire organization/there is no vision.

Some focus group participants expressed a frequent lack of clarity around leader’s intent and vision and asserted that no vision for the fire organization currently exists. In the fatalities and injuries focus group, one participant pointed out that the last large-scale visioning exercise for the Forest Service occurred in 1995. They also noted how much has changed since then. For instance, in 1995, fire expenditures accounted for just 16 percent of the overall Forest Service budget; today, fire expenditures account for well over half of the budget. Whatever the reason is for this dramatic organizational shift in funding, staffing, and operational parameters, it is a different world now and fire has become a much bigger part of the Forest Service’s management scope without a corresponding change in vision.

“How or why has fire come to be such a large part of the budget?” was, for many of the participants, a crucial question they felt could yield deeper insights concerning the need for a new agency vision. These same participants also recognized that while vision-related documents for the fire organization do exist, including the “Chief’s Annual Letter of Intent” and “This Is Who We Are,” they felt these documents were not adequate to the need; the
first provides only a short-term vision and the latter provides a vision not specific to the fire organization.

**Perspective 2: The fire organization has a clear vision.**

Other participants felt the agency's fire community does have a vision; however, they felt it has not been well communicated. In several focus group conversations, participants spent a good deal of time discussing how the lack of clear leader’s intent inhibits the communication, collaboration, and execution of one clear vision. This led to the question, “If we have a vision, what is it?” The conversation circled around what agency documents provide vision until one participant, a regional fire director, spoke up during the society focus group to argue that in fact, the wildland fire community does have a vision:

“First of all, there’s the Cohesive Strategy. I find it alarming that we’ve been in here for a couple of hours and nobody’s talked about it. Because that is the agreed interagency framework for talking about the Nation’s fire problem.”

“A National Cohesive Wildland Fire Management Strategy,” known simply as the Cohesive Strategy, presents an interagency vision of safely and effectively extinguishing fire when needed, using fire where allowable, and managing natural resources as a Nation to live with wildland fire. Participants whose work units have whole-heartedly adopted the Cohesive Strategy spoke of effective collaboration and planning. They’ve seen gains in communication and understanding amongst themselves and their partners and spoke of having a universally agreed upon vision for managing wildfire in their area. Often, these localized success stories use the strategy’s goals (creating resilient landscapes, working toward fire-adapted communities, and safe and effective wildfire response) to build a common path forward. However, participants did note, where extensive preplanning and collaboration with partners is not taking place, the Forest Service wildland fire system tends to default to “safe and effective” fire suppression in response to wildland fires.

While some participants spoke of success implementing the Cohesive Strategy, most did not. If the Cohesive Strategy is the shared vision for fire, why wasn’t it the first thing that came to mind when participants talked about these issues? Why was there still so much confusion and lack of clarity?

**Perspective 3: The fire organization has a vision, but we struggle to carry it out.**

“It wasn’t because of a lack of asking the question. It was just that success didn’t exist in a form that everybody could agree on what success looked like.”

—Fire and Aviation Staff Officer, Fatalities and Injuries Focus Group

Some focus group participants suggested we do have a vision, many of whom pointed to the Cohesive Strategy or the Chief’s Letter of Intent, and it is communicated effectively, but the message is confounded by behavior—there is a gap between the organization’s stated vision and the way members of the organization carry out their work.

Focus group participants highlighted several system drivers and unintended consequences that serve to reinforce the status quo of focusing on suppression even though other goals, such as creating resilient landscapes and fire-adapted communities, have been identified. Some of
these system drivers, which are discussed in greater detail in other chapters of this review, include:

- A pay structure for firefighters that rewards long hours on the fireline (overtime pay) and exposure to risk (hazard pay).
- A funding structure that supports virtually unlimited suppression spending but only limited and carefully scrutinized hazard fuels reduction and prescribed fire spending.
- A management approach that, in response to socio-political pressures, prioritizes mitigating short-term risks associated with fire events over long-term risks of fuels accumulation.
- A bias toward managing for short-term risk based on perceived threats to career and reputation.

As several focus group participants pointed out, no one questions when a person chooses aggressive suppression; if something bad happens you’re off the hook because it’s wildfire and not within your control. But if you choose to manage a fire for other than full suppression to create more resilient landscapes and something goes wrong, your career could be in jeopardy. This begs the question, “How can the agency’s fire organization and its people fulfill the long-term vision when current policy serves as a barrier to its implementation?”

It’s Not for Lack of Trying

There are, in fact, examples of Forest Service leadership working to communicate vision, provide leader’s intent, and solicit feedback from the field. In the 2015–2020 Strategic Plan, Chief Tidwell committed to communicating “a clear vision and clear direction to all employees.” The elements of this vision included: (1) sustain our Nation’s forests and grasslands, (2) deliver benefits to the public, (3) apply knowledge globally, and (4) excel as a high-performing agency.9

Chief Christiansen also described her vision for the agency’s fire organization clearly in her 2019 Chief’s Letter of Intent for Wildland Fire as she identified priority areas for the year. She reaffirmed the Forest Service’s commitment to the goals of the Cohesive Strategy and reiterated its vision. And there are numerous other examples. Yet, despite all this effort, the three distinct perspectives outlined in the last section still exist.

It’s hard to question the intent behind efforts to provide clarity about the agency’s vision, but are these efforts hitting the mark? Are they reaching and resonating with their intended audience? And if not, then why?

Communicating Vision

The concept of “communication virga” describes one of the challenges the agency faces in communicating its vision internally. In this phenomenon, much like rain that never reaches the ground, information that originates up high, say at the Washington Office, fails to make it to the people in the field, dissipating as it makes its way down through the chain of command.
Communication Virga

A thick, black bank of clouds builds on the horizon. The cloud bank brings the promise of rain, and as it rolls in, expectant faces look to the sky for relief. The rain is falling, yet what looks like a life-giving shower is diminished to a couple drops, the precious moisture evaporating long before it reaches the ground: virga.

This phenomenon is common across the dry west in the summer and its equivalent, “communication virga,” is common in the Forest Service work environment. The result is a workforce left looking to the sky for rain in the form of information; they see it up there, but never feel more than a drop, forcing them to operate to the best of their ability with the limited information they have.

This breakdown in communication typically takes place in several different ways, according to participants. Sometimes it can be well-meaning supervisors who think their subordinates don’t need to know the information and filter it out. Often, they are correct; sometimes they are not.

At other times it can be information saturation; there just isn’t enough time in the day to read every message. Focus group participants felt the abundance of other information or noise in the system inhibits their ability to identify important new information. Often, messages are deleted prior to reading as part of the daily information triage that most, if not all, employees carry out. Based on arguments made in Peter Senge’s pivotal book on organizational learning, “The Fifth Discipline,” if something as important as vision is communicated via email and looks like just another short-term initiative amongst an abundance of other initiatives, it is very likely that most will overlook or ignore it.

“Are we overcommunicating? Is there too much communication, too much information out there that people are just tuning out?”

—Safety Officer, Communication and Work Environment Focus Group

Participants also noted that broad statements of vision and leader’s intent often get modified as they travel down the chain of command, at times looking nothing like the original when the information reaches the field level. Participants also speculated it is possible people receive the message, understand it, but don’t feel invested in it because they were not involved in developing the message. If a vision statement is developed by leadership with input from a few at the field level and then “educated” down to the rest, those not involved in the development may feel left out, resulting in a lack of buy-in or support for the vision.

The struggle with communicating vision is not unique to the Forest Service. Ken Wong, the president of Lenovo Asia Pacific, recently shared some insights he learned from his career in business: “After more than 20 years in business, I’ve come to realize that the communication of strategy is of equal importance to the development of the strategy.” He recognized a substantial imbalance between time spent creating the strategy compared to time spent...
determining how best to communicate the strategy. “While they may have spent up to 6 months developing a strategy, sometimes they'd spend as little as 6 minutes considering how best to share it with the organization.”

While “This is Who We Are” was the result of more than 10 years of collaborative work, participants shared that the first they had heard of it was when the books showed up on their desk. How much time was spent developing the communication strategy for relating this huge effort? What are the corporate assumptions that drive our agency's communication practices? As an agency, could we learn a lesson from Ken Wong and others in the private sector who realize the importance of devoting significant time, energy, and resources to developing a communication strategy for getting all significant messages, especially those related to vision, to the field?

“The single biggest problem in communication is the illusion that it has taken place.”

—attributed to George Bernard Shaw
Learning Challenge

Regardless of which of the three perspectives you hold (we don’t have a vision, we do have a vision, or we have a clear vision but we struggle to carry it out), you likely work for the Forest Service for deeply personal reasons. Something about this organization drew you to it. Gather your work group, watch the linked videos below, and discuss the following:

Watch the video “How Does the WHY Relate to Vision?” and then answer the following question:

Q What is your “why?” Why did you choose to work for the Forest Service? Share your “why” with your work group.

Watch the video “You Don’t Need to be a Visionary – It’s Fine to be a Follower” and then explore the following content and questions.

The four links listed below each communicate a vision for the future of the Forest Service in different ways. There are undoubtedly parts of these vision statements that will resonate with you and other parts that may not do so. As you review them, look for the statements that speak to you, or for something that connects to your unique ‘Why’ and paints a picture of the vision you hold that you are willing to tirelessly work towards.

**Forest Service Vision**

**Cohesive Strategy**

**2015–2020 Strategic Plan**

**This is Who We Are**

Q What are the elements of vision presented in these documents that resonate with you? How do they connect to the work you do? What is the idealized vision of the Forest Service you are committed to realizing and what does it look like when it has been achieved? Share your thoughts with your work group.

Q How can you help your coworkers carry out the elements of the Forest Service vision they believe in? Share your ideas with your work group.

“I don’t believe vision should be something that is ethereal. It shouldn’t be something that lives in our imaginations...I love the Declaration of Independence and it is written in such a perfect form too. It doesn’t start by complaining. It starts by idealizing. And then it gets into all of the things that are in the way of this ideal and that’s what we set out to overcome.”

—Simon Sinek, “You Don’t Need to be a Visionary – It’s Fine to be a Follower”

Watch the video “Vision Without Execution is Hallucination” and then ponder the following question:

Q What are underlying system drivers preventing you from realizing the elements of vision that resonated with you? What can you do about them? Does where you sit within the organization (field, line officer, Washington Office, etc.) affect what you can do? How so? Share your ideas with your work group.

Tell us about your experience participating in this challenge at this [team learning link](#)!
Chapter 5. Does Our Communication Lead to Trust?

“Radios are a medium to help us with communication, but the reality is we don’t know how to communicate effectively with each other in person yet.”

