Stories of Fire: Resources for Media Covering Wildfire Events and Topics in Oregon

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Cedar Creek Fire, October 2022

INTRODUCTION

Oregon has seen an increase in wildfire events and impacts over the last decade, and with that has come more media coverage of the topic. Wildfires that threaten public safety often create an urgent need for time-sensitive information to be shared, and they tend to interest people. However, there are many other facets to fire. One is that it is an ecosystem process. This means that it plays an important role in how species evolve and adapt, and in the interactions of plants, animals, elements, and other parts of our world. Ecosystem-appropriate fire can help minimize the potential of extreme fire events.

Another aspect of wildfire is how it's intertwined with humans and culture. It can have impacts on our homes, communities, and physical and mental health. It can help or harm values that matter to us, such as wildlife habitat, drinking water, and cultural and spiritual places and practices. We also shape the conditions for fire, we cause fires, and we react to and are affected by them when they occur. Wildfire even makes people think, learn, and organize together in new ways as we try to figure out how to prepare for and recover from events.

Hence, wildfire is much more than the moment in which we may experience it, such as a threat to our community or as visible smoke. It has many stories to tell.

Sweet Creek Fire, September 2022

Media are one way that these stories are told. Media in all forms provide crucial information during fires and can be key messengers to the public. They can also share knowledge about fire causes, effects, and history that help us all better understand why fires occur and what is happening when fire moves across the landscape. Media can also share the human stories of fire, beyond its impacts. These include efforts to return fire to its ecological and cultural roles where it can do good, address fire hazards, and prepare our communities. Importantly, fire's story is different around Oregon, because it is an ecologically, socially, and culturally diverse state.

To support coverage that addresses these many dimensions of wildfire, we offer this collection of resources to serve you as a media professional working on fire events and fire in the bigger picture in Oregon. We designed this guide by first interviewing members of the media, fire scientists, and public information officers across the state. We listened to their needs and interests to develop something that responded directly to those. We aim to offer resources and to support reporting with diverse stories and voices. This collection of resources has been divided into sections to be used as a reference for different topics.

Oregon HB 4087

<u>Oregon House Bill 4087</u> **took effect on January 1, 2023 and allows news media representatives to access wildfire or other natural disaster scenes on Oregon public lands that would be otherwise closed to the public during these incidents. The bill does not apply to private property, federal land, tribal land, or property owned by educational institutions such as school districts, charter schools, colleges and universities.** Media are required to take a mandatory safety training and follow all access protocols.

This guide offers some broader considerations about reporting, but does not replace or provide details on these requirements. You can review <u>official guidance about this bill</u> to become aware of training and personal protective equipment requirements.

SECTION 1. WHAT TO EXPECT WHEN COVERING FIRE EVENTS IN OREGON

Section Summary

- When getting ready to go to a fire, prepare personal protective equipment in advance. Follow all requirements of Oregon law for safe media access if you are going to an incident that falls under its provisions. Include mental preparation and support for yourself.

- Identify what type (1 to 5) of incident you are reporting on, and prepare yourself accordingly for the complexity of issues that incident personnel are managing and the capacity of public infomation officers to work with you.

- Review and carry brief references to key fire operations and management terms. When in doubt, ask the public information officer to explain a term they are using.

- Be considerate of the privacy and sensitivity of individuals affected by the fire. Obtain consent, especially when photographing individuals, property, or sensitive images.

If you are going to an incident that falls under the provisions of Oregon's Safe Media Access to Disaster Sites bill (HB4087), you must follow its requirements for equipment and advance safety training. This guide does not cover these requirements. This bill applies only to public non-federal lands; it does not apply to private property, federal land, tribal land, or property owned by educational institutions.

The Organization of Fire Response
If you have been to one fire, you haven't been to them all. Wildfire events vary significantly in size, location, and affected or threatened values—and therefore, how the incident response is organized. Being aware of the size and complexity of the incident you are reporting on can help you better understand the situation and how to obtain information.

What wildfire events do have in common is that they are managed through the Incident Command System (ICS). This is a standardized system with established procedures and terminology for managing personnel and communications. It can be expanded to match the complexity of an incident while retaining the same foundational structure of five function areas or "sections" (Figure 1).
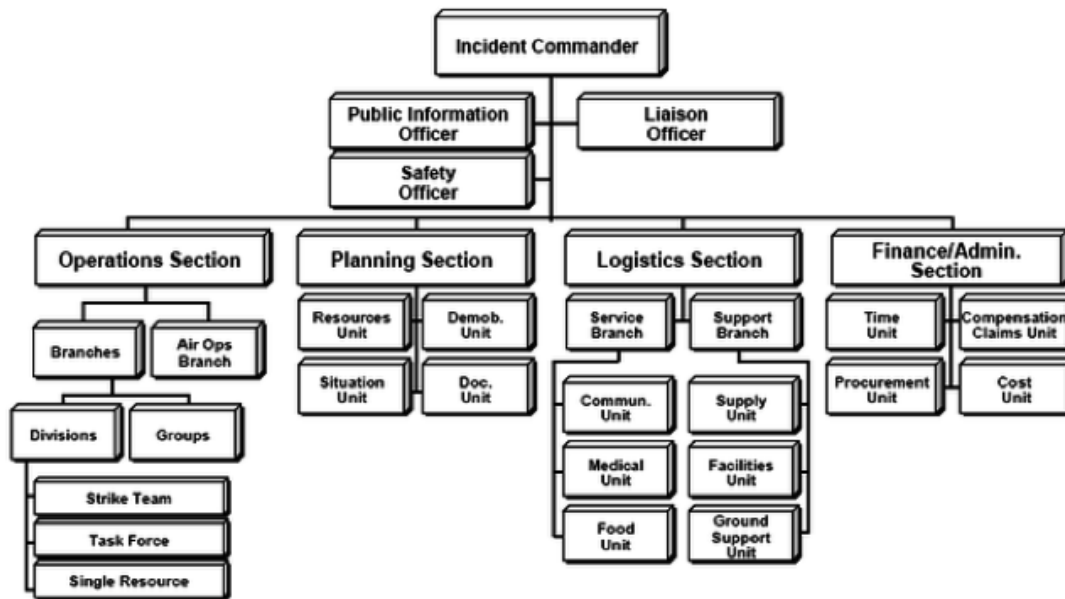
Figure 1. The Incident Command System. Source: FEMA.

Complexity is what determines the scale of the incident command organization. Complexity refers to the "level of difficulty, severity, or overall resistance faced by incident management or support personnel" (NIMS 2021). This depends on a combination of factors that affect the probability that personnel can control the incident. Incident complexity follows a five-point scale, with Type 5 being the least complex incident and Type 1 the most complex.

Public information is part of the command section. Public information officers (PIOs) are your point of contact during wildfire events. It is part of their job to assist you with what you need to do your reporting. The number of PIOs and how they will interact with you depends on the complexity of the incident. Less complex incidents or incidents in their early stages may have just one PIO handling all aspects of incident information, while more complex incidents can have multiple PIOs with some specializing in media engagement. When there are many fires at once in a state and the complexity of those fires is high, multiple agencies may form a Joint Information Center (JIC). This is a team managed by a lead PIO to handle the numerous communication duties that arise.

Physical Preparation
It is important to show up to a fire response environment with the appropriate physical preparation and awareness of the situation you will be in. Being prepared helps improve your reporting because you will be more ready to effectively engage with incident personnel. You must always ensure that you will be safe in fire camp, at the fireline where firefighters are actively working, or in postfire settings—all of which present hazards and logistical considerations.

Arriving at a fire in appropriate gear gives confidence to PIOs and fire personnel that you know what you are doing and understand the paramount importance of safely reporting while on scene. It also demonstrates respect for fire personnel, which increases the likelihood that they will show respect to you. Mutual respect is a key cultural value in wildland fire settings.

Physical preparation includes personal protective equipment (PPE) for keeping your head, eyes, body, hands, and feet safe. If you have a peer or colleague who is more accustomed to reporting on fires, you can also ask for their tips on what to bring and prepare. As time allows, make a list of what you need to bring and, if possible, ask the public information officer what they want you to bring or what you can borrow on site. Suppliers such as Forestry Suppliers, Cascade Fire Equipment, Wildland Warehouse, and the Supply Cache all sell PPE online. Organizing your gear in a "go-bag" or box where it is prepped and ready at a moment's notice is also important so that you can head out the door quickly. Consider obtaining and preparing your gear well before the season starts.