—Regional Safety Manager, Communication and Work Environment Focus Group

Focus group participants noted a disturbing lack of trust at multiple levels: between the Washington Office and the field; fire and line; and supervisor and employee. References to a lack of trust-building communication were prevalent in both the qualitative and quantitative analysis. However, focus group conversations put a finer point on the topic, highlighting listening as a key attribute of communication currently missing from many internal Forest Service interactions.

Communication is taught in almost every wildland fire and leadership course, the Forest Service hosts or has a part in. Most, if not all, focus on how to communicate clearly and concisely to others. Rarely do these trainings offer advice on how to listen, and the unintended outcomes of that disparity can be seen agencywide. For example, the National Wildfire Coordinating Group (NWCG) curriculum includes the five communication responsibilities, of which listening is conspicuously absent from. To be engaged at work, everyone needs to feel heard.

This issue is also compounded by the lack of time agency personnel have to engage in active listening. Participants noted feeling completely inundated with emails, expectations to attend too many meetings, and administrative requirements such as hiring or employee-relations issues. Many felt these obligations consumed an inordinate amount of time at all levels of the organization, and instead of supporting them in their work, detract from their ability to function effectively. While these concerns are nothing new, the degree to which they demand the attention of supervisors feels greater than ever. This has resulted in not enough time in the day to carry out their primary duties, including engaging with their employees. Focus group participants also spoke of their employees spending several hours per day performing administrative minutia rather than fulfilling the mission of the agency. Most of this time is spent alone in front of a computer rather than developing relationships or engaging in conversations.

“We have focused for so long as a culture about communication, but it really focuses on the sender, right? Focusing on what you’re saying. We have not taught people how to listen. A lot of time we don’t listen to hear, we listen to speak.”

—Fire Management Officer, Communication and Work Environment Focus Group

Looking within the agency, participants provided examples of existing programs working to address this issue, such as the Forest Service Middle Leader Program which includes education specifically targeted at improving the listening skills of participants. One participant in the communication and work environment focus group, a fire management officer, spoke of level 3 listening which is taught in Middle Leader, saying:
“In level 3 listening...we listen for the meaning behind what the person is saying. We often don’t pick the ‘perfect’ words to convey meaning; however, at level 3 listening it doesn’t matter because the person listening is feeling and sharing that deeper meaning with the person speaking. It doesn’t mean you agree with what they are saying, but there is understanding at a deep level. For me, personally, level 3 listening is exhausting.”

Sadly, this and other efforts to improve dialogue skills, specifically listening, reach relatively few employees each year. With limited offerings, how can these efforts effectively reach a wider audience?

Feedback as a Form of Listening

The power of listening has also been demonstrated, for better or for worse, in the Safety Engagement sessions undertaken in recent years. In these sessions, participants could see for themselves the leader-facilitator listening... or not listening; either way, the experience was powerful. In these and other initiatives, leadership has taken great efforts to make the field feel heard. However, without tangible feedback, something as simple as someone saying, “I hear you,” or a leader taking visible action as a result of the conversation, employees across the agency have inevitably questioned whether their input during those sessions was valued or not.

Participants also brought up the annual Federal Employee Viewpoint surveys, and how many people don’t even respond to the surveys because they don’t believe the results will be used. In fact, the statement that generally receives the lowest positive rating in the Federal Employee Viewpoint Survey each year is “I believe the results of this survey will be used to make my agency a better place to work.” From 2016 to 2018, the highest proportion of people who agreed with that statement was just 26 percent.\textsuperscript{11,12,13}

While the agency has done a lot in recent years to solicit comments and opinions from its employees about work environment and other issues, the lack of feedback on what is being done with that information has made
employees feel unheard, as if the surveys and engagements were exercises in futility. Despite this common sentiment, participants still saw national leadership as well-intended, caring deeply, and trying to make needed changes; they just wish leadership was more transparent about their followup efforts.

Ultimately, participants expressed a strong belief that more two-way communication, or as one focus group participant put it, “artful dialogue,” is central to increasing trust. This could come in many forms, including feedback, action response, or direct dialogue.

**Who Has the Time?**

Focus group participants acknowledged that trust-building communication requires authenticity, and in the fire culture, authenticity is often risky as it calls for individuals to be vulnerable. As Brené Brown suggests in her book “Dare to Lead,” communicating in a way that builds trust and strengthens relationships requires courage and vulnerability. It may be simple in theory but the practice is not always easy, and the transformative potential of this kind of communication may not be realized overnight.

> “If you read these stories and think, ‘who has the time?’ – I’d ask you to calculate the cost of distrust and disconnection in terms of productivity, performance, and engagement. Leaders must either invest a reasonable amount of time attending to the fears and feelings, or squander an unreasonable amount of time trying to manage ineffective and unproductive behavior.”

—Brené Brown, “Dare to Lead”

With limited time and increasing workloads, effective communication has been frequently sacrificed for efficient transfer of information, often at great cost. The kind of listening described above requires a significant investment in time and energy. But is that investment worth it?

Participants already support the investment, believing that building trust through listening will lead to fewer accidents, injuries, and fatalities within the wildland fire environment and across the agency. If we as an agency want our people to feel heard, to have trust in their leadership, and to strengthen relationships, the answer to the question above is clearly “yes.”
**Learning Challenge**

Gather your work group, watch the linked video below, and discuss the topics outlined in the questions. Encourage everyone to take this time to practice level 3 listening: listening to understand with curiosity rather than listening to respond. When you notice yourself formulating a response instead of listening deeply, prompt yourself to ask a clarifying question instead.

Watch the video “10 ways to have a better conversation.”

**Q** Who do you see as good communicators in your work unit? What traits or skills make them good communicators?

**Q** What communication practices are effective between the people you work with daily? Is this different from the larger group you are part of?

**Q** What barriers to effective communication have you experienced or are you currently experiencing in your work group?

**Q** What barriers to effective communication exist between levels of the organization?

**Q** How do any of the barriers you identified impact trust?

**Q** What tactics do you use to overcome the barriers you face?

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**Level 1 Listening**

*My focus is on how this conversation affects me.*

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**Level 2 Listening**

*My focus is on the other person, what they are feeling and saying.*

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**Level 3 Listening**

*My awareness is open to what’s going on with us and what’s around us.*

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Tell us about your experience participating in this challenge at this team learning link!
Overwhelmingly, participants valued the ability to provide cohesive, accurate, and compelling messaging to the public they serve as well as their partners and cooperators. The importance of having this ability stemmed from a desire to tell their unit’s story in a way that is open, honest, and most of all, easily understood. Yet, the actual lived experience of most participants was very different. Participants spoke of efforts they made to get their story out having been clouded by a variety of agency protocols and a lack of support for, or the capability to offer, transparency. From these discussions, two major themes emerged as barriers to communicating the agency fire organization’s story to partners and the public: (1) constantly changing terminology for wildland fire management and (2) mixed messaging on whether fire is good or bad.

Why Are We Constantly Changing Our Terminology?

“The terminology we have been using over the last 20–30 years has been inconsistent. Once the public understands what we are talking about, we change the terminology again. I’ve lived through ‘full suppression,’ ‘natural ignitions,’ ‘prescribed natural fire,’ ‘fire use,’ ‘wildfire for resource benefit,’ etc.”

—Public Affairs Officer, Society Focus Group

Wildland fire use. Appropriate management response. Fire managed for multiple objectives. Full suppression. Other than full suppression. The list goes on. Over the years each of these policy terms, along with many other informal ones, have been coined, shared, adopted, implemented, rejected, and replaced. Some are still occasionally used, either out of habit or a lack of awareness that the term has been replaced. Some people continue to use outdated or revoked policy names because they feel the new, accepted terminology does not allow them the ability to articulate the story they are trying to convey.

What are we as an agency trying to accomplish by requiring specific language that never seems to stick around for long? Participants acknowledged that sometimes these changes reflect a healthy desire to stay current with the most recent developments in science and policy, such as the 2009 “Guidance for the Implementation of Federal Wildland Fire Management Policy.” At other times, participants recognized that the changes were attempts at simplifying the language to make fire management decisions easier to explain to the public. While the reasons may be well-intended, focus group participants said the frequency of changes to terminology is actually making things more complicated, undermining the efforts of employees to tell the agency’s story to the public in a way that is consistent and builds trust and understanding.

“We are very inconsistent with terminology and how we talk about fire, not just region-to-region, but forest-to-forest, and person-to-person. And that inconsistency feeds this distrust, uncertainty, and public angst about what it is we’re doing.”

—Regional Fire Director, Society Focus Group

The Complexity of a Simple Question

The simple question “is fire good or bad?” has anything but a straightforward answer. Decades of promoting the clear and simple message that all fire should be suppressed has been hard
to replace with a more nuanced conversation as the Forest Service mission has evolved. The question is now complicated by the complexity of competing values, perspectives, and priorities; altered environmental conditions; risk management processes; and ever-increasing socio-political pressures. Unfortunately, when asked by the public, the question often results in a simple response of a shrug and “it depends.” Though it is an accurate statement, it also highlights the challenge agency employees have in answering that question, especially when they feel they don’t have the vocabulary to support a more transparent and reasoned answer. This struggle is nothing new but still requires a more involved conversation than is often allowed for.

“The categorization of wildland fire as ‘good’ or ‘bad’ may imply absolutes, but this review acknowledges that the desirability of any fire depends on the conditions at the time of its occurrence and that the entirety of a fire, or parts of it, may transition from ‘good’ to ‘bad’ or vice versa throughout its existence.”


Focus group participants acknowledged the complexity of these conversations and told stories of both success and strife. Focus group participants felt that entrenched suppression organizations (both within the Forest Service and external entities) that value fast, overwhelming initial attack, are often at odds with a strong scientific understanding that fire has a natural role in healthy ecosystems. These competing approaches influence discussions with the public, and examples on either side are often presented simultaneously in the communities the agency serves. As a result, participants have found communities who embrace fire-adapted communities, those who view fire as an enemy to be fought, and everything in between.

Changing the Story

“...one of the things that I think we’re missing is having that dialogue with the public. Because I think sometimes too often, we’re trying to have that right during the fire. And I think that’s critical that we do have those conversations during the fire, but I think we also need to have those conversations ahead of time before the fires start.”

—Public Information Officer, Ecological Soundness Focus Group

During an incident, identifying fire as good, bad, or both is a topic in the forefront of the public’s mind and the resulting conversations can be rich and immediate. However, there are also increased tensions and time pressures that often inhibit dialogue. Focus group participants acknowledged the complexity of these conversations and told stories of both success and failure. The following examples (see inset box on page 31) from the same area of southwestern Oregon illustrate the dynamic tension within which employees often operate, and how communities have partnered with diverse groups and organizations, including the Forest Service, to help people learn to live with fire.