Personal Protective Equipment

For a general guideline, the National Interagency Media Guidelines for Wildland Fires says "News media representatives will be required to wear PPE as outlined in the Fireline Handbook and the Interagency Standards for Fire and Aviation Operations (the "Red Book") when working within the fire perimeter, and have an appropriate safety briefing. PPE must meet National Fire Protection Association /National Wildfire Coordinating Group standards." Oregon HB4087 requires media to have specific PPE and training for all hazards, and additional PPE for entering a wildland area where fire is actively burning, so check official guidance for those requirements if you are on land covered by this law. For entering a wildland area where fire is actively burning, you must have:

- 8-inch high, lace-type work boots with non-slip, melt-resistant Vibram soles and heels
- A NFPA-compliant (1977) long-sleeved, flame-resistant shirt (e.g., Nomex
- NFPA-compliant (1977) flame-resistant pants (e.g., Nomex)
- Hard hat with chinstrap
- Fire-proof safety glasses or goggles
- Ear plugs or another type of hearing protection
- Leather or leather and flame-resistant gloves
- Water canteen

A fire shelter may also be required under certain circumstances.

Wearing a mask that can protect against PM2.5, such as an N95 or better, can be helpful in protecting yourself from airborne particles.

Fill your vehicle up with gas before going out to cover a fire. Wildfires are usually in remote areas. Once you arrive at the base fire camp, you will typically travel many miles to the fire site itself, and then spend several hours driving around in the fire area looking for crews to cover. In general, if it is an Oregon Department of Forestry fire, you will travel in their vehicle. If it is a federal agency fire, you are not allowed to travel in their vehicle. Running out of gas in a remote area near an active wildfire is not a good idea. Also make sure that your vehicle is reliable and can handle driving on steep, rough, and rocky dirt roads.

When you are on site, follow all training and instructions that you have been given and that are required. Keep your hard hat on your head, your Nomex shirt buttoned and tucked in, and your water, gloves, and shelter on your person at all times. In general, focus on your situational awareness, tracking what is going on around you that you can and can't see. The hazards of fire response environments are not limited to flames. Many accidents and safety issues are related to driving to and from an incident, parking, smoke, being around heavy equipment and aerial resources such as helicopters, or being in recently burned areas where vegetation and soils still contain heat or are unstable.

If you plan on going to the fireline, it's important to know it can be a dangerous, harsh environment. The air can be hazardous, it's typically hot, and wildfires are often in rugged terrain, making movement physically demanding. Consider your physical fitness and ability to hike on steep ground, carry equipment, and be in smoke when deciding to go to the fireline. There is always risk involved, including getting caught in a precarious position if the wind shifts or the fire intensifies. Knowing the risks inherent in covering fire events can help you decide what is the right path for your reporting and how best to mentally prepare.

Mental Preparation
Mental preparation is just as important as logistical and physical preparation. Fires can present stressful and emotional aspects for you and the people and communities with whom you are engaging. During an active wildfire, community members and incident personnel typically are coping with a range of matters at any given time. The mental effects of fire events on a community or person also can last a long time, even when the incident is far in the past, and new incidents can trigger challenging memories. Contentious issues pertaining to wildfire policy, management decisions, and relationships among people and organizations can also be difficult to observe and navigate effectively. This all can also be hard for you to experience as a reporter. While we provide a brief overview on some key aspects of wildfire reporting and mental preparedness below, you can also visit the Dart Center for Journalism & Trauma for additional resources on dealing with trauma and reporting during wildfires.

There are several steps you can take to support your mental health and that of others when reporting on wildfire or related topics. During a wildfire event, stay up to date on fire status and evacuations. If you are covering an area that is being evacuated, find a safe place where you can access food, water, rest, and medical care if needed. Understand that wildfires affect people differently. If you find that you are experiencing emotional distress such as restlessness, sadness, low or no energy, feeling afraid, or other distressing signs, connect with others and know that you are not alone. There are many tools and strategies to help you cope. Choose approaches that make the most sense for you.

You can also support the mental health of others before, during, and after a wildfire by using a trauma-informed care approach to reporting. A trauma-informed approach means understanding what individuals might be experiencing in the wake of a traumatic event, such as a fire, and responding with care, respect, and kindness. You can do this by being clear with individuals about how their stories will be used, using active listening techniques, and paraphrasing back what you hear to make sure it's accurate. The Dart Center offers a detailed guide for journalists, editors, and managers covering traumatic events. The Dart Center recommends that after a disaster or tragedy, it's important to rely on factual reporting and not to sensationalize or embellish events.

Images are a powerful tool, and there are several important considerations to capturing them in a fire context. When photographing wildland firefighters, consider that not everyone may want their photograph taken. Seek permission from them. Be aware that adults in custody may be working as firefighters and start by asking your public information officer what is permissible if they are present. Be aware that if you are covering a wildfire that has led to an evacuation of homes and structures that have been destroyed by the fire, the evacuees and homeowners often do not yet know the status of their property. Seeing the status of the property for the first time, such as an image of the burned and destroyed home on a news site or news publication, can result in emotional distress. Think carefully about what images are most appropriate to publish, and consider whether property owners and residents have been notified. When handling potentially traumatic imagery, you will also want to consider its effects on media workers, including yourself, who have to index and prepare these photos for publication.

Beyond burned structures or photos of flames, it's important to show the other aspects of impact, including burned trees or other affected areas. Consider using satellite imagery and maps to show the extent of a fire. As communities deal with fires, consider using images that highlight human resilience, as well as the human toll, which can be a powerful way to let people know that they are not alone.

Cedar Creek Fire, October 2022

A Word About Drones

Aerial images captured with a drone have become an important element of visual storytelling. They make the perfect establishment shot, and often are visually stunning. If you are a 107 Certified Drone Pilot, you are well aware of the tight FAA restrictions covering drones. Now, many popular drones weigh less than 0.55 pounds (250 grams) the weight limit after which you must be 107 certified. The new rules for "recreational" drones require you to complete an online test.

If you are covering a fire managed by the Oregon Department of Forestry, that means, for the most part, the fire is located on private land. As a drone pilot, you must have permission from the property owner to fly over private land. If you are covering a wildfire on public land, often a national forest, theoretically you can fly your drone if given permission by the PIO, or more likely the Incident Commander. However, getting permission in either case is highly unlikely. Once a wildfire is of sufficient concern to be declared an incident, an FAA Temporary Flight Restriction (TFR) will be declared for the entire wildfire area. This is for good reason. Efforts to fight wildfires include the use of various aircraft: helicopters making water drops, fixed-wing aircraft dropping fire retardant, and most importantly, emergency medical helicopters used to transport injured personnel to hospitals.

Common Terms You May Encounter During a Fire Event

Aircraft Type 1, Type 2, and Type 3 helicopters; fixed-wing aircraft and airtankers (very large and single engine); multi-mission aircraft; unmanned aircraft (drones).

Anchor point serves as a secure and defensible location where firefighting personnel can set up command posts, deploy equipment, and coordinate their operations.

Backfires are intentionally lit fires initiated to consume vegetation or fuel ahead of an advancing wildfire, with the expectations of reducing its intensity, slowing its spread, and creating a barrier that helps to control and contain the fire.

Burnout is a tactic used to create a controlled fire along the inner edge of a fire line or containment feature to deprive the advancing fire of fuel and halting its spread.

A wildfire is **Contained** when the fire is encircled by constructed fire lines or other fuel breaks such as roads, streams, etc. and there is a high level of confidence that the fire will not spread beyond that line.

A wildfire is **Controlled** when it is fully contained within established boundaries and is no longer a threat to spread beyond those boundaries. Controlled does not mean the fire is completely extinguished.

Creeping is when a fire is burning with a low flame and spreading slowly.

Crown fire is when fire reaches the upper part of a tree; these are difficult to fight because they move from treetop to treetop.

Direct attack is a firefighting strategy that involves directly targeting the active flame front of a wildfire to suppress or extinguish it.

Dozers are any steel tracked vehicle equipped with a front mounted blade used for exposing mineral soil.

Embers also known as firebrands, are small, burning pieces of fuel that are carried through the air by wind currents during a wildfire.

Engines There are seven ground engine types. The most commonly used in wildfire suppression are Type 5 engines, which hold 2 to 4 people and 400 gallons of water.

A **Fireline** is a cleared area or a constructed barrier that is intended to stop or control the spread of wildfire.

Fire behavior is the characteristics and actions exhibited by a fire, including its spread, intensity, rate of growth, direction, and effects on the environment. Fire behavior is influenced by various factors such as fuel, weather conditions, and topography.

Firebreak is a cleared area or a natural feature that acts as a barrier to slow or stop the spread of wildfires.

Fire intensity is the amount of heat energy released per unit of time during a fire. Intensity is influenced by factors such as weather conditions, amount, size, and moisture content of fuel, plant chemistry, and topography.

Fire perimeter is the entire outer edge or boundary of a fire.

Fire severity is a measure of the ecological and physical changes resulting from a fire and is influenced by various factors such as fire behavior, fuel characteristics, weather conditions, and landscape features.

Flank is a side of the fire; it may be left or right.

Flare up is when there is a sudden acceleration of fire spread or intensity, but of relatively short duration.

Fuels are any combustible material that: are living or dead, are in or on the ground, are in the air, that can ignite and burn.

Head is the direction the fire is burning, usually the hottest and most dangerous area.

Heel or **Rear** is the opposite side of the head; there is usually minimal fire activity at the heel.

Incident Command System (ICS) is a standardized organizational structure used to direct all operations at the incident scene.

Incident Management Team (IMT) is a designated group of trained and experienced individuals responsible for managing and coordinating the response to an incident. The three main levels of IMTs are Type 3, Type 2, and Type 1, with Type 1 being the largest and most complex.

Indirect attack is a firefighting strategy that focuses on controlling the spread of a fire by establishing control lines at a distance from the active flame front. A tactic used in indirect attack is backfiring.

Island is an area in the middle of the fire that hasn't burned.

Mop-up refers to the process of extinguishing or securing remaining hotspots, embers, and smoldering areas within the fire perimeter.

Origin is where the fire started.

Red flag warning means that conditions such as temperatures (high), humidities (very low), and winds (strong) are expected to combine to produce an increased risk of extreme fire danger and rapid fire spread.

Running is when a fire spreads rapidly with a well-defined head.

Slopover refers to where fire crosses a containment line or control feature, such as a firebreak or a constructed fireline.

Smoldering is when the fire is burning without flame and barely spreading.

Spotting refers to the transport of burning pieces of firebrand (embers) by wind currents that can potentially start new fires in areas separate from the main fire.

Torching occurs when the tops of trees or vegetation ignite and burn intensely (also referred to as crown torching or tree torching).

Sources of Information

As technology and communications about fire continue to change, there are many sources of online information about wildfire events that you can use in reporting. Focus on those managed by officials on the fire or by sources that exist to offer up-to-date fire status information across the region. The amount and location of information online will vary from fire to fire, and depending on which agency/ies are responsible. Large fires will have the most information available. These are defined as any wildland fire in timber 100 acres or greater, and 300 acres or greater in grasslands/rangelands, or has an Incident Management Team assigned to it.

Evacuation information is one of the most common topics that people want to know about when a fire is occurring. Regardless of which agency/ies are managing the incident itself, evacuation is always the responsibility of the local government (county officials). Always rely on the official local source of evacuation information. There can be confusion about how to sign up to receive evacuation notices, as this varies by county. Most local officials will also use Facebook to share evacuation information.

Numerous websites now offer free data and resources about current wildfires, including maps of fire perimeters, incident action plans, daily status summaries, satellite or infrared observations of active heat areas, air quality, and logs of radio traffic from personnel on the incident. These are for information only and can improve your situational awareness of fire status, but your first line for facts about a fire is the public information officer. When using these sites, review all contextual notes and disclaimers about the information offered. For example, "hotspots" of thermal activity are not always due to fire, and not all fires are detected at all times by satellites due to fire size, cloud cover, or other factors.

Helpful Information Sources

- InciWeb: An interagency all-risk incident information management system with current information about wildfires managed by federal agencies.
- Northwest Coordination Center: An interagency coordination center for Oregon and Washington, offering daily summaries and maps of large fires.
- National Interagency Fire Center FTP site for Oregon: Contains incident action plans and spatial fire data including infrared from flights over fires.
- Oregon Wildfire Situation Dashboard: A summary of statistics about current fires provided by the Oregon Office of Emergency Management.
- Fire Information for Resource Management System: Managed by NASA and provides real time or near real time thermal data from satellites.
- Watch Duty: A popular app that aggregates from official sources and radio traffic, with a goal of providing the most up to date information.
- AirNow Fire and Smoke map: A government map of air quality sensors, updated hourly and including forecasts.

Additional Resources:

- Safe Media Access to Disaster Sites (Oregon HB4087) information
- National Interagency Media Guidelines for Wildland Fires
- Northwest Fire Science Consortium "Fire Facts"; easy to read flashcards of key fire management and operations terms
- Inciweb quick reference glossary of common fire operations, equipment, and fire behavior terms
- National Incident Management System Incident Complexity Guide
- Oregon Evacuation Levels
- The Dart Center's Tips for Working with Traumatic Imagery
- Trauma-informed toolkit
- Our Future in Our Hands: Working together to reduce wildfire impacts – Care for your Mental Health (OSU Extension, EM 9404-c)
- Mental Health Impacts on Wildland Firefighters and Their Families
- An article about media and wildfires: https://www.cjr.org/local_news/california-prep-wildfire.php
- National Oceanic and Atmospheric Administration's media resource guide to fire season and fire weather
- Society of Professional Journalists' Toolbox for Covering Wildfires

Initial attack on a small fire near Oakridge

SECTION 2. FIRE AND LAND MANAGEMENT IN OREGON

Section Summary

- Before going to a fire, review available information on which landownerships it is affecting and which entities are involved in fire response. You can ask about the objectives, strategies, and tactics for responding to a fire.

- Different communities will prepare for, experience, and recover from fire in different ways. Consider reaching out to Tribal leaders, NGOs, community leaders, and local collaboratives for their local insights on these topics.

Oregon has a diversity of landownerships and jurisdictions (Figure 2). This means that preparing for, responding to, and recovering from wildfires usually involves many different entities. These entities own or manage land, have legal authority and responsibilities in fire response, and/or are affected directly or indirectly by how land, wildfire, and smoke are managed. Each has its own mission, mandate, budget, structure, culture, and politics. In this section, we outline the different entities that might be engaged in land management, wildfire mitigation, or wildfire response.

It is especially important to convey the land ownership and management context in which a fire event is occurring and the specific roles, responsibilities, and mandates of the responding agency/ies. Being aware of the diversity of relevant entities can also help you increase contacts and sources for your reporting.

Eastern Oregon rangelands
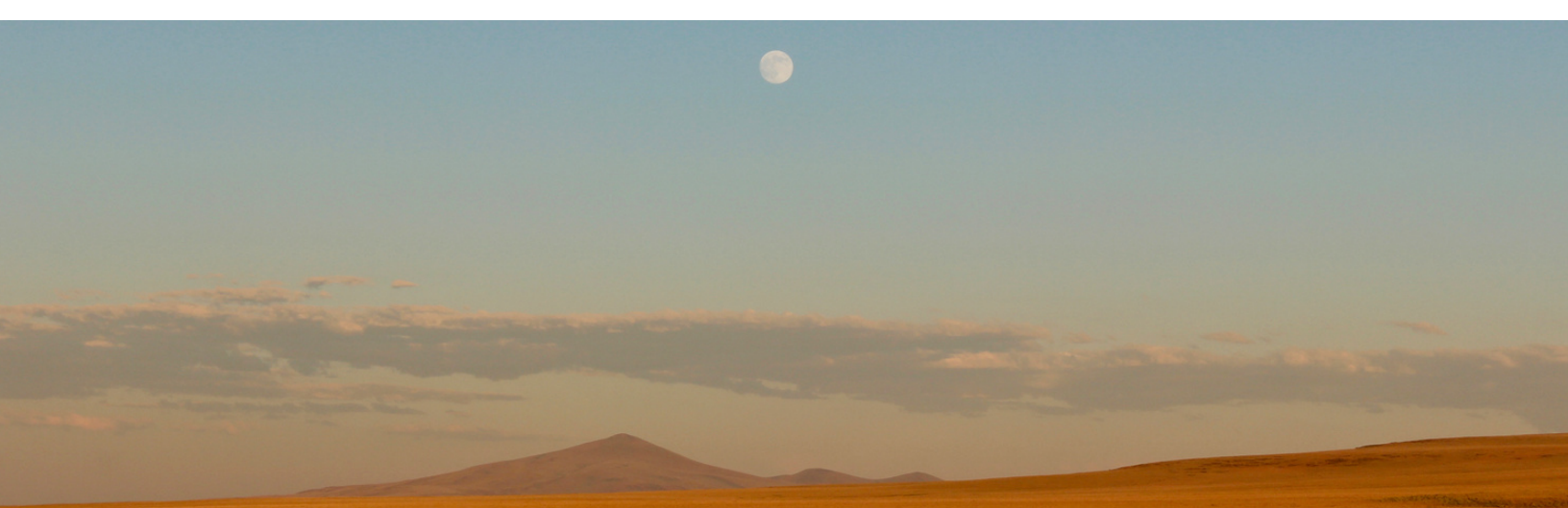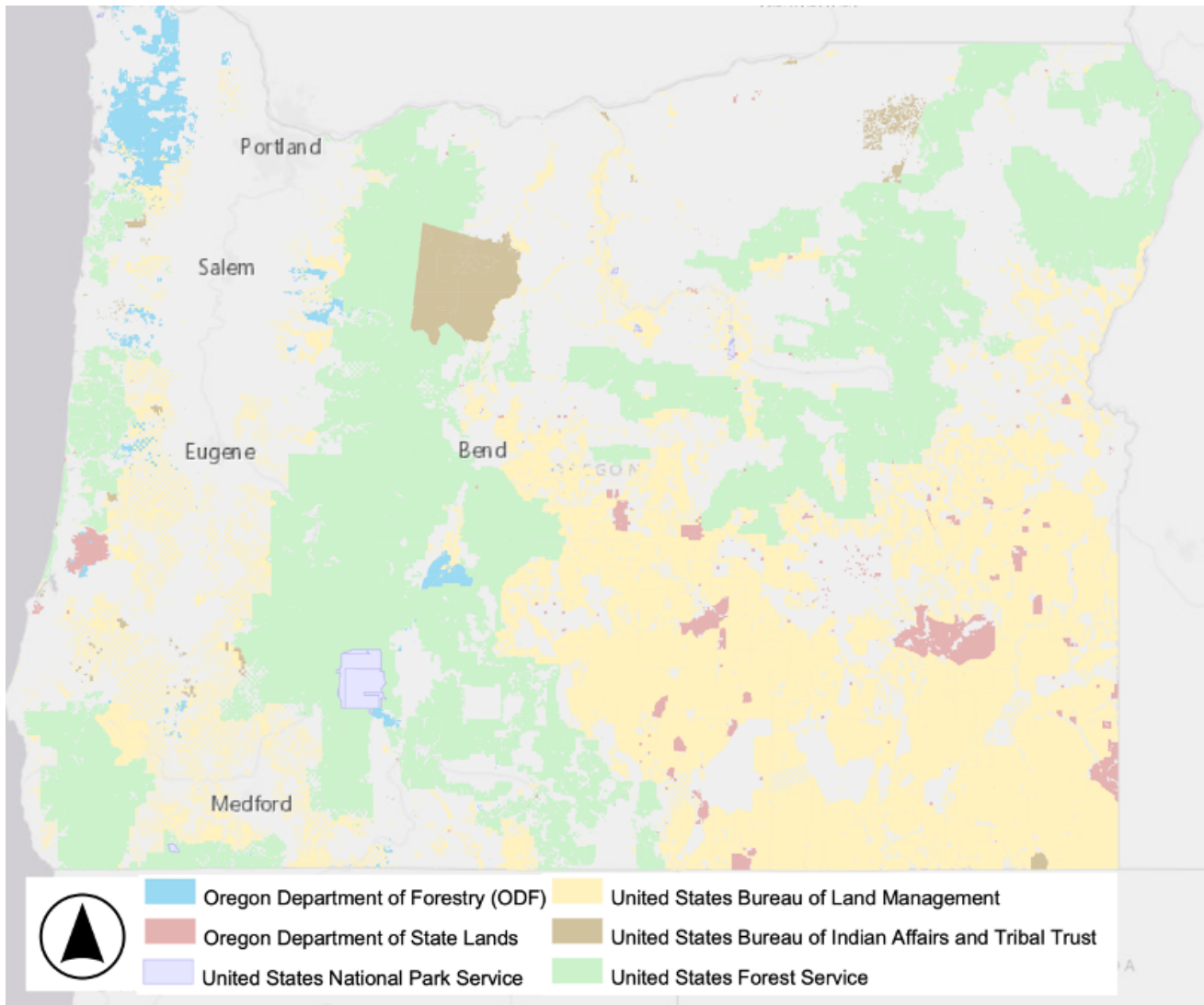
Figure 2. Oregon's land management and ownership. Source: Oregon Department of Forestry.