Participants suggested that conveying context and engaging in interactive dialogue with the public is key to ensuring the message is effective and multiple perspectives are heard. Research indicates that when these efforts are skillfully undertaken, public support of fire management increases.15
Learning to Live with Fire

The following examples from the same area of southwestern Oregon illustrate the dynamic tension within which employees often operate and how communities have partnered with diverse groups and organizations, including the Forest Service, to help people learn to live with fire.

“Ashland residents live in a fire-prone environment and need to prepare for wildfire every year to protect our community and our health.”

—Ashland Forest Resiliency

“The purpose of the workshop was to help guide business owners to better prepare for smoke impacts to their business. Given how negatively our community was impacted by the smoke from the fires of last summer, we realized we needed to research and provide more information for businesses to plan ahead for possible smoke impacts to their building, employees, and customers in the future.”

—Ashland Oregon Chamber of Commerce

The article below shows the challenges faced when a fire impacted several communities.

“The U.S. Forest Service’s [let burn] fire policy is resulting in catastrophic fires,” Josephine County Commissioner Lily Morgan said. ‘We would like a change in their policy.’”

—Josephine County Board of Commissioners Declare No-Confidence Resolution with U.S. Forest Service.

The “2014 Quadrennial Fire Review” outlined possible future outcomes and highlighted strategies to best achieve a coherent public communication campaign, suggesting that public engagement through an “evolved communications approach” and “grassroots efforts” is critical. Ventures such as those illustrated by the Ashland Forest Resiliency and the Ashland Chamber of Commerce in the inset box to the left are examples of such efforts already underway. This evolution in communication isn’t limited to outreach techniques; the review also calls for a narrative that compliments Smokey Bear’s message and is focused on fire-adapted communities and resilient landscapes where fire is portrayed as a “natural, necessary, and productive occurrence.”

Identifying the strongest aspects of effective communication campaigns could help inform what a coherent organizational approach might look like for the agency. Incident management teams are now routinely broadcasting situation updates on social media, but can these platforms also be used to share products that help tell the agency’s story by creating learning opportunities about fire's role in a healthy ecosystem? How can existing products, like the Lolo National Forest's StoryMap about reforging its relationship with fire (created by the Rocky Mountain Research Station) or “A Better Way to Think About Wildland Fires” (produced by Untamed Science in cooperation with State and Federal fire agencies), be incorporated into these efforts?

Living with fire is not unique to the United States, and other countries can offer examples of success as well. Australia approaches this complex issue through a multifaceted strategy addressing immediate public safety needs, enhanced public outreach, and long-term change through legislation. Of course, even with the best-laid plans, conditions can change as the unprecedented 2019–2020 Australian fire season showed.
Telling the agency’s story, and that of fire’s role on the lands they manage, in a cohesive and compelling way was viewed by focus group participants as essential to regaining the trust of both employees and the public. The Nation’s most famous fire spokesperson, Smokey Bear, is an example of an incredibly effective strategic communications campaign. Much of this success stems from the simple, clear, and memorable tone of Smokey’s message. As we look to develop new messages in the future, how can we harness these same characteristics that made Smokey’s message so effective?
Gather your work group and discuss the following scenario:

Your forest has recently committed to managing fire when conditions allow so that it can play a more natural role on the landscape. This is a departure from the full suppression strategies that have historically been implemented on your unit.

Q  What steps can your unit take (or has it already taken) to communicate why this management strategy is in place?

Q  What tools are available to you to help convey this complex message to the public you serve?

A recent lightning bust has given your forest the opportunity to put this approach into practice. While most of the starts were suppressed during initial attack, the duty officer and agency administrator have agreed that one start near the wilderness boundary is a good candidate to manage. Reports from units on scene say that “it looks like a prescribed burn” and “it’s doing nothing but good.” There are natural barriers nearby, including an old burn scar and a logging road system. The fire has remained small for 4 days. The smoke is visible from town but the activity on the ground is not. You have stopped at the local grocery store to pick up some items and the person in line behind you notices your fire shirt. They ask, “Why aren’t you guys putting that fire out?”

Q  How do you respond? Do you feel prepared to explain the benefits of fire on the landscape to someone with a different perspective than your forest’s? If you don’t feel prepared, where, or from whom, can you get that information?

Q  What concerns might this person have? Are you prepared to listen to understand them? What information do you need to help alleviate their concerns?

Tell us about your experience participating in this challenge at this team learning link!
Chapter 7. Socio-Political Pressures: Real and Perceived

“Fire is a social problem. Fire is not a problem if people aren’t around. It only becomes a problem when people are around.”

—Regional Fire Director, Society Focus Group

The 2007–2016 metareview qualitative analysis found the expectations partner agencies, stakeholders, and the public have for Forest Service firefighting resources can be drastically different than what those firefighting resources or the agency perceive them to be. Focus group participants reinforced this observation, stating in some cases expectations have been much higher and, in others, much lower than what agency personnel believed them to be.

“I asked them, ‘Well, do you want your son or daughter on that hillside?’, and they said, ‘Yeah.’ They felt that firefighters are just like soldiers. They should be putting their life on the line. I had to walk away.”

—District Ranger, Society Focus Group

“As a Type 1 IC, I’ve seen them not want to take risk to protect their home.”

—Forest Fire Management Officer, Society Focus Group

Dr. Sara McCaffrey, the academic presenter for the society focus group, further supported this observed trend when she presented research suggesting socio-political pressures are not so clear cut; some of these pressures are real while others are merely perceived. Dr. McCaffrey referred to these perceived pressures as “false narratives,” a state in which fire managers or the agency may be hesitant to use certain management strategies because of pressure they assume to be real but that may not actually be representative of the greater population they serve.

This tension between real and perceived pressures was highlighted in real time during the society focus group when, after Dr. McCaffrey presented some of her findings, a focus group participant (regional fire director) responded by expressing their disbelief in the numbers:

“What is the source of this data? I see that number, and my BS flag is flying up the pole right now. It’s just not what I have seen.”

Participants speculated these false narratives are likely perpetuated by personal experience with the few loud voices in the room. Often these few loud voices garner the most attention, but by engaging with only those voices, agency personnel may sometimes project those expectations onto the rest of the community.

“We tend to make a number of assumptions about the public but there is no ‘the public;’ there are just people, and people are diverse and complicated. It’s all about assumptions and stereotypes, right? It’s what we think of as ‘the public.’ But we know the public is so many different people and so many different opinions that it really is complicated.”

—District Ranger, Society Focus Group
This gap also exists in the understanding our partners and the public have of the work the fire organization actually does compared to what they imagine the work they do is. Not telling the story of agency resources and their mission leaves partners and the public to develop their own understanding of what the Forest Service’s fire resources do. Left to their imagination, it is clear to see how the public’s, our cooperators’, and our agency partners’ perceived expectations can be far off from the agency’s real duties.

Insights from focus group participants provided some useful clues as to where some of this misalignment between real and perceived pressures and expectations may stem from:

- Educating rather than listening—having a monologue with the public rather than a dialogue.
- Not telling the story of the fire organization or the agency.
- Using broad-brush narratives rather than geographically localized narratives.
- Differences in national, regional, and local perceptions of public opinion and expectations.

In addition to the challenges discussed already, there are also practical barriers that stand in the way of developing these relationships and partnerships—it takes time, resources, and energy to implement. All are things which most employees don’t have much of to spare.

Being understaffed and underfunded, most participants spoke of putting a majority of their time and resources into accomplishment-oriented tasks rather than on building relationships. Because the agency reports to Congress, meeting targets has started to feel like the primary mission for agency employees. One participant, a district ranger, spoke of putting more effort into building relationships within their unit's community after experiencing a bad fire season, saying:

“I have a lot of coffee meetings with the public, and my own staff criticize me for having coffee meetings because it is not an output. In my next letter of direction, I’m going to say that ‘You spend four hours every pay period having a relationship conversation.’ I might get in trouble for that. It's not a log on a truck.”

Most focus group conversations reinforced the social science literature around the importance of knowledge, trust, and interactive communication. As Dr. Sarah McCaffrey, the academic presenter for the society focus group, noted, “We tend to approach communication with the public as a matter of educating them, but assuming the role of ‘educator’ can put us in an inherently asymmetrical power dynamic with the people we are attempting to communicate with.” Rather than fostering true dialogue and interactive communication, our efforts to “educate” the public sometimes promote a one-way information flow that inhibits rather than fosters opportunities for learning and real collaboration. So how can the fire organization better understand where the public is coming from, get into their shoes, and try to figure out where we can find common ground?

This challenge with communication is not unique to the Forest Service. As Edgar Schein, scholar and researcher of organizational culture, suggests in “Humble Inquiry: The Gentle Art of Asking Instead of Telling:” “We value task accomplishment over relationship building and either are not aware of this cultural bias or, worse, don’t care and don’t want to be bothered
with it.” Schein further asserts, “We must become better at asking and do less telling in a culture that overvalues telling.”

Moving Forward as Engagers and Educators

“There is misalignment across jurisdictions. The Forest Service really struggles with that. The State is easy; it’s all suppression. But the Forest Service has this more complex fire paradigm. We know that, but society doesn't know that. There needs to be a coming together that agencies have to have with each other, to tap some appreciation for what others are doing and coordinate... There is definitely a leap we need to make in the shared stewardship sense about, ‘OK, now we’ve talked to each other, now how do we engage society?’”

—Cooperator, Society Focus Group

Participants across all focus groups agreed the solution to dealing with these real and perceived social and political pressures lies not in placing blame on external sources, but in building trusting relationships with them through interactive communication so that a shared understanding can be developed.

Participants suggested finding more ways to engage key stakeholders would be a big first step in the right direction. Bringing the public and cooperators into the risk tradeoff analysis or coming up with a shared vision of what fire on the landscape looks like are just two ideas participants recommended for increasing engagement. By involving key stakeholders in planning, fire management personnel can gain strong voices in their communities who can speak the language and convey rationale to their own stakeholder groups. To have those key members as a voice for the Forest Service within the community can be an incredibly powerful tool in aligning real and perceived expectations.

Focus group discussions also converged on the importance of annual collaborative spatial planning with partners and cooperators. Fire does not recognize jurisdictional lines, and participants suggested that planning for fire management and fuels projects should also be blind to these lines. Being transparent about forest-level planning and working together with adjacent cooperators and partners to build cross-jurisdictional expectations could help establish a common operating picture. Having this shared understanding prior to a fire ever starting can help ensure objectives for fire management are more effectively built, and in a timely fashion.
“We routinely think about fire in a vacuum, and it is always just the Forest Service talking amongst themselves...We need to create a metaframe of the problem that all the stakeholders see. Until we have meetings that are more than just the Forest Service, I don’t think we’re going to get anywhere.”

—Research Forester, Society Focus Group

How the fire organization structures planning processes is another example of a tangible way the agency can work to build trust. One cooperator participating in the society focus group suggested that the fire organization needs to bring more consistency to its planning process and to ask the questions: “Do the current planning processes build understanding and trust and is the fire organization in service to those goals?” Using such items as metrics for success on projects could go a long way to enhancing relationships with various stakeholders.