Tribes
The state that we now call Oregon contains homelands of nine federally recognized Indian Tribes. Each is a sovereign nation and Tribal lands are not public property. The Oregon Department of Forestry provides fire response for reservation lands through a master cooperative agreement, but many tribes have their own fire programs and fire staff as well. Reporting about Indigenous people and fire necessitates tact, care, and nuance. Resources offered by the Native American Journalists' Association provide considerations for how to present accurate and respectful information.

Federal Agencies
A little more than half of Oregon's land is managed by federal agencies; largely the U.S. Department of Agriculture Forest Service; and U.S. Department of Interior Bureau of Land Management, Bureau of Indian Affairs, National Park Service, and Fish and Wildlife Service.

Each has roles in wildfire mitigation and preparedness that include environmental analysis, planning fuels reduction projects, and monitoring outcomes. They also award grants and contracts to external partners or the private sector to help plan and implement wildfire risk reduction. They each lead fire response within their jurisdictions with their own fire workforces, and provide cooperative assistance to other partners on their lands when needed. Federal land management agencies coordinate closely with each other and with Tribal, state, and local governments on fire response through interagency agreements and dispatch centers that organize the sharing of information and resources.

State Agencies
Several state agencies manage land in Oregon, including the Department of State Lands, Department of Forestry, Department of Fish and Wildlife, and Parks and Recreation Department. Each of these agencies has varying purposes for their land management. Oregon Department of Forestry (ODF) also is authorized to provide fire suppression on assessed private land, state land managed by the above agencies, tribal reservation lands, and Bureau of Land Management forestland in western Oregon. Emergency response agencies involved in wildfire are the Oregon State Fire Marshal and the Office of Emergency Management. Two state agencies that do not manage land or have emergency management responsibilities are the Oregon Watershed Enhancement Board and Oregon Department of Agriculture, which support watershed councils and soil and watershed conservation districts through grants and technical assistance that can include wildfire risk reduction and postfire activities.

Fire Protection Departments, Districts, and Associations
Fire departments and rural fire districts have fire suppression responsibilities for a designated local area. Fire departments serve municipalities and rural fire districts provide protection in many places outside of municipal areas. Oregon also has 12 forest protective associations, which are organized groups of forestland owners, and 28 rangeland fire protection associations (RFPAs) in eastern Oregon, which allow landowners and federal land permittees who lease grazing lands from the government to respond to wildfires. RFPAs are a valuable asset in rural and remote areas where ranchers may be the closest to a fire start. Both types of associations can provide fire protection across landownerships (private, state, federal) through state statutory authority and cooperative agreements with federal agencies.

Other Entities
- County or municipal governments: Local governments develop community wildfire protection plans and other preparedness efforts, issue evacuation notifications for residents within their jurisdictions, and coordinate with structural and wildfire suppression agencies during incidents. Counties also typically have road departments and manage fuels along county roads, and have health services and resources that pertain to prescribed and wildfire smoke.

- Federal and state regulatory agencies: These include the U.S. Environmental Protection Agency, U.S. Department of Environmental Quality, U.S. Fish and Wildlife Service, Oregon Department of Environmental Quality, Oregon Department of Fish and Wildlife, and Oregon Department of Forestry. Some of these agencies are relevant to wildfire risk reduction because they regulate and monitor air quality, setting parameters for conditions under which managers can use prescribed burning to reduce hazardous fuels. Monitoring information is also used for health and safety during wildfire events. Other agencies regulate the management actions that can be taken on federal, state, and/or private lands to reduce wildfire risk through required environmental analysis processes or forest practices compliance.

- Private landowners: Privately-owned lands also compose a significant amount of Oregon's landscape. Private landowners vary in type, management goals, and size of ownership. They include private industrial (corporate) forestland owners, primarily managing their lands for timber production or investment; nonindustrial private forestland owners (individuals, families); and privately-owned agricultural and rangelands. ODF provides fire suppression for assessed private forestlands.

- Private land and fire management businesses: Private sector businesses often provide fuels reduction, thinning, forest health, and wildfire response capacities through contracts with governments or landowners.

- Nongovernmental and community organizations: Nonprofit, nongovernmental organizations (NGOs) of various sizes and scales also participate in wildfire risk reduction through planning, collaboration, partnerships, grant writing, and capacity building. Some also have their own workforces for fuels reduction work and workforce training. Some national or regional organizations that work on wildfire-related issues in Oregon include The Nature Conservancy, Sustainable Northwest, and Blue Forest Conservation. Watershed councils and soil and water conservation districts are another common type of organization found locally throughout Oregon, and are often involved in post-fire response and managing watershed impacts from fire.

- Collaboratives and partnerships: Oregon is also uniquely known for its collaborative spirit and is home to many examples of collective groups of diverse interests. These include groups that host dialogue and review science about how to manage vegetation and fire risk, partnership that coordinate implementation of on-the-ground projects, and community or neighborhood groups of residents who work together on wildfire preparedness. NGOs and collective groups can contribute local knowledge to your reporting, as well as human interest stories about working together on shared goals and helping each other.

What to Expect Before, During, and After Fires

Before: Prevention, preparedness, mitigation, risk reduction, adaptation
Individuals, communities, and networks can take action to prevent human-caused ignitions, prepare structures and communities for fire events, and mitigate the risk of fire's undesired effects by reducing fuels on the landscape.

Small pieces of burning airborne wood and/or vegetation called embers are the most common cause of structure ignition and how up to 90% of structures are destroyed during a wildfire. Risk to structures can be mitigated by implementing measures to reduce vulnerability and enhance structural integrity to an ember intrusion.

Risk to communities can be mitigated through land use planning, building codes and regulations, community wildfire protection plans, emergency management systems, and response plans. Community emergency shelters, clean air spaces, evacuation routes, and warning systems are vital components of preparedness.