From Aspiration to Reality

No doubt, moving from educator to engager is easier said than done, but applying Edgar Schein’s theories of developing a sense of humble inquiry, honing the agency’s listening skills, and becoming genuinely interested in learning from the other’s perspective could be a good place to start. Focus group participants agreed that building trust with the public, stakeholders, cooperators, and partner agencies through mutual understanding and effective dialogue is absolutely necessary moving forward.

“I do think the...three themes of building understanding, trust, and utilizing interactive communications are fundamentally effective, right? If we invest in those things, we can get better outcomes, both from an organizational kind of decision making/risk management standpoint, and from a societal standpoint in terms of what communities then do in terms of how they take ownership...and how [they] understand, mitigate, and manage their risks.”

—Cooperator, Society Focus Group
Learning Challenge

Gather your work group and discuss the following situation which is a continuation of the scenario presented in the learning challenge in chapter 6, “Telling Our Story.”

It is 3 weeks later, the lightning fire has grown considerably but is still, overall, doing “nothing but good.” Crews have prepped and burned out along a road to protect a communication site and a popular trail has been closed to the public. A helicopter was used to support the burnout. Dense smoke has been settling into your community every night. You are at the grocery store again and the same person sees you and approaches, “I thought you said it was a good fire? Doesn’t look good to me. This smoke is horrible!”

Q How do you respond?

Q Did your response show a commitment to listening and building trust rather than telling?

Q How do you think your community views the fire? Where does your perception of how your local community views fire come from?

Q What can you do to listen, build trust, and establish quality relationships with your local community members before there is smoke in the air?

Q Have you experienced instances where community members spoke up to support fire management efforts? How was their perspective received by their fellow community members?

The regional office has received numerous calls from the public, a TV news station, and a staffer from the Governor’s office. The local Air Quality Board has issued a health advisory for your area. The regional office public affairs officer calls your district to inform you that the Governor is “very interested in how you are suppressing your fire.”

Q How do you respond?

Q What kind of support or opposition to managing fire do you expect to have (or have experience with already) in your area? What could be done before there is smoke in the air to gain the support of local and State government officials for management practices that might impact communities?

Tell us about your experience participating in this challenge at this team learning link!
Chapter 8. Cost or Investment?

“The growth and fire costs [are] crippling the agency’s ability to conserve the Nation’s forests and grasslands and to provide the multiple uses and values for which the agency was created.”

—“The Rising Cost of Wildfire Operations,” USDA Forest Service

The cost of fire operations has increased steadily over the past 15 years, with an all-time high expenditure of $2.4 billion during the 2017 fire season. “The Rising Cost of Wildfire Operations,” published in 2015, found that wildfire operations represented 16 percent of the Forest Service budget in 1995 and projected that number to surpass 67 percent by 2025. Focus group participants agreed that this projected trend has already been fully realized, with $3.9 billion of the Forest Service's $6.1 billion 2019 budget going to the fire organization just to maintain the status quo.

What’s the difference?

Cost vs. Investment

Oxford’s dictionary defines cost as: “an amount that has to be paid or spent to buy or obtain something.” It simply represents an outflow with no return specified.

Investment, on the other hand, means: “an act of devoting time, effort, or energy to a particular undertaking with the expectation of a worthwhile result.” This term implies that what you spend today yields something of value in the future.

What benefits, advantages, and value does the Forest Service hope to achieve? And what is the agency willing to invest to make those things a reality?

“The Rising Cost of Wildfire Operations” found the continually increasing cost of fire operations has been “significantly impacting all nonfire program and staff areas.” This begs the question, “Is this level of fire spending and focus on suppression affecting the ability of the Forest Service to successfully manage forests?” Most participants believed the answer to that question was, “Yes.” Ensuing discussions highlighted system drivers, such as internal beliefs, organizational conditions, and external pressures that may be preventing the agency from fully adopting a long-term investment mindset.

“We are constantly talking about fiscal costs, and we're not talking about fiscal investments.”

—Wildland Fire Module Supervisor, Fiscal Incentives Focus Group

Wildland Fire and Budget Policies Encourage Cost Over Investment

Participants highlighted the current spending model as biased towards fire suppression, noting that it is structured to support virtually unlimited suppression spending but closely scrutinizes, and invests little in, hazard fuels reduction or prescribed fire. While the Forest Service has developed a significant and important capacity to mobilize resources on a large scale in a short amount of time to address major crises, the agency approaches project funding, planning, and implementation very differently. Focus group participants expressed frustration over the inability to mobilize resources and share...
funding across agencies for planned actions, such as prescribed fire, which are often mired in bureaucratic red tape. The differences in spending structure between suppression and non-suppression activities inadvertently puts the agency at odds with the goals articulated in the Cohesive Strategy and those committed to in the 2019 Chief’s Letter of Intent which call for long-term investments.

“There are so many barriers for us to spend that money on restoration. Everything in our system is stacked up against us from doing that. Appropriations law, internal policy—firm walls that forbid us from spending that million dollars on restoration quickly and so the fire side wins.”

—Regional Fire Director, Society Focus Group

Allocating scarce resources to long-term, landscape-scale investments (e.g., fuel reduction) poses the challenge of comparing fuzzy, future benefits with tangible costs today. Today will usually win out over tomorrow, much less 10 years from now. Focus group participants clearly stated that while decision makers may know what long-term benefits will look like from prescribed fire treatments, they are faced with the challenge of quantifying them with the same certainty as suppressing a fire. It is much easier to say, “We can save 1,000 homes,” than “We will reduce fire behavior should a fire occur again in this location in the future.”

Participants acknowledged that at times, there might be very good reasons for prioritizing immediate risks and costs over long-term risks and investments. However, the difficulty is in meeting the immediate demands while working to achieve the long-term goals.

“With fire, there’s too many ‘what ifs.’ There’s too many ‘if-ands.’ There’s too many hypotheticals to talk about it as an investment. You can’t talk about an investment in the fire workforce paying off in the long term, when every time we talk about fire in the moment, it’s talking about a cost.”

—District Fire Management Officer, Fiscal Incentives Focus Group

Recognizing the need to think long-term and the necessity of tracking the efficiency and effectiveness of investments as they are made, the Cohesive Strategy calls for agencies to:

- “Track priority investments by Cohesive Strategy goal, over time with the intent of establishing trend information (where applicable) on the effects of investments to achieve goal outcomes.”
- “Help assess which investments are the most cost-effective means of achieving the goals in order to make informed investment tradeoffs with respect to wildland fire program appropriations.”

Firefighters working together to cool off an area of heat on a wildfire. National Interagency Fire Center photo.
However, shifting the Forest Service from management and budget decisions that operate on a 1- to 3-year cycle to long-term investment decisions that span decades requires changes in practices and perspectives that may be deeply imbedded in current Forest Service policy and culture. Focus group participants consistently expressed the difficulty in adjusting to a long-term investment mindset needed to accomplish these goals.

**Personal Liability**

“You’re always putting your career at risk when you either manage the wildfire or put in prescribed fire.”

—Fire Ecologist, Ecological Soundness Focus Group

“Yeah, essentially, we’re doing prescribed fire in August, but we’re not calling it prescribed fire.”

—Lead Forestry Tech, Fatalities and Injuries Focus Group

The decision to manage a fire can also create career risks that may serve as a barrier to making investment decisions. Participants spoke of concerns over personal liability should a prescribed fire or a wildfire being managed for other than full suppression act unexpectedly. There were many horror stories of personnel who lost jobs, were moved to other positions, or stripped of their fire qualifications after an escaped prescribed fire. Many worry the agency doesn’t have their back and that it is much safer to avoid those scenarios rather than expose themselves to the risk associated with planned ignitions. When faced with this risk, it is easy to see how the alternative, fire suppression, where “no one ever doubts your decision,” is compelling.

**Thinking Long Term—Investing in the Future**

“As we continue to try harder doing what we are doing, maybe we can get to [treating] 2 percent [of forest system lands annually]. But that’s not going to do it. We need a huge, turn-the-titanic-around investment.”

—Regional Fire Director, Society Focus Group

A shift to an investment perspective represents a significant organizational challenge. The first challenge is developing a consistent understanding of short term versus long term. Short term, in an ecological sense (5 to 10 years), is actually long term in an organizational budget sense. Given budget and planning policy, regulation, and law, is it possible to reorient to meet both organizational and ecological time frames?

Secondly, the Forest Service cannot accomplish the goals of the Cohesive Strategy alone. Leveraging partner resources through shared stewardship and collaboration is identified in the Cohesive Strategy. However, to do so, the fire organization may need to find ways to overcome a deeply imbedded value of self-sufficiency while also working with partner organizations that may have different views on cost and investment. It may also need to overcome current funding structures, such as the discrepancies in how agency and cooperator funds are accessed for suppression versus nonsuppression activities. While there are many examples of successful collaborations between the Forest Service, its partners, and local
communities and governments, there are also many examples of failures. Both the successful partnerships and the failed ones are rich and necessary opportunities for learning.

To truly make the shift from short-term cost to long-term investment will likely require the Forest Service to have an understanding of current reality, a clear, long-term vision of where the fire organization is trying to go, and agreed upon measures of what success or return on investment looks like.
Learning Challenge

In 2014, the Chief of the Forest Service challenged us to carry out the Cohesive Strategy. Gather your work group and discuss the following questions:

Q What does the Cohesive Strategy mean for your work group? How does your work connect to the goals in the strategy?

Q What are some specific examples from your unit where short-term costs have prevented long-term investments? What are some examples of how long-term investments, as opposed to short-term costs, have been successful?

Q What support, resources, or system incentives would you find helpful in your efforts toward building resilient landscapes and fire-adapted communities as long-term investments?

Cohesive Strategy Vision: Safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and as a Nation, live with wildland fire.

Three primary factors:

1. Restoring and maintaining resilient landscapes
2. Creating fire-adapted communities
3. Responding to wildfires

Tell us about your experience participating in this challenge at this team learning link!
Chapter 9. Is “Safety First” a Myth?

“I’ve always thought ‘safety first' was about the most stupid thing you could say because you all know that’s not really the over-riding thing.”

—Assistant Regional Fire Director, Fatalities and Injuries Focus Group

“Safety first” is a phrase heard often during wildland fire operations. Well, let’s be honest, “often” is an understatement. The phrase is usually the number one objective on every fire and is vocalized several times a day at briefings and on the fire line. Yet, to participants, the phrase can feel disingenuous; in one breath, safety is promoted as the highest priority and that “no home is worth a life,” but in the next breath wildland firefighters are tasked with conducting structure protection.