Fuels reduction activities on the landscape include thinning of trees and brush, mastication (mulching forest vegetation into small chunks), and prescribed (controlled) fire. These are used differently around the state, depending on the kinds of vegetation present and the role of fire in those ecosystems. For example, some types of thinning that work well to reduce fuels and restore forest health in dry ponderosa pine forests may not have the same results in wetter coast range forests. The social context varies too. In some places in Oregon, especially those with prior experience of fire, more people are typically aware of these preventative and mitigation needs, and more work may have been done. When covering how communities or land managers prepare for fire and reduce fire risk, you can ask scientists and managers about the kinds of fuels reduction treatments and preparation measures that make the most sense for the local area.

During: Response
When a fire occurs, the managers in charge will make informed decisions about how to respond. They will consider multiple factors including response resource availability locally and nationwide, projected weather conditions, firefighter and community safety, proximity to values at risk, potential for a fire to have positive ecological or fuels reduction impacts, and potential of spread. Not all agencies have the same mission or mandate around fire. For example, the Oregon Department of Forestry is required by statute to seek full suppression of wildfires within its response jurisdiction, while federal agencies are allowed to manage wildfires for multiple objectives, including resource objectives such as improving forest conditions, reducing fuels, or improving soil health.

When covering a fire event that lasts more than a day and involves multiple agencies, you can look for information about the objectives, strategies, tactics, and any public land closures in daily update reports, agency websites, and social media. There are many different ways to respond to wildfires. Some fires may have different objectives and strategies in different areas. For example, parts of a fire may occur in areas of terrain that are unsafe to access and that may have resource benefits from experiencing fire, while other parts require more direct protection because they are near communities or other values. Strategies can also change during the course of a fire. Using phrases such as "let burn" can be misleading because they don't reflect the amount of analysis, planning, decision-making, and action that goes into fire response, even when the strategy at the time may be to monitor and not take direct action.

Fire suppression has been a primary goal of many agencies for the past century, and language used in the media has often reflected that. It can be easy to use militarized language, perpetuating the notion that all fire should be "fought" and removed from the landscape. However, having more low-severity fire can help us avoid more significant fire events in the future. As you write about fire, you may want to consider how you frame it as a positive, negative, or neutral process; and how that might influence your audience's understanding of how we can live with fire.

Reporting relevant metrics during a wildfire event can be difficult. There are many metrics you can choose to describe the consequences of the event or fire season. Typically, the number of wildfires and total area burned are the easiest metrics to report. Unfortunately, they often do not meaningfully reflect the impact of wildfire. Wildfires can have either positive or negative impacts depending on various factors. A large wildfire burning in a remote area might reduce fuels and revive fire-adapted ecosystems, whereas a small fire in a populated area could cause incalculable social and economic upheaval. Fire severity tends to be a better metric, because it helps point to fire effects on ecological resilience, recreation, clean water, carbon sequestration and timber production; but it may be difficult to obtain reliable data until months after the fire is over. Here are some metrics that might be useful when reporting on the impacts of wildfires on communities and ecosystem services:

- Number of residents evacuated
- Number of homes burned
- Acres of high-severity fire
- Amount of a watershed severely burned
- Air quality index and smoke impacts to communities
- Hospitalization rates due to smoke

After: Postfire repair, stabilization, rehabilitation, restoration, and recovery
After a fire, there can be physical impacts to vegetation, soils, watersheds, and built infrastructure. There are also often mental, social, and economic impacts for those affected. Some of these impacts can be from the response effort itself, such as flame retardants in waterways, or questions and concerns about how the incident was handled. In the short term, the focus may be on assessing damage, repairing impacts of suppression activities, performing emergency stabilization for burned areas, and mental and community reflection about the event. This phase can involve urgent activities that are time-sensitive to implement, and emotions may range across a spectrum of grief and anger. There can also be questions and fears about whether drinking water is safe or what valued areas that remain closed to the public look like after the fire. Over the medium and long term, efforts shift to rehabilitation and restoration, which can include replanting vegetation, larger repairs to infrastructure, and rebuilding or relocation for survivors. Mental health impacts of experiencing wildfire can last for months or years after the event itself.

A challenging aspect of the postfire environment is that there can be many different government agencies and nonprofit organizations involved over time depending on the extent and types of impacts. Many of these can be from outside a community. For community members, it is often difficult to know where to go for accurate information or helpful resources, and this can add to their trauma and frustration. Reviewing resources about trauma-informed reporting can be helpful when reaching out to affected residents.

Additional Resources:

- Fire FAQ: Who owns Oregon's forests, and how does that matter when it comes to fire?
- Overview of Oregon's Nine Federally Recognized Tribes
- National Interagency Fire Center information on post-fire recovery
- Santiam Canyon Community Health Impact Assessment offers examples of how one area of Oregon experienced community health issues following a large fire event.

Mid-Willamette Interagency Fire School, 2023

Story Ideas

While media coverage is often devoted to event-specific stories, fire stories are relevant and timely year-round in Oregon. You can think of fire season almost like a sports season or election cycle: there are preseason stories (preparation and mitigation), the season itself (event-specific coverage), post-season stories (community recovery and resilience), and off-season or ongoing stories (the science and history of fire, current or updated legislation, social context and long-term coverage of events). Here are some story ideas that focus on fire when it's not an active event.

At the structure: Consider profiling a community where residents have taken proactive measures to protect their homes from wildfires. The story could showcase innovative building materials, such as non-combustible roofing, exterior siding, and windows with tempered glass. Another topic could be the importance of proper landscaping, such as maintaining defensible space around structures and choosing fire-resistant vegetation. Interviews with homeowners and experts can help explain how these measures significantly reduce the risk of structural damage during wildfires.

Within a community: Consider featuring a community that has come together to develop a comprehensive wildfire resilience plan, such as a Firewise USA ® site. This could highlight the community's efforts in conducting risk assessments, creating evacuation routes, establishing communication networks, providing clean air spaces and resources, and organizing regular drills. The story could feature interviews with community leaders, firefighters, and residents to showcase why and how they made a collective commitment to wildfire preparedness.

On the landscape: Consider examining the efforts to restore and manage the landscape to mitigate the risk of wildfires. The story could highlight various management actions such as prescribed burns and forest thinning projects, both aimed at reducing fuel loads and restoring natural fire regimes. It could feature interviews with land managers, ecologists, and local residents who discuss the importance of these practices in creating fire-resilient landscapes. It could also show examples of collaborative partnerships among government agencies, conservation organizations, forest and fire ecology research institutes, and local communities to implement strategies effectively. This story would serve to raise awareness about the significance of landscape-level mitigation and restoration in preventing large-scale wildfires.

Showing communities' strengths and approaches to post-fire recovery: When covering communities recovering from a wildfire event, it can be helpful to explore all the ways that individuals and organizations are coping with the impacts of the fire. The stories we tell about fire recovery can serve many purposes: they can reflect the nature of social ties of communities, investigate the effectiveness of community resilience planning, examine collaborative efforts among community leaders and organizations, and counteract stereotypes of helplessness. You can showcase how communities work to repair damage to social ties, physical infrastructure, or local economies after a fire event.

SECTION 3. FIRE IN OREGON: THE BIG PICTURE

Section Summary

- Because Oregon is an ecologically diverse state, wildfire doesn't look the same or have the same impacts everywhere. Climate change is also having a variety of effects on fire occurrence and outcomes. Consider consulting with scientists who specialize in understanding fire in specific parts of the state (see Section 4).

- Oregon is also socially and culturally diverse, and wildfires have different meanings and effects for different populations. You can develop stories about social dimensions of fire including values, trust, working together to prepare and respond, cultural burning practices and relationships to fire, and challenges and opportunities for those who are more vulnerable to fire.

The Ecological Role of Fire

Fire has always been part of Oregon's ecosystems. It interacts with vegetation, climate, and topography to shape the state's diverse forests, grasslands and shrublands. Just like rainfall patterns influence why we have deserts and rainforest, patterns of fire strongly influence the landscape. These patterns are called "fire regimes" and are defined by factors including how often fire occurs (frequency) and its consequences to the ecosystem (severity). Many of today's fire management problems exist because fire regimes have been altered since colonization by several factors, including:

- Removal of Indigenous people and repression of cultural burning practices,
- Fire exclusion (through suppression of fires), which causes live and dead vegetation (fuel) to accumulate,
- Logging of large fire-resistant trees, and
- Climate change.

The impact of each of these factors varies throughout the state because of its diverse fire regimes. Where fires are limited by a moist, cool climate, more fuel can build up, and the next fire could be more intense. In the wetter forests of the Coast Range and western Cascades, vegetation was historically able to grow more prolifically between fires, which were limited by the moist climate rather than by the amount of fuel. When weather conditions became suitable for fire spread, large areas of forest would burn, and a high proportion of trees could be killed.

Willamette Valley wetland and oak savanna

In contrast, frequent, low-severity fire regimes are found in the dry forests of southern and eastern Oregon, and the prairies and oak savannas of the Willamette, Umpqua, and Rogue valleys. Historically, fire behavior in those areas was limited by the amount of fuel, which was kept sparse and discontinuous by frequent fires. The resulting fire behavior was less intense and allowed for the survival of most trees. In addition, the traditional burning practices of Indigenous peoples have influenced landscapes and fire regimes. Understanding the difference between climate-limited, infrequent, high-severity fire regimes and fuel-limited, frequent, low-severity fire regimes is critical to understanding what is happening with wildfire events today in Oregon.

Culture and Fire
Tribes and Indigenous peoples are central to the past, present, and future of fire. Indigenous knowledge about wildfire stems from time immemorial, including cultural burning practices that have been greatly reduced. Importantly, fire is part of a web of reciprocal relationships between people, plants, water, and the land, helping support stewardship obligations and ecological connections among all. Burning achieves many outcomes that are important to tribes, including maintaining habitat for game species such as deer and elk, creating quality plant materials for basketry, rejuvenating berry and nut bushes, and clearing along trails and around homes. In some ecosystems such as the oak savannas and grasslands of the interior valleys of western Oregon, fire was used across large areas for these purposes. In other ecosystems such as higher elevations in the Cascades, burning may have been limited to more specific areas such as huckleberry patches.

Today, tribal members continue to use cultural burning on a small scale, while some tribes employ large-scale prescribed burning as part of their forest management operations. Changing fire regimes have unique implications for tribes, including declines in cultural plants from lack of fire, damage to archeological resources during suppression activities, and exposure to high-severity wildfires.

The Many Faces of Fire in Oregon
Climate and vegetation types vary dramatically across Oregon, and so do fire regimes (Figure 3).

- In the wet Douglas-fir/western hemlock forests of northwest Oregon, fire is less frequent than in drier parts of the state, although there is growing evidence that burning by Indigenous peoples has been more common than previously recognized. Trees and shrubs also grow faster, so fuel tends to be abundant. What limits fires from being large and frequent here is that ignitions rarely line up with the right weather conditions. However, if conditions become dry and windy, high-severity fires can spread across large areas, which is what happened historically. Fire exclusion has had a lesser impact on these forests, and the feasibility of managing fuels on a large scale to reduce fire risk is questionable. Because climate was historically the main obstacle to wildfires, climate change predictions suggest that this region may see the greatest relative change in fire regimes (1).
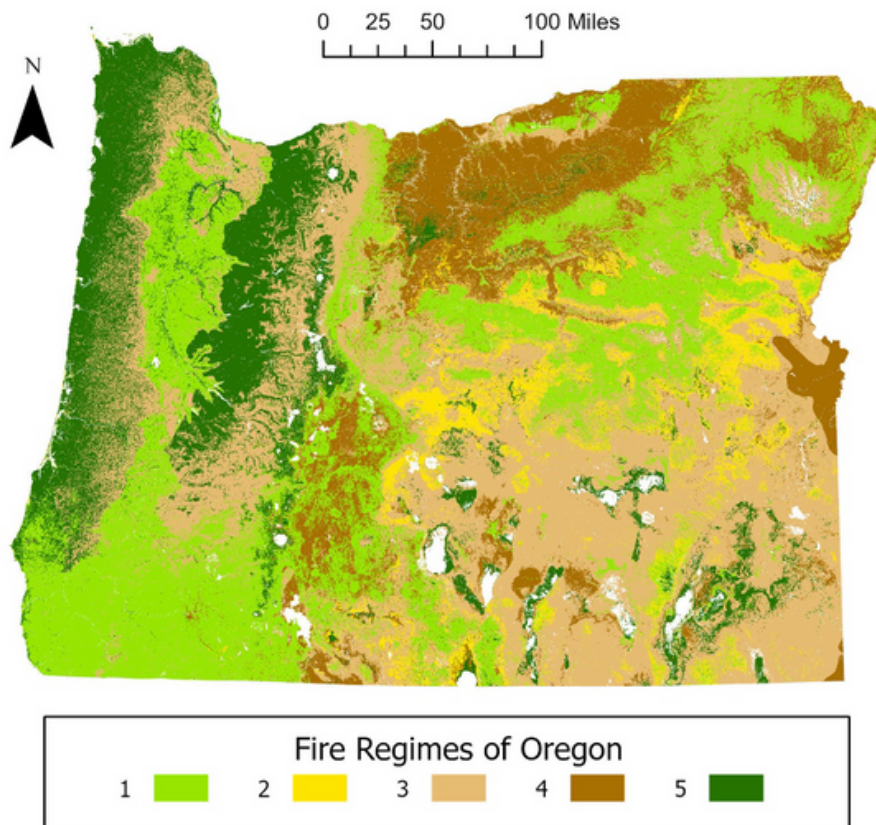

Figure 3. Fire regimes of Oregon (Source: LANDFIRE). 1: frequent (0-35 years), low-severity; 2: frequent, stand-replacement severity; 3: infrequent (35-100+ years), mixed severity; 4: infrequent, stand replacement severity; 5: very infrequent (200+ years), stand replacement severity.

Oregon High Cascades

- Dry forests of southwest and eastern Oregon have seen much greater contemporary change in fire behavior and extent due to fire exclusion. Fire was historically much more frequent than in wetter forests than it is today, burning about every 5-35 years. Because of the prevalence of fire, the amount of fuel was the primary factor limiting fire behavior. Today, fire exclusion has caused a fire deficit in these forests (2). While wildfires may still have beneficial ecological impacts under the right conditions, increased tree density and live and dead fuel have caused fires to burn more severely overall and the size of high-severity patches has increased, creating concerns about forest recovery. The fact that attempts to eliminate fire from the landscape inevitably lead to more damaging fires that escape suppression is called the "wildfire paradox" (3). Measures to reduce fire severity include thinning, prescribed burning, and reducing aggressive fire suppression under mild weather conditions.

- While much focus is directed toward forest fires, more than half of Oregon is not forested. Large portions of southeastern Oregon are a mix of rangelands and sagebrush shrublands. In contrast to many other regions, wildfires in this environment have become larger and more common than historically, in part due to flammable invasive annual grasses. These grasses have fundamentally changed how fire behaves and reinforce the cycle of more frequent fire by readily colonizing burned areas and excluding native fire-adapted plants. Dealing with this issue requires cross-boundary partnerships that prioritize protecting rangelands and sagebrush habitats that have not yet been affected by annual grasses and are thereby relatively resilient to effects of wildfire.

- The interior valleys of western Oregon (Willamette, Umpqua, and Rogue), and the Columbia Gorge are home to ecologically stunning oak savannas and prairies that were once burned annually by Indigenous peoples. Without fire, these ecosystems can change rapidly due to the growth of shrubs and conifers which degrade the habitat value for numerous species and undermine their fire-adapted nature. The dependence of oak and prairie habitats on fire has made them a high priority for prescribed and cultural burning, though urbanization complicates implementation of these practices.

Changes Over Time
Since the late 19th century, numerous changes have taken place on the landscape that have altered how fire behaves. Logging has removed large, fire-resistant trees and they have been replaced more flammable plantations in many places. The frequent, low-severity fires that helped sustain ecosystems were reduced because of policies to put all fires out for much of the 20th century. Indigenous people were largely removed from their homelands due to depopulation from illness caused by diseases brought by settlers, and forced to relocate to reservations. In rangelands and sagebrush habitats, invasive annual grasses that are more flammable have increasingly replaced native vegetation. These factors combine in geographically distinct patterns to change the type and continuity of fuels, and thus influence fire behavior. Changes in patterns of development leading to more homes in the Wildland-Urban Interface (WUI), and changes in climate have together further exacerbated the consequences of these ecological alterations.

Climate change alters the condition of the landscape because it affects fuel moisture and fire behavior. Summer drought is causing fuels to become drier and more flammable, and increases the number of extreme fire weather days. Fire seasons are becoming longer, placing a strain on the agencies and firefighters responding to wildfires. The role of climate change is difficult, perhaps impossible, to separate from other alterations to the landscape. It is also important to consider regional differences and time scales.

In dry forests, much of the increase in fire extent and behavior in recent decades is the product of climate change. However, climate change is interacting with historically unprecedented fuel loads, or amounts of fuel. Social-ecological changes in the last 200 years include the legacy of fire suppression policies, removal of Indigenous burning practices, and resource extraction, all of which have set the stage for impacts of climate change. When discussing climate change trends and predictions, it is important to consider regional differences in impacts, relevant timeframes, and interactions with other human-caused changes. It is also useful to differentiate between wildfire extent (area burned) and outcomes (e.g., proportion burned at high severity).

- Extent: Scientific models suggest that the overall area burned will continue to increase regardless of prevention and suppression efforts (4). While forest and fire management won't alter this trend, it is possible to lower the severity of fires when they occur, and/or help firefighters respond to protect communities and sensitive infrastructure and natural resources. Remember that many landscapes are currently far below the historic annual area burned, and that this fire deficit is a primary contributor to increased fire intensity, particularly in dry forests. Therefore, reporting on the area burned alone leaves out important information about the outcomes of wildfires, which can be positive or negative.