Time and time again, focus group participants stated how the work they do is inherently risky; no matter where firefighters are working, they will always be exposed to some form of hazard. Yet the work they do is vital to the mission. This creates an ever-present goal conflict between safety and mission accomplishment that the wildland fire organization must navigate daily. It is an ongoing challenge that has been in the wildland fire system for quite some time, as the opening quote from Chief Dale Bosworth in the 2007 Dialogos Diagnostic Memo illustrates:

“We have grieved too often for those who lost their lives in support of our mission… At the end of the day, I want everyone to go home to their families.”

While this statement is hard to argue with, it also doesn’t resolve the problem, and has left firefighters to figure out what is “safe enough” and what risk is acceptable at any given moment. Various organizational initiatives have been implemented in an effort to help find this illusive sweet spot including the “Safety Journey,” “Stop, Think, Talk, Act,” and Chief Tidwell’s goal of zero fatalities. But rather than a universally accepted aspirational statement, the goal of zero fatalities has sparked a provocative conversation that had not been formally discussed before: is zero realistic or is it impossible within the current wildland fire system?

“Is that what people are preaching when they say, ‘Yeah shoot for zero’? Are you pitching for drastic, dramatic change? And then once we figure out what it looks like on the ground, are we still onboard with it?”

—National Interagency Fire Center Branch Chief, Fatalities and Injuries Focus Group

While many participants would disagree with the possibility of achieving “zero,” it has never stopped the fire organization from striving for that number. As focus group participants grappled with this question, they asked themselves what would need to change within the fire system to make it safer while still accomplishing the mission of the agency? At one extreme, some participants felt a complete overhaul of how the Forest Service approaches wildland fire operations was needed, like investing entirely in preventative and educational services and abandoning fire suppression. Others felt simply dropping the term “safety” and replacing it with an investment in risk management skills was the best path forward.
Reinventing the Wildland Fire System

“...what we do isn’t safe, by definition, nor can it be. So, we’re going to continue to have injuries and we’re going to continue to have fatalities. It’s going to happen.”

—Assistant Regional Fire Director, Fatalities and Injuries Focus Group

Several focus group participants felt the emphasis in recent years on risk management has been a positive step forward. They see developing sound risk management skills within employees as a means to improve performance and decrease accidents, injuries, and fatalities. Additionally, some felt using the risk management process is an important departure from the term “safety,” which to some, implies a zero-risk option. The wildland fire environment is far from being free of known dangers, and by using a process that acknowledges the inherent risk, it validates the work firefighters do every day. Practicing risk management provides those in the fire organization with a common process and vocabulary with which to talk about the ever-present risks of the wildland fire environment. The “Burdette Fire Case Study” offers just one example of what success can look like when risk management processes are put into place.

Expanding on the conversation around zero fatalities, participants acknowledged that under the agency’s current approach to wildland fire, accidents, injuries, and fatalities are likely to continue at the rate they have been. Sending firefighters into remote areas where true safety zones are often not available or where evacuation times of an injured firefighter are extended is a recipe for increased risk. If the agency truly wants to reduce the risk, some participants felt a complete overhaul of the wildland fire system of work was needed. At the extreme end, the suggestion was made to completely stop suppressing wildland fires. The science shows fire is a natural part of the landscape. So instead of pouring billions of dollars into fighting fires, some participants suggested pouring that money into implementing vast fuels reduction projects, educating the public on how to live with fire, and collaborating with partners to ensure they are successful in their missions despite the change in Forest Service mission. Participants also recognized this was a titanic-level shift that would take a large budget, a dedicated communications plan, time, and most of all, courage.

“The fire system is as safe as the fire system can be until we change the system itself.”

—Assistant Regional Fire Director, Fatalities and Injuries Focus Group

Knowing with the certainty of hindsight and experience that unless the system changes, the agency will continue to experience injuries and fatalities, what steps can the fire organization take to start changing? For many, completely overhauling the system will seem daunting and impossible; for others it will be unnerving as it is a system that fundamentally works well. Despite the vocalization to change the wildland fire system, are those who operate within the system willing to change and what would the effects of those changes be? One facilitator
posed this hypothetical question to their peers in the fatalities and injuries focus group and to the agency as a whole:

“If we’re willing to drive 20 miles an hour everywhere we go, we can guarantee zero fatalities on the road [excluding pedestrians] ...so if you do a system-level change that drastic, then the goal is possible. Are we willing to do that drastic of a change and accept all the other consequences that come with zero fatalities on the highway?”

In other words, is it possible to accomplish the mission of the Forest Service or the objectives of an incident while truly holding safety as the highest priority? Given the challenge, focus group participants recognized the need to understand the conditions of influence that tip the balance between safety and mission accomplishment. These discussions will likely be difficult as most value conflicts tend to feel like choosing between two “rights” while grappling with uncertainty. But by giving the safety-mission accomplishment continuum the attention it deserves, maybe the agency can move closer to who we aspire to be as an organization.

Threads of Change

While few would argue with Chief Bosworth’s observation that “we have grieved too often,” what has the agency done to fundamentally change the wildland fire system? Interwoven through the conversations was an underlying current of fatigue and frustration but also threads of optimism. While fatalities and serious injuries are still occurring, it is important to acknowledge positive change is happening, hard truths are being heard, and tangible investments are being made. Learning Reviews and Facilitated Learning Analyses strive to prioritize learning from events to prepare for the future. Courses like “You Will Not Stand Alone” and “Stress First Aid,” as well as initiatives such as safety engagement sessions, hiring a medical director, and standing up an agency-wide emergency medical services program were acknowledged as important steps by focus group participants. These examples show tangible investments in prioritizing the health and safety of agency employees. Yet, most of these threads of change serve only to reduce the severity of events or to learn from them. How do we as an agency make more substantive changes that remove or alter system drivers rather than just mask them?

“Maybe this is the conversation that needs to happen at the higher levels of the organization. They [senior leadership] wish for a different outcome of what’s going on when we have fatalities, right? So, is part of that conversation the way we staff our fire organization?”

—Regional Safety Manager, Fatalities and Injuries Focus Group
Learning Challenge

Gather your work group and discuss this chapter using the following questions as a facilitation guide:

Q What do you think... is “safety first” a myth?

Q In what ways does the tension between the desire to do meaningful work and the need to bring everyone home safely manifest at your home unit or within the larger agency?

Q In what ways do you see safety held as a core value in your workplace? Is safety one of your core values?

Q In what ways does safety become a lower priority when faced with other pressures?

Q How do you feel about the organizational efforts (e.g., the safety journey, the safety empowerment card, “Stop, Think, Talk, Act”) implemented in recent years to improve safety? Have you seen these efforts change how work is done?

In the fatalities and injuries focus group, a facilitator asked participants to consider why the agency still experiences injuries and fatalities, to which one participant responded:

“Would it be worth it to say it’s just the cost of doing business?”

Q Are the losses of friends and colleagues the cost of doing business? If not, ask yourself if you are truly willing to make the necessary changes that may be required to achieve that goal.

Q What improvements to how the fire organization manages risk have you seen in recent years? Where can the fire organization further improve?

Continued Learning

Want to dive in a little further into the topic of working safely in the wildland fire environment?

Check out the article “Same as It Ever Was...” from the winter 2015 publication of “Two More Chains.”

Opportunity

Tell us about your experience participating in this challenge at this team learning link!
Chapter 10. Mental Health and Suicide—A Call to Action

“In firefighters get burnout. You know, the emotional stress, PTSD, mental issues, substance abuse, suicide... In my experience, there’s certain suicides...that feel like line of duty deaths to me.”

—Risk Management Specialist, Fatalities and Injuries Focus Group

In 2012, the Forest Service addressed the suicide of an agency employee in the “Learning from a Traumatic Event—Suicide” facilitated learning analysis. In 2014, the Quadrennial Fire Review also referred to mental health and suicide within the wildland fire community. Yet among the 341 learning products looked at for this metareview, not one spoke about suicide or mental health. Despite this, the topic played an important part in focus group conversations.

Grassroots Efforts to Organizational Institutions

“The increased psychological toll on firefighters associated with lengthened fire seasons, more severe fires, and limited available resources creates significant health and safety challenges... According to experts consulted during this review, wildland firefighters often lack the resources that their structural fire counterparts have when it comes to addressing trauma-related stress reactions, such as depression, domestic abuse, workplace conduct issues, suicides, and alcohol and drug abuse.”


In recent years, various grassroots efforts to develop mental fitness and resilience among the workforce have been implemented and eventually institutionalized within the agency. Courses like “Comprehensive Wellbeing and Resilience,” “Human Performance Optimization,” “Stress First Aid,” “You Will Not Stand Alone,” and mindfulness webinars are just a few examples of these now institutionalized grassroots efforts. In addition, the Forest Service’s Work Environment and Performance Office (WEPO) hosts a website for the agency outlining mental health support options available to employees. In the spring 2017 edition of “Two More Chains,” authors took the problem head on by focusing on suicide and mental health. Fire and Aviation Management’s July 2018 “Behavioral Health Advisory” continued the conversation and provided links to resources for agency employees. Various tools are also available on the National Wildfire Coordinating Group (NWCG) Mental Health Subcommittee (MHSC) website. The MHSC, chartered in 2019, provides national leadership in wildland firefighter mental health and wellness. MHSC’s publication, “A Preparedness Guide for Firefighters and Their Families,” addresses this topic directly.

However, it became painfully clear during focus group discussions that many of these efforts remain little known to those they are intended to help. Focus group participants felt that to be truly effective, these efforts need to be supported, coordinated, reinforced, and made readily available to the community they serve. Focus group participants also expressed a need for the agency to explore further investments in mental health support including readily available consultation with professionals in the field of mental health and suicide prevention who are trained in trauma and PTSD.
To gain a better understanding of the impacts fighting wildland fires can have on those tasked with putting them out, listen to the “One the Line” podcast episode “Survey Says…”. In the podcast, Patty O’Brien, a clinical psychology doctoral student and former long-time hotshot, discusses the results of her recent research efforts. O’Brien surveyed 2,600 current and former wildland firefighters to learn more about their demographics, employment, and clinical characteristics, as well as their health behaviors, much of which is focused on mental health and suicide. In this episode, O’Brien and her doctoral advisor, Dr. Duncan Campbell, discuss some of her groundbreaking findings, and chart out a course for future steps.

Adding to the issue are the organizational systems which are supposed to help employees during times of need, such as the Office of Workers’ Compensation (OWCP) or the Employee Assistance Program (EAP). Participants expressed anger and disappointment towards some of these programs and believe employee experiences with the programs may be contributing to feelings of hopelessness, perceived burdensomeness, pain, and isolation.