- Outcomes: As a proportion of area burned, contemporary wildfires experience 3-14 times more high-severity fire than compared to the pre-colonization period, depending on the ecoregion (5). This trend is projected to persist; given this, attempts to continue suppressing all fire will only exacerbate its undesirable impacts. Additionally, the size of high-severity patches is increasing, creating a growing concern about forest loss in vulnerable areas. Wet forests of northwest Oregon have not seen as much of an increase in fire severity because wildfires are naturally relatively infrequent and already more severe in those ecosystems.

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Mt. Hood National Forest in Wasco County

People and Fire

Social and cultural concepts can be helpful when covering how different communities are exposed to, live with, or are affected by wildfire. Social systems and interactions also influence the way we see and experience the world. Our previous experience with fire, what we learn from media, and our social interactions help us understand fire's role on the landscape.

Social vulnerability is a term used to describe a population's ability to adapt, respond to, and recover from natural hazards like wildfires. Not all communities have the same access to resources to adequately prepare for and respond to wildfires when they happen. Resource-abundant communities are likely to be more resilient after a wildfire because they have the resources to prepare for and recover from a wildfire. For natural hazards, although not wildfire specifically, some of the most studied dimensions of social vulnerability include race, age, socioeconomic status, migration status, gender, and property ownership (renting vs. owning) (Figure 4). The strength of social connections and social organizations can also affect vulnerability. Because social vulnerability has multiple dimensions that often intersect, it can be difficult to study, but it is one component of how wildfire's impacts are not the same for everyone.

Figure 4. Factors in social vulnerability to wildfire. Source: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0205825

Fuels reduction during the Rum Creek Fire, 2022

Labeling a community as vulnerable can be stigmatizing, so you can document individual and community strengths in addition to vulnerabilities. You can highlight their strengths using asset framing. Asset framing is a <u>concept explained here by Trabian Shorters</u> that defines people by their assets rather than starting with what they may be lacking. This is particularly important when thinking about communities that might otherwise be defined as vulnerable.

Equity generally refers to the just distribution of resources and opportunities among groups or individuals. Equity is an important issue in wildfire preparedness and response, as it aims to address historical and systemic disparities. Environmental justice is the fair and meaningful involvement of all people regardless of race, ethnicity, socioeconomic status, or other social factors with respect to the development and implementation of environmental policies. Environmental justice also calls attention to the disproportionate exposure to and impacts of environmental hazards for certain communities, and the need for equitable distribution of environmental hazards and benefits.

Some social dimensions you could examine when covering wildfire events include:

- Social and cultural values that inform land management
- Public trust in the organizations that prepare and respond to wildfire
- History of place and previous wildfire exposure/impact
- Land ownership patterns
- Homeownership and rental patterns (and issues related to insurance at these dwellings)
- The amount of wildfire mitigation happening at multiple scales (individual properties, community level, etc.)
- Cultural burning practices and Indigenous relationships to fire
- The impacts of wildfire and smoke on different groups

Wildfire Smoke and Public Health

Wildfire smoke is becoming an increasingly important issue. In the past five years, Oregon communities have experienced worsening air quality, which is projected to continue into the future. Wildfire smoke is a public health issue because it releases a variety of pollutants, including PM 2.5 (PM stands for particulate matter, and 2.5 means 2.5 microns or less in diameter). PM 2.5 is the most concerning pollutant because it is so small it can be inhaled and settle deep within our lungs and may enter the bloodstream. Some populations are particularly vulnerable to smoke impacts and/or exposure, including children and the elderly, those with pre-existing health conditions, pregnant individuals, and outdoor workers. What's particularly important from an equity and environmental justice perspective is that wildfires and wildfire smoke can exacerbate existing inequalities. For example, communities that are more routinely exposed to other types of air pollution are more vulnerable to impacts from wildfire smoke because they may already have high rates of respiratory or cardiovascular disease. These concerns can become even more apparent during extended smoke events when communities have to find ways to reduce exposure for days or weeks at a time; or for workers who can't avoid being outdoors in the smoke.

To learn more about smoke and monitor current conditions, you can refer to the Oregon.gov air quality monitoring and alerts page, or use apps such as Oregon Air or the US Environmental Protection Agency's Air Now.

Wildfire smoke in the Columbia River Gorge, 2017

Oregon Wildfires of Note

The fire history in a place can be important when reporting on current fires. Some fires have been focusing events—in other words, something about them was so noteworthy that it changed how people think about fire and changed policies related to fire. Such fires also shape collective memory of a place. Most Oregon fires have not become national news. It generally takes a wildfire that either reaches conflagration status or results in a high number of fatalities to become a national news story, sometimes both. A **conflagration** is generally defined as a large disastrous and destructive fire that threatens human life, animal life, health, and/or property. Although not all of the fires outlined here have become national news or reached conflagration status, they have been notable events in Oregon's fire history.

Columbia Fire, also called the Yacolt Burn (1902)
Acres: Approx. 170,000 in OR and 434,000 in WA / Cause: Land clearing
The Columbia Fire is the collective name for multiple fires that ignited in September 1902 in both Washington and Oregon. The total size of all fires was 604,000 acres. The town of Palmer was destroyed and there were 66 fatalities.

Tillamook Burn (1933, 1939, 1945, and 1951)
Acres: 355,000 acres total/ Cause: Logging
The fires burned parts of Tillamook, Washington, and Yamhill counties. There were 35 fatalities, including one firefighter.

Bandon Fire (1936)
Acres: 287,000 / Cause: Logging
The Bandon Fire started as a forest fire, but a wind shift caused it to burn through the town, catalyzed by invasive gorse plants. Thirteen people died.

Biscuit Fire (2002)
Acres: 500,000 / Cause: Lightning
The Biscuit Fire began as five separate fires but became a single conflagration that burned in the Siskiyou National Forest in Oregon and over the state line into the Klamath Mountains in California. The Forest Service spent over $150 million fighting the fire. After the incident, the agency sold the largest salvage timber sale in history from the area.

B&B Complex (2003)
Acres: 90,769 acres / Cause: Lightning
The Booth and Bear fires came together and burned along the crest of the central Cascade Mountains, largely in wilderness areas on the Deschutes and Willamette national forests. Although no structures were lost, the fire affected many stands of timber, at times displayed extreme fire behavior, and had impacts on recreation and highway travel. President George W. Bush visited central Oregon during the incident and gave a speech about the need for his proposed Healthy Forest Initiative.

Long Draw Fire (2012)
Acres: 558,198 / Cause: Lightning
This rangeland fire killed horses and cattle, and devastated prime habitats for greater sage-grouse. It is regarded as Oregon's largest known wildfire by area burned.

Buzzard Complex (2014)
Acres: 395,747 / Cause: Lightning
The complex was made up of several fires that burned on rangeland southeast of Burns, killing scores of cattle. Its name came from the nearby Buzzard Butte. Large range fires like the Buzzard and Long Draw were part of the impetus for the Integrated Rangeland Fire Management Strategy created by the U.S. Department of the Interior in 2015, and for increased investment in rangeland fire protection associations.

Canyon Creek Complex (2015)
Acres: 110, 262 / Cause: Lightning
Lightning ignited 12 fires in the Malheur National Forest. Strong winds pushed the flames together, creating the Canyon Creek Complex. The fire burned 43 homes and over 100 barns and other structures. No lives were lost.

Eagle Creek Fire (2017)
Acres: 48,861 acres / Cause: Fireworks
The Eagle Creek Fire ignited when a firework was thrown in dry late summer conditions in the Eagle Creek Canyon. For a portion of time during the incident, Interstate 84 was closed and rail traffic halted. Crews succeeded in protecting the historic lodge at Multnomah Falls and other structures. Many popular hiking trails and recreation areas were burned over and closed for several years as a result. Over half of the area within the fire perimeter was unburned or low in fire severity, however.

Santiam Fire (2020)
Acres: 402,274 acres / Cause: Ignited by both lightning and downed power lines
The Santiam Fire began as three separate fires on August 16: the Beachie Creek, the Lionshead, and the P-515. On September 8, the Beachie Creek and the Lionshead fires merged, and the P-515 merged with the main fire a few days later. Five people died and over 1,500 structures were burned in the cities of Detroit, Gates, Idanha, Mill City, and Lyons, making it one of the most destructive fires in Oregon history. The fire was finally contained on December 10.

Holiday Farm Fire (2020)
Acres: 173,393 acres / Cause: Undetermined
The fire burned 911 structures, including 574 homes, in the communities of Blue River, Vida, Nimrod, and Leaburg on the McKenzie River. Over 2,500 residents were evacuated and there was one fatality. Like other fires in western Oregon in September 2020, strong east winds and dry fuel conditions allowed for rapid fire growth.

Archie Creek Fire (2020)
Acres: 131,542 acres / Cause: Downed power lines
High temperatures, dry conditions, low humidity, and 40-mph winds caused the Archie Creek Fire near Glide to expand to over 100,000 acres in the first 24 hours at a rate of nearly 70 acres per minute. 109 homes were destroyed, and one firefighter was found deceased in his vehicle.

Almeda Fire (2020)
Acres: 3,200 acres / Cause: Arson
The relatively small but destructive Almeda fire burned through the southern Oregon towns of Talent (population 6,141) and Phoenix (population 4,258) along the I-5 corridor after being set by an arsonist. More than 2,600 homes were destroyed. There were three fatalities.

Bootleg Fire (2021)
Acres: 413,765 acres / Cause: Lightning
The fire burned 161 homes, 247 outbuildings, and 342 vehicles. The fire was so large that it created pryocumulonimbus clouds that reached an altitude of 45,000 feet, and caused bright red sunrises and sunsets in New York City. There were no fatalities.

Cedar Creek Fire (2022)
Acres: 127,283 acres / Cause: Lightning
A lightning strike in the Willamette National Forest approximately 15 miles east of Oakridge ignited the Cedar Creek Fire. East winds pushed the fire toward Oakridge, and 2,000 homes were evacuated. Firefighters were able to halt the flames and no structures were burned. Smoke from the fire caused extended poor air quality for Oakridge and surrounding communities. The smoke also blew north over Seattle, Washington, causing the city to have the worst air quality of any major city in the world at the time.

Bootleg Fire, July 2021

Fire, Winds, and Power in Oregon
Perhaps the most-known contemporary wildfires in Oregon are "the Labor Day fires", which affected numerous communities and areas around the state in September 2020. These fires were landmark events for several reasons. They grew or started more quickly than most fires, causing widespread evacuations and destruction in a relatively short time period. They affected over one million acres, and together resulted in the loss of nine lives and over 3,000 structures. Many people in western Oregon or within urban or town centers had not expected to experience such events. The psychological, economic, political, and other impacts of these fires are longstanding.

Another key feature of the Labor Day fires and other historic events such as the Tillamook fires was the role of east winds. These move downslope off the Cascades and other mountain ranges from the east towards the west. They are typically warm, drying, and can be gusty and very strong. This can cause fires to spread rapidly. East winds with effects on wildfires are most common in Oregon in September. These winds can damage and knock down power lines and poles, which can spark wildfires. Power lines and utilities have become a key part of how we prepare for and respond to fires. Oregon utilities are now required by state law to create yearly mitigation plans describing how they will maintain their equipment and manage vegetation near power infrastructure. Importantly, power shutoffs are also possible during "red flag warnings", issued by the National Weather Service when heat, low humidities, and wind speeds are expected to together increase fire danger.

Additional Resources:

- OSU Extension Fire Program Fire Aware. Fire Prepared webinars and resource guides
- Map tool for visualizing historical wildfires: select "fire history" in the sidebar of maps
- Recommended metrics for reporting on fires
- Adapting Western US Forests to Climate Change and Wildfires: Storymap addressing ten common questions related to forest management and wildfires
- Climate Change and Western Wildfires research articles collection in Ecological Applications
- Oregon Health Authority's FAQ about Wildfire Smoke and Public Health
- Guidance on how to use asset framing
- Native American Journalists' Association's Indigenous Media Guides and Bingo Card to identify tropes or stereotypes when reporting in Indian Country
- 2020 Oregon Wildfire Spotlight storymap
- Podcast about east winds in Oregon with forecaster Eric Wise
- Information about wildfires and electric utility systems in Oregon

SECTION 4. ENGAGING WITH SCIENTISTS

Section Summary

- Try to find scientists who are familiar with the place or topic you are covering, including social scientists if reporting on social or policy issues.

- Ask questions to explore the extent of what is known or unknown about a place or topic, and where to go for more information.

- Be aware of attempts to spread misinformation. One of the best ways to assess this is to seek additional perspectives from other subject matter experts.

- Establish relationships with trusted sources in advance of wildfire events to support prompt and accurate reporting when needed.

Where can scientists' perspectives be incorporated into coverage?
Although a scientific perspective is not needed for every story, scientists who study wildfire are a great resource for reporting on the bigger picture. Many have dedicated their careers to learning about how fire works, its effects, and numerous other topics that can enrich stories with crucial details and interesting facts. Their knowledge can be useful for building a longer-term understanding of key issues in fire science that may come up repeatedly. While we focus this section on Western science, it's important to recognize and highlight the equal value and importance of <u>Indigenous Local Knowledge (also referred to as Traditional Ecological Knowledge)</u>.

Tips for including scientists in your reporting

- **Seek expertise specific to your topic.** Consider if you are asking about a biophysical topic, social topic, or both. Research about fire is found in many different disciplines, including ecology, environmental management, forestry, engineering, geography, sociology, public policy, anthropology, communications, public health, and more. If you're exploring a social topic, you can look for social scientists, who focus on the behaviors of individuals or groups of people. They can help with data and information about issues such as community experiences with fire, social responses to fire management decisions, public perceptions of management practices, or policy, among others. Understand that many scientists have a narrow field of expertise and might not feel comfortable speaking about broad topics or areas outside of what they study.

Scientists and land managers discuss fire history

- **Find the most place-based knowledge.** Seek scientists who have studied fire topics in the community, area, or region of your story. This is not always possible, but when it is, it can provide locally relevant knowledge about the ecosystem at hand. This can help you better reach audiences with content that directly relates to places they care about, including locations, landmarks, plants, or other features that they know. Scientists based at universities and government or nonprofit organizations located in or near the place of the story can be good starting points. Targeted searches in Google Scholar may also be helpful, using community names, land management unit (e.g., the national forest or other landownership where a fire is), or a broad regional descriptor (e.g., southern Oregon).

- **Use existing resources to direct your search.** Academics and government institutions often have media experts pages, which offer concise lists of scientists with their topics and contact information. There are also organizations that exist to help connect scientific knowledge to the real world. In Oregon, these include the Oregon State University Extension Service and the Northwest Fire Science Consortium. Their websites can help you learn more about a topic and identify potential scientist contacts. In particular, personnel working within the Extension Service are trained to listen to questions, communicate about science in a clear way, and help you find further resources.

- **Consider whose voices you may be elevating.** Science and the institutions that house it have historic and ongoing challenges with diversity, equity, and representation. Some studies have found that scientists who are non-white, non-male, and/or belong to other categories outside of dominant culture are less likely to be cited, to be on editorial boards or in other positions of power, or to receive recognition. Media may further amplify these issues by featuring a few selected scientists repeatedly. Consider how demographic factors such as race and gender contribute to this.

What makes for an effective conversation with scientists?
Scientists can vary greatly in their interest, comfort level, and capacities for engaging with media. Some are comfortable with a cold call and speaking on the spot, while others may want to learn more about your story or receive written questions in advance. Some may not understand that you are on deadline or return your calls in a timely way. It can be helpful to clearly communicate your deadline and the nature of your story when leaving a message or sending an email.

A common challenge is that what reporters or the public want to know is often hard for scientists to generalize. Much scientific work is specific to a site or context, and can't be assumed to apply more broadly. Some scientists may respond that "it depends" and offer a lot of considerations or conditions, rather than a straightforward and brief answer. To help get at what you want to know, you can consider asking them questions such as:

- Does the available science on this topic include studies based in the ecosystem or community context that I'm reporting on?
- Do you have a story or specific example you can share?
- What, if any, are the most current and new findings about this topic, and how have they changed how you think about this?
- For whom or what does this matter the most? Are there implications you feel comfortable discussing?
- Can you summarize what you just said in a one- or two-sentence take-home message?

If you interview a scientist and don't feel you obtained enough or sufficiently clear information, or you want to learn more, you can ask for recommendations about others who could speak on the topic. This could include other scientists, land managers, or community organizations with local knowledge about the fire event or issue. You can also ask them if they have any fact sheets, websites, story maps, or other written or visual resources about their or others' work that can help further explain it.

When identifying sources for your reporting, you are likely to encounter a variety of views (**for more information, see "Counteracting Wildfire Misinformation" in the References section, p. 37**). Attempts to spread misinformation can often be used to promote certain management paradigms; for example, increasing conventional logging as a solution to wildfires, or, on the contrary, discrediting any form of forest management to reduce wildfire risk. Individuals who make extensive blanket statements may not be accurately representing the state of scientific consensus about a topic or location. In addition to reviewing the credentials and organizational affiliation of potential experts, you may also validate findings with other subject matter experts within the same discipline. It may be helpful to establish contacts with trusted sources in advance of wildfire events for timely input and fact-checking when needed.

Parting Words
Media professionals play a crucial role in conveying accurate and timely information about wildfire events and related topics to the public. You support people in better understanding all facets of wildfire, and taking action to prepare for and live with fire. This guide offers context, considerations, and resources to help effective reporting in this context. We hope that it has helped you become more familiar with terms used to describe fire ecology, behavior, and operations. We also hope that it has provided a sense of the ecological and social diversity of Oregon, and how fire therefore has many stories across the state.

If you have feedback on this guide, please contact us. We want this and our future efforts to be useful for anyone covering fires in Oregon, and we welcome your thoughts.

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Western Cascades stream after wildfire

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