When in a mental health crisis, an employee needs the process to be a relief rather than a further burden. Yet, time and again, participants described navigating the OWCP process as challenging even under the best of circumstances. There were many stories of employee claims being denied over simple administrative mistakes; employees being flown off the fireline for a medical emergency, only to receive a $25,000 bill for the helicopter flight which they are expected to pay with a GS-5 salary; and stories of others still who simply used their personal insurance because it was easier than trying to get OWCP to pay for it. While this speaks much to the treatment of physical injuries, or the lack thereof, participants felt the ability to garner mental health support through OWCP after traumatic events was nonexistent, with many either not knowing the option was available or not knowing how to navigate the process to request and get it approved.

“The Office of Workers’ Compensation Programs and the Department of Labor [system] is broken, and people are committing suicide because they’re not getting [the treatment they need].”
—Regional Safety Manager, Fatalities and Injuries Focus Group

Frustrated with the OWCP process and the lack of information or help on how to get access to mental health professionals via the program, many employees turn to EAP for assistance. Though participants said the process did work, more often than not, the assigned mental health professional lacked the skill and training to adequately help employees who had experienced a traumatic event. Being assigned a marriage counselor is a far cry from what is needed for someone who may be suffering from post-traumatic stress disorder (PTSD). This leaves employees feeling frustrated with the inadequate support. Other participants spoke of being unable to extend the benefits of EAP to their seasonal workforce who lose access to the program once the season is over, a time when they generally need it the most. After 6 months of camaraderie and near-constant companionship, being away from their crew can create
feelings of loneliness and despair. Extending access to EAP during the off-season was viewed as highly important by participants and an action item they felt the agency should be actively pursuing.

While the context of each suicide is unique, as an organization, we have to ask how the stressors inherent to the profession, exposure to traumatic events, and system conditions might add to the psychological burden our employees carry. What can be done to limit these impacts and build resilience within the agency’s workforce? How can efforts already institutionalized, as well as further grassroots efforts, be supported, expanded, and globalized throughout the organization?

**Culture is Changing**

This evolution of being able to talk about suicide within the fire organization, considering that even discussing or acknowledging suicide has been taboo for centuries, corresponds with a larger change within American culture. As a nation, people are discussing these losses and exploring how to address mental health in ways never seen before. The agency can’t continue to ignore these events—those lost to suicide, and those we may be about to lose to suicide.

Most focus group participants agreed that as an organization, we need to talk about this. The science of change says it will be uncomfortable and it will be difficult, but we have, we can, and we will do difficult things; it is in the fire organization’s DNA.

> “And then I’ve also been close to some fatalities, including a couple of suicides of people that I knew. So, yeah, I’m looking to see that one day there can be a better work environment for everybody.”

—Assistant Fire Management Officer, Communication and Work Environment Focus Group

“We none of us end up being able to go through difficult experiences in life without vulnerability, without some sort of unsettledness, without knowing and embracing the unfolding, unpredictable unknown, which is always right now. But when we go through those experiences and they are difficult, we earn the right to say something very powerful to ourselves. Which is, ‘I can do difficult things.’ We have to earn those scars to say, ‘I can do difficult things.’ There is no pathway through that without vulnerability.”

—Dr. Michael Gervais, “Finding Mastery” episode 185
Learning Challenge

The article “Breaking Down the Walls that Isolate Us” is an example of the cultural change currently being experienced in fire, in the agency, and as a nation. Gather your work group, read the article, then discuss it using the questions below as a guide.

Content Warning

This revealing personal narrative from a wildland firefighter includes the topics of addiction, overdosing, and suicide. If you’re feeling suicidal or know someone who is or who you believe may be feeling suicidal, talk to somebody. Call the National Suicide Prevention Lifeline at 988; the Trans Lifeline at 1–877–565–8860; or the Trevor Project at 1–866–488–7386. Text “START” to the Crisis Text Line at 741–741. If you don’t like the phone, connect to the Lifeline Crisis Chat at https://suicidepreventionlifeline.org/chat/.

Q What do you think? Discuss your impressions of this article. Are there themes in it that resonate? Themes that don’t?

Q Have you seen “heroic feats of alcohol consumption” in your time with the agency? Have you performed such feats yourself?

“I’ve never been shunned or belittled for getting help or taking medication. My supervisors, without exception, have been there for me. My peers have opened their hearts to me. That network helped me choose walking to the hospital under my own power.”

Q Imagine that Erik is one of your coworkers. In your workplace, would they receive the support Erik shared in the above quote, or would their experience have been different? How would you have responded to them?

Q Do you believe we need an anonymous reporting system? Why or why not?

“I believe we have accepted that some programs/modules will simply make their employees miserable... The fact that this is known and accepted in the fire culture is absolutely ludicrous.”

Q What is your experience with situations like Erik’s? If you haven’t experienced such situations, imagine for a moment you are in a program/module like that. What is it like to be in an environment like that? What do you do about it? Think about how you answered these questions. Do your actions change culture or sustain the culture that exists in the agency?

Q Is this conversation hard for you? For anyone in your group? If so, you are not alone. Consider how deep seated the “walls of shame and taboo” are. Without conscious effort these walls will remain; that’s what walls do. So, as you move forward from this challenge, should the fire organization be breaking down the walls or trying to protect their foundations?

Tell us about your experience participating in this challenge at this team learning link!
Chapter 11. The Quest for 1,000 Hours of Overtime—Money as an Incentive to Risk

“Hourly wages incentivize exposure. Everybody goes to a fire to get your 16s and [hazard pay]…They’ll take the opportunity to work as long and as hard as they can so that at the end of the summer, we have a 1,000-hour [overtime] season. Within the OPM hourly wage requirements, there’s no way to provide this financial stability that a young individual could use to build a future on or build a career out of.”

—Wildland Fire Module Supervisor, Fiscal Incentives Focus Group

A fundamental tenant of the learning review process is understanding the conditions of influence that affect decision making and firefighter safety. One of the most common conditions which emerged from the 2007–2016 metareview dataset revealed that for many, the current system of pay incentivizes accepting greater levels of risk when making decisions within the wildland fire environment. To dive deeper into the fiscal conditions which may influence risk decision making, fiscal incentives focus group participants were asked to consider if they believed the wildland fire system has fiscal incentives built-in that:

1. Encourage risk taking or increase exposure to risk
2. Create a relationship between firefighter pay structure and rates of firefighter fatalities or injuries

Subsequent discussions confirmed this theme and participants noted that many employees depend on premium pay to make ends meet. Much of the conversation focused on the ethics of balancing fiscal rewards with risk and fatigue management. Put simply, to make money, one has to work, and for firefighters, that means to work as much as possible due to the seasonality of the job. This means grabbing overtime and hazard pay whenever possible, even when the risk associated with an assignment might be high. Focus group participants expressed a desire to see changes to the system that would mitigate or remove this pressure from the decision-making process. Further conversations revealed three primary concerns regarding firefighter pay structures: (1) financial instability is prevalent in the workforce, (2) the ethics of working 16-hour days (16s), and (3) prioritizing pay over recovery.
**Financial Instability**

“We have a seasonal workforce that is incredibly unstable financially. We are approaching a point where a GS-3 is making less than some State’s minimum wages. And in order to make up for that hourly wage, I’m trying to do my best as their line supervisor to cover for that in overtime.”

—Wildland Fire Module Supervisor, Fiscal Incentives Focus Group

To begin to understand this pressure, we can look to American society for some insight. According to CareerBuilder, 78 percent of Americans are living paycheck to paycheck. When were you able to stop living paycheck to paycheck? If the answer to that question is “I haven’t,” then money is likely still a motivator for you.

In 2020, the minimum wages set by Washington State and the District of Columbia exceeded the GS-3 “rest of U.S.” pay rate. Combine this pay rate with a limited tour of duty, and it is easy to see how the temporary and permanent seasonal workforce might be motivated to make the most of fire season. Whether seasonal or permanent, GS-3 or GS-12, overtime and hazard pay were seen by focus group participants as either the only means to make ends meet or as the means to support the lifestyle one has chosen.

To achieve a livable wage, participants spoke of being willing to take on riskier assignments if accepting them meant the difference between an 8-hour day and a 16-hour day with hazard pay. Participants also spoke of fiscal incentives influencing decisions around strategy, pushing folks more towards suppression tactics than letting fire take its natural course. For many, these decisions aren’t selfish ones; rather, they are made by supervisors looking out for their employees’ financial well-beings who get paid less and only work part of the year.

> “Fact is, money is a motivator at work but in a slightly strange way...the best use of money as a motivator is to pay people enough to take the issue of money off the table. Pay people enough that they aren’t thinking about money, they are thinking about the work.”


While most firefighters love their jobs and have chosen this career out of selflessness, they still need to put food on the table and a roof over their head. This can unwittingly make money a significant motivator as many employees have these issues weighing in the back of their minds. Participants felt that changing the pay structure in a way that removed the pressure of fiscal incentives would decrease the level of risk firefighters were willing to accept. To do this will require a massive overhaul of policy and directives, and should the agency decide to take on that challenge, it must first ask itself what Dan Pink proposes in the quote above, “How do we get to the point where we pay people enough that they aren’t thinking about money, they are thinking about work?”

> “We need to neutralize financial incentives for everyone that participates in fire. Firefighters are paid by the hour they work, including me. They rely on that overtime pay to get them through the winter, pay for college, make their truck payments, etc.”

—Regional Fire Director, Society Focus Group
The Ethics of 16s

“We were on a Type 5 fire and I knew that people were going to want 16s, right? And I just have a problem if we’re working 12s and signing 16s. So, we stayed on the fire and we just... we kept mopping up. We stayed on the fire till after dark and that way I can feel ethically okay with signing their [crew time report (CTR)] and then we hike back to the truck in the dark and we missed the turn.”

—Interagency Hotshot Crew Captain, Fiscal Incentives Focus Group

Intentional misrepresentation of hours worked can result in severe consequences, yet there is a prevalent ethical exception which exists in wildland fire: many firefighters and supervisors have claimed 16-hour days when 16 hours were not actually worked. How is this ethical decision justified by both supervisors and employees?

In an agency where one of the few sure ways of ending a career is lying on your timesheet, one must carefully consider why people would be willing to take the risk. Focus group participants offered several rationales, including compensation for time away from home, not truly being off hours while at camp, acknowledgment that a lot of administrative and maintenance work is done off the clock, and making up for having to “show your lunch” even though you worked right through it. So where does the ethical dilemma come in? For many, claiming 16 hours of work is uncomfortable when they know they did not work 16 hours, yet they want to make sure their folks are paid.

“I’m going to throw in there that I think it is a conflict of values. I’m calling it that because you have your ethical responsibility to the organization, but you have your ethical responsibility to the people that work for you.”

—District Ranger, Fiscal Incentives Focus Group

To avoid this ethical dilemma, supervisors spoke of finding ways to stay out on the fireline for the full 16 hours, which they admitted, could inherently come with detrimental impacts to the health and safety of their employees. For example, one participant spoke of a crew that worked a fire during the shoulder season. To reduce risk, the crew had been leaving the fireline earlier so they wouldn’t have to drive in the dark. However, their division would only sign the hours they worked on the fireline. To get around this, the crew decided to stay on the line longer so they could claim 16-hour days, recognizing they would then have to drive in the dark at the end of a long day when safety margins were reduced. Fiscal drivers often compel fireline leaders to push for 16s to take care of those they lead who may still be living paycheck to paycheck. Conversely, fireline leaders who hold to the letter of policy are sometimes seen as not taking care of their people, impacting trust, relationships, and sometimes retention. Whatever side of the ethics coin one lives on, there is no easy answer to this difficult dilemma.

“I mean, ethically, that’s the deal. When I say that I sign 16s [even if 12s are worked] and I ensure for that, it’s to take the exposure [of long hours on the line] and the [associated] risk off...to free them up [from those pressures].”

—Deputy Forest Supervisor, Fiscal Incentives Focus Group
It appears to focus group participants most everyone knows and accepts that this ethical dilemma exists, and striving for 16s is just how it’s done. Whether it be to falsify a timesheet or to take on extra risk or hours, walking that line is easy for no one, as duty, integrity, and respect are pillars of the wildland fire organization’s character. Yet fireline supervisors will continue to be forced to navigate that ethical decision space until the structure of pay in the wildland fire system changes. To take the pressure of fiscal stability off the table so firefighters can focus on their jobs, the agency must identify aspects of the wildland fire system that can be improved to address the underlying conditions that lead to the inevitable question, “to 16, or not to 16?”

What is the Priority: Recovery or Pay?

“I think it’s interesting to take a look at the taking care of your people aspect from a short-term perspective vs. from a long-term perspective. So, taking care of your people for a short term, you might be looking at their work-rest and maybe looking at fatigue; take care of their feet, personal needs. But you’re not taking care of the long term. The 6 months they’re not working out of the year, you’re not looking out for their bank accounts, or their families, [or] their finances. So, am I taking care of the long term or am I taking care of the short term?”

—Risk Management Officer, Fiscal Incentives Focus Group

The effect of fatigue on decision making and performance has been acknowledged for decades, yet the wildland fire organization still struggles with the long hours and extended assignments necessary to accomplish the mission. The problem is only worsening due to depleted workforces, longer and more active fire seasons, and increased socio-political pressures.

Participants stated that in recognition of this trend, fireline supervisors and line officers have started encouraging their fire crews and personnel to take more time off during the season. Additional paid and unpaid rest and recuperation (R&R) days have been offered and folks have been encouraged to take more vacation time. Yet many of those offers get rebuffed as taking days off during the summer is seen by many as the fastest way to affect the availability of themselves and their module, which can result in a drastic pay cut (e.g., to take time off in the middle of the summer can mean missing out on a 2-week assignment full of hazard pay and overtime). Many firefighters and supervisors sacrifice self for crew in this regard.

Ultimately, these factors often lead to significant tension as the fire season marches along. Terms like “dirty August” and “Snap-tember” get thrown around as fire personnel reach their breaking points. Yet, as one participant, a wildland fire module leader, pointed out during the fiscal incentives focus group:
“At the end of the season when everybody's looking tired and you can see exhaustion in everyone, [that's when] teams, division supervisors, ICs... they're all gonna say, ‘We gotta take care of our people. So, get them into bed, get them bedded down early,’ and all of a sudden, folks are down to a 12-hour shift, and that's the quickest way to piss off a crew boss.”

Even though fire conditions may be moderating with the shorter days, the tension felt to make the most of the closing season gets worse. Work remains to be done; crews are still stuck in camp sleeping on the ground. Coupled with little explanation as to why hours are reduced and little trust the reduction in hours is anything more than “cost containment at the lowest level,” the tension grows.

The perceived inability to take time off during the summer for recovery also has system-wide effects as the transition to the shoulder season occurs.

“Fatigue be damned, I need to put food on the table.”
—Fuels Technician, Fiscal Incentives Focus Group

For those who have worked all summer, accruing but not using annual leave, fall is the time to use leave before they lose it. This is especially true for seasonal permanent employees. With only a short window of time to use this leave, districts are losing key players and numbers during what is normally their active prescribed fire season. This can lead to tension between those exhausted from a long season and those who are trying to implement forest management plans. Sometimes the worn-out firefighters are forced to lose out on valuable time off and sometimes the local system goes untreated for another year. Either way, one important part of the system will lose out.

The System as a Driver of Culture

In some ways, the wildland fire pay structure drives the culture of can-do. For example, firefighters who work 14 consecutive days will earn 2 paid days off. However, a firefighter who works 13 consecutive days will not earn 2 paid days off. The move from 21-day assignments to 14-day assignments was made to address fatigue just as the decision to cap the workday at 16 hours was made. However, the impact of such decisions must be evaluated. Are these changes to our system accomplishing their intent? If the goal is to provide a highly motivated, low-cost, seasonal workforce that is willing to do whatever it takes to get the job done, then the current pay structure with its fiscal incentives of overtime and hazard pay is working just fine. But is that the goal?

As with many of the other issues, these incentives that push fire personnel to work despite being fatigued are much the result of system drivers. Unfortunately, this means there is no easy fix. To remove these pressures would require policy and directive changes, or even creating a whole new pay system. Participants suggested increasing wages,
moving to a portal-to-portal pay system, or creating a system of pay where employees are paid based on the qualification they are serving in as possible means of moving forward. While these changes may seem and feel monumental or impossible, many participants believe they still deserve recognition and a national-level conversation. Until then, what other skills, resources, or tools might help employees become more financially stable and maximize the income they receive?

“I was really concerned...when we started with nothing but the ground-level firefighter's lack of integrity. You know? All those things. I sat here and I just said, ‘Man. There's a lot more to this.’ I always fear from where I sit in the organization that we're pushing all the fault down to the lowest level.”

—Interagency Hotshot Crew Captain, Fiscal Incentives Focus Group
Learning Challenge

The issue of pay highlights two very different perspectives:

Perspective 1: Pay is Fair
People get paid for the work they do; they chose this line of work and are aware of what it entails. Any complaints about pay sound like whining, and claiming more hours on a timesheet than were actually worked is illegal, unethical, and grounds for dismissal—end of conversation.

Perspective 2: The Pay System is Broken
People are on assignment away from their home for 6 months at a time, risking life and limb, making enormous sacrifices, and, even with hundreds of hours of overtime, are barely making a living wage. Burnout and stress due to financial instability is real. Forest Service employees are suffering, and supervisors are struggling to retain quality employees.

Take some time to personally reflect on these two perspectives using the following questions as a guide:

Q Which perspective do you align with most? Why? Have you said or experienced the sentiments related above?

Q Are you still living paycheck to paycheck? If so, does this affect which perspective you hold?

Q What would a system look like that satisfied both perspectives?

Q Now, purposefully, take on the other perspective. Think about how the arguments hold weight from that perspective. Was that easy to do? Did it change your thinking of “the other side” in any way?

Q What is the effect on the work group when members hold to polarized viewpoints like this?

Now that you have taken some time for yourself, gather your work group and discuss some of the different perspectives.

Tell us about your experience participating in this challenge at this team learning link!
Chapter 12. An Exercise in Envisioning

While focus group conversations were filled with differing perspectives and challenging ideas, there was a unifying theme throughout: nearly all participants, whether from an ecological or a suppression perspective, agreed the national forests are unhealthy and the fire organization has a role to play in both the cause as well as the solution.

In discussions about what the wildland fire system might look like in the future, many noted their “white whale” scenario as one that would shift fire operations away from suppression and move it to one where forest and ecosystem health are the priority. Using the goals set forth in the Cohesive Strategy (safe and effective wildland fire response, creating resilient landscapes, and creating fire-adapted communities) is offered here as a lens through which the agency can self-reflect on how current actions, and the incentives which influence them, could be bringing the agency closer to, or farther away from realizing a new vision for wildland fire operations.

Safe and Effective Wildland Fire Response

“[The] Governor, said, ‘We’re tired of it. Get rid of the smoke.’ [As a result] we were dropping mud (retardant) in the middle of the Gila Wilderness.”

—Area Coordinator, Fiscal Incentives Focus Group

The Cohesive Strategy acknowledges fire needs to be suppressed when life is threatened, when values are at risk, and when conditions lead to destructive fire in fragile ecosystems. Recently, though, some have begun to question if “safe and effective wildland fire response” could mean something entirely different if the focus shifted to ecological resilience. Several participants and facilitators suggested during discussions that if the focus was on landscape health rather than value protection, less people would inherently be asked to set foot in the time-compressed, risky fire environment. In “Rethinking the Wildland Fire Management System,” the authors ask: “What does effective response look like? How would we know?”

One participant in the ecological soundness focus group, an emeritus professor, attempted to dive deeper into this question, agreeing the metrics of wildland fire response success needed to change, and proposed the following:

“What we have is a fire management [system] designed for fire control. It’s about fire behavior. It’s about the only metric that matters is fuels. What about biodiversity? What about ecological integrity? Do we even have metrics that allow us to say, ‘Are we advancing those?’ Currently, success is based solely on fire behavior and values at risk.”
Whether or not you agree with the professor's thoughts or those of the participants, it would appear the time is ripe for us as an agency to reevaluate and then communicate what success looks like, so all levels of our agency understand why we do what we do and how that equates to a safe and effective wildland fire response.

Creating Resilient Landscapes

“You have these competing issues and that's where we need to use ecological science to say 'Here, if we want to create this kind of habitat in the end, here's these tools that we need in order to get there.' So, let's start with that end goal in mind, then figure out the tools to get there.”

—Forest Supervisor, Ecological Soundness Focus Group

While the agency approaches naturally occurring fire with a range of management options, external social and political pressures often push decision makers toward aggressive suppression even when other options might move them closer to the goal of more resilient landscapes. Things like smoke impacts, a fear of an escaped prescribed fire, an unusually long fire season, or a struggling timber industry were all listed as socio-economic influences that elicit pressure upon land managers, pushing them away from letting fire play its natural role in the environment.

If those socio-economic pressures continue, what other aspects of the wildland fire system could be altered to allow easier access to strategies that promote creating resilient landscapes? One suggestion from participants focused on changing the way the agency collectively discusses the value of the land it manages. A deputy forest supervisor in the fiscal incentives focus group summed up the discussion well when they asked:

“What's the value of the land that we are treating? What's the value of the land between a nonhealthy state and a healthy state? How much money are we putting in to get there and what is the difference in the value as compared to whether we do it through a natural fire management, prescribed fire management, or other ways?”

To create resilient landscapes, fire must be reintroduced back onto the land. Yet, after several intense fire seasons necessitating predominately full suppression strategies, focus group participants questioned if agency personnel are losing the skills necessary to manage fire when conditions allow. Participants also noted that tools already exist to help incident management teams and agency administrators manage fires in abundance and are largely being built and produced at the Forest Service's Fire Lab. These tools can help managers better understand short- and long-term risk, fire effects, and predicted severity allowing them to make more informed decisions. Putting these products to use more regularly might just reinvigorate the use of fire as a tool for...
creating resilient lands, but the question remains: How do you get those tools into the hands of the implementers?

Another suggestion was to consider how the fire organization could work together with other departments within the agency to take the lessons learned and skills developed through wildland fire response and adapt them in a way that contributes to creating more resilient landscapes. For example, could some of the methods used by National Incident Management Organization (NIMO) teams be modified to provide support to local forests in preparing and implementing large-scale burning? Is there something to be learned from the success behind our incident management teams and resource mobilization that could be implemented by other departments? What would have to change in the system to make these a reality?

Fire-Adapted Communities

“I started my career in fire in ‘95. I was living in Chico, California. I remember going through my first S-130/190 [class]. People who were putting on the course talked about how someday there was going to be a catastrophic fire that burned up the town of Paradise.”

—Risk Management Officer, Fiscal Incentives Focus Group

Focus group participants echoed the sentiments expressed in the Cohesive Strategy: there are many communities at risk. Throughout all the discussions, questions around creating fire-adapted communities abounded. “But what do we do about it?” was asked many times. What is our role as an agency in community planning and building codes? How well is wildfire risk understood by community members and local government officials?

As with efforts to build resilient landscapes, creating fire-adapted communities requires significant investments in time and effort, and therefore, funding at the local level. Participants agreed, it is necessary to carry out community engagement, interagency collaboration, and implementation of mitigation projects before there is smoke in the air. How are these efforts prioritized against the rest of the agency mission? How could a different funding structure lead to greater effect?
Learning Challenge

Gather your work group to discuss each member's role in carrying out the Cohesive Strategy.

Q How does your work connect to one or more goals in the Cohesive Strategy? Was it easy to identify these roles or did you have to stretch?

Q Is there anything standing in your way of carrying out this strategy and following the Chiefs Letter of Intent?

Q The Cohesive Strategy calls for “safe and effective wildland fire response.” What does a “safe response” look like? What are our measures of “effective”?

Q How resilient are the landscapes on your unit? What can you do to improve their resilience?

Q How fire adapted are the communities in your area? What can you do to help them improve their ability to live with fire?

Q Are there ways you are currently using workarounds on your district or unit to overcome these roadblocks?

Image from the Wildfire Risk to Communities website, a free, easy-to-use website with interactive maps, charts, and resources to help communities understand, explore, and reduce wildfire risk. Wildfirerisk.org photo.

Tell us about your experience participating in this challenge at this team learning link!
Chapter 13. What’s Next? Continuing the Learning

“We are freakishly smart, but we need to start owning that and be responsible for this job. We are a select special group of people that have dedicated their lives to making the difference. We are supposed to lead.”

—District Ranger, Fatalities and Injuries Focus Group

This metareview is one large step on an ongoing journey the Forest Service set upon over a decade ago to become a learning organization. The safety journey, safety engagement sessions, life first sessions, and other initiatives have one thing in common: good people working hard to understand the work and the environment they operate in, with the hope of reducing serious accidents, injuries, and fatalities. It is in listening to each other and learning together that the agency will continue to move toward becoming a learning organization.

Each focus group yielded rich, far-reaching conversations that provided deep insights and valuable suggestions for organizational change. And as essential as the “voice of the field” is, it is inescapable that over time memory fades. Focus group participants readily recalled the challenges they faced in recent years, however they struggled when looking farther back to the earlier years covered by the 2007–2016 metareview. Do you remember what struggles you were dealing with last year? What about in 2013? Extraordinary events were readily called to mind, but the nuanced details were often lost to history. Without this context, and the connection to the shared history it provides, organizational learning will never reach its full potential.

Learning Strategy

As the 2007–2016 metareview evolved it became clear that a logical next step would be to develop a strategic learning plan for the agency. To better capture learning while the lessons are fresh, IOL proposes conducting an annual “year in review” and creating a report similar in structure to this metareview. Quantitative analysis is routinely conducted and distributed in the annual interagency safety gram and the Lessons Learned Center’s annual “Incident Review Summary” and infographic. The year in review would build upon these efforts using a qualitative approach. Like this metareview, the annual review would use focus groups to analyze what was learned, what changed, and identify needs for continued learning and change.

This organizational learning strategy is built upon increasing the ability for local-level learning to be shared globally. The learning challenges presented in each chapter of this review are an example of this. As participants undergo the challenges, they can share their insights with the entire organization through the linked StoryMaps.

Building upon the qualitative and quantitative data, the year in review annual report would inform the design and development of strategic learning investments for the coming year. The quantitative data would help identify specific challenges to safety and focus group participants would provide input, real world examples of learning, and suggestions for products or strategies that could help address those specific challenges.
A “flagship” learning review or FLA would be included to serve as a common frame of reference among the community. Content specific to the flagship review would be developed and distributed for annual learning events.

## Learning How to Learn

The desire to revisit and clarify events years later, as highlighted in the quote below, is all too common with those close to tragedy events. While revisiting these events can be painful, it can also serve as an important opportunity for healing where hard-earned lessons can be shared with others in the hopes that another tragedy can be avoided. When those who were there are ready to talk, we as an agency should be ready to listen.

Learning reviews and FLAs are conducted shortly after events have occurred, and once a learning product has been produced the agency often moves on to the next issue that demands its attention. Sometimes we, as an organization, learn. Sometimes the organization just carries on as before. But for some, often those closest to the event, the learning doesn’t stop, and it may well be years before insights are gained and realizations emerge.

“I would give anything to be reinterviewed for Thirtymile and have somebody go, ‘What were you thinking about when you left the lunch spot and went back up the road?’ But that was never asked of me.”

—Crew member at Thirtymile

**Triple-loop learning**, “focuses on the ability to effectively utilize single- and double-loop learning. As such, triple-loop learning challenges one’s existing learning framework as well as one’s mental models and assumptions. Ideally, triple-loop learning links all of the local learning units into a unified learning organization.” Staff rides and work by the NWCG, such as their **“Week of Remembrance,” “This Day in History,”** and their case study [video on the 1994 South Canyon Fire](#) all seek to revisit our history and set the stage for triple-loop learning to take place. This learning strategy will build upon this foundation and take learning to the next level by going back, revisiting history with those involved, and sharing their reflections gained.

## Defining Success

As with any strategy it is important to review progress. As Brené Brown suggests in her book “Dare to Lead,” “collective courage” will determine if an organization is capable of honest self-assessment of its progress, or the lack thereof. As the year in review process becomes normal, the reports should serve as meaningful guides to reflect on our agency’s efforts and evaluate the success of its previous year’s learning strategy. Have we as an agency increased our ability to speak openly and honestly about the really challenging stuff? Did we move closer to our goals or farther away? Were there any unintended outcomes from our attempts to focus on a given topic? What can we as an agency do differently moving forward? How do we define success?
Metareviews as Normal Work

If an individual learning review or FLA is a single snapshot in time and the year in review provides an examination of a years’ worth of snapshots, then the need remains to periodically look at the entire system over time. While previous organizational reviews sought to achieve similar goals to this end, conducting the “Wildland Fire Metareview, 2007–2016” was uncharted territory for IOL, as well as for the current generation of Forest Service leaders. After completing this project, IOL can confidently say that each participant, regardless of role, found value in this effort. To continue the learning, IOL looks forward to your discussion on this body of work and sincerely hopes it resonated with you in a meaningful way.

One signal of positive change in our organizational culture that would indicate the agency’s commitment to being a learning organization is that metareviews such as this become a normal and expected part of work rather than conducted based on a unique event brought about by tragedy. Events would no longer be defined as good or bad, but simply valued for the learning opportunity each represents.

What will have been learned when the next metareview begins? Only time will tell, but with the aid of a decade of year in reviews, insightful focus group participants, and courageous people willing to share their stories of learning, one thing will be certain: the agency will be a better learning organization than it is today.
Learning Challenge

In a learning organization, continued evaluation of common business practices, friction points, ideas, or innovations must be on the table for discussion. To accomplish this, author Peter Senge suggests that members of a learning organization continuously practice a set of organizational learning disciplines:

1. Systems Thinking—“Learn to better understand interdependency and change.”
2. Personal Mastery—Developing a “coherent picture of desired results by balancing the tension between their vision and their reality.”
3. Mental Models—Developing “awareness of the attitudes and perceptions that influence thought and interaction.”
4. Shared Vision—Learning to “nourish a sense of commitment in a group by developing shared images of the future they seek to create.”
5. Team Learning—“Transforms a group’s collective thinking, teaching them to mobilize their energies and ability greater than the sum of individual members’ talents.”

In this metareview, incredibly heavy topics such as mental health and suicide or completely revamping the wildland fire system have been discussed, yet this report makes no claims of discussing everything of importance.

Q What other organizational friction points demand our attention?
Q What practices or systems that we take for granted need review?

A vision for the future here is one where all differing perspectives can be valued and discussed rather than left unspoken.

Q How do we eliminate sentiments like, “Nothing is going to change so why waste time talking about it?”

Q As you explored this metareview did you find examples of Senge’s organizational learning disciplines in action?

Q Do you see opportunities to continue to apply the practices in your work?
Q What barriers to becoming a learning organization stand in your way?

To continue and share in the learning, IOL would be honored to hear your thoughts and opinions on the topics covered in this metareview. To share your thoughts, please reach out to us at SM.FS.OL_RMRS@usda.gov.

Tell us about your experience participating in this challenge at this team learning link!
Chapter 14. Final Learning Challenge

For this review to have any hope to affect the type of change envisioned by those that commissioned it, each of us must accept our role in the wildland fire system and contribute to the learning together. There must be no “us” and “them,” only “we.” This isn’t a singular endeavor but instead an iterative process that must never end.

The final challenge of the “Wildland Fire Metareview, 2007–2016” is simple, but not easy:

Go forth and learn.
Get better every day.
Listen intentionally.
Ask humbly.
Share courageously.

Be prepared to show your work.

The participants in this metareview shared with us how they saw the wildland fire system at that time through their lived experiences. Now, we’d like to ask you to do the same. To understand our system and make it better, we have to engage and talk about it. Please tell us what you think using this feedback link.

Want to stay in the know on new products coming out related to this metareview? Sign up for our mailing list.
Endnotes


18  **U.S. Department of Agriculture, Forest Service. 2015.** The rising cost of wildfire operations: effects on the Forest Service’s non-fire work. 16 p.